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PIONIR PERUBAHAN

PROCEEDING

The 1st International Conference on Health Sciences

Faculty of Health Sciences Universitas Nasional
14 - 15 March 2019 At Marlyn Park Hotel Jakarta

PROCEEDING

THE 1st INTERNATIONAL CONFERENCE ON HEALTH SCIENCES

"The Role of Health Professional to Improve Quality of Care in Achieving Sustainable Development Goals (SDGs)"

Jakarta, 14-15 March 2019

Penerbit:
Fakultas Ilmu Kesehatan
Universitas Nasional
Jakarta

PROSIDING
THE 1ST INTERNATIONAL CONFERENCE ON HEALTH SCIENCES

"The Role of Health Professional to Improve Quality of Care in Achieving Sustainable Development Goals (SDGs)"

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Cetakan Pertama, Juni 2019

Rector Speech
on The First Internasional Conference On Health Sciences 2019.

Assalamualaikumwrwb.
Good Morning and May God bless all of us,

On behalf of UniversitasNasional, I would like to welcome all speakers and participants of the First International Conference On Health Sciences 2019, organized by Faculty of Health Sciences UniversitasNasional.

Ladies and gentleman,

We know that the world leaders have signed a new agreement that will determine the direction of world development called the Sustainable Development Goals (SDGs). The agreement is a continuation of the world development blueprint in the Millennium Development Goals (MDGs) which ended in 2015. Indicators and target achievements of the SDGs cover three major aspects namely, ending all forms of poverty and hunger, increasing food and nutrition security, and guaranteeing the existence of healthy and prosperous by promoting human development and a sustainable environment in all countries.

Even though the development agenda has referred to the SDGs, Indonesia apparently still keeps homework that has not been achieved in the MDG indicators. All these problematic indicators are closely related to health payments. The indicators intended include reducing maternal mortality during childbirth, decreasing the prevalence of HIV and AIDS, ensuring environmental sustainability and proper sanitation for the community is still far from the target set out 15 years ago.

This policy should be a concern for health workers, who must take part in every change in society towards health, so they can contribute to the success of the SDGs. Health workers, lecturers and researcher have great potential to be involved in a variety of health policies both at regional and national levels. Indeed the degree of public health that is still not optimal is essentially influenced by environmental conditions, community behaviour, health services, and genetics.

Dear Attendees of the First International Conference On Health Sciences 2019,

SDGs are development programs involving all parties including health workers, higher education lecturers and their students, and researchers. They have a very strategic role so that coordination and support from all parties are needed by involving all components of

the nation in promoting the health paradigm to reach the SDGs target of 2030 in the health sector. Such thematic focuses are expected to provide us with more comprehensive yet specific understanding SDGs to our needs.

Thus, the Faculty of Health Sciences UniversitasNasionalcarry out an international conference with the theme **"The Role of Health Professionals to Improve Quality of Care in Achieving Sustainable Development Goals (SDGs)".**

In closing, I would like to convey my deepest appreciation to Faculty of Healthsciences, especially to the committee to hold the First International Conference on Health Sciences thisyear.We highly appreciate all experts and speakers who will share their expertise, experience and knowledgeto all Conference attendees.

Wesincerely hope that all attendees will enjoy and be inspired from the discussions, presentations and knowledge sharing sessions of this Conferences.

I wish The First International Conference on Health Sciences 2019 a great success!!

Thank you and
Wassalamualaikumwrwb.
Rector,
Dr. El AmryBermawiPutera, M.A.

Dean Faculty of Heath Sciences Speech
on The First Internasional Conference On Health Sciences 2019.

Assalamualaikumwrwb.

Excellencies, Rector of UniversitasNasional, distinguished guests, all speakers and participants, good morning and May God bless all of us.

First, on behalf of the Faculty of Health Sciences UniversitasNasional, I would like to thank you for coming to the First International Conference On Health Sciences 2019.

Ladies and gentlemen,

For me, It is not easy to be leader at Faculty of Health Sciences UniversitasNasional. I must always think, how the the latest faculty at UniversitasNasionalalways advancing in various developments in sciences, knowledge and good governance. And I was lucky because many lecturers in our faculty support the advancement of fFaculty of Health Sciences.

There are a lot of progress hasoccurred in our faculty in two years. Many lecturers conduct researchs, community services and write articles in various journals in Indonesia or abroad. So many lecturers has academic rank, now.

Our faculty has also moved to a new building at MenaraUnas 2 Ragunan, South Jakarta. We have five floors for class rooms, laboratories and faculty office. We have held various trainings for lecturers and students to improve competencies.

And then we strategize for new achievements. And the First International Conference On Health Sciences2019 is the new ourfaculty achievement. At this conference we invited some speakers. We invited The Excellency Minister of Health Republic of Indonesia, Vice Minister and as Head of Sustainable Development Goals (SDGs) Indonesia, and Director General of of Science and Technology of Higher Education at Indonesian Ministry Research, Technology &Higher Education. On behalf of Faculty of Health Sciences UnivesitasNasional, I am grateful to the many experts who have come to share their knowledge and I would like to thank you for responses and coming to our invitation to speak in the conference.I am grateful to the many experts who have come to share their knowledge. I also welcome the many representatives of governments, universities, associations and NGOs who have joined us.

Ladies and gentlemen,

The organization committee have choosen the conference theme"The Role of Health Professional to Improve Quality of Carein Achieving Sustainable Development Goals (SDGs)“. Why SDGs ? Caused *there are international conventions, national level policies and strategies that address issues targeted in the 2030 Agenda.* Despite the continuous dispute around the preceding Millennium Development Goals and whether they were feasible and relevant for all countries (not just poorest), the important lesson learned derived from their implementation is that having time-bound, universal goals result in greater mobilization of the global community, strengthen collaboration and networking of stakeholders across the sectors, countries and regions, and promote innovation and sharing of expertise and best practices. And the international conference will explore the health professional to Improve Quality of Care in Achieving SDGs.

SDGs seeks to ensure health and well-being for all, at every stage of life. Major strides have been made in improving health around the world: between 2000 and 2015, the global maternal mortality ratio declined by 37 per cent, and the under-5 mortality rate fell by 44 per cent. Still, 5.9 million children under age 5 died worldwide in 2015. Most of these deaths were from preventable causes.As progress towards the SDG’s slows, the need for more health workers continues to rise. The World Health Organization estimates that the global needs-based shortage of health care workers is projected to be more than 18 million in 2030. How can we make progress on the world’s most audacious health goals if we do not have enough trained, competent health workers – doctors, nurses, midwives, community health workers, etc. – in our communities?

Improving the health outcomes of individuals and communities around us requires a strong and skilled health workforce. To reduce preventable deaths of children under the age of five, to improve access to skilled birth attendants for pregnant mothers, to ensure everyone has access to the care they need, increasing the number of health professionals must be a cornerstone of not only global policy, but more importantly, action.

Dear Attendees

I believe that all of invited speakers and all of oral presenter will share many experience, knowledge or applied sciences to us. And We hope that the international confereceICHS 2019 will be held once in two years, minimal, witha lot of progress for better enforcement.

On this happy occasion, I thank to the committee who have worked so hard until this international conference was held. And I thank to all of the sponsors who provide funds.

Finally, again on behalf of Faculty of Health Sciences and the committee, I would like to thank you foryour coming, discussions, presentations and knowledge sharing. I wish you every success with The First International Conference on Health Sciences 2019, andgood luck to all of us and I look forward to learning about the outcome.

Thank you and wassalamualaikumwrwb.
Dean of Faculty Health Sciences.
Dr. RetnoWidowati, M.Si.

Head of Committee Speech

First of all, thanks to Almighty Allah, the most merciful, beneficent and compassionate, for His blessing that this conference could be held today. All respect and greeting to the Holy Prophet, Muhammad SAW who guided us of Allah and lead us to Islam rahmatanlilalamin.

I would like to express my greatest gratitude to Dr. El AmryBermawiPutera, M.A; Rector of UniversitasNasional, Professor IskandarFitri; Vice Rector for academic service, Professor ErnawatiSinaga, M.S., Apt; Vice Rector for Research, Collaboration, and Community Services, Professor EkoSugiyanto; Vice Rector for Administration, Finance, and Human Resources, Dr.RetnoWidowati, M.Si; Dean of the Faculty of Health Sciences, UniversitasNasional, and all of the committee members for all of your hard work, kind help, and best effort as a solid team work, by which this event can be held successfully today.

I would like to thank all of the honourable speakers for valuable time to deliver knowledge and share scientific information regarding the topic at this conference. I believe that this opportunity will provide the valuable information for us and deliberate some new research ideas for participants of this conference. For all the participants from various institutions, I would also like to welcome you at this conference, hope you enjoy on this conference.

Welcome to the 1st International Conference on Health Sciences. It is a great pleasure to have all of you here in the 1st ICHS, which held by the Faculty of Health Sciences, UniversitasNasional, Jakarta, on this March 14-15th, 2019.

The big topic of this conference is "The Role of Health Professional to Improve Quality of Care in Achieving Sustainable Development Goals (SDGs) in Indonesia". The SDGs, otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. SDGs built on the successes of the Millennium Development Goals. SDGs are a collection of 17 global goals set by the United Nations General Assembly in 2015 for the year 2030. Two of 17 global goals of SDGs are our concern as health professionals, they are end hunger, achieve food security, improve nutrition, ensure healthy lives and promote well-being for all at the age. These goals will be explained today by all the expertise speakers.

Furthermore, the 1st ICHS in this year focuses on some highlights topics which are medical sciences, nursing sciences, midwives, pharmacology sciences, public health sciences, and nutritional approach to prevent diseases, which have been of interest to hundreds researcher and clinicians who want to share their interesting research problems.

As a major purpose of this event, we hope that it can be an excellent chance to share and discuss interesting ideas and develop fruitful project in the future, network opportunities with old and new colleagues, coordination new partnerships which advance collaboration either about the research field or not, as well as the careers of all the participants.

The 1st ICHS is held in Jakarta, a capital city of Indonesia with rich history and culture, it is the biggest and most beautiful city in Indonesia.

Please enjoy your participation in this conference and have a wonderful experience during your stay in Jakarta. That's all my speech, as human being, I realize that I can't avoid the mistakes, so I apologize for these and thank you very much for your nice attention. Wish you the best in all your work.

WassalamualaikumWrWb
Ns. Dayan Hisni, S.Kep., MNS

DAFTAR ISI

THE CORRELATIONBETWEENSPORTS ACTIVITIES AND STRESS WITH THE PRIMARY DYSMENORRHEA PAIN LEVELS IN ADOLESCENT GIRLSAT MADRASAH ALIYAH NEGERI (MAN) 13 JAKARTA IN 2018

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ABSTRACT

Introduction: Dysmenorrhea or menstrual pain is a phenomenon in the lives of adolescent girls. One way to prevent menstrual pain is to do sports activities and avoid stress. Some exercises can increase the blood supply to the reproductive organs so as to facilitate blood circulation.
Objective: To determine the correlation between sports activities and stress with the level of primary dysmenorrhea pain in adolescent girls.
Method: the type of research used is comparative non-experimental quantitative research with analytical descriptive design using a *cross sectional* approach, while the data analysis used is *chi-square*.
The results of the study: this study shows the results between the variables of sports activities with the level of dysmenorrhea pain (p-value 0,000). Stress variables with dysmenorrhea pain level (p-value 0,000).
Conclusions and Suggestions: from these results there is a correlation between sports activities and the level of primary dysmenorrhea pain, and there is a correlation between stress and the level of primary dysmenorrhea pain. This research is expected so that adolescent girls can find out how to reduce the pain of primary dysmenorrhea.
Keywords: Adolescent Girls, Dysmenorrhea, Sports Activities, Stress

INTRODUCTION

A healthy country starts with a healty oneself and family. Along with the rapid development in the globalization era, as well as the demographic and epidemiological transitions of the disease, the problem of disease due to behavior and lifestyle changes related to behavior and socio-cultural tend to be increasingly complex. Many interpretations that health must have complete and adequate health support equipment, so that it still requires not a small amount of money.

Improvements are not only done onaspects of health services, improvement in the environment and engineering population or heredity, but need to pay attention to behavioral factors that theoretically affect 30-35% of health status. Considering the impact of behavior on health status is quite big, various efforts are needed to change unhealthy behavior to health (Department of Health, 2013).

The simplest step to safeguard health while preventing disease is only to do Clean and Healthy Life Behavior (Sri Setyani, 2010).

Health is closely related to behavior or culture so behavioral or cultural change requires continuous education (Aprilianti, 2009). Thus, health is something that is sought after by everyone. According to the World Health Organization (WHO, 2010) health is a healthy state that is intact physically, mentally and socially and is not only free from illness or disability. The percentage of dysmenorrhea in the United States is estimated at nearly 90% of women experiencing dysmenorrhea and 10-15% of them experiencing severe dysmenorrhea[1]. The prevalence of dysmenorrhea in Sweden is 72%, and the prevalence of dysmenorrhea in Indonesia is 64.25% consisting of 54.88% of primary dysmenorrhea and 9.36% of secondary dysmenorrhea[2]. Research conducted in China is that girls who are easily affected by dysmenorrhea do not take medical action, because each woman already has knowledge[3,4].

There is a significant correlation between attitudes toward community healthy living behavior in the family. A person's attitude towards something will be positive if it is supported by good knowledge and understanding of it. The more positive the attitude of the community, the higher the quality of the healthy living behavior in the community and vice versa (Zaahara, 2011). Dysmenorrhea is pain during menstruation caused by spasms of the uterine muscles[5]. The blood flow to the uterus decreases so that the uterus does not get adequate oxygensupply which causes pain.Intensity of pain are affected by individual descriptions of pain or perceptions of experience pain[6]. Treatment efforts to reduce dysmenorrhea are by providing pharmacological therapy such as analgesic medicine, hormonal therapy, namely therapy with non-steroidal anti-prostaglandin medicine and dilatation of the cervical canal[7,8].

Until now, the cause of the pain is unknown, but the most plausible theory is the spasms of the uterine muscles caused by poor blood flow. Sport is physical activity that has a specific purpose and is carried out with certain rules systematically such as the rules of time, target pulses, number of repetitions of movements and so on, carried out by containing elements of recreation and having certain specific goals. With less pain during menstruation, a woman is expected to be active as usual. The results of the pre-study conducted by the researchers found that there were many cases of dysmenorrhea and this data was

taken from School Health (UKS) data. The average student affected by dysmenorrhea overcomes it with anti-pain medication and few of them rested enough to be given eucalyptus oil. Based on this background, the researchers were interested in examining the correlation between sports activities and stress with primary dysmenorrhea pain in adolescent girls at MAN 13 Lenteng Agung, South Jakarta in 2018. The difference between this research and other research is located in sports which is included in the school curriculum and can be used to treat dysmenorrhea and other studies emphasizing yoga activities.

METHODOLOGY

The type of research used is comparative non-experimental quantitative research with descriptive analytic design using a cross sectional approach,while the data analysis used is chi-square. The population is all students who experience dysmenorrhea at the time of menstruation, which is a total of 139 students and while the sample used is total sampling.

RESEARCH ETHICS

This research received permission from the research site and to maintain the confidentiality of the respondents, the researchers do not include the names.

RESULTS AND DISCUSSION

Univariate Analysis

Table 1 Frequency Distribution of Primary Dysmenorrhea Pain Levels

Pain Levels	***F***	**%**
Mild	62	44.6
Moderate	63	45.3
Severe	14	10.1
Total	**139**	**100**

Table 1 shows that students who experience moderate pain are 45.3% and this is more than mild pain and severe pain. Pain that is usually felt in the pelvis is felt during menstruation. Generally occurs for adolescent girls who have just experienced menstruation[9]. In addition, as you get older the pain will decrease. The Correlation between Sports Activities and Primary Dysmenorrhea Pain Levels in Adolescent Girlsat MAN 13 Jakarta, most

experienced primary desmenorrhea pain with moderate level of 44.6%. Dysmenorrhea can betreated with medicine. This is supported by the research that says that it can be overcome by yoga[10].Medicines that are often used to treat dysmenorrhea are NSAIDs (Non-steroidal anti inflammant medicine). Even contraception will be used in conjunction with other medicines. This aims to reduce estrogen levels. There is also dysmenorrhea caused by fibroids and will be removed (surgery). Operation of uterine artery embolization. In more severe cases, hysterectomy may be treated. A hysterectomy is a surgery to remove the entire uterus. There are also ways to handle consumption of vitamin B1supplements, massage and acupuncture[11]. Understanding of the prevention of dysmenorrhea needs to be emphasized in adolescent girls so that dysmenorrhea is not a scourge of problems in the adolescent girls' activities.

Table 2 Frequency Distribution of Sports Activities

Sports Activities	***F***	**%**
Regular	79	56.8
Irregular (Rarely)	60	43.2
Total	**139**	**100**

Based on table 2, it was found that regular activities were greater (56.8%) than irregular activities (43.2). Sports activities carried out by adolescent girls in the Correlation between Sports Activities with Primary Dysmenorrhea Pain Levels in Adolescent Girls at MAN 13 Jakarta are very good, this is evidenced by the percentage of sports activity as much as 56.8%.

In general, the notion of sport is one of a person's physical and psychological activities that is useful for maintaining and improving his/her health quality. Talking about health, what is the meaning of health, health is a normal condition both physically and spiritually according to its portion experienced by living things.

Table 3 Stress Frequency Distribution

Stress	***F***	**%**

Normal	60	43.2
Mild-Moderate	60	43.2
Severe	19	13.6
Total	**139**	**100**

Based on table 3 it is known that the proportion of respondents who experience stress in the normal category is 60 respondents (43.2%), the proportion of respondents who experience mild-moderate stress is 60 respondents (43.2%) and the proportion of respondents who experience severe stress is 19 respondents (13.6%). Respondents who experienced stress in the normal and mild-moderate stress category had the same percentage. The average level of stress experienced by adolescent girls in the Correlation between Sports Activities and the Primary Dysmenorrhea Pain Levels in Adolescent Girls at MAN 13 Jakarta was at normal to moderate stress levels with 60 respondents (43.2%) respectively. Research is supported by other studies where there is a significant correlation between stress and the primary dysmenorrhea and a simple statistical test of the correlation coefficient shows that there is a rather weak correlation between stress levels and the degree of primary dysmenorrhea[12]. Stress is a form of tension from physical, psychological, emotional and mental. This form of tension affects a person's daily performance. Even stress can make productivity decrease, pain and mental disorders. Basically, stress is a form of tension, both physical and mental. The source of stress is called a stressor and tension caused by stress, called strain.

Bivariate Analysis

Table 4 Correlation between Sports Activities and the Primary Dysmenorrhea Pain Levels

Sports Activities	**Pain Levels**						**Total**		***P Value***
	Mild		**Moderate**		**Severe**				
	F	%	F	%	f	%	F	%	
Regular	48	60.8	23	29.1	8	10.1	79	100	0.000
Irregular (Rarely)	14	23.3	40	66.7	6	10	60	100	

Total	62	44.6	63	45.3	14	10.1	**139**	**100**

From the results of the analysis of the correlation between sports activities with the primary dysmenorrhea pain levels in Table 5.4, the results showed that the proportion of respondents regularly carrying out sports activities and mild primary dysmenorrhea pain levels were 48 respondents (60.8%), the proportion of respondents regularly doing sports activities and moderate primary dysmenorrhea pain levels were 23 respondents (29.1%) and the proportion of respondents with regular sports activities and severe primary dysmenorrhea pain levels were 8 respondents (10.1%). The results of statistical tests with chi square analysis obtained a value of $p = 0.000$ ($\alpha = 0.05$), it could be concluded that at a significance level of 95% there was a significant correlation between sports activities and theprimary dysmenorrhea pain levels.

The occurrence of dysmenorrhea will increase with a lack of exercise, so that when dysmenorrhea occurs, oxygen cannot be channeled to the blood vessels in the reproductive organs which occur when vasocontraction causes pain, but if someone does exercise regularly, she can provide oxygen almost double per minute so that oxygen is delivered to blood vessels that experience vasoconstriction[13]. One way to reduce pain in patients with menstrual disorders (dysmenorrhea) is by exercising[14]. Sport is an alternative to reduce pain, such as walking, jongging, cycling and swimming which will help the body to produce endorphin chemicals to inhibit extraordinary pain.

It is a support that to relieve the primary dysmenorrhea pain not only by taking medicine, but regular exercise can also relieve the primary dysmenorrhea pain. So that adolescent girls do not need to consume a lot of medicines when experiencing primary dysmenorrhea. Emphasis and counseling about exercise can overcome primary dysmenorrhea is also very necessary, because education in school is only held once a week, so that adolescent girls must be independent or take extra curricular sports so that sports activities can increase. In accordance with the results of the study, sport can be used as a preventive treatment for adolescent girls in tackling dysmenorrhea. Besides consuming vegetables and vitamins can reduce dysmenorrhea[15]. Proper exercise must meet the frequency 3-5 times a week with a duration of 30-60 minutes.

Table 5 Correlation between Stress and the Primary Dysmenorrhea Pain Levels

Stress	Pain Levels						Total		*P Value*
	Mild		Moderate		Severe				
	F	%	f	%	f	%	F	%	
Normal	46	76.7	12	20	2	3.3	60	100	0.000
Mild-Moderate	13	21.7	45	75	2	3.3	60	100	
Severe	3	15.8	6	31.6	10	52.6	19	100	
Total	**62**	**44.6**	**63**	**45.3**	**14**	**10.1**	**139**	**100**	

The results of the statistical test with chi square analysis obtained a value of p = 0.000 (α = 0.05), it can be concluded that at a significance level of 95% there is a significant correlation between the primary dysmenorrhea pain levels and stress. Research conducted in Japan, out of 221 respondents with stress conditions, 63% experienced menstrual disorders[16].

Stress is a form of tension from physical, psychological, emotional and mental. This form of tension affects a person's daily performance. Even stress can reduce productivity, pain and mental disorders[17]. Basically, stress is a form of tension, both physical and mental[18]. The source of stress is called a stressor and tension caused by stress, called strain. Stress is a physiological, psychological human response that tries to adapt and regulate both internal and external pressure[19].

Based on the results of the study it was found that theprimary dysmenorrhea incidence was higher in respondents who experienced stress compared to respondents who did not experience stress. This stress factor can reduce resistance to pain[20]. During stress, the body will produce excessive estrogen and proglandin hormones. Estrogen and proglandin can increase excessive uterine contractions which cause pain. The adrenaline muscle

also increases and causes the body to tense including the uterine muscles.

Relaxation can be done if adolescent girls experiences stress so as not to aggravate the pain of dysmenorrhea itself. Relaxation makes the endorphin hormone come out naturally. This can reduce the amount of painkillers use in adolescent girls who experience desmenorrhea pain.

The same thing was also stated by Lusa (2010), that in a relaxed state the body will stop the production of adrenaline hormones and all the hormones that are formed when stressed. Relax is needed to give the body an opportunity to produce hormones that are important for menstruation which are free of pain. Stress levels can also be overcome by preparing yourself for a stressor. For example, by improving yourself psychologically and mentally.

CONCLUSION

The frequency distribution experienced a mild primary dysmenorrhea pain level of 62 respondents (44.6%), the proportion of respondents experiencing moderate primary dysmenorrhea pain level were 63 respondents (45.3%) and the proportion of respondents experiencing severe primary dysmenorrhea pain were 14 respondents (10.1%). There is a correlation between the primary dysmenorrhea pain level and sports activities and the correlation between the primary dysmenorrhea pain levels and stress in adolescent girls at MAN 13 Jakarta in 2018.

SUGGESTION

Students can increase knowledge about premarital sex, by looking for good and accurate information and can choose good friends so as not to be affected by premarital sexual behavior. It is expected that health workers, especially midwives, will more often conduct health promotions about reproductive health in an effort to convey health messages to the community.

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DIFFERENT PASSAGE IN WOMEN WHO USE HERB MEDICINE at WANASALAM VILLAGE, LEBAK BANTEN

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ABSTRACT

Introduction: Postpartum period generally lasts 40 days In undergoing postpartum care, many mothers use herbs to restore the uterus, increase appetite, stop too much blood, smooth blood circulation, strengthen the veins in the legs and hands and expedite the milk. The Banten Provincial Government is currently striving to explore and foster the development of traditional medicine, and strive to provide understanding to the community in utilizing medicines around them such as herbal concoctions.
Methodology: This study is a real experimental study that compares results between experimental groups and control groups. This study was conducted in November 2017 until May 2018. The population in this study were all postpartum mothers who used herbal medicine as many as 15 people and postpartum mothers did not use 15 herbal medicines with Quota sampling technique. Data was processed computerically and analyzed by univariate and bivariate using the Independent T-Test.
Results: The results of the study showed that there was a significant relationship between the administration of herbal medicine and the duration of puerperium in postpartum mothers (p = 0.001).
Conclusions and Suggestions: The conclusion of this study is that there are differences in the duration of puerperium between mothers who use herbal medicine and mothers who do not use herbal medicine. Suggestions for Wanasalam Village, it is expected that health workers in the village and community leaders will be more active in promoting the benefits of consuming safe and appropriate herbal medicines, especially for postpartum mothers.

Keywords: Herb, Postpartum, Labor

INTRODUCTIONS

Postpartum period (puerperium) is the period after the release of the placenta until recovery of reproductive organs such as the original condition before pregnancy which lasts 6 weeks (40 days) (Kasrida, 2014).

The problem of puerperium is pain disorders, during the puerperium many women experience postpartum despite normal complications without complications. it causes discomfort in postpartum mothers, postpartum mothers are expected to overcome this disorder and

provide comfort to postpartum mothers. Maternal taste disorders experienced by the mother include after pains / abdominal cramps, breast swelling. Perineal pain, constipation, haemoroid, deuresis (Wiwik, 2014).

Traditional efforts can be made according to Meishin (2010) in Kumriati (2013) Herbal medicine for maternal care after giving birth for up to 40 days, it is useful for restoring the uterus, increasing appetite, stopping too much blood, promoting blood circulation, strengthening veins on the feet and hands and smooth the ASI to stay healthy and fresh. according to Purwanto (2013) the types of postpartum herbal herbal medicine, namely lampyang, turmeric, betel leaf, bartowali, tumbulawak, ginger, kencur, temuireng, bangle, which have similar properties.

Herbal herbs are herbs that can be used for women who experience postpartum periods with several types of plants that aim to clean the uterus so dirty and leaving blood that does not come out some women undergo a brief postpartum period in several

days after giving birth. And the longest period of childbirth is experienced for 40 days. but if more than 40 days, you should check your health medically.

According to the Ministry of Health Research and Development (2009) in Nurwanto (2013) Indonesia is very rich with a variety of flora species as many as 40,000 species of flora that grow in the world, 30,000 of which grow in Indonesia. around 26% of flora in Indonesia has been cultivated and the rest grows wild in the forests. Indonesia has 17% of the species in the world. the vast tropical forests along with the biodiversity contained within them are priceless natural resources.

According to Adi (2017) the tradition of Banten Province to develop alternative medicine Non-medical treatment using traditional medicine methods, as well as utilizing herbal herbs, will be developed by the Banten Provincial Government to strive to explore and foster the development of traditional medicine, and try to provide understanding to the community in utilizing medicines around it.

Based on preliminary studies conducted by researchers in postpartum women who use herbal medicine there is a recovery in the fast and moderate postpartum period, as many as 15 postpartum mothers who do not use herbal medicine experience recovery in the mid-term and slow fasting period. how to overcome the recovery of the puerperium by consuming herbal herbs by taking three times a day in the postpartum care for 40 days. which consists of lamps, turmeric,

betel leaf, bortawali, temulawak, ginger, kencur, temuireng, bangle.

Based on the background above, the researchers were interested in knowing the effect of herbal medicine on postpartum period in postpartum mothers in Wanasalam Village, Wanasalam Subdistrict, LebakBanten in 2018.

METHODOLOGY

This research is a real experimental one that is comparing the results between the experimental group and the control group. The population in this study were all postpartum mothers who used herbal medicine as many as 15 people and postpartum mothers did not use 15 herbal medicines with Quota sampling technique. The sample in this study is taking from a portion of the population by considering the conditions that have been fulfilled by postpartum mothers who consume herbal herbs and do not use herbal medicines in Wanasalam Village in getting as many as 30 postpartum mothers. as many as 15 postpartum mothers as experimental subjects or those given herbal medicine and 15 postpartum mothers as controls or not given herbal herbs. This research was conducted in November 2017 to May 2018 in Wanasalam Village, Wanasalam Subdistrict, LebakBanten Data was computerized and analyzed by univariate and bivariate using the T-Test Independent test.

ETHICAL CONSIDERATIONS

This study was approved by the University.

RESULTS

From the results of research conducted in November 2017 to May 2018 in Wanasalam Village, Wanasalam Subdistrict, LebakBanten. Based on the results of the study, it was concluded that of the 13 respondents who had fast recovery period, there were 10 (33.3%) who used herbal medicine, while 3 (10%) others do not use herbal medicines. From a total of 11 respondents experiencing a period of postpartum healing with a moderate category, there were 5 (16.7%) who used herbal medicine, while 6 (20%) did not use herbal medicine. Then from 6

respondents who experienced the period of postpartum healing in the slow category, all of them did not use herbal medicine.

After a bivariate analysis was carried out to influence the administration of herbal medicine with the duration of puerperium in Wanasalam village. Get in that.

the value of p <0.05, it can be concluded that there are significant differences in the average duration of puerperium between groups of mothers who use herbal medicine and those who do not use herbal medicine. The magnitude of the difference between the two groups is -7,200.

Because it is negative, it means that the first group (mothers who use herbal medicine) has a lower mean than the second group (mothers who do not use herbal medicine). Thus, it can be concluded that mothers who use herbal medicine have shorter or faster postpartum periods compared to mothers who do not use herbal medicine.

DISCUSSION

Based on the results of the Independent T test, it was found that mothers who used herbal medicine had an average period of puerperium for 18 days, while women who did not use herbal medicine had a longer puerperal period, which means that mothers who use herbal medicine have a period faster childbirth.

From the results of this study it was found that there was an effect of giving herbal medicine to the duration of puerperium (p value = 0.001), this shows that a person will experience a fast period of puerperal healing if he uses herbal medicine.

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This is in line with the results of research conducted by Kurniarum&Kurniawati (2015) that there is an influence of betel leaf on healing of perineal wounds with a p value = 0.009 and the use of betel leaves 4.12 times more effective for healing perineal wounds than using betadine so that help speed up the recovery of the puerperium. Research conducted by Yuniarti&Mulyati (2014) proved that almost all who consumed binahong leaf extract, 17 of 20 respondents (85%) experienced rapid perineal wound healing compared to the group that did not consume binahong leaf extract almost entirely, 18 out of 20 respondents (90%).

experience slow perineal wound healing which means that there is an

influence of consumption of binahong leaf extract on postpartum maternal perineal wound healing with a median 3.5 (p value = 0,000).Previous research on the Effectiveness of Drinking Herbs (Herbs of Katuk Leaves, Turmeric, Lempuyangan, Javanese Asem) only found benefits in breast milk production in Nifas mothers, which was carried out by Baequny et al. , where 70.8% of mothers who consume the herbal medicine above have smooth milk production. The author has not found the same research about the use of katuk leaves, turmeric, and lempuyangan to cure the puerperium.

According to Suharmiati (2003) herbal medicine is useful to increase milk production in breastfeeding mothers. The composition of herbs uyup-uyup includes kencur, turmeric, lempuyang, temugiring, temulawak and katuk leaves. Kencur is useful as a freshener and body warmer, thus affecting the condition of the mother to breastfeed. Turmeric contains a lot of curcumin, carbohydrates, protein, vitamin C, potassium, phosphorus, Fe and fat which helps meet the nutritional needs of the mother so that it supports the production of breast milk.

Lempuyang is useful for increasing appetite, enhancing blood and restoring the condition of women who have just given birth. Gathering is useful for treating feelings of unease. Curcuma and katuk leaves are useful for increasing milk production.

From the results of research conducted by the authors and previous research, this is in accordance with the theory that herbal medicine is a herb derived from plants that is efficacious in curing various diseases and can be used as prevention and treatment to improve health as well as maintain fitness and empirically proven (Puwarnto, 2013). Herbal medicine is a form of traditional medicine handed down by the ancestors of the community. Society considers herbal medicine to be a safer treatment compared to modern medicine.The use of herbs is found in the community both during pregnancy, childbirth and the puerperium (Paryono&Kurniarum, 2014).

Consumption of herbs is more common in the puerperium than during pregnancy and childbirth. Most people consume herbal medicine with the aim of helping to expedite breastfeeding, prevent illness, maintain body resilience and maintain mother's beauty especially in female organs (Baequny, 2016). The use of a plant in medicine sometimes must be in the form of concoctions in order to work optimally. Soemiati&Berna (2002) say a plant in its use must be supported by research data so that its efficacy is scientifically undoubted.

Perineal pain is a significant source of problems for many women after childbirth, not only in the immediate postnatal period but also in the long term. Postepisiotomy wounds must be treated properly so the wound heals quickly and no infection occurs. The causes of perineal infections are Streptococcus haemoliticus, Staphylococcus aureus and Eschericia coli. For that we need the right techniques in wound care, and the most important is the use of the right ingredients in wound care. This is very important because if it is not right it can cause injuries that are difficult to heal and allow infection to occur. Officers must understand the physiology of wound healing and be challenged to provide wound assessment based on knowledge of skin integrity and prevention of infection. The material commonly used for prevention of infection is an antiseptic solution.

Researchers assume that according to the research carried out and several previous studies have proven that the use of herbal medicine is effective in healing the puerperium where consumption of herbal medicine can accelerate wound healing, this does not mean that postpartum mothers may consume all types of herbs but they may only consume herbal medicine that has proven its efficacy and consumption in an appropriate amount and must also pay attention to the hygiene of herbal medicines that will be consumed.

The consumption behavior of postpartum maternal herbal medicine in medical terms is not harmful to the health of the postpartum mother's body. The composition of the herbal medicine consumed contains several compounds that are capable of supporting the recovery of maternal health, such as from galingale and meeting sleigh. Another composition builds and stimulates the prolactin hormone in increasing milk production so that it can reduce maternal anxiety about the lack of milk production. Consumption of herbs is not all individuals have the same reaction.

Apart from that, postpartum mothers do not mean having to rely entirely on the recovery or smoothness of the puerperium on the consumption of herbal medicine, but also must be accompanied by consumption of nutritious foods to strengthen the body's resistance and maintain personal hygiene to accelerate wound healing and prevent infection. In this case the health worker must also pay attention to what is consumed by the postpartum during the postpartum care and must always pay attention to how the progression of wound healing and lochea is coming out so as to prevent and detect possible problems that arise and facilitate

the mother to tell what foods safe for consumption.

CONCLUSION

There is a significant difference in the provision of herbal medicine with postpartum period in postpartum mothers in Wanasalam Village, Wanasalam Subdistrict, 2018.

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ANALYSIS OF HIGH RISK PREGNANT WOMEN AT TELUK PUCUNG COMMUNITY HEALTH CENTRE IN BEKASI 2017

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ABSTRACT

Background: In 2015, WHO estimated that more than 585,000 pregnant women die during pregnancy or childbirth and 81% are caused by complications during pregnancy, childbirth and post-partum. In Indonesia, there were 305 dead mothers per 100,000 people in 2016. Bekasi Health Office in 2016 recorded 22 maternal deaths including those from Teluk Pucung Community Health Centre, there were 3 maternal deaths from 1273 births in 2016.

Objectives: This study aims to find out the analysis of pregnant women with a high risk of anemia and Chronic Energy Deficiency (CED) at Teluk Pucung Community Health Centre Bekasi in 2018.

Methods: The methodology used in this research was Quantitative design with *Cross Sectional* approach, the population in this study was all of mothers with high risk pregnancies, and the sampling used *total sampling*.

Research Results: From the 226 respondents, 132 (58.4%) had anemia and 94 (41.6%) had CED. The results showed that the majority of respondents from the age that not at risk 58.7%, worker women 59.4%, parity who is not at risk 60.9%, the risky spacing of pregnancies at 61.5% and irregular antenatal during pregnancy 72.4% experienced anemia. The bivariate results obtained from the correlation of ages (p = value 0,912), occupations (p = value 0,784), parity (p = value 0,161), the spacing of pregnancies (p = value 0,378), irregular antenatal care (p = value 0,000) with high risk pregnancies.

Conclusions / Suggestions: From the independent variables such as ages, occupations, parity and spacing of pregnancies are not related to the high risk incidence in pregnancy. However, from the independent variable of irregular antenatal care, there is a correlation with the high risk incidence in pregnancy. Through this reason, it is expected that health workers will improve health promotion and activities that will prevent high risk incidence in pregnancies.

Keywords: Maternal age, occupation, parity, pregnancy spacing , examination, pregnancy, high risk of pregnancy.

Introduction

Every pregnancy and childbirth always has a risk with the possible danger of complications in pregnancy, childbirth and post-partum. Complications that occur in pregnancy have range from mild to severe which cause death, pain and disability for the mother and fetus.

Mortality and morbidity in pregnant women and childbirth is the biggest problem in developing countries. It is estimated that 15% of pregnancies will experience high-risk conditions and obstetric complications that can endanger the mother and the fetus if it is not adequately treated, around 80% of

maternal deaths are the result of increased complications during pregnancy, labor and after labor. High-risk pregnancy is a pregnancy that will cause more harm and complications to the mother and to the fetus that were conceived during pregnancy, childbirth or post-partum compared to normal pregnancy and childbirth (Saifuddin, 2014).

Based on the fact that the *World Health Organization* (WHO), every dayoccured around 800 maternal deaths also an estimated 287,000 women die every year due to pregnancy and complications of pregnancy and childbirth. Some basic deaths occured in low and middle-income countries due to preventable causes (WHO 2013).

The main causes of maternal death are heavy bleeding (25%), infection (13%), unsafe abortion (13%), parturition (8%). According to WHO in 2013, 51.8% of pregnant women in the world suffered from anemia. Moreover, reports in Asia and Africa, nearly one from ten maternal deaths are associated with hypertension disorders (WHO, 2016). According to SKDI, Maternal Mortality Ratio (MMR)in Indonesia has decreased by 228 per 100,000 live births, in 2012 it increased by 359 per 100,000 live births. Based on the results of the 2015 inter-census population survey (SUPAS), MMR showed a degression to 350 per 100,000 live births. The National Mortality Rate (NMR) showed 19/1000 KH. Based on SUPAS 2015, MMR showed a degression to 305/100,000 KH and Infant Mortality Rate (IMR)showed an increase of 22.23/1000 KH (Indonesian Ministry of Health, 2015). There were three causes of maternal death in Indonesia namely bleeding (30%), eclampsia (25%), and infection (12%). (POGI, 2016).

The high risk pregnancy is around 34%, the category with high risk reaches 22.4%, with details of <18 years oldmother's age at 4.1%, maternal age >34 years at 3.8%, birth spacing <24 months at 5,2% and with the number of children which are >3 at 9.4%. The direct causes of maternal death include bleeding (28%), eclampsia (24%), infection with puerperium complications (8%), abortion (5%), and congestion (5%), obstetric emboli (5%), and others (11%). (Manuaba, 2012)

The Province of West Java is one of the provinces with the highest number of maternal deaths in Indonesia, which is at 781 deaths. In 2015 maternal deaths increased during childbirth, around 823 people from live births. The maternal mortality rate at Bekasi in 2015 was 22 people and the deaths of babies were 76 (Public Health Office Bekasi, 2016). At Teluk Pucung Community Health Centre, there were 2 cases that recorded as maternal deaths and 2 infant deaths. In 2016 there were 3 cases of maternal deaths. From all birth rates in the city of Bekasi as many as 60,048 people and all deaths 644 people (Public Health Office Bekasi, 2016). From the result of the annual report of Teluk Pucung

Community Health Centre in 2016 there was an increase of 10% to 20% of high-risk pregnant women with 107 people (39%) pregnant women and Chronic Energy Deficiency (CED) as many as 27 (10%) of 159 high-risk pregnant women.

High-risk pregnancy is a pregnancy that has a higher risk than usual for both the mother and her baby, there will be illness or death before and after delivery (Nurahyo, 2009). Some are caused by the risk of pregnancy such as anemia in pregnancy, which is a condition of the mother with a hemoglobin level below 11 gr%. Hypertension in pregnancy, which is a condition where blood pressure in pregnant women increases more than normal. As well as high-risk pregnancies with CED, pregnant women with a chronic malnutrition condition which characterized by the size of an upper arm that is less than 23 cm.

During pregnancy, dealing with high-risk pregnancy not only has a negative impact on the mother but also has a negative impact on the baby. The danger of a high-risk pregnancy will impact the mother such as a miscarriage, maternity bleeding, long and difficult labor, or pre-eclampsia. While the impact on the baby may not be old enough to be born (premature), low birth weight, congenital abnormalities and also more maternal deaths. Which is included in the incidence of high risk, in anemia and chronic energy deficiency (CED).

Factors that influencing the incidence of high-risk pregnant women including an influence of maternal age, parity, spacing of pregnancy, the mother's knowledge, and the mother's occupation (Hidayah, et al, 2016). The prevalence of pregnant women with CED has increased and is still quite high at 24% (MOH, 2013) and based on basic health research in 2013, the proportion of pregnant women with CED increased to 38.5%. In addition to CED, according to the 2015, the Centre of Information andData Indonesian Health (Infodatin), 82% of all pregnant women experience anemia. In 2012, MMR reached 359 per 100,000 live births or an increase of approximately 57% when compared with the condition in 2007 that per100.000 228 live births. This is due to the occurrence of high risk pregnant women, one of whom is hypertension in pregnancy (SKD 2012).

The cause of high-risk pregnancy in pregnant women is due to a lack of maternal health education about high-risk pregnancies, and low education. With the existence of a mother's education about the purpose or benefits of prenatal care, it can motivate her to get a routine pregnancy check-up, how to maintain health and live a healthy life which include knowledge about the types of nutritious food, maintain personal hygiene, and the importance of adequate rest to prevent complications, while maintaining a healthy degree that already exists, (Rochjati, 2011). The research design that used in this study was quantitative methods with analytical design, a research that consisted of independent variables and dependent

variables with *Cross Sectional* approach. The type of research that emphasizes the time of measurement or observation of independent variable data and the dependent variable only once at a time (Nursalam, 2016).

Research Design

The research design used in this study is an analytical survey with a *Cross Sectional* approach, specifically the type of research that emphasizes the time of measurement or observation of independent variable data and the dependent variable only once at a time.

Population and Sample

Population is a whole of research subject or all of the elements in the research area that area suspected of it's characteristics (Arikunto, 2016). Amount of the population of this research is all of high risk pregnant woman at TelukPucungBekaso, Community Health Centre in 2017 are 226 people. Sample is part of research populations in population that was taken all of it for research so that the research is the population research **(**Arikunto, 2016).

Ethical Consideration

The study was approved by the university

Result ofThe Research

1. Correlation Between of High Risk Pregnant Women with Mother's Age

Based ofthe research at TelukPucung Community Health Centre in 2018, there wasn't correlation between mother's age and the high risk of pregnancy. Hastono (2014) said that age is the length of time for life or the existence of someone, fromtheirbirthor existence.The age range that has a high risk in pregnancy is less than 20 years or more than 35 years, at the age of less than 20 years iron needsfor women increase and their knowledge is still low about pregnancy to breastfeeding, as well as those womenover the age of 35 andtheir endurance is no longer optimal and is susceptible to complications of the disease so it will be more risky to get pregnant.

The age range that has a high risk in pregnancy is less than 20 years or more than 35 years, at the age of less than 20 years iron needs for women increasedand their knowledge is still low about pregnancy to breastfeeding, as well as thosewomen over the age of 35 and theirendurance is no longer optimal and is susceptible to complications of the disease so it will be more risky for pregnancy.

The results of research conducted by Riana in Banyuwangi there are as many as 70.2% of people aged>20-35 have a correlation with knowledge about high risks in pregnancy. And the results of the research conducted by nurhidayah, (2016) show the attitudes of pregnant women

about high-risk pregnancies based on age who have the most positive knowledge at the age of 20-35 years amounting to 51%.

The research at TelukPucung Community Health Centre that age is at risk and is not at risk of anemia, according to researchers because at age that is not at risk or not at risk is a productive reproductive age who will experience repeated pregnancy so that women can experience high-risk pregnancies and based on data obtained by pregnant women at the age of those who are not at risk or at risk in TelukPucung there are more migrants (who live in rented house) who follow their husband working in the city. So that pregnant women who are left in their house will live a modest life and not thinking about over-life as well as the ability of the mother's age to get different health information.

Based on the results of the research at TelukPucungCommunity Health Centre in 2018 that there is no correlation between occupation with a high risk of pregnancy. And the highest risk pregnant women experience anemia as much as 55.3%. Occupation is an activity or activity that someone works to earn a living, yield or income. People who are busy with activities or daily work will have more time to obtain information because people who work will interact more with other people than people who do not work and work activities (Depkes RI, 2016).

According to Soetimah research, Riana in Banyuwangi there were 55.3% of mothers not working related to the incidence of high-risk pregnant women and in the results of Ernawatik's study (2017) the incidence of anemia in the working category was 4.9%. This research is analogous with Soetimah researchers, Rina.

According to researchers, at TelukPucung Community Health Centre, high-risk pregnant women who are alsoworkinghave a high risk of anemia, because women who work will be busy with their job so that they ignore dietaryhabitamong with this modern days which makes it easy for all the instant lifestyle by buying practical meals without taking into account the nutritional content of the food

1. Correlation Between Parity and High Risk of Pregnancy

Based on the results of research at TelukPucung Community Health Centre in 2018 that there is no correlation between parity that is not at risk with a high risk of pregnancy. The results of the study showed that among 174 parity respondents who did not risk much anemia was 66.9%. According to (BKKBN, 2008). Parity is the number of births that are owned by a woman and According to Manuaba (2008)

parity is an event where a woman has given birth to a baby with a duration of pregnancy between 38 to 42 weeks.

According to research results by Andriza (2017), there is a significant correlation between parity and high risk events with anemia. And according to the results of the study by IkaPratiwi (2014) in Wonosobo, it was shown that most of the mother's parity was not at risk as much as 33 55.0% of the risk of pregnancy in the preeclampsia. The research was not analogous with Andriza'stheory and research (2017).

According to the researchers' assumptions, research on parity that is not risky at the TelukPucungCommunity Health Centre has a higher risk of anemia because of lack of experience, especially in primiparous pregnancies who often experience emotional stress and lack of knowledge so that they trust the culture and advice from parents and in-laws, rather than officers health.

2. Correlation Between the Distance of Pregnancy with a High Risk of Pregnancy

Based on the results of research at TelukPucungCommunity Health Centre in 2018 that there is no correlation between the distance of pregnancy and the high risk of pregnancy. The results of the study show that the distance between pregnancies is not a greater risk of anemia.

According to Varney, H. (2014). Pregnancy distance is also an important thing to note, because the optimal pregnancy distance is more than 36 months of previous pregnancy, while the close distance of pregnancy is less than 2 years. The distance of pregnancy that is too close can reduce the benefits obtained from previous pregnancies, such as the uterus that has enlarged and increased blood flow to the uterus, whereas if the distance is too short it will not have time for recovery, reproductive system damage or postpartum problems (Prawihardjo, 2009). According to the results of the research by ItaSulistiani (2009), it was shown that there was no correlation between the distance between pregnancy and the high risk incidence of anemia in third trimester pregnant women at the Umbulharjo I Community Health Centre in Yogyakarta. According to the results of the study by SugiPurwanti, it was shown that the distance of the risky pregnancies was 2.47 times greater for experiencing postpartum hemorrhage. this research is in line with the research results of ItaSulistiani (2009).

According to the researchers' assumptions, from the results of this study that happened at TelukPucung Community Health Centre Bekasi in 2018, the high risk of pregnant women

with a frequency of birth spacing who were not at risk of anemia because pregnant women who were not at risk of pregnancy were ignoring advice from health workers and also usually more busy with their works. Based on the results of research at the TelukPucung Community Health Centre in 2018, there is a correlation between the examination of pregnancy with a high risk of pregnancy. Based on 98 respondents who were examined irregular during pregnancy, there were 71 respondents (31.4%) who had a high risk of pregnancy and 31.4% had anemia.

According to Wiknjosastro (2009)pregnancy test or ANC is an examination of pregnant women both physically and mentally tosavemothers and children in pregnancy, childbirth and the puerperium, so that their postpartum condition is healthy and normal, not only physically but also mentally.

According to the research results of HariyaniPutri (2015), it was shown that the majority ofpregnant women who getirregularexaminationand underwent antenatal care were anemic at 73% and suggested that there was a significant correlation between regular pregnancy checks and anemia in pregnancy. According to the assumption the research researchers conducted at the TelukPucung Health Centre that the examination of irregular pregnant women had more anemia because most of the high-risk pregnant women were migrants andlived in rented house who were only 3 months or 6 months old so that before their pregnancy examination was complete they had moved or go back to their hometown and there are also those that are caused by pregnant women working outside the city of Bekasi, such as in busy city likeJakarta,it is difficult to get a day off so they can check their pregnancy according to their schedule.

In this research, researchers used a total sampling technique, which all objects of pregnant women increased the risk of anemia increased (132 people), and chronic energy deficiency (CED) (94 people) in the study using samples to help as many as 226 people.

Conclusion

The results showed that from the 226 high-risk pregnant women at Teluk Pucung Community Health Centre, 58, 4% pregnant women are anemic and 41.6% experienced a chronic energy deficiency (CED). There are 61.1% women that are not on risky age, 55, 3% of non workers, 60.9%parity,72.4% have irregular examinations. There is no significant correlation between age (p = Value 0.912), work (p = value 0.784), parity (p = value 0.161) and the distance of pregnancy (p = value 0.378) with the risk of pregnancy at

Teluk Pucung Community Health Centre. There was a significant correlation between irregular antenatal care (p = value 0,000) and pregnancy risk high

Suggestion

Teluk Pucung Community Health Centre are expected to improve theirservices through the promotive and preventiveprogrammes as to decrease the incidence of high risk and maternal anemia pregnancies.

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THE CORRELATION BETWEEN THE USAGE OFINTRA-UTERINE DEVICE(IUD) WITH ANEMIA ON EVENTS IN LUSH AGE WOMEN (WUS) IN BPM ERMIYATI S, ST DEPOK 2019

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ABSTRACT

Background: In Indonesia, IUD users use 22.6% of all users of contraceptive methods. Intrauterine contraceptives (IUDs) are now believed to be one of the tools that can effectively prevent pregnancy in a long period of time. Actually the use of contraception is not something new. However, it turns out that IUD is not a perfect tool, so there are still some disadvantages including (spotting), garment menstruation, menstruation become more painful, longer time of menstruation, heavy bleeding during menstruation which allows the cause of anemia and so on

Objective: to find out the correlation between the usage of contraceptive devices in uterus and the incidence of anemia in fertile age couples at BPM Ermiyati S,STDepok 2019.

Methodology : The design of this study is an analytical survey with a crossectional approach. The population of mothers usingIntra-Uterine Device who conducted the installation at BPM Erniyati S,ST Depok 2019 there were 162 respondents. The sample amounted to 62 respondents. The sampling technique uses Random Sampling. The research instrument uses a calibrated HB measurement instrument.

Result: There is a correlation between the use of uterine contraceptives and anemia in aged couples

Conclusions and Suggestions: There is a correlation between theusage of intra-uterine device with anemia on events in lush age women at BPM Ermiyati S,STDepok 2019. It is hoped that this research can be useful for Institutions, Independent Practice Midwives, and future researchers.

Keywords: intra-uterine device(IUD), Anemia, lush age women (WUS).

INTRODUCTION

Throughout the reproductive age, women will experience blood loss due to menstrual events every month. The IUD can increase blood expenditure 2 times during menstruation and pills can reduce blood loss by 1.5 times during menstruation. The Side effectsof the blood loss depends on the amount of blood that comes out and the reserves of Fe in the body. On average, a woman bleeds 27 ml every 28 days of menstrual cycle. Allegedly 10% of women lose more than 80 ml per month. If there is a lot of blood coming out during menstruation

(many women don't realize that their menstrual blood is too much) iron deficiency anemia will occur.

The new paradigma of the National Family Planning program has changed its vision from realizing the Norms of a Happy and Prosperous Small Family into a vision to realize "Quality Families in 2022". A quality family is a family that is prosperous, healthy, advanced, independent, has an ideal number of children, forward-looking, responsible, harmonious and devoted to the Almighty God. In the new paradigm of the Family Planning program, its mission strongly emphasizes the importance of efforts to respect reproductive rights, as an integral effort in improving family quality.

METHODOLOGY

The design of this study uses a cross sectional method, which is a type of research that uses the time of measurement or observation of dependent and independent variable data only once at that time. This type of research aims to determine the correlation between the usage of intra-uterine device (IUD) to the incidence of anemia in lush age womenin BPM Ermiyati, S,STDepok 2019.

In this study the tools used for data collection. The research instrument can be: Statement (containing biodata), checlist sheet, other forms relating to data recording and so on.

The research data is obtained through the stages of data collection as follows: Preparing material and theoretical concepts that support, Conducting preliminary studies, Taking data that is preceded by selecting samples or respondents

At this stage the researcher takes data from the respondents by making a visit during the service activities at Ermiyati BPM and conducting a visit to the respondent's house in the BPM Ermiyati area. Previously researchers explained the purpose of the study. The next step is collecting interview results and filling out the checklist sheet and taking Hb level

samples using an electric Hb device with work steps according to the components

ETHICAL CONSIDERATION

This research obtained permission based on the Chancellor's Decree of the National University with No. 162 of 2018. Respondents will first be given informed consent by giving an explanation of the basic information and procedures that will be carried out during the study. The respondents' identities are kept secret by only initials on behalf of the respondent. Confidentiality of all information obtained from research subjects is guaranteed by the researcher. Respondents have the right to resign without any sanctions given.

RESULTS

Univariate Results Based on research data at BPM Midwife Ermiyati S, ST in Depok 2019, the time to use the IUD on WUS can be seen in the following table:

Table 4.1 TheDistribution of Frequency of Time of Use of IUDs at WUS IUD in BPM Midwife Ermiyati S, ST Depok 2019

Usage Time	Frequency	Precentage(%)
0-≥3 Years	27	43.5
4-8 Years	35	56.5
Total	62	100

Based on Table 4.1, it can be seen that ~~of~~ the 62 respondents who used the IUD in Ermiyati BPM, there were 27 respondents (43.5%) who had used the IUD for 0_3 years, and 35 women who had used the IUD for 4-8 years (56.5 %).

Based on research data at BPM Midwife Ermiyati S, ST Depok in 2019, the time for using the IUD on WUS can be seen in the following table:

Table 4.2 The Frequency Distribution of HB Level at WUS IUD at BPM Midwife Ermiyati S, ST in Depok 2019

HB Level	Frequency	Precentage(%)
Anemia (8-≥11)	39	62.9
Not anemia (≥ 12)	23	37.1
Total	62	100

Based on Table 4.2, it can be seen that the participations of WUS IUD on examination based on Hemoglobin Level there were 62 respondents consisting of WUS IUD who experienced Anemia as many as 39 people (62.9%), and WUS IUD who had no Anemia as many as 23 people (37.1%).

Bivariate analysis carried out aims to determine whether there is a correlation between the independent variables namely WUS IUD and the dependent variable is Anemia. The results of bivariate analysis will be presented in the following tables:

Table 4.3 The Correlation Between The Usage OfIntra-Uterine Device (IUD) With Anemia On Events In Lush Age Women (WUS) In BPM Ermiyati S, ST Depok 2019

Time To Use an IUD	HB Level				Total		P value
	8 - ≥11g/dl		≥ 12				
	F	%	F	%	F	%	
0-≥3 Years	20	68.2	7	31.8	27	100.0	0.026
4-8 Years	20	71.4	15	42.8	35	100.0	
Total	40		22		62	100	

Based on Table 4.3 it can be seen that the between WUS in uterine contraceptive device acceptors at BPM Ermiyari S, ST obtained 62 of which 20 respondents used IUDs in a timeframe of 0-> 3 years with a percentage of 50% suffering from anemia, 20 respondents who used an IUD in a period of 0-> 3

years with a percentage of 50% who suffer from anemia, 7 respondents who used an IUD in a period of 0-> 3 years with a percentage of 31.8% who did not suffer from anemia, 15 respondents who used an IUD in 4-8 years with a percentage of 68.2% who suffer from anemia means that there is a acorrelation between the usage of intra-uterine devicethe womb with the incidence of anemia.

DISCUSSION

Ased on the participation of HB examinations that were seen from a long time ago, the usage was carried out at Ermiyati BPM in 2019 as many as 62 respondents. 18 respondents (28.0%) suffered from mild anemia, 21 people with moderate anemia and 23 people (38.2%) who did not suffer from anemia. This study addressed the results that IUD contraception tended to experience a decrease in hemoglobin levels, which had an opportunity for anemia, but respondents who had longer periods of menstruation were greater to suffer from anemia compared to respondents who experienced shorter menstruation.

Early hormone control shows that pregnancy does not occur in users of modern copper-bearing IUDs. Thus, prevention of implantation is not the most important working mechanism except if a copper-containing IUD is used for post coitus contraception. LNG-IUS induces atrophy and production of antagonistic cervical mucus, which will increase its effectivitas.

Low hemoglobin levels are experienced by women of reproductive age and not pregnant as much as 35 percent in developing countries, especially in Indonesia. Decreasing hemoglobin levels results in adverse effects on reproductive health and increases the prevalence of maternal and neonatal deaths and morbidity and can increase the risk of morbidity and mortality in infants including LBW. One reason for the decrease in hemoglobin levels is micro-

bleeding that lasts a long time as a side effect of the IUD. In general, the purpose of this study was to determine the relationship of the duration of IUD use with hemoglobin levels in family planning acceptors at Ermiyati S BPM, ST Depok in 2019.

Based on Bivariate Analysis, it can be seen that the relationship between WUS in uterine contraceptive device acceptors at BPM Ermiyari S, ST was obtained 62 of which 20 respondents used IUDs in a time frame of 0-> 3 years with a percentage of 50% suffering from anemia, 20 respondents who used an IUD in a period of 0-> 3 years with a percentage of 50% who suffer from anemia, 7 respondents who used an IUD in a period of 0-> 3 years with a percentage of 31.8% who did not suffer from anemia, 15 respondents who used an IUD in 4-8 years with a percentage of 68.2% who suffer from anemia.

Based on the results of this study, IUD use was associated with the incidence of iron deficiency anemia. The results of this study are in line with Estrin (2014) that women who rely on IUDs are not only high in anemia, but they are likely to suffer from severe anemia (26%)hat the IUD and menstruation period lasting longer than 5 days are associated with lower hemoglobin values in women4. Dangour stated that IUD use was significantly associated with longer menstrual periods. According to Dangour in his latest research that IUD use and longer menstrual periods independently are risk factors for iron deficiency in menstruating women

According to the researchers' assumptions, there are still a lot of them found in the WUS IUD to check with the local midwife so that the mother has no control over her health and hemoglobin levels.

CONCLUSION

Based on the research on the a correlation between the usage of intra-uterine device with anemia on events in

lush age women at BPM Ermiyati S,STDepok.

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NURSING ACTIVITIES TO IMPROVE QUALITY OF LIFE WOMEN WITH BREAST CANCER UNDERGOING CHEMOTHERAPY : A LITERATURE REVIEW

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ABSTRACT

Introduction : Breast cancer (Ca. Mammae) is the most critical cause of death in the world especially for women. The physical and psychosocial functioning of breast cancer patient undergoing chemotherapy is impaired by the disease itself and the toxicity of treatments, and in parallel their quality of life deteriorates.
Method : This literature review used five bibliography databases (CINAHL, Scientdirect, Proquest, Pubmed, and MEDLINE) from their inception in 2017 to 2019. The Inclusion criteria in this study are articles published in 2010 to 2019 that are available in full text and in English languange. The subject of the study was female breast cancer patients undergoing chemotherapy.
Result : A total of 9 articles were included. The Main findings that emerged from this review have been summarized in five themes results of nursing activities: Monitoring Patient's Quality of Life using specific questionnaire, giving the Quality fo Life's exercise/training intervention, giving self healing program, builiding comprehensive coping strategy program (CSSP), and giving complementary oral intake intervention.
Conclusion: Helping women with breast cancer to come to term and walk through this journey is challenging for nurses. Perawat perlu untuk melakukan pengembangan keilmuan dan keterampilan berkaitan dengan perawatan Quality of Life pasien breast cancer yang menjalani kemoterapi.

Keywords: Quality of life, Nursing activities, Breast Cancer, Chemotherapy

INTRODUCTION

Based on epidymological data, the incidence recorded globally by the International Agency for Research On Cancer (IARC) in 2012, as many as 43.3 women had breast cancer and 12.9% died because of breast cancer[1,2]. In Indonesia, in 2013 cervical and breast cancer was a cancer with a prevalence of 0.8% cervical cancer and 0.5% breast cancer. The largest estimate of the number of sufferers of cervical cancer and breast cancer is in East and Central Java[3].

Someone who suffers from breast cancer will undergo various types of treatment, where one of the treatments referred to is chemotherapy.

Chemotherapy itself has several side effects. Side effects that occur can interfere with the functioning of life physically, psychologically, socially, and spiritually and if it lasts long it will disrupt the quality of life of the woman[4,5].

Nurses need to carry out nursing care in dealing with QOL deterioration in Ca patients. Mammae who underwent chemotherapy. The purpose of making this review literature was to find out various types of nurse interventions to improve the quality of life for patients with breast cancer undergoingchemotherapy[5,6].

METHODOLOGY

Search Strategy

This literature review used five electronic databases (CINAHL, Scientdirect, Proquest, Pubmed, and MEDLINE) from their inception in Januari 2010 to Desember 2019. The subject of the study was breast cancer patients whose undergoing chemotherapy. To be considered as a candidate article for review, the term ‘breast cancer’ AND ‘chemotherapy’ AND ‘Quality of Life’ AND “Nursing Activities’ OR ‘Nursing Exercise’ OR ‘Nursing intervention’ had to be stated in the title or abstract. The Inclusion criteria in this study are articles published in 2010 to 2019 that are available in full text and in English laguange. Studies were included in our review if focused on female breast cancer patients undergoing chemotherapy related with the intervention for improve the quality of life.

We excluded studies that mainly focused on the other medical treatment for breast cancer patient. Therefore, the literature was summaried using a table format. We also inspected the reference lists of the included paper to identify any possible addtional studies that might have been missed during the database searches. The method that was used in this writing is a literature review study and the analytical method that was used here is PICOT (The population is breast cancer patient; Intervention is nursing activities; Comparison: n/a (not answer); Outcome is Improve QOL, and Time is undergoing chemotherapy).

Search outcome

From a total of 155 aricles retrived, 9 were considered relevant and were included in the review. Reasons for exclusion of other articles can be found in Figure 1. Studies were completed in Germany by Désirée Lötzke *et al* in 2016; Turkey by Müzeyyen Arslan *et al*., in 2014; Taiwan by Fan-Ko Sun,*et al*., in 2016; Iran by Aghabarari Maryam *et al*., in 2010); Thailand by Samonnan Thasaneesuwan *et al*., in 2018; Spain by Aintzane Sancho *et al*, in 2015; Cyprus by Andreas Charalambous et al, in 2015; New York by Joseph J. Loizzo et al., in 2010; and USA by Fannie Gaston-Johansson et al., in 2013.

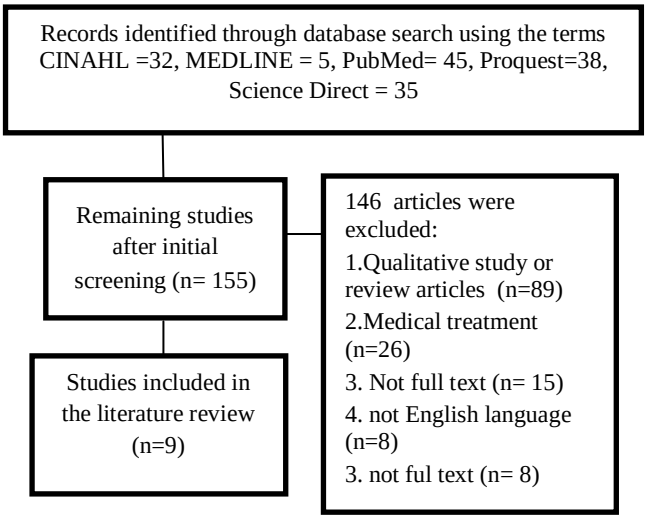

Figure 1. Results of the search strategy and reasons for excluding articles

Studies were classified as experimental study for improving patients' quality of life who suffer from breast cancer undergoing chemotherapy. The population in this review literature is patients with breast cancer who underwent chemotherapy. 6 articles discussed nursing interventions that focused on improving the QOL of breast cancer patients undergoing chemotherapy, while 3 other articles discussed nursing interventions to address the side effects of chemotherapy that could interfere with or worsen the quality of life of breast cancer patients. The ages of the women in the 9 studies varied from 18 to 65 years. The stage of breast cancer varies in the six meanings, including 1 article starting from stadium II-III, 7 articles from stadium I-III and 1 article using patients with stage IV. We found 4 articles using the RCT (Randomized Control Trial) design. The study design and results are summaried by year of publication in Table 1.

ETHICAL CONSIDERATION

The study was aprroved by the university.

RESULTS

The Main findings that emerged from this review have been summarized in five themes results of nursing activities: Monitoring Patient's Quality of Life using specific questionnaire, giving the Quality fo Life's exercise/training intervention, giving self healing program, builiding comprehensive coping strategy program (CSSP), and giving complementary oral intake intervention

1. Monitoring Patient's Quality of Life specific questionnaire

   Quality of life in Ca patients. Mammae who underwent chemotherapy experienced a decrease in quality, due to increasingly bad disease processes or as a result of chemotherapy treatment. Various effects that arise can affect aspects of life that will also affect physical health, psychological well-being, social and spiritual relationships, in other words it will also have an impact on the quality of life of patients[7,8].

   Nurses need to assess the patient's quality of life during chemotherapy using a special questionnaire. In these various studies, Wefound various questionnaires that can be used to measure the QOL of breast cancer patients undergoing chemotherapy. Various questionnaires that can be used include QOLI-CV (Quality of Life Index Cancer Version), FACT B (Functional Assessment of Cancer Therapy Breast Cancer), QOL BC (Quality of Life Breast Cancer), SF-36 (Short Form-36), WHOQOL-BREF (WHO quality of Life-BREF), and EORTC QLQ C30 (Europian Organization of Research and Treatment of Cancer Quality of Life Questionnaire) equipped with BR23 (Breast 23)[7,8,910].

   All questionnaires generally measure QOL related to the four main components (physical wellbeing, psychological wellbeing, social wellbeing and spiritual). QOL BC was designed by the research center of hope for California for QOL assessment in women with breast cancer. QOL BC examines the effects of the disease process and treatment on the body which is divided into four QOL sub-scales/domains. The QOLI-CV questionnaire is used to measure life

satisfaction and can be used for all types of cancer patients[11,12].

In the FACT B questionnaire, additional concern is available which focuses more on the effects of chemotherapy on the body, regardless of the four statement item subscales (a total of 5 sub-scales). The EORTC QLQ C30 questionnaire can be used to study QOL on all types of cancer, but if the researcher wants to study QOL in patients with breast cancer, it is necessary to add the BR23 questionnaire as an additional concern. While WHOQOL BREF and SF 36 can also be used in all circumstances (patients with chronic diseases or the general public) to know about QOL and life satisfaction[9,13].

2. Giving exercise/training intervention

We found from the literature that physical exercise was a 3 month therapeutic walking mix Muscle Relaxation Technique (MRT), mix Guided Imagery Progressive Muscle Relaxation (PMR) for 3 weeks, aerobic exercise mix strength and joint exercises for 2 months, and a combination of Yoga Intervention (YI) and Physical Exercise Intervention (PEI) for 12 weeks[9,10,13].

We are analyzed, the principle of physical training that can be found from several studies is streching and relaxation muscles. PMR or MRT is a general term for doing physical exercises to tighten and relax certain muscles. Some muscles that are recommended when doing muscle exercises are hand, forehead, face, teeth, mouth, head, shoulder, waist, and feet. Other literature states that the muscles that need to be trained are the biceps muscle, triceps, deltoid and trapezius; knees and extensors and hip flexors, and the inner abdomen and back muscles associated with body posture, and can be applied to other muscle groups, even researchers also recommend doing Dummbells or resistance bands to help train the upper and lower muscles, with assistance[10,13] .

3. Giving self healing program.

We found 2 studies that had been discussed spiritual supportive care activities that could be done to help women who survived breast care or gynecological cancer to reduce their suffering and improve their quality of life (QOL). These activities include self healing programs and Buddhist based nursing programs. Interventions are more focused on reducing stress and can add insight and health skills[8,14].

The study combines deep inner intelligence, social-emotional self-care,

visualization, affirmation, and yoga breathing that are inspired by the mind body medicine and self healing by Info-Tibetan paradigm of 2000 year old. This intervention was carried out for 20 weeks and focused on meditation based (contemplative) for stress reduction and self healing. Participants will be focused on building basic meditative skills, and to expose stress reactive habits of thinking. (motivational / behavioral strategies).

Tibetan style, that is by implementing attention, visualization, affirmations and deep breathing can help improve one's ability to master insight and skills, namely by changing cognition, emotions, physiology, and behavioral responses simultaneously[14].

4. Builiding comprehensive coping strategy program (CSSP)

In the CSSP program, patients are taught and forced to be able to manage themselves comprehensively in dealing with various symptoms and stressful conditions during the post-treatment period. The CCSP is a multimodal coping strategies approach consisting of four components of preparatory education, cognitive restructuring, coping skills enhancement, and relaxation with guided imagery[7].

In the study, the CSSP procedure was carried out 2 weeks before the patient entered the hospital and carried out for approximately 1.5 hours personally. Patients will be given handouts and tapes. After the first meeting, nurses will carry out further exercises to strengthen the CSSP in the next 5 meetings, including when patients are admitted to hospital, after HDC (High Dose Chemotherapy), Mid-hospitalization, return time, and during hospital visit control. The activities carried out during the advanced CSSP stage were patients were asked to listen to recordings and observe patients while performing relaxation techniques with imagery; and review the patient's diary. The results of this study showed that before CSSP was found the patient's stress level was high[7].

Each CCSP group patient noted their perception of the benefits of CCSP in a diary. Patients most often play relaxation tape and use handouts before going to sleep at night, but the use of tape is more effective (> 50%) of the time, but handouts are also sometimes more effective at certain times[7].

5. Giving complementary oral intake intervention.

Chemotherapy induced nausea and vomiting (CINV) is the side effect most frequently reported by patients receiving breast cancer therapy, its severity and intensity vary among patients[15,16].

Women with breast cancer can use the CAM (Complementary and Alternative Medicine) method to reduce treatment side effects and psychological distress.Patients in the intervention group consumed powdered ginger 30 minutes before chemotherapy administration. In total, 500 mg powdered ginger, mixed with a spoonful of yogurt to make swallowing easier, was administered to patients twice a day for three days. Patients in the intervention group took the first dose of ginger 30 minutes before the chemotherapy administration on day 1 under the researcher's supervision. The remaining five doses of powdered ginger (five packages of 500 mg each) were given to the patients to be used at home.[16]

The significant decrease in scores on nausea severity and number of vomiting episodes for four days following the first day of the research intervention in the current study is parallel to the emetic effect of chemotherapy agents. Although no vomiting was observed on day 1, when administration of chemotherapy agents occurred, vomiting/retching episodes were commonly experienced[16].

Table 1. Studies included in the literature review

Study (Title, author, year of publication)	Design	Sampel and Intervention	objectives	Result relevant nursing actvities
The Effects of Muscle Relaxation and Therapeutic Walking on Depression, Suicidal Ideation, and Quality of Life in Breast Cancer Patients Receiving Chemotherapy Authors: Fan-Ko Sun, PhD Chao-Ming Hung, MD YuChun Yao,	Experimental study	• 87 breast cancer patients • A group of 87 breast cancer patients receiving chemotherapy were randomly assigned into an experimental group (n = 44) or a control group (n = 43). The subjects in the	This study evaluated the effects of muscle relaxation and therapeutic walking on depression, suicidal ideation, and quality of life in breast cancer patients receiving chemotherapy	• This study use the World Health Organization Questionnaire on Quality of Life. • Muscle relaxation techniques and therapeutic walking are easy to learn, are convenient, and do not require any special exercise equipment. These exercises can be done at home and in any

EdD Chu-Yun Lu, PhD Chun-Ying Chiang, PhD 2016		experimental group received 2 interventions for 3 months		area suitable for walking. • Clinical nursing staff could teach both MRTs and correct walking skills, and even other exercises, to breast cancer patients. • The hospitals can arrange education course to teach clinical nurses the skill of MRTs the therapeutic walking as well as other exercise program that would benefit for breast cancer patients.
The effect of designed exercise programme on quality of life in women with breast cancer receiving chemotherapy Author: Aghabarari Maryam MSc, RN., et al 2010	Quasi Experimental design	• 56 women with breast cancer receiving chemotherapy • The patients in the experiment group followed a designed exercise programme characterized with daily physical exercises, 3–5 days per week, which lasted for 9 weeks.	The researchers sought to investigate the effect of a designed exercise programme on the quality of life (QOL) in women with breast cancer receiving chemotherapy.	• The Quality of Life-Breast Cancer (QOL-BC) questionnaire was employed to measure the participants' QOL in physical, emotional and social dimensions before and after the intervention.
Supervised physical exercise to improve the	RCT	• 66 patients with stage IV breast • The	to assess the efficacy and efficiency of an innovative	• This study use EORTC QLQ C30 for measuring

quality of life of cancer patients: the EFICANCER randomised controlled trial Author: Aintzane Sancho1., et al 2015		treatment common to both groups will be the usual care for cancer: optimized usual drug therapies and strengthening of self-care; in addition, patients in the intervention group will participate in a 2-month exercise programme, including both aerobic and strength exercises, supervised by nurses in their health centre.	physical exercise programme, for individuals undergoing chemotherapy for breast,	quality of life • The physical exercise program coordinated between the oncology andprimary care units, supervised at health centres bynurses to safeguard patient safety but which can be canbe continued in the community setting, and commonfor all types of cancer while tailoredto meet individualpatient needs, will be effective in improving the qualityof life of patients with cancer as well as being costeffective.
Iyengar-Yoga Compared to Exercise as a Therapeutic Intervention during (Neo)adjuvant Therapy in Women with Stage I–III Breast Cancer: Health-Related Quality of Life, Mindfulness, Spirituality, Life Satisfaction, and Cancer-Related Fatigue	RCT	• 92 women with breast cancer undergoing oncological treatment • Participants of the yoga intervention (YI) group received weekly a 60-minute session of regenerative Iyengar-Yoga over a	to test the effects of yoga on health-related quality of life, life satisfaction, cancer-related fatigue, mindfulness, and spirituality compared to conventional therapeutic exercises during (neo)adjuvant cytotoxic and	• This study use EORTC QLQ C30 for measure QOL. • The development of yoga began in the Indian culture. Usually it is a combination of stretchingexercises and various poses with a particular relevance ofbreathing and meditation.

Author : Désirée Lötzke,. Et al 2016		period of 12 weeks at the intervention center "Yoga Munchen GbR" in Munich. • The comparison group received conventiona l physical exercise intervention (PEI) which consists of a 60-minute physical exercise session per week over a period of 12 weeks at the intervention center "Gesund • Both groups were encouraged to perform home-based practices (YI and PEI) twice a week for 20 minutes supported by written instructions. All patients filled an exercise protocol for their own practice at home.	endocrine therapy in women with breast cancer.	

A Randomized controlled Trial for the Effectiveness of Progressive Muscle Relaxation and Guided Imagery as Anxiety Reducing Interventions in Breast and Protate Cancer Patients Undergoing Chemotherapy Author: Andreas Charalombous., et al. 2015	RCT	• 256 patients were registered and 236 were randomly assigned • The intervention entailed a combination of PMR adn GI sessions both suervised and unsupervised for 3 weeks. Intervention included 2 minutes breathig exercise, followed by a 10 minutes PMR exercise and a 15 minutes pleasant GI session.	To test effectiveness of guided imagery and PMR as stress reducing interventions in patients with prostate and breast cancer who undergoing chemotherapy	• PMR is defined as a technique of alternately tensing and relaxing muscle groups in sequence throughout the body to induce relaxation, a state of freedom from anxiety and skeleton muscle tension.
A Randomized Controlled Trial of a Buddhist-based Nursing Program for Women with Breast Cancer Author: Samonnan Thasaneesuwan., et al 2018	RCT	• 93 breast cancer women were randomized to either the experimental group (n = 45) receiving both the BNP and routine care, or the control group (n =	This study examined the effect of a Buddhist-based Nursing Program on psychological symptom experiences of these women	• The core of Buddhist teaching is the Four Noble Truths: 1) suffering; 2) cause of suffering; 3) ways to overcome suffering (the Noble Eightfold Path); and 4) the cessation of suffering. • The Four Noble Truths focus on

		48) receiving only routine care. • The intervention consisted of 1) raising self-awareness; 2) integrating the Buddhist principles of the Four Noble Truths in the care of self; and 3) self-reflection regarding psychological symptom experiences and the progress of the Buddhist practices.		understanding the true nature of life, suffering and obtaining wisdom to deal with suffering in order to accept reality, calm one's mind, and reach a state of serenity.
The effect of a contemplative self-healing program on quality of life in women with breast and gynecologic cancers Author : Joseph J. Loizzo, MD. PhD., et al 2010	Experimental study	• 68 breast cancer patient • A 20-week program was implemented: the initial 8 weeks adressed open-mindfiilness, social-emotional self-care, visualization, and deep	to determine the impact of a 20-week contemplative self-healing program among breast and gynecologic cancer survivors on seli-reported quality of life (QOL),	• Cancer-related QOL was assessed by the FACIT-G, version 4, which measures QOL with 28 items in four domains: physicalwell-being, social/family well-being, emotionalwell-being, and functional well-being. • Intervention program

		breathing followed by 12 weeks of exposing stress-reactive habits and developing selfhealing insights. Daily practice involved CD-guided meditation and manual contemplations		consisting of group instruction in anIndo-Tibetan meditation-based practice of stress reduction and self-healing through enhanced cognitive-affective behavioral learning could reduce distress and improve QOL
Long-term effect of the self management comprehensive coping strategy program on quality of life in patients with breast cancer treated with high-dose chemotherapy Author : Fannie Gaston-Johansson1.,et al 2012	Experimental study	• 128 breast cancer patient • Long-term effect of the self-management comprehensive coping strategy program on quality of life in patients with breast cancer treated with high-dose chemotherapy	to examine the effectiveness of a self-management multimodal comprehensive coping strategy program (CCSP) on quality of life (QOL) among breast cancer patients 1 year after treatment	• This study use Quality of Life Index—Cancer Version (QOLI-CV) for measure patient's QOL
Oral Intake of Ginger for Chemotherapy-Induced Nausea and Vomiting Among Women With Breast Cancer Author:	Experimental study	• 60 breast cancer patients • The patients in the study group (n = 30) also received oral ginger for the first	to assess the effect of ginger on chemotherapy-related nausea and vomiting.	• Women with breast cancer may adopt CAM methods to reduce the side effects of treatment and psychological stress, as well as to achieve a sense of control

Müzeyyen Arslan, RN, MSc, PhD, and Leyla Ozdemir, RN, MSc, PhD 2015		three days of the chemotherapy cycle. No intervention was performed in the control group (n = 30) except for the routine antiemetic treatment		during the treatment. In addition, a sufficient benefit is not gained from traditional medical treatments

DISCUSSION

This literature review provides some informations on the some nursing activites to improve Quality of Life of patients with breast cancer undergoing chemotherapy. The findings can be summarized as follows. Firstly, monitoring Patient's Quality of Life using specific questionnaire. Measuring QOL levels can not only be done qualitatively, but can also be done quantitatively by using the right questionnaire[5,17].

Second, giving the Quality fo Life's exercise/training intervention for breast cancer patient. The physical and psychosocial functioning of breast cancer patients is impaired by the disease itself and the toxicity of treatments, and in parallel their quality of life deteriorates. Some studies carried out in order to find exercise effects have shown that positive biological, psychological and social effects consist of increased functional capacity, decreased nausea, fatigue and somatic symptoms, increased natural killer cells activity; improved body image, reduced depression, anxiety and emotional distress. In addition, it is reported that improved immune system activity, increased blood cells production, increased pain tolerance, improved sleep quality and physical activity are among the other helpful effects of exercise. Thus, exercise is one of the permitted and efficacious strategies for creating such effects[18,19].

Third, giving self healing program. The two articles applied the Buddhist mind and health healing programs by using Four Nobel Truth, the basic framework of all Buddhist learning, scientific and spiritual.Although this contemplative self-healing intervention builds on Tibetan Buddhist tradition and

practice and teaches skills and insights based on the tradition, it does not require patients to adopt Buddhist ideas or to become Buddhists[9,14].

The Buddhist based Nursing Program, is the intervention consisted of raising self awareness, integrating the buddhist prinsiples of the Four Nouble Truth in the care of self, self reflection regrading psychological symptom experiences and the progress of the Buddhist practices. The core of Buddhist teaching is the the Four Noble Truth yaitu sufferin, cause of suffering, way to overcome suffering and cessation fo suffering. The rationale was that women with breast cancer could follow the precepts of Buddhist morality and train to achieve high-level morality (right speech, right action and right livelihood)[7,8,9,14].

Fourth, builiding comprehensive coping strategy program (CSSP). It is important to teach the patient coping strategies prior to treatment and to regularly reinforce these strategies during the course of treatment. Breast cancer survivors also experience many demands of illness across all QOL domains and are in need of comprehensive care and targeted interventions Development of a comprehensive, self-managed intervention is needed, which gives the patient more control over their coping. Self-managed comprehensive coping has the potential to be a cost-effective intervention for patients during active and chronic disease. Effectiveness of these interventions needs to be tested[7].

Fiftly, giving complementary oral intake intervention. Ginger is linked to nausea prevention, though there are limited data about the efficacy of ginger in reducing CINV. Ginger was used in the complementary treatment of hyperemesis gravidarum as a antiemetic medicine[16].

CONCLUSION

Based on the results of this review literature, it was found that five themes of intervention might be additional insights and references to nursing interventions in providing health care services to breast cancer patients undergoing chemotherapy, especially in improving QOL which includes physical health, psychological well-being, social and spiritual relationships. Nurses need to carry out scientific development and skills related to the care of Quality of Life breast cancer patients who undergo chemotherapy, but in implementing these interventions, it is necessary to look back related to regulations / hospital policies, whether

having cancer care units and relating to the legality of licensing the application of interventions . The limitation of this literature review is that the number of articles found is small, many studies have not yet been discussed relating to interventions that can be used to improve the QOL of breast cancer patients undergoing chemotherapy.

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THE EFFECT OF REPOSITIONING USING 30° PILLOW IN RISK OF PRESSURE ULCERON PATIENTS WITH STROKE

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ABSTRACT

Repositioning is an integral part of pressure ulcer management. Every year pressure injurymake a high burden on health financing and this trend is expected to continue increasing by 4% each year. Prevalence of pressure sores is 2,2%-23,9%globally. The incidence rate has not been well documentedin Indonesia, but data from several hospitals show very varied numbers.Positioningpatients using simple pillows that are available. This condition causes problems when the pillow cannot guarantee that the positioned angle can be maintained. This certainly will affect the success of prevention of pressure sores. Need new innovations to provide solutions to these problems.This research was conducted in one of the government hospitals in the central Java of Indonesia with total 32 respondents. The design of this study is quasi-experimental pre-post test with control group where the selection of respondents in this study was conducted random. Braden scale is use to evaluate risk of pressure ulcer.The risk of pressure ulcer of the control group decreased in the measurement with p-value 0,002.Whereas in the intervention group the risk of pressure ulcers decreased significantly at the measurement with p-value 0,002. The results of this study found a significant reduction in the risk of pressure ulcer between the experiment group and the control group after repositioning using 30° pillows with the p-value 0,004. In conclution :30° pillow significantly decrease the risk of pressure ulcer in stroke patients.

Keywords: Pressure ulcer, 30° pillow, braden scale

INTRODUCTION

Repositioning is an integral part of presure ulcer management. Every year pressure injury give a high burden on health financing and this trend is expected to continue increasing by 4% each year[1]. The incidence of pressure injury varies greatly depending on the clinical setting, the highest incidence of pressure sores is in the long-term care unit. Prevalence of pressure sores is 2,2%-23,9%globally[2]. The incidence rate has not been well documentedin Indonesia, but data from several hospitals show varied numbers[3].

Management of pressure ulcer requires a comprehensive approach to understanding the process of overall wound formation[4]. Various guidelines have been issued for the management of pressure ulcer, the guidelines of the National Pressure Ulcer Advisory Panel (NPUAP) and the National Institute for Health And Care Excellence (NICE) are

the most frequently used globally[5]. In various intervention studies that have a level of effectiveness and security they are still uncertain[6]. The high incidence of pressure sores still becomea problem that must be resolved[7–9]. The current condition in most Indonesianhospitals still applying the patient's repositioning technique every 2 hours with an angle of 30°, the positioning of patients using simple pillows that are available[10]. This condition causes problems when the pillow used cannot guarantee that the positioned angle can be maintained. This certainly will significanly affect the success of prevention of pressure ulcer. Need new innovations to provide solutions to these problems. In other research, Althea compared the effectiveness of using regular pillows and specifical designed pillows to reduce the pressure that occurs on the heel. The nurse has difficulty in positioning the heel of the patient using a regular pillow. Nurses find it difficult to ensure the patient's position is well maintained during the repositioning period[11].

METHODOLOGY

This research was conducted in one of the government hospitals in the central Java of Indonesia. The research respondents were split into two research groups, control group and intervention group. Each group consisted of 16 respondents based on Lemeshow calculation formula. The design of this study used quasi-experimental pre-post test with control group, respondent selected randomly. This study consisted of three stages, the measurement of the pretest, the intervention phase, and the posttest measurement stage. The repositioning control group was carried out according to the standard of the hospital where the study was conducted, repositioning using regular pillows, while the intervention group was carried out using 30^o pillows. Each group was assessed for risk of pressure ulcer with braden scale on sixth day as the last day of the study.

ETHICAL CONSIDERATION

This study has received ethical approval from the medical faculty ethics commission ofDiponegoro University with numbers 591/EC/FK-RSDK/IX/2019 issued at September the 19th 2018

RESULTS AND DISCUSSION

Result

The results obtained in this study were that both groups experienced a significant reduction in the risk of pressure sores. The risk of pressure ulcer of the control group

decreased in the measurement with p-value 0,002. This result is caused by the measurement of nutritional scores showing the mean value of pretest rank of 1,75 changed to 2,68 with p-value of 0,024 in measurement. Whereas in the intervention group the risk of pressure ulcers decreased significantly at the measurement with p-value 0,002. This result is due to the measurement of the humidity score showing the mean value of Pretest 1,69 changing to 3,69 with p-value of 0,000 on the measurement.The results of this study found a significant reduction in the risk of pressure ulcer between the intervention group and the control group after repositioning using 30^{o} pillows, with the p-value 0,004. The measurement results on changes in the braden scale of this study show that humidity is the only score that changes significantly, with p-value 0,000.

Discussion

Pressure ulcer, bed sores, or pressure sores are tissue damage that is located due to excessive pressure that occurs in certain areas that have not been repositioned[12]. National Pressure Ulcer Advisory panel (NPUAP), states that pressure ulcer are local tissue necrosis which tends to occur when soft tissue is compressed between the bonycompromise and the external surface for a long time[13].Other research find that stroke patients at risk of experiencing hemiparesis, where the condition causes a decrease in ability to change body position. Hemianaesthesia and hemiinatensia that affect the ability to localize pressure, disphasia and confusion that hinder patient communication when pain occurs. Elderly people who have a stroke have a higher risk of developing jug pressure ulcers due to increased skin weakness during the aging process[14]. The results of this study are similar with the previous research that mentioned patients with strokes experience impaired mobilization, malnutrition, dehydration, urine and fecal incontenesia are factors that increase the risk of pressure ulcer[14]. The results of the category of pressure ulcer risk in this investigation also corroborate previous studies that the risk of repositioning respondent every 2 hours are almost the same between high risk (braden scale 11-14) with very high risk (braden scale 6-10)[10].Other research uses standard hospital pillows that are commonly used by patients in hospitals to reposition patients. The results of the research mention repositioning 30^{o} provides various benefits, increasing tissue blood circulation and decreasing the pressure received by skin tissue. These various mechanisms have an impact on the reduction of the risk of pressure ulcer[15]. Another study examined the effect of blood circulation on the occurrence of pressure ulcer, the results of his study stated that blood circulation is an important factor in the formation of

pressure ulcer, the decrease in tissue blood circulation increases the risk of pressure ulcer[16].The other research mentioning braden score analysis in 39% of patients in hospitals with cerebrovascular disorders was found with very limited mobilization, mostly humid, very limited sensory perceptions, and experiencing problems with friction. In the same study, it was explained, patients with stroke have good nutritional scores, this could be because patients are still in an acute condition where they still have good nutritional conditions or are using the use of nutritional support device[17].

Nutrition plays important role in the occurrence of pressure ulcer, the condition of lack of nutrients causes muscle damage and loss of soft tissue tissue.30º Pillow is considered capable of being one of the choices in solving existing problems in prevention of pressure sores. Research conducted by states that health workers do not care how effective the repositioning technique is used, this is because prevention of pressure wounds is not always successful. It is very important to eliminate pressure in areas that are susceptible to pressure sores, but the repositioning technique itself needs improvement[6].

Other research who examined the effect of age on skin conditions, show the results that friction and shear of skin in skin tissue increases with aging and moist skin conditions. The results of this study reinforce previous research which stated that humidity is a risk factor that causes the occurrence of pressure sores in the elderly[18].

In a study conducted by stating that patients not always feel comfortable while in bed, and repositioning 30º is also difficult to maintain[9]. Other studies find that elderly patients who experience immobile perform spontaneous movements between nurses self repositioning but the angle is very varied, this condition causes the repositioning angle of the patient difficult to be maintain at the optimum angle and decreases the success of prevention of pressure ulcer[9].

The 30º pillow uses cotton fabric as coverfor polyethylene foam inside. The older research was conducted by examining the effect of textile products on the occurrence of skin tissue damage. This study found that immobile conditions were a significant factor that caused skin damage and pressure sores. The immobile conditions cause long interactions between the skin and textile products, this condition increases the risk of skin damage[19]. Other studies examining the effect of using fabric on prevention of pressure sores. The result stated that cotton increase comfort by absorbing moisture[20] .

Table I Distribution of age

Age	M	SD
Control group (n=16)	54,50	4,211
eksperimental (n=16)	53,94	4,187

M = mean score, *SD* = standard deviation

Table IIComparation Risk of pressure ulcerbetwen pre-post test

	Control Group (n=16)			Experiment group (n=16)		
	M	**SD**	***P***	**M**	**SD**	***P***
Pretest	8,88	1,821		9,06	1,340	
Posttest	10,25	1,528	0,002	12,00	1,506	0,001

M = mean score, *SD* = standard deviation

Table IIIComparation Risk of pressure ulcer betwen control and experimental group

			N	***MR***	***P***
Risk of pressure ulcer	Control	Pretest	16	15,91	0,715
	experimental			17,09	
	Control	posttest	16	11,78	0,004
	experimental			21,22	

MR= mean range score, *SD* = standard deviation

CONCLUSION

Our findings reveal that risk of pressure ulcer both of groups has decreased significanly. Measurement of braden scale show nutrition score decreasing significanly For control group, and humidity decreasing significanly for experiment group. Comparation between control group and experiment group show that risk of pressure ulcer decrease significanly when using 30º pillow. In conclusion, 30º pillowsignificantly decrease the risk of pressure ulcer in stroke patients.

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DISCLOSURE

No conflict of interes.

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STRESS AND CAREGIVER'S BURDENS EXPERIENCE OF SUICIDE BEHAVIOR CLIENT WHO OBTAIN FAMILY PSYCHOEDUCATION IN THE AFFACTED AREAS OF TIDAL FLOOD: A CASE REPORT

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ABSTRACTS

Caregiver is a member of family who has a role to take care the client. The role as caregiver can trigger the psychosocial problems such as stress and burdens affecting the health and quality of caring to the client, especially caregivers who care for client of suicide behavior in the tidal flood area. The purpose of this study was to observe the experience of stress and the burden of caregivers with suicide behavior client who obtained family psychoeducation in areas affected by tidal flood. The method of this study used a case study / single case design by exploring one case in depth. The case showed that the client was cared for the wife as primary caregiver. Caregiver felt confused, anxious, bored, embarrassed, sad, afraid, and socially stigmatized. Caregiver was not comfortable caring the client with tidal flood conditions. The most serious burden of caregiver was the economic burden, the burden on the client future, and the burden of the inconvenience felt by caring for client in areas affected by tidal flood. Family psychoeducation conducted on caregiver that caring client of suicide behavior in areas affected by tidal flood had an impact on reducing stress and burden. However, not all stresses and burdens could be resolved such as worries about the future, economic burden, and physical environmental problem. The FPE implementation is too short. Therefore, FPE in caregivers in the tidal flood area requires a relatively long time and requires a special approach, such as by increasing the productivity of families and clients to improve economic status and mobilize families to obtain appropriate health services.

Keywords :*Caregiver Stress and Burden, Family Psychoeducation, Tidal Flood*

INTRODUCTION

Suicide behavior is a serious mental disorder in individuals who end their own lives (O'Connor and Nock, 2014). Suicide behavior is carried out by clients who have a history of self-harm, feeling guilty, low self-esteem, depression, and family history of suicide (Large, Smith, Sharma, Nielssen, & Singh, 2011). Clients with suicide risk behavior need to be prevented and managed properly, so that the client does not repeat it. Prevention and management of client suicide behavior at home can be done by presenting caregivers who can care for clients at home, including clients with chronic diseases (Merriam Webster, 2012).

Caregiver is someone who can treat voluntarily or paid for both from his own family members or not from his own family members (Sukmarini, 2009). Caregiver from his own family member such as husband/wife or children who have grown up can carry out their role in caring for and resolve client health problems (Wenberg, 2011). The caregiver in this case is part of the core family member who cares for and lives one house with the client.

In addition to being required to be able to resolve client health problems, Caregiver also needs to adapt for the stresses and burdens experienced while caring for clients so that the caregiver's role can be carried out properly. The adaptation efforts include biological, psychological, social and spiritual adaptation (Muhlisin, 2012; Harnilawati, 2013; Luthfa, 2018). Biological adaptation aims to maintain the caregiver's physical health due to routine caring for clients. Psychological adaptation is carried out to increase acceptance of client conditions related to length of care and client conditions. Social adaptation is carried out to balance social roles and caregiver roles (Luthfa, 2018). Caregiver's adaptation ability is considered important in supporting the implementation of caregiver roles.

Caregiver who is unable to adapt effect a decrease in the quality of care provided to the client, including the influence caregiver's support (Harnilawati, 2013). In fact, caregiver support is proven to accelerate the healing of clients (Seeman et al., 2013). In addition, caregiver support is also a source of strength for client recovery (Tempier et al, 2013). However, giving caregiver support is hampered because they feel the burden in caring for clients.

The burden felt by caregivers includes physical, psychological, social and economic burdens (Darwin, Hadisukanto, and Elvira, 2013). The perceived physical burden is fatigue, dizziness, sleeplessness, and tension. The psychological burden that is felt includes feelings of shame, anger, pressure, helplessness, and despair. Social and economic burdens include changes in roles, changes in social activities, and economic changes due to inability to work (Anneke and Endarwati, 2009; Luthfa, 2018). These burdens make a psychosocial impact on caregivers which includes stress, anxiety, and the increasing burden that was previously felt.

Psychosocial problems experienced by caregivers were increasingly aggravated due to uncomfortable environmental conditions due to tidal flooding. Tidal

flooding is the process of rising and falling sea water which results in inundation in coastal areas (Suryanti & Marfai, 2008). Tidal floods cause physical and psychological impacts. Physical impact in the form of damage to homes, the environment, and various physical ailments. Some physical diseases include skin disease, diarrhea, and pulmonary TB. While the psychological impact of increasing anxiety and decreasing coping abilities. These impacts can last a long time and are experienced by all affluent groups (Stanke, C., Murray, V., Amlỗt, R., Nurse, J. O. & Williams. R, 2012). Caregiver who lives in the tidal flood area with clients besides being able to experience psychological problems due to his role can also be affected and experience physical and psychological problems. Therefore, the stress and burden experienced by these caregivers need to be managed properly.

Mental nursing is a form of professional nursing service that focuses on maladaptive psycho-social responses due to bio-psycho-social disorders through the provision of mental nursing therapy. One of the therapy is Family Psychoeducation (FPE) for families. Family Psychoeducation is given to families, especially caregivers because FPE can increase family knowledge and abilities in caring for clients, improve family adaptive coping, and deal with psychosocial problems experienced by families by reducing burden, stress, and anxiety (Wardaningsih, 2007; Maldonado, JG & Uri zar AC, 2007; Pahlavanzadeh et al, 2010; Gozales, 2010; Mulia, Keliat & Wardani, 2017).

Family anxiety with family members that suffering stroke decreased and family psychosocial support increased after being given FPE (Nurbani, 2009; Rahayu, 2011). Similarly, when the FPE is given to families with family members whose schizophrenia has been proven to reduce anxiety, improve ability in client care, accelerate healing, prevent recurrence, reduce caregiver burden, and be able to help overcome psychosocial problems faced by caregivers (Maldonado and Uri'zar, 2007; Pahlavanzadeh at al, 2010; Gonzales, 2010; Yadev and Kar; 2014).

Giving FPE to the family has been carried out in many previous studies. However, no study has discussed in depth about the success achieved in giving FPE to client caregivers of suicide behavior, especially in the areas affected by tidal flooding. The implementation of caregiver roles and tidal flood exposure further aggravates the psychosocial problems faced. Therefore, the authors are interested in writing case

reports about experiences of stress and the burden of caregiver clients on suicide behavior who obtain FPE especially in the areas affected by tidal flooding.

METHODOLOGY

The writing method used a case study. The author used a prospective case study to find trends and direction for the development of a case. The author used a single case design which was focused intensively on analyzing one case of client suicidal behavior in the area affected by tidal flood. The subjects studied from the case was caregiver who received FPE who treated suicide clients in areas affected by tidal flood. Data was obtained directly qualitatively from caregivers who treated clients with suicidal behavior for a period of 4 weeks.

CASE DESCRIPTION

A man (44 years) lives in one of the villages in Pekalongan Regency which is affected by tidal floods. A man has got a history of mental disorders since 10 years ago. The results of home visits on February 2, 2019 obtained the data that the client had attempted suicide by stabbing his stomach with a knife. According to the client's statement this was done because he felt dizzy and depressed about the family situation. When the writer visited, the condition of client was cooperative, there were no complaints related to his mental disorder. However, the client did not want to consume medicine because he thought he had recovered and had no complaints.

The meeting of the writer with the caregiver, namely the wife, obtained data from the caregiver who felt confused, anxious and bored with the client's condition. In addition, the caregiver was also afraid if one day the client relapsed and returned to suicide. Caregiver also felt uncomfortable giving care to clients with flood conditions. The Caregiver felt that caring for herself alone finds the difficulties even more to care for the client. Caregiver has tried to treat clients even though they have to debt with neighbors. Caregiver felt the economic difficulties because of limited time to work, clients can’t work anymore, exacerbated by the tidal flood, caregivers often having difficulty reaching workplaces and often no work. Caregiver no longer knows how to care for clients. The client didn’t want to seek treatment again because he felt that he was cured, even though the doctor asked to continue to take medication regularly. On the other hand, caregivers felt embarrassed and

saddened by the stigma that arises from their neighbors. Caregiver is considered unwilling and unable to care for her husband. Caregiver also found the difficulty to reach health services. Finally, the caregiver did not want to bring her husband to treatment because of economic limitations, the unwillingness of the client to take medication, and feeling disappointed with his neighbors.

Nursing intervention given to caregivers are identifying the causes of problems that arise, practicing positive affirmations, exercising involvement in decision making, and utilizing situations that can still be done. In addition, other nursing actions that focus on the family given are FPE.

DISCUSSION

Suicide cases in people with schizophrenia are cases that require the immediate management. Clients with a history of suicide behavior treated at home must ensure that the condition of the client, family and environment is physically and psychologically safe. This is because suicide can occur, one of which is influenced by sociocultural factors (Rujescu, 2012). Therefore, the family as the closest system to the client has an important role in the care of clients with a history of suicide behavior, as family caregiver.

Caregiver in the family is expected to care the clients both physically and psychologically (Davidson, Gerald, Neale, Jhon, and Kring, 2012). Although, caregivers care to clients also often experience physical and psychological problems (Kadarman, 2012). The problem occurs because the family is an open system that influences all family members in it when there is a change in one family member including the condition of a sick family member (Goode, in Nainggolan and Hidajat, 2013). The consequences of the problems experienced by the caregiver caregiver didn't feel maximal in providing care to clients. However, she still tries to provide routine treatment to clients, even with economic limitations. This is in line with the results of a study that states that family members as caregivers will mostly try to provide optimal long-term care when clients are at home (Kane, Robert, and Ouellette, 2011). Nevertheless, these conditions also led caregivers to feel the effort he did was in vain on certain conditions

The Caregiver felt in vain when the effort that has been made to provide the drugs

needed by the client, in fact he didn't want to drink it. The Caregiver ultimately chose to leave the client's condition rather than trying things that were not in line with the client's efforts to take medicine. Caregiver really wants the client to recover, but there is powerless to make the client want to take the medicine he needs.

Powerlessness is a situation where individuals have negative beliefs about problems and the inability to find a way out of the problems they face (Wenzel, Brown and Beck, 2009). The caregiver's powerlessness is caused by perceptions and feelings of guilt and inability to provide optimal care (Anneke and Endarwati, 2009; Wilkinston, 2012). The powerlessness experienced by caregivers in cases other than because of the client's condition is also due to stress and the burden that is felt due to caring for the client and the condition of the tidal flood.
Tidal flood affect the damage to homes, the environment, and the emergence of various physical ailments, thus increasing anxiety and decreasing ability family coping strategies. These impacts can last long and are of all ages (Stanke, C., Murray, V., Amlỗt, R., Nurse, J. O., and Williams. R, 2012). The caregiver in the case experiences felt of confusion, anxiety, and boredom in caring for the client. Caregiver also felt embarrassed, saddened by social stigma, and felt afraid if one day the client relapsed and returned to suicide. Caregiver also felt uncomfortable giving care to clients with tidal flood conditions.

Caregiver said that tidal floods made him and his family experience limited access. Access to health services and access to employment is limited. Access to getting limited jobs makes caregiver more difficult to meet their economic needs. So that these conditions increasingly support caregivers not to bring clients to hospitals or health centers even more make caregivers feel powerless.

Feelings of powerlesness arise when someone feels a loss of sources of strength, control in life, and fear in life (Lubkin & Larson, 2009; Aujoulat, Luminet, & Deccache, 2007). The condition of stress and the burden felt by caregivers for a long time made caregivers feel changes in comfort, fear, and changes in identity. It has an impact on dependence and caregiver involvement in decision making. The Caregiver didn't give an opinion about the client's treatment because according to him the client was able to decide on his own, so the caregiver gives full to the client about his treatment. This is in accordance with Pereira et al. (2014), Wilkinston (2012), and Braga & Cruz (2009) which state that helplessness

can influence the client's involvement and thinking.

Perception of stressors is very closely related to the assessment of stress that occurs. Caregiver unconsciously interpreted negative experiences in caring for clients so that caregivers felt there was not much that could be done to help clients recover. Caregiver is unable to utilize internal sources and family external sources such as self-ability, potential other family members, and community support in dealing with problems. Caregiver is unable to fulfill the demands of the role and solve the problem because the caregiver is unable to achieve balance in the reciprocal relationship between caregiver and client. Therefore, feeling tired of facing a difficult situation and helplessness makes the caregiver want to end the burden that is felt maladaptively by letting the client in ill condition even the caregiver is emotionally ready to accept the client's death due to his illness.

Nursing interventions carried out on caregivers, namely studying the causes of helplessness, providing health education about helplessness, teaching how to overcome helplessness with positive thinking exercises, teaching caregivers to make decisions and take advantage of situations that can still be done, spiritual support such as motivation to pray, dzikir pray on time, identify other family members and social resources that can be utilized, and utilize the nearest health and health services (McCubbin, Larsen, & Olson, 1987; Carpenito, 2013).

The results of nursing actions by providing education, training to change negative perceptions, and involvement of caregivers are efforts to change cognitive, behavioral, and social responses. Cognitive response is the source of the process of individual adjustment to circumstances that have an impact on decision making on how individuals must react psychologically, behavior, and socially (Stuart, 2013).

Care for caregivers with these actions is felt by caregivers not change much and overcome the problem, because caregivers had a perception of health and illness was very dependent on the availability of money to seek treatment and maintain health itself. Caregiver revealed that in addition to healing clients, caregivers also hoped to live comfortably and properly, be free from flooding, and be able to meet the family's economic needs.

Based on the conditions experienced by caregivers who experience increased stress and burden, and the expectations of caregivers who want a comfortable life,

the authors applied FPE as additional nursing therapy that could be used to address caregiver problems. Family psychoeducation is given to families who experience stress, stress, chaos, dependency that continues continuously so that it causes inappropriate adjustments to existing conditions (Shives, 2012). In addition, FPE is also proven to reduce signs of helplessness, improve the ability of clients and families in overcoming helplessness and self-care clients (Niman et al, 2014).

Family psychoeducation in the caregiver was given five meeting sessions. However, the implementation of FPE in this case report uses three meeting sessions which refer to the latest research, namely Mulia, Keliat and Wardani (2017). The author modified the contents in each session according to the purpose of family psychoeducation therapy for family members with suicide behavior. Modification was carried out by changing the contents into psychoeducation therapy aimed at clients with suicide behavior, such as client problems with suicide, caregiver problems treating clients suicide behavior, stress and burdens faced in treating clients suicide behavior.

The implementation of FPE session one obtained results that the caregiver was able to identify the problems faced by the client and himself. The caregiver's problems included feeling confused, anxious, bored in caring for clients, embarrassed and sad because of social stigma, afraid that one day the client will relapse, be uncomfortable due to tidal flooding, and have difficulty accessing health and work services. This is in line with the results of previous studies. Families as caregivers who care for schizophrenic clients have been shown to experience psychological disorders while caring for clients, reduce caregiver's quality of life, and reduce the quality of care to clients (Mitsonis, et al., 2012; Shah, et al, 2013). Psychological disorders experienced can be stress, low self-esteem, depression, decreased social interaction, and anxiety (Cabral et al., 2014).

Caregiver had positive expectations for the client's recovery and his problems were quickly resolved even though he feels it is difficult to control the problems that arise. In addition, at the session one caregiver also revealed that he was able to provide care to clients independently. Caregiver has tried to provide optimal care in accordance with the caregiver's limits. However, this session the author provides information about how to care for clients with a history of suicide behavior by securing the environment from dangerous

objects, inviting clients to discuss positive things about themselves and supporting clients in activities, and regular treatment. Family psychoeducation in session one is able to provide opportunities for families to express feelings and share experiences and information (Herminish, et al, 2017).
The obstacle faced by the caregiver in session one was that the caregiver felt unsure of being able to carry out the treatment as recommended. Caregiver felt insecure about being able to motivate clients by looking at the flood conditions and also the condition of clients who did not want to take medication. However, the obstacles faced further reinforce that the second session of FPE needs to be implemented.

The second family psychoeducation session was given a focus to overcome the stress experienced by caregivers. Stress management is given by deep breathing relaxation techniques, physical muscle relaxation (PMR), and dzikir. Stress management needs to be given to caregivers because it is proven to be able to manage the psychosocial impact experienced by caregivers (Jewell et al., 2009). The results were obtained that the caregiver felt more controlled stress. Changes in stress scores are measured simply by using a scale of 1-10 indicating a change in the initial scale 9 to be on a scale of 4.

Stress management that can be done by caregivers is deep breathing and dhikr techniques. The Caregiver said it was difficult to do PMR because the procedure was more complex and needed a long time. The caregiver also said that it was not supported by flood conditions so that caregivers did not get a comfortable environment for conducting PMR.

A third family psychoeducation session was conducted to manage the burden felt by caregivers. Family expenses arise as a result of the existence of sick family members (Pityasari, 2009). Expenses must be managed properly. This is because the excessive burden will be felt by the family as a manifestation of economic demands and a short time in care, social stigma, dependence on clients with family, patience in dealing with clients' emotions, and decreased productivity in families (Masitoh, Asiyah, and Sholihah, 2014). In addition, the perceived burden will also affect the treatment of clients which can result in recurrence and worsening conditions (Kaplan and Sadock, 2010).

The author discusses with caregivers about supporting resources in the family that can be used to share burdens such as children,

neighbors, and health cadres. Load management is found that the economic needs will be assisted by children. The need for access to health services will be assisted by children and neighbors who still want to help or health cadres. In session three it also had a positive effect on the family because the family felt that through FPE all problems and complaints could be conveyed.

The caregiver burden that is felt to be the most severe is the economic burden, the burden on the client's future, and the burden of the inconvenience felt by caring for the client while being affected by the tidal flood. Family psychoeducation has been shown to reduce objective and subjective burden (Herminish, et al., 2017). However, caregiver felt insecure with the conditions of uncertainty faced in the future.

Family psychoeducation conducted by caregiver clients of suicide behaviors in the affected areas is felt by caregivers to reduce psychosocial problems faced by clients and caregivers. However, not all psychosocial problems can be overcome such as worries about the future, economic burdens, and physical environmental problems. It was caused the implementation of FPE is considered too short.Caregiver felt the benefits of FPE were reducing stress, worries about the client's condition, and the physical and social burden experienced by caregivers. Therefore, the implementation of FPE in these cases requires an approach that can optimize the role of caregivers and other family members so that all problems that arise can be resolved.

Family psychoeducation can be given in this case with modification of load management. This modification can be done by optimizing the caregiver talents who can make money such as making economic value skills and mobilizing social rehabilitation in the family for clients. The hope of the FPE writer with an approach to increasing family and client productivity can improve the fulfillment of economic needs that can affect health status. In addition, the implementation of FPE in families in the tidal flood area requires a long time.

CONCLUSSION

Family psychoeducation can be given to families as caregivers of schizophrenia clients, especially suicide behavior in the environment affected by tidal flooding. However, the implementation of the FPE needs to modify the content especially in

the load management session where the dominant burden that is felt is concern about the future, economic burden, and physical environmental problems. Poverty is a caregiver's reason to find it difficult to provide care to clients such as doing routine treatment. In addition, environmental conditions with tidal floods make it difficult for families to get access to health and work. Therefore, FPE with an approach to increasing family and client productivity needs to be done to improve economic status and mobilize families to obtain appropriate health services.

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THE ASSESSMENTS OF DELIRIUM PATIENTS IN ICU ; A CONCEPT ANALYSIS

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Abstract

Delirium is characterized by the changes of mental status, consciousness level, as well as acute and fluctuating attention frequently encountered by patients in ICU room. This condition lengthens the stay period (LOS) which causes the raise of treatment cost, slows the functional recovery down, and increases the morbidity and mortality rate. Those all disadvantage the patients, families, and the hospitals.This article aims to find out the sensitivity and specificity of Tools CAM-ICU, ICDC, and Nu-DESC to assess delirium patients in ICU room which is pertained to analytical concept of Walker and Avant covering to find and define attribute, to identify case model, to identify antecedents and consequences, and to identify empirical reference dealing with delirium patients. Case model is taken by identifying sensitivity and specificity of each delirium assessment tool.

Keywords: delirium, CAM-ICU, ICDSC, Nu-DESC, analysis concept

Introduction

Delirium is characterized by the changes of mental status, consciousness level, as well as acute and fluctuating attention frequently encountered by patients in ICU room. This condition lengthens the stay period (LOS) which causes the raise of treatment cost, slows the functional recovery down, and increases the morbidity and mortality rate.(3,4) Delirium often occurs in patients treated in ICU room or elderly aged more than 65 years old.Studies in some countries show that there is an increasing number of delirium incident. Researches in Saudi Arabia and Germany showed the number of delirium incident as much as 80%, while in Norway, the number rose to 89% of the total of patient (3,5,6). In Indonesia, 37% patient in ICU room suffers delirium (2). This is predicted to climb considering many patients are not diagnosed delirium (7).

Previous research showed 32% patient was not diagnosed delirium, whereas only 25% of 80% delirium patient in Germany got precise medication (2,3)(3). It shows difficulty in recognizing delirium in patients as it is often accompanied by another disorder like dementia in elderly, also clinical factor like mechanical ventilation use that cramps patients to communicate verbally (8). Besides, in regard to nurses,the previous research also showed only 77% nurse knew about delirium, and only 5.6% nurse performed delirium examination consistently towards patients (7).

Based on those problems, a solution to ease early detection and to assess delirium disorder is required. *Confusion Assessment Method-Intensive Care Unit* (CAM-ICU), *Intensive Care Delirium Screening Scale Checklist* (ICDSC) and *The Nursing Delirium Screening Scale* (Nu-DESC) are tools that can be used to assess delirium suffered by patients.

The Definition and Benefit of Delirium Patient Assessment in ICU Room

Delirium is defined as a condition in which someone undergoes mental status changeoccurred acutely or in fluctuation which is accompanied by declining consciousness, attention and thinking ability (5,9). Another definition states that delirium is also called as syndrome pertained to attention and concentration confusion (*Acute confusion state)* and often occurs in elderly (2). Patients may look weak and apathetic or agitated and easily stimulated.

Handling and treating delirium patients must be done early by determining the cause factor. To begin with, determining cause factor as well as family and closest person can be done to prevent more complex complication. In addition, delirium treatment is conducted in pharmacology and non-pharmacology ways. Non-pharmacology intervention covers reorientation and intervention towards patients' behavior, mobilization reinforcement, sleep patternmaintenance by providing comfortable and sedate room, drinking warm milk, listening to classical music and massaging back can be given when patients feel hard to fall asleep.

The effects of untreated delirium patients are some treatment problems namely (10): 1. Longer Length of Stay Period 2) Rising Treatment Cost 3) Death 4) Permanent Delirium 5) Longer Patient Recovery Process

Defining Attributes

It is defining attributes in assessing delirium patients. The tools to define are

Confusion Assessment Method-Intensive Care Unit (CAM-ICU), Intensive Care Delirium Screening checklist(ICDSC), and The Nursing Delirium Screening Scale (Nu-DESC).

a. CAM-ICU is an instrument to detect delirium briefly in delirium patients with or without installed mechanical ventilation (8,11). This instrument focuses on patient acute mental change, fluctuating patient consciousness, and disoriented patient of thinking organization (5). The early step of CAM-ICU measurement is performed by measuring the consciousness level and sedation depth of patients using *Richmond Agitation-Sedation Scale (*RASS) and then continued by further examination which is more complex (11). The CAM-ICU instrument consists of questions about the existence of 1. *Acute Change or Fluctuating Course of Mental Status, 2. Inattention, 3 Altered Level of Consciousness(LOC), 4. Disorganized Thinking.*

b. ICDC is an instrument which also evaluates patient consciousness response, lack of attention, disorientation, hallucination, psychomotor activity, sleep disorder, verbal communication disorder, and fluctuation signs (8). Pertained to previous research,ICDSC had the same sensitivity level as CAM-ICU (99%), yet it had lower specificity level that was 64% (8). This shows that ICDSC is an instrument which can be used to assess delirium patients. This instrument contains 1. *Altered Level of Consciousness (LOC, 2 Inattention, 3. Disorientation, 4. Hallucination, Delusion, or Psychosis, 5. Psychomotor Agitation or Retardation, 6. Inappropriate Speech or Mood,7. Sleep-Wake Cycle Disturbance, 8. Symptom Fluctuation.*

c. Nu-DESC is an instrument which is able to detect or determine delirium patients by assessing the changes of status and fluctuation in patients (12). This instrument is developed by nurses because they are beside patients for 24 hour. Nu-DESC is simpler instrument, easy to use, but it has not been validated and examined in nursing area of study. Nu-DESC consists of *1. Disorientation, 2. Inappropriate Behavior, 3. Inappropriate Communication, 4. Illusions/Hallucination, 5. Psychomotor Retardation.*

Model Case

Model Case is one of concept attribute definitions explaining daily case.

Here is the example of delirium patient case in the field.

Model Case:

Mr.X is treated in the intensive room with medical diagnose CHF, edema lungs and breathing failure. His condition is weak, somnolentconsciousness, installed Et and ventilator mode SIMV, FiO2 50%, RR 12x/Mnt, PEEP 8, Pressure support 15. He feels agitated when retrain is done. Roche right and left lung of hemodynamic patient TD 150/110 mmHg, SPO2 88 %, body temperature 36,5 Celsius, HR 120x/Mnt. He is treated on the second day.

Related to above patient condition, delirium assessment needs to be done. If this condition is ignored, it can cause longer length of stay and raise hospitalization cost (3). There is a possibility of permanent delirium. When the patient is home, delirium affect will appear and take him long to recover. Delirium assessment can be performed by tools CAM-ICU, ICDSC or Nu-DESC(10).

The availability of delirium tools must be accompanied by standard operational procedure which is rarely found in hospitals in the present. Nurses' knowledge about the importance of delirium assessment needs to be concerned in which nurses understand about delirium and have ability to use delirium assessment tools.

Contrary Case

Contrary case is a concept showing what if the concept is not used as how it should be.

In the above case, Nurse A sees that patient feels agitated so she conducts restraint. The patient is so worried about his survival that he rebels and wants to remove all installed equipment like endotracheal tube, NGT, or folleycatheter.The nurse also feels more worried if patient removes all equipment, she then installs the restraint stronger. In this case, the nurse does not know how to assess delirium patient so she does not know how to handle this patient. Conversely, when nurse B sees this patient condition, she performs delirium assessment and finds that the patient suffers delirium. Then she collaborates medical pharmacology and non-pharmacology treatments to handle the patient. She conducts patient reorientation, behaviorintervention, patient sleep pattern maintenance, sedate and comfortable room arrangement, music/Al-Quran reading therapy, back massage and others (1).

Antecedents and Consequences

Antecedents are events or incidents before the existence of the concept itself or the ancestors of the concept itself (

Walker&Avant, 2010)(13). The antecedents of delirium patient are physical illnesses, alcohol consumption, dehydration, head trauma, electrolyte malnutrition, sepsis, hospitalization. Those all cause imbalance neurotransmitter in central nerves system (CNS) so that patients suffer delirium.

Consequences are the consequences of events as the result of certain concept (Walker&Avant). The consequences of delirium assessment are that nurses have to understand about delirium, know how to assess and handle delirium patients (14).

Empirical Referents

Empirical referents relate to measuring a concept to find out whether it is applicable in real life or not (13). Identifying measurement tools to assess delirium patients by using CAM-ICU, ICDSC, Nu-DESC determines whether those tools can be used to assess delirium patients in ICU room or not. Empirical referents are definitely proved by doing research. The research results that measurement tools CAM-ICU, ICDSC and Nu-DESC have high sensitivity and specificity. Thus, they are usable in real life and the result is measurable.

Discussion

Delirium patient assessment is necessary. The effects if it is not conducted are the longer LOS and treatment cost raise. They give inferior impacts on patients, families, and hospitals. Nurses' knowledge of delirium and ability to treat delirium patients are still insufficient. A research in England found that 77% nurse knows about delirium and only 5,6% assesses delirium in patients constantly (7).To assess delirium patients, tools are needed. Some literatures state that CAM-ICU, ICDSC and Nu-DESC are three tools used frequently to assess delirium patients.Those tools have high sensitivity and specificity. A research in Japan found that the sensitivity and specificity of CAM-ICU were 97% and 97% respectively, whereas ICDSC were 94% and 91 % respectively (11). Another research in America found that Nu-DESC sensitivity was 95% and specificity was 98% (12). However, it is necessary to choose which of them is the most appropriate with patient condition in ICU room in Indonesia.

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FAMILY PARTICIPATION IN CARING CRITICALLY ILL PATIENTS IN THE INTENSIVE CARE UNIT: A Concept Analysis

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ABSTRACT

Family participation is a participation of family members in caregiving to their hospitalized family members in the intensive care unit. The implementation of family participation has been a debate for the caregivers. One concept can be used to apply the family participation during the treatment. The purpose of this study is to analyze the concept of family participation based on the strategy of concept analysis of Walker and Avant, covering antecedent identification, attribute definition, consequence, empirical reference, and case study relates to the concept. The concept of family participation can give a vivid description in the research and nursing implementation so that it can present positive outcomes for the patients and family members during and after the treatment.

Keywords: family participation, concept analysis, intensive care unit

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INTRODUCTION

Concept analysis is a method employed to identify a concept which is frequently used in the nursing practices and literature. A concept can be applied if it is implemented in a proper identification, so it can give a contribution to the knowledge development. Nurses commonly involve family members in caring patient. However, they basically do not have a clear concept in doing such actions. Regarding to this, the purpose of this study is to analyze the concept of family participation by using a framework of attribute definitions, antecedents, consequences, and model cases. [1]

A concept analysis of family participation will give perspectives about a

conceptual model of family participation in conducting some actions for a research and nursing application. Therefore, family participation conceptual model can be used as a framework to develop and examine the family participation both in the research and nursing application in order to get positive outcomes.

THE DEFINITION AND THE BENEFITS OF FAMILY PARTICIPATION

Family participation is defined as a family involvement mentally and emotionally to achieve the goals in managing a kind of activity in active and responsible ways to individuals, both in a sick or healthy condition. [2] Family participation is defined as a care form which points out that if a family member is sick, it will subsequently affect to the well-being of the family.[3] Family participation is defined as a participation of family members in an activity of caregiving to both individual and family members, during a sick and healthy condition.[4] With this regard, the nurse attendance is vital for the implementation of family participation in caring the patient at the hospital.

Nurses have limited information and knowledge about family participation in caregiving. Furthermore, family participation in caring the patient in the intensive unit is still a debate since there is a visiting hour policy for the hospitalized patients to the family members. [5]

Family participation in caregiving applies a concept of involving family members in a treatment of the hospitalized patients both in active and passive ranges.[2] A concept analysis in giving an understanding about family participation is still debated topic. Family participation has been developing in countries which applied Family Centered Care (FCC). In Indonesia, FCC is only applied in the form of giving information, accepting information, and representing family members in giving an approval in one medical treatment. Family participation in the nursing treatment has some advantages both for the patient and family member. Therefore, there should be some mutual understandings between service providers in considering the family participation in intensive care unit, in order be obtain satisfactory service outcomes for both patients and family members.

REVIEW OF THE RELATED LITERATURE

Family participation has become a booming topic which mostly discussed by international boards and institutions, yet the concept about family participation is still debated. One study provided a result

that family participation gave positive outcomes to family members and patients, by showing the high degree of satisfaction.[6,7] In order to understand the advantages of family participation, it needs a conceptual clarification based on the attributes, antecedents, and consequences, which are vital elements of conceptual model of family participation.

FAMILY PARTICIPATION ATTRIBUTES

Family participation has five ranges in its applications, starting from passive participation until active participation. The five ranges of family participation cover; 1. Attendance of family members in the patient's bedside; family members are present in the patient's bedside without giving any treatment, family members are only accompanying patient on the bed. In this case, family members are present when patient gets invasive treatment or resuscitation cardio pulmonary.[8] 2. Family members get treatment or an appreciation from officers; family members get their needs during their presence for their hospitalized family member, of which consist of five dimensions: supports, comfort, information, relationship, and assurances. 3. Family members give and receive information about the condition of patient; family members usually have known about the condition of patient before his/her sickness better, so that the information will be valuable for health-care providers, family members also need some information about the condition of patient during hospitalization anytime which can lower the tension in family. 4. Family members give an approval towards medical treatments; as long as patient are not able to give his/ her own approval towards any medical treatment, so family members will represent the patient for approval. Patient is not able to think about the condition and medical treatment done for him/ her.[9] 5. Family members take part actively by providing caring treatment accompanied by nurses; Family participation in active ways can cover: wiping patient' eyes with wet swabs; cleaning patient's mouth with cotton or toothbrushes, splashing patient' mouth with a spray, moistening patient' mouth with jelly or lips, secret aspirations from the mouth to catheter, cleaning patient's nose, preventing any wounds which are caused by pressures, helping staff to change patient's position on bed, assisting patient to have a shower, cleaning patient's hair in the weekends, washing patient's feet, manicuring patient without cutting his/her nails, and moistening his/ her face.[2,10]

FAMILY PARTICIPATION ANTECEDENTS

Antecedents are events or occurrences coming before certain concepts [1]. Intensive care unit is a care unit providing patients who need serious attentions and quick and appropriate treatment, so that visiting hour restriction occurs [3,11]. The existence of visiting hour restriction for patients cause some anxieties and depression towards family members once getting information that their family member is hospitalized in intensive care unit [10]. This condition is also felt by almost all family members who get information that their family member will be hospitalized in intensive care unit.[12] The family hopes that they will be always closed to patient in any conditions. This is a representation of their care and responsibility roles as members of family who tend to take care and protect each other [11].

FAMILY MEMBER CONSEQUENCES

Consequences are events or occurrences taking place as a result of a certain concept [1]. Nurses have some vital roles to help family participate in the nursing activities [3].

Family participation in these nursing activities is extremely beneficial for family and patient, so it can increase family care towards patient, increasing family expectation, lowering depression level, shortening length of hospitalization in the intensive care unit, and improving the quality of life [13,14].

MODEL CASES

A conceptual model from family participation covers attributes and antecedents, providing perspectives to develop the family participation in caregiving in order to influence the consequences. Consequences from family participation are used to evaluate the advantages of family participation in caregiving, both advantages for family members and patient.

Some patients who are hospitalized are given a massage by family members, so that it can lower the anxiety and depression level of patient [15]. Nurses can play their roles by giving family members a chance to do a massage to the patient and giving a supervision to the patient while family members are giving massage. The second case is a patient with *Unilateral Spastial Neglect* (USN), or severe stroke, where family members are involved in rehabilitation. The results showed that there was an increase of *Daily Life Activity* (ADL) functions towards the patient who was accompanied by family members than

that who was not accompanied by family members.[16]

DISCUSSION

Nurses and other professional health-care providers have not understood the concept of family participation in the care treatment in intensive care unit. This condition can impede family participation. The concept analysis gives insights to nurses that the concept has only been focusing on passive participation. Nurses can give motivations or supports to family members to participate in caregiving ranging from passive until active participation, even though the implementation is still under supervision of nurses.

The nurse supports are also needed by family members in order to participate in caring patient. According to the result of previous research.[2] (Olding et al. 2016), it is said that family participation had five ranges starting from passive to active participation. Those five ranges comprise of:

1. Family members are present in patient's bedside.
2. Family members receive information from the officers.
3. Family members give and get information about the patient' condition.
4. Family members give an approval for nursing and medical treatment.
5. Family members actively participate in caring activities.

From those five ranges of family participation, healthcare professional can give a chance to family members and give supports to family members to participate in giving caring activities, suitable with what the family members want, starting from passive to active participation under the supervision of healthcare professional.

CONCLUSION

Family participation is a family participation in giving care in intensive care unit starting from passive (the presence of family members in patient' bedside) to active participation (caregiving). This participation is highly needed by both patient and family members while the patient is hospitalized in intensive care unit. Understanding among healthcare professional will make the implementation of family participation easier so that it can increase the services and give satisfaction to patients and family members.

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STAFF NURSES' QUALITY OF CARING AND OSTOMY PATIENTS' NEEDS: A LITERATURE REVIEW

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ABSTRACT

Aims and Objective: This review examined the literature across 8 years that explored nurse caring given to ostomy patients with their conditions and needs. The general objectives were: (1) to describe nurse quality of caring through patients and family perspective; (2) barriers on providing care from nurse perspective.
Background: Evidence shows that patients with ostomy get various complaints about transitions in their life, particularly on their quality of life. The challenge for staff nurses is how they can be present and careabout problems that patients experience while using an ostomy.
Search strategies and design: Seven database were systematically searched to identify peer reviewed studies published in English between 2011 and 2019. The results are resented via a thematic literature review.
Findings: Four major themes emerged from a synthesis of the review findings: 'Barriers Among Nurse Caring, Nurse and Patient Mutuality, The Unmet Needs, and Outcome of the Quality of Caring'.
Conclusion: As health care settings evolve to meet the needs of the growing number of ostomized patients, staff nurses are poised to be at the forefront of these changes by initiating, developing, and evaluating innovative survivorship care models throughout a variety of practice settings. Recognized as skilled educators, and navigators, staff nurses working independently or as a team will play a significant role in expanding access to quality care and an improved quality of life for ostomized patients.

Key Words: Quality of caring, Staff nurses, ostomy, ostomy patients.

INTRODUCTION

Colostomy procedure is a common and frequent surgical intervention for various reasons such as cancer, diverticulitis, or trauma. The number of people living with ostomy in the United States is around 650,000 to 730,000.[1]A report from United Ostomy Associations of America estimates that 128,000 ostomy surgery were carried out in 2007.[1]

The creation of an ostomy has effects on body image, sexual function, mood, daily functions, and social activities; its presence affects the person and the people around them.[3-5] People who live with an ostomy need an education and training to manage their stoma and to identify and prevent stomal or peristomal complications.[6-7] While the creation of an ostomy is associated with an increase in life span, it has a variable effect on health-related quality of life (HRQOL).[8-9]Patients with an ostomy, either temporarily or permanently experience changes in their quality of life.[10-11] The purpose of making a colostomy is to complete a pathological condition, to prolong life expectancy, to improve quality of life and to help patients on theirproductive life.[12] However, colostomy causes a variety of physical, psychological and social problems in both patients and their families, whether when it first introduced or after returning from hospital.[13-14]

Persons living with an ostomy require comprehensive and personalized care.[15]Nursing care is important in order to prevent or manage complications and improve the physiological and psychosocial adjustment to the ostomy.[16]Ostomy nurses are responsible for managing persons with a stoma, and this specialty nursing practice continues to evolve on a global basis.[17]Ostomy care includes practical interventions such as managing a pouching system, along with counseling patients living with a stoma.

Nursing is a discipline that continues to grow and change, focusing on giving caring to individuals. While nurses provide care to meet the physical needs of patients in hospitals,

they find emotional, spiritual, and psychosocial needs from patients struggling to meet their health conditions.Having a staff nurse who is confident and knowledgeable in providing this care is hypothesized to play a significant role in patients' satisfaction with overall care received.[18]The nurse must determine the appropriate health and disease conditions to facilitate the patient to a new condition, be able to evaluate the patient's coping mechanism and its impact, and implement the nursing interventions according to the information they have.[19]

Caregiving is often a multi-faceted endeavor that can entail both instrumental and affective support.[20]Over the past decade, the cancer caregiving literature has grown as patients' and partners' needs and quality of life (QoL) have become focus of concern.[21-23]For these reasons, it is necessary that staff nurses can understand what it is like to live with an ostomy, in all its multiple dimensions, in a manner that they can think about care that is a response to the needs that are generated, many of which are related to the social and labor environment, sexuality, and fear of rejection.[24] It is fundamental to understand the habits, perceptions and attitudes, feelings and emotions demonstrated in the most diverse situations that cross the patients[25], while understanding those who accompany and sustain them in this life-changing experience.[26]

AIMS

The aim of this review was to examine the literature that explores caring which ostomy patients received or hoped fromstaff nurses. Specific objective goals include determining family members, patients and staff nurses' experiences, patients' expectations, and caring deliveries.

METHODS

Between the months of January and February, a literature review was performed for the following database: PubMed, CINAHL, Science Direct. The keywords *family or families or relatives or parents or siblings or caregiver, expectations or perceptions or attitudes or perspective, nurse or nurses or nursing or nursing staff or health care professional or registered nurse, colostomy or stoma or ostomy or ostomates or colostomates*. Inclusion and exclusion criteria are listed in table 1

After reading and comparing titles and abstracts with the inclusion and exclusion criteria, the number of articles was further reduced to 7 articles. A total of 7 articles were then subject to critical appraisal before being considered for final inclusion, resulting in the inclusion of all 7 studies. Throughout this process, the authors conducted independent searches and then conferred on the final section (Table 2).

THEMATIC ANALYSIS

The analysis of the literature was conducted using a thematic approach described by Polit and Beck.[34] This method was undertaken to detect patterns and regularities in order to identify substantive themes. The synthesis of the findings resulted in four themes: Barriers Among Nurse Caring, Nurse and Patient Mutuality, The Unmet Needs, and Outcome of the Quality of Caring.

RESULTS

Barriers Among Nurse Caring

Caring for an ostomy patient has never been an easy task to do. There are many challenges surrounding the area of ostomy caring. Study from Cross *et* al finds that nursing care in an ostomy patient's bed can be accompanied by anxiety and frustration for patients and nurses, often due to lack of trust and knowledge and skills among the nursing staff who

care for these patients. The findings also indicate that nurses' staff trust is higher with training in ostomy care and the experience of treating patients with stoma.[31]Duruk and Ucar also finds that the majority of nurses who work in areas with frequent contact with patients who have intestinal stoma have limited knowledge about basic ostomy care and indeed consider stoma care to be the primary nursing responsibility.[30] The findings of their study indicate that nurses do not consider themselves the most responsible for stoma care, and many do not have the basic knowledge to provide care.[30]

Opportunities to continue education can increase the confidence of nursing staff in providing ostomy care. Ostomy nurses must make their presence known so that appropriate referrals can be initiated for optimal patient care and satisfaction.[31]]

The Unmet Needs

Patients show important unmet needs as a result of slightly rationalized health services that vary greatly with respect to access to services, waiting periods, specialized training of professional staff in health care information and coordination.[29] Patients also stated in Danielsen*et al*study that they need to receive reliable information about life with a stoma. Participants reported a mismatch between the time and environment of preoperative and post-surgical ostomy education and suggested group learning and involving lay people as educators.[28]

Nurse and Patient Mutuality

The obstacles between ostomies needs and caring might me so hard to endure. But, it is not something that irreparable. With a good mutuality between nurse and patient, and most of the time includes family or caregiver, the barriers and the needs can be overcome.Altschuler*et al* finds that patients in high mutuality relationships who don’t need treatment related to their ostomy can benefit emotionally from caregiving that is not

medically necessary. However, others who have functional limitations and are in a low mutuality relationship, may suffer from a lack of care related to the need for an ostomy.[27]

It is possible to understand patients' family experiences and expectations with a colostomy, regulate family relationships beforehand to convince them, and trust the health team, arrange nurses as an articulator process. Hope is centered on the need for human care, increasing household adaptation to new ways of life, restoring and increasing their strength, and helping to overcome their weaknesses.[33]

Outcomes of The Quality of Caring

The perception of caring received is closely related to the process of information and communication experienced. Regardless of the nature of the information received, this is considered to play a key role in facing the situation and returning to normal. This also affects the quality of life. The importance of stoma care nurses in all stages of health care is specifically emphasized, as reference professionals to get support.[29]

Results from Coca *et al* study reported a statistically significant increase in HRQOL when patients received treatment from an ostomy nurse specialist month after stoma surgery. their findings are also reported more positive adaptation to the stoma after being discharged from the hospital when patients received treatment from an ostomy nurse specialist.[32]

CONCLUSION

Nurses have complex professional roles which include conducting research, evaluating the quality of care they provide and generating new knowledge.[35]This requires that they commit to learning to use appropriate ways and acquire the knowledge and skills to support caring improvements for ostomy patients. This informed literature reviewshould be included in the design and development of services for patients with ostomy, or in the current redesign of health care given to them to improve the quality of caring.

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Table 1 Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
Published between 2011 and 2019	Published prior to 2011
Published in English Language	Published in language other than English
Related to adult care settings	Pediatric or neonatal care settings

Table 2 Summary of Findings

Study	Sample size and Characteristic	Aim	Findings
Altschuler et al (2018)[27] USA	31 long-term colorectal cancer survivors with ostomies and their primary informal caregivers.	Qualitative study with semi-structured and in-depth interviews to explore relational and emotional aspects of long term colorectal cancer (CRC) survivorship with ostomies and further conceptualize mutuality and cancer caregiving	Mutuality impacts the quality of caregiving, and this quality may change over time, depending on various factors. Emotional feedback and amplification is the proposed mechanism by which mutuality may shift over time
Danielsen et al (2013)[28] Denmark	15 persons with permanent colostomies	Qualitative study with Focused Group Interview to explore the impact of a permanent stoma on patients' everyday lives and to gain further insight into their need for ostomy-related education.	Patient education, using health promotional methods, should take the settings into account and patients' possibility of effective knowledge transfer. Respondents recommend involvement of lay teachers, who have a stoma, and group-based learning processes are proposed, when planning and conducting patient education.
Nieves et al (2017)[29] Spain	21 adults with digestive stoma	Qualitative study with phenomenological approach to describe ostomy patient's perception about health care received, as well as their needs and suggestions for healthcare system improvement	Findings contribute to address the main patients' needs (better prepared nurses, shorter waiting lists, information about sexual relation, inclusion of family members all along the process) and recommendations for improving health care to facilitate their adaptation to a new status of having a digestive stoma.

Duruk&Uçar (2013)[30] Turkey	54 staff nurse	Descriptive study to explore the opinions of nurses regarding their knowledge of and perceived responsibility for providing ostomy care	Study findings reveal that knowledge level of non-specialty nurses about intestinal stoma care is inadequate, and most staff nurses did not consider themselves responsible for stoma care.
Cross et al (2014)[31] USA	576 staff nurse (510 registered, 61 licensed practical, 5 unspecified nurse)	Descriptive, cross-sectional study to examined the confidence and perceptions of barriers among hospital staff nurses when caring for ostomy patients.	Confidence of staff nurses in delivering ostomy care was higher with training and experience. Opportunities for continuing education may increase staff nurse confidence in providing ostomy care. The greatest barrier was lack of knowledge about the presence of an ostomy nurse as a resource in caring for patients
Coca et al (2015)[32] Spain	402 ostomy patients	Multicenter, quasi-experimental, prospective, longitudinal study to compare HRQOL in a group of patients cared for in hospitals that employed nurses specializing in ostomy care versus patients who were cared for at hospitals that did not employ nurses specializing in ostomy care.	Patients who received specialized ostomy care experienced significant improvements in HRQOL compared to patients who were not cared for by specialist nurses.
Umpiérrez& Fort (2014)[33] Uruguay	12 family members of patients with colostomies	Qualitative research, with the social phenomenological approach of Alfred Schütz to understand the experience of a group of family members of patients with colostomies, revealing their expectations regarding the	Findings on the experience and expectations of the families are emphasizing the previous family relationships to build upon them, and the trust in the health team, emphasizing the nurse as articulator of the

		intervention of health professionals	process. Expectations focused on the desire for humanized care, enhancing adaptation of the nuclear family to the new way of life, restoring and enhancing its strengths, and collaborating in overcoming its weaknesses.

A CONCEPT ANALYSIS: SEDATIVE MUSIC

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ABSTRACT
Music is known as a universal language for it can give therapeutical effects to physiological and psychological responses to individuals during interventions. However, the mechanism underlying the physiological and psychological responses towards music has not been identified and defined correctly. One concept can be applied if it is analyzed well so that it will not reduce the effects when applied a nursing treatment experiment. The purpose of this study is to analyze the concept of sedative music based on the strategy of concept analysis of Walker and Avant; covering antecedent identification, attribute definition, consequences, empirical references, and cases related to the concept. The conceptual model of sedative music gives guidance to develop music interventions in the research and nursing practice so that it increases various outcomes from the patients.

Keyword: concept analysis, sedative music

INTRODUCTION

A concept analysis is a method employed to clarify a concept which is frequently used in the nursing and health literature. One concept can be employed if it gets some clarifications accurately, so it can give a contribution to the knowledge development. For instance, there is lots of literature discussing music interventions in changing moodss, but the therapeutical characterictic of music cannot be defined clearly based on the attributes, antecedents, and consequences as the basic consideration in giving a music intervention. In regard to this, the purpose of this study is to analyze sedative music concept by using a framework of attribute definition, antecedents, consequences, and case models (Walker and Avant, 2010)

A concept analysis of sedative music will provide perspectives about conceptual models of music interventions and nursing practice. Therefore, the conceptual model of music intervention can function as a framework to develop and examine a music intervention in various adult population in increasing medical outcomes.

THE DEFINITION AND THERAPEUTICAL EFFECTS OF SEDATIVE MUSIC

Sedative music is defined as music without lyric which has melodious quality between 60-80 beats per minutes without rhythm or strong percussion. Volume and pitches in sedative music are controlled so that they give comfort to the listeners (Voss et al, 2004). Sedative music shows beneficial effects to anxieties, pain, and stress (Engwall & Duppils, 2009; Nilsson, 2009).

Music stimuli have some biological effects to human by influencing their specific brain functions, namely memory, motivation, emotion, and stress (Don Campbell, 2006). Music creates endorphin releases which cause some analgesias eliminating neurotransmitter of pain in the perception centre and somatic sensorial interpretation in the brain so that it makes the pain reduced and gives some relaxation effects. Psysiologically, music also stimulates autonomic nerve system affecting the heart beats, breath, blood pressure, and endocrine function (Nilsson, 2009).

Sedative music is used to increase, maintain, recover, or prevent one or more clinical problems in patient treatments (De Niet, Tiemens, Lendemeijer & Hutschemaekers, 2009). Music interventions can reduce pain after surgeries (Comeaux & Steele-Moses, 2013), improve management of pain (Kwan, Soek & Seah, 2013), reduce anxieties towards the adult patients (Li, Zhou, Yan, Wang, & Zhang, 2012) and treatments of patients with cancer (Lai, Li & Lee, 2011), reduce anxieties to patients with ventilators (Korhan, Khorshid & Uyar, 2011), increase patients' moods (Kim et al, 2011), increase sleeping quality and relaxation (Su et al., 2013). In reference with the explanation about the effects of music interventions, there is an empirical support for the conceptual model of music interventions based on psychological and psysiological responses in various adult populations.

REVIEW OF THE RELATED LITERATURE

Music has been used as a part of nursing interventions by Florence Nightingale since 19th century. Nightingale proved that sounds can help recovery and increase relaxation. In the end of 19th century, music started to be used in some hospitals as a part of nursing interventions to reduce anxieties and pain related to surgeries (Schou, 2008). In order to understand the therapeutical effects of sedative music, it needs some conceptual clarifications based on the attributes, antecedents, and consequences, which are the vital elements of the conceptual models of music interventions.

SEDATIVE MUSIC ATTRIBUTES

Sedative music attributes consist of five elements, namely rhythm, melody, tone, harmony, and interval (Bunt, 1994). These attributes are closely related to each other, dependent, and non-hierarchical. As the first element, rhythm is a sound pattern and serves as the most basic element, essential, structural, and organizational (Tramo, 2001). Rhythm influences the motoric control and functions based on the repeated patterns and predictable signals. Rhythmical signals direct to the synchronization of skeletal muscles and determine time, rhythm, and dynamics of the physical movements (Thaut, 1997). The second element, melody, is a sequence of music pitches and intervals among the music notes. Melody is structured by the length and the intensity in expressing moods or emotion (Schneck & Berger, 1999). As a form of non-verbal communication, melody can cause emotion from a response (happy, calm, and excited) or another response (sad, anxious, angry). The third element, pitch, is a number of vibrating cycles for a particular voice (Aldridge, 1996). A rapid vibration produces a high tone which is commonly related to the expressions of excitement or happiness. On the other side, a slower vibration produces a lower voice and commonly shows depression feelings. Levels of the vibration influence emotions as the rapid vibration, and it is considered as a stimulation, while the slow vibration is considered as a calm reaction. The fourth element, harmony, is a result of a mixed pitches to construct a voice combination (bunt, 1994). The fifth element, intervals, is the ranges among notes, which are the integral component of melody, and it gives characteristics and emotional responses (Schneck & Berger, 1999). Those five music elements play important roles in arousing broad spectrum consequences, such as emotional responses (phycological) and serve as stimuli for some movements (psysiological) which can improve the medical outcomes in a variety of patient populations.

SEDATIVE MUSIC ANTECEDENTS

Antecedents are events or occurrences which appear before a particular concept (Walker & Avant, 2010). Sedative music antecedents are vibration, sound, tone, timbre, intensity, and tempo. Vibration is a molecule movement which is moving or producing sounds. In the human hearing, a sound ranges from the lowest tone which can still be heard by humans (vibrating approximately 20 times per second) to the highest tone which can be heard by humans (vibrating approximately 20.0000 per second) (Guzzetta, 2000). To differentiate the sounds coming from music, there must be resonance, which are music tone enrichment by vibrations. Tone

is a definite sound, while timbre is sound quality which is different from a particular music instrument (Curtis et al, 1998). Consistently loud music is considered to be very disturbing, while soft music is assumed to be calming or relaxing. In contrast with the loud and soft volume, intensity is what makes the music interesting. The speed of the sequences of music tones are called as tempo (Schneck & Berger, 1999). Tempo is an antecedent which is important to determine emotional connotation of happiness and sadness of the music. There has been a suggestion that emotional responses of music come from brain stems. For instance, music representing happiness is usually indicated by fast tempo, while music representing sadness is usually expressed by slow tempo (Pereira et al, 2011). Based on the conceptual model of music interventions, antecedents basically give effects on the psychological consequences and physiologically responses in human bodies. Thus, six antecedents are basis in the characteristics of music interventions.

SEDATIVE MUSIC CONSEQUENCES

Consequence is an occurrence which takes place as a result of another concept occurrence (Walker & Avant, 2010). Sedative music consequences are psychological responsive attributes and psysiological responses in the human bodies. Music produces phycological responses by involving the right brains, which is related to intuitive and creative method in processing information (Tamo, 2001). From auditory cortex, music is processed in the limbic system, which is known as the centre of emotions, sensations, and feelings (Creutzfeldt & Ojemann, 1989). Music follows a complex of syntax structure (Seger et al., 2013) as an attribute and antecedent, such as pitch, tone, rhythm, volume, which play important roles in affective and cognitive responses (Wu, Li, Yin, Zhou & Yao, 2010). Affective responses are subjectives od positive and negative emotional responses, such likes or dislikes and happiness or unhappiness related to the certain music composition (Vieillard, Roy & Peretz, 2012). Cognitive recognition is a sense or memory which is connected to music to adult people (Gold et al, 2012; Hars, Herrmann, Emas, Rizzoli, & Trombetti, 2014).

When music is played to an individual, the music wave will be transmitted through an ossicles in the middle ear and through cochlear liquid to the inner ear. Basilaris cochlea membranes which perform as the resonance area will respond to the various vibration frequency. Cilia are the sensory receptors which change the vibration frequency into the electrical frequency, and they are

connected to the nervous auditory, which send these signals to cortex auditory in lobus temporal. Primary cortex auditory receives the input and processes pitch and melosy, and interprets music as a combination of harmony, melody, and rhythm (Wigram, 2002).

Sedative music can produce distraction effects by altering attention from any unpleasing stimuli. For example, pain usually refers to stress responses causing an increase of heart beats, breath, blood pressure, and anxieties (Nilsson, 2008). Based on the references, antecedent and attributes are defined and music consequences are documented to support the conceptual model of music interventions.

CASE MODELS

The conceptual model of sedative music covers antecedents and attributes, which is directed to develop interventions to affect the consequences. Learning sedative music attributes is an important part or music intervention to develop interventions. Consequences are sedative music which are employed to evaluate the effectiveness of music interventions. Case model is an example of conceptual model of sedative music which has all definitions of conceptual attributes (Walker and Avant, 2010).

Some patients with a colonoscopy experience show stress and pain responses (Bechtold et al, 2009). When the patients are in that condition, the nurse must maintain the patients' well-being (Harikumar et al., 2006). Before the colonoscopy treatment, it is important to give information about procedures and methods used to reduce anxieties and pain. Sedative medication and analgesic are usually used, but the non-pharmacological method can also be implemented. Patients are given sedative music by using a tape recorder though a headset as long as 30 minutes in every session, in order to give comfort during the colonoscopy treatment (Messman & Barnet, 2006; Ylinen et al, 2007).

DISCUSSION

Concept analysis is used to clarify sedative music and give conceptual model of antecedents, attributes, and consequences. Definitions and consequences of sedative music are discussed based on the definitions. Attributes are vital when used to develop sedative music interventions to obtain psychological and psysiological responses in improving the medical outcomes. Music antecedents are the basic for the characteristics of music interventions. Thus, conceptual model of sedative music can function as a framework of music

interventions which has a practical application in the nursing research, so that it can increase the medical results in a variety of patient populations.

In patients with ventilator support, effectively giving the music a positive change to anxiety, vital signs (heart rate, systolic blood pressure, and respiratory rate), pain, sedation, tolerance, contentment, and mood. Music is a safe and effective intervention for patients with ventilator support, particularly to reduce anxiety through non-pharmacological agent (Suhartini, 2011). Music can influence the biological circumstances such as memory and emotion. Quiet rhythm that give effect to the patient in order to reach a relaxed state. This situation triggers the activation of the parasympathetic nervous system causing pain distraction effect and reduce the side effects of analgesics. Music interventions can also reduce anxiety, depression, increase motivation so as to improve the quality of life (Finnerty, 2000).

Intervention music can provide a distraction effect upon the mind of the pain, stimulating a more regular rhythm of breathing, reduce tension, relaxation and increases the feeling of the music intervention positif give effect to the reduction of stress, fear of illness and injury, lower levels of depression and anxiety, and help overcome insomnia. Music also promotes positive behavior and increase the motivation of the patient during the treatment period and recovery (Laura, 2000; Schou, 2008). Music increasing spending endorphins that have a relaxing effect on the midbrain issued enkepalin and beta endorphins that can cause analgesia which eliminates pain neurotransmitter in the central somatic sensory perception and interpretation in the brain, causing reduced pain effect (Nilsson, 2009).

Music interventions help patients adjust to the environment and adapt with critical illness conditions. Different music with other interventions, such as imagery or biofeedback, because the music intervention does not require a lot of practice or concentration of the patient. Music is an effective intervention in patients with ventilator support because it does not require a lot of energy from patients (Chlan & Tracy, 1999). Music can reduce pain, provide relaxation, improve cognitive function, and help the patient tolerance to exercise or procedures (Wong, 2001; Mok, 2003). Music can influence the physiological response (vital signs) and the psychological response (lowering of anxiety and pain) (Nillson, 2009).

Frequency music recommended to reduce pain is 40-52 Hz. Music therapy can be initiated with a frequency of 40 Hz which is a fundamental frequency in the

thalamus so it will provide the cognitive effects for therapy. Music with a frequency of 40-60 Hz can reduce anxiety, muscle tension, reduce pain and give calm effect (Aalbers, 2017). Musical characteristics that provide therapeutic effects is the music that has a soft tone, harmony, and lyrical, with a tempo of 60-80 beats per minute. Harmony melody in a unity of music can cause a relaxing effect. Recommended instruments are more strings eg guitar, harp, violin, piano, with minimal drum and percussion (Wigram, 2002). Instrument that can produce harmony of therapeutic vibrating is piano, harp, violin, guitar, whistle, fluete (Pasero & McCaffery, 2007). Listen to music using the headset, the volume of the music can provide a therapeutic effect is 40-60 dB and do 20-60 minutes per session. Music can also be given at bedtime and is recommended for 45 minutes in order to get the maximum relaxation effect. Giving music therapy performed at least twice a day (Nilsson, 2009).

Recommended types of music including instrumental music, slow jazz, pop, folk, country western, easy listening music natural or nature, and music that fits the culture of origin patients (Nillson, 2009; Schou, 2008). Kind of music that has a therapeutic effect other sedative music. Sedative music is music without lyrics with melodic quality between 60-80 beats per minute and does not have a strong rhythm or percussion. The volume and pitch of the sedative music controlled so that it can lead to comfort. The patient is given a sedative music using a tape recorder via the headset for 30 minutes at each session. Sedative music consists of six types of music that is a synthesizer, harp, piano, orchestra, jazz and fluete slow. Sedative music can be provided by selecting one of the six types of music tersebut (Voss, et al, 2004).

Various sizes of the results recorded in the existing studies. These include patient anxiety, pain, and physiological responses. Mostly, the existing studies measured the results of physiological responses before and after the music intervention. However, most of the studies did not clearly state when the researchers measured the results. The researchers say that they measure the physiological response immediately after the music intervention. There is no established evidence regarding the ideal time measurements to document the physiological response. Thus, the researchers measured the physiological responses every ten minutes during the intervention (Suhartini, 2011).

As a result of this concept analysis, conceptual model of music interventions provide basis for another theory. The other theories focus on the psychological

responses of music in reducing pain. The severe pain management theory (Good, 1998) employs music as a non-pharmacological adjuvant to shift the patients' attention to pain stimuli.

CONCLUSION

Some studies defined the purpose of music intervention or discussed the significant attributes and antecedent when developing music interventions to arouse psychological and psysiological responses. Some studies identified a theoretical or conceptual framework as the fundamental effort in developing and examining music interventions. In this regard, the conceptual model of music interventions must be based on the attributes and antecedents to show psychological and psysiological responses in increasing medical outcomes.

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Description of Basic Construction Factors of Participatory Asset community development research in action (Yudhia) Model to PreventComplication of Pregnancy and Child-Birth

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ABSTRACT

It is known that high Maternal Mortality Rate (MMR) is mostly caused by lack of information and bad habit of pregnant women in high risk pregnancy treatment. This condition causes impact to high maternal mortality during childbirth. This study has aims to identify factors as main construction of Participatory Asset Community Development Research Action Model (YUDHIA). This study used qualitative approach. Location of the study is at Cimanuk, Pandeglang, Banten. Informants were chosen based on purposive sampling and snowball techniques. Key informants were four pregnant women that had complication risk. Supporting informants were eight person. Data collecting used in-depth interview and is recorded by tape recorder. Analysis data used RAP techniques, and released 12 themes that described the main factors in construction of YUDHIA model. The description were (1) development of community asset, such as physical, economic, environmental, human, and social asset. (2) Community participation such as dimension of community contribution, community development and organization. The conclusions of this study are community participation has been already existed by forming *desasiaga* (standby village). The most important asset in community is human assets, midwifery and*dukun*(traditional birth attendant), therefore create strong commitment to give priority the needs and lives of pregnant women.

Keywords: community assets, community participation, YUDHIA model.

INTRODUCTION

Maternal Mortality Rate (MMR) is one of the important indicators of the level of public health and able to be used in the monitoring of pregnancy-related deaths. This indicator is affected by general health status, education, and services during pregnancy and childbirth [1]. The direct causes of maternal mortality for more than 90% are a result of obstetric complications, mainly of childbirth complications. Pregnancy complications are obstetric emergencies that can cause the death of the mother and fetus. Pregnancy complications include hypertension and pre-eclampsia, anemia, placenta previa, and diabetes [2-4]. While childbirth complication is difficult childbirth (dystocia) that causes a disease. Childbirth complications include premature rupture of membranes, premature childbirth, abnormal fetal position.

Based on the Indonesian Demographic and Health Survey (IDHS) in 2012, MMR in Indonesia was high, at 359 of 100,000 live childbirths. This data increased compared to MMR in 2007 which was at 228. Meanwhile, the 5^{th} global target of the MDGs (Millennium Development Goals) is reducing MMR to 102 in 2015.

Based on reports from the Provincial Health Office of Banten, the highest MMR was in Pandeglang. Complications of pregnancy and childbirth in Pandeglang district caused 34 cases of maternal mortality in 2013, bleeding was 14 cases, hypertension during pregnancy was 8 cases, infection was 4 cases, and prolonged childbirths is nothing, and other reason was 9 cases.

One of strategic effort is improving the knowledge, awareness and motivation towards improved behavior for the prevention of complications of pregnancy and childbirth. This is able to be conducted through the empowerment and participation of family or community. Participation is a voluntary involvement by the community in a self-determined changes, it is also mean the community involvement in self-development, life and their environment [5]. Community empowerment goal is to enable communities to determine practices / actions in solving problems and managing the planned activities, with an increase in the capacity of individuals, control efforts, institutional and environmental improvement [6]. Empowerment goal is to increase the capacity and capability of society to be able to recognize the encountered problems, explore, and exploit the available resources, as well as show their existence clearly [7].

From the description above it is able to be inferred that to support Pandeglang

District government programs, improving the maternal health and reduce the maternal mortality rate (MMR) are able to be done through increasing the prevention of complications by developing a model of assistance established on the development of community assets and participation, a model of Participatory Asset Community Development Research In Action (YUDHIA) or community assets participation based on action research. YUDHIA model is a modification of Participatory Action Research (PAR) and the Asset Based Community Development (ABCD), which is intended to complement each other adapted to the needs, circumstances, and community participation involved in this study. YUDHIA models are expected to address issues related to the incidence of complications of pregnancy and childbirth in the community in the prevention of complications of pregnancy and childbirth.This study was conducted in order to identify the aspects of Participatory Asset Community Development Research in Action Model (YUDHIA).

MATERIALS AND METHODS

This study used a qualitative approach. Qualitative research is defined as research that aims to understand the aspects of social life. The results obtained in the form of words which are analyzed later [8]. This type of research is done to find out more about a phenomenon and to strengthen the validation of research results and provide more in-depth results [9]. This study used Rapid Assessment Procedure (RAP) strategy to explore how could the community participation and community assets help in the prevention of complications of pregnancy and childbirth in a short time [10]. The data were collected using a Focused Group Discussion (FGD), In-depth interviews and observation. Triangulation was conducted to validate the results of the study and assure the results of the interview.

Focused Group Discussion (FGD) aims to see the variety of opinion and influence of culture related to community participation and the assets that also related to the preventionbehaviur of pregnancy and childbirth complications. This technique was used since the topic discussed was not sensitive. In this study, FGD was conducted on homogeneous informants group of around 7-10 people. Selection of informants was initially conducted with a purposive technique followed by a snowball technique. Initially, researchers recruited several respondents in

accordance with predetermined criteria, but only 4 women were elected as key informants to be involved in this study with an age range of 25-35 years. The discussion was guided by facilitators (Researchers) using a semi-structured guidelines that had been prepared previously. In general the time of the FGD lasted about 90 minutes. Meanwhile the in-depth Interview (II) was conducted to explore the comprehensive and in-depth information related to participation and utilization of public assets in confronting complications of pregnancy and childbirth. The clearance was obtained from the Research and Development Agency of the Regional Government of Banten Province, National Unity and Community Protection District Office. Ethical review of study was obtained from the Ethics Committee of the Faculty of Medicine, University of Andalas Padang.

Preliminary research was conducted as initial assessment. In this study, researchers observed people'sactivityeveryday, behavioral health, maternal health status, behavior and public confidence, sanitation, community structure, the role of the husband, the village midwife and health services. This preliminary study also included in-culturation, or blending into the everyday life of the community such as following Integrated Health Center (Posyandu) programs for pregnant women and joining community activities like Dasawisma, PKK, and more.

After the preliminary study phase was successfully implemented, the next step was for the community organizing for research agenda. At this stage, the activities undertaken were: (1) forming groups of informants (8 supporting informant, such as community leaders, Head of Puskesmas or experts, health professionals (Midwives), health volunteers, the husband / family and TBAs and 4 key informants, pregnant women who are at risk of complications of pregnancy and childbirth and agreed to be interviewed), criteria used in selecting key informants were pregnant women who live in the territory of District Health Clinics Cimanuk and are in the productive age range. This means that the subjects in the age range of 20-35 years was part of the inclusion criteria. (2) Analyze the problem, and (3) formulate the problem.

RESULTS AND DISCUSSION

Overview of Study Location

Pandeglang regency is geographically located between 6º21 '- 7º10' south latitude and 104º48 '- 106º11' east longitude with the total area of 2,747 km² or equivalent to 29.98 percent of the total area of Banten province. Districts in the West End of this province have the following administrative boundaries [11]: North: Serang, South: Samudera Indonesia

West: Sunda Strait, East: Lebak. The population of Pandeglang based on forecasts of June 2014 is 1.188.405 people with the composition of the male population as many as 607 304 people and women as many as 581 101 people. Based on the data above, the sex ratio in 2014 amounted to 104.51. Distribution of population by districts is relatively uneven. Districts with the lowest population is the Sumur District with an average of 91 people / km2, the most densely populated area is Labuan District as many as 3,585 people / km2. While the average population density of Pandeglang is 432 people / km2 [11].

Pandeglang district has 36 Health Centers located in every district, 9 Health Centers with nursing facilities, 58 supporting Health Centers, 51 mobile health clinics and one hospital. For health personnel, there are 37 physicians, 14 dentists, 250 nurses, 226 non-medical health workers and 7 public health personnel [11].

This research was conducted in the Cimanuk District, because the results of preliminary studies showed that there are 50 percent of pregnant women have a high enough risk for complications there. The risk arises because of several causes, including the pregnant women which are too young or too old, the first of pregnancy (Primavera) or the pregnancy is more than five times (Grande multipara) and anemic.

CimanukSubdistrict is geographically located at 06 ° 28'16,5 "south latitude and 106 ° 00'00,0" East Longitude (Measured by means of GPS at the Cimanuk District Office) with the area of 23.64 km² or 8.7% of Pandeglang area. CimanukSubdistrict is 10 km from the Capital of District Pandeglang, PandeglangSubdistrict.

Cimanuksubdistrict consists of 11 villages, 48 hamlets (RW) and 156 neighborhoods (RT). Kupahandap village is the smallest village with an area of 1.51 km2, while Kadubungbang village is the largest village with an area of 2.76 km2, or 11.68% of the total districts Cimanuk. The Cimanuk District's topography is generally a plateau with an average altitude of below 500 m above sea level (asl). In terms of geomorphology, the Cimanuk District is included into the zone of the mountain foot

and the foot of Mount KarangPulo sari where many springs so it becomes a major of agricultural center in Pandeglang.

In CimanukSubdistrict, there are nine health facilities consisting of Health Centers, supporting Health Centers, mobile clinics and village Health Centers (Puskesdes). Details of the distribution of health facilities are shown in Table 1.

Table1. Distribution of Health Facility in Cimanuk

No	Village	Health Center	(Supporting Health Center)	Mobile Clinic	Village Health Center	Total
1	Kadudodol	-	1	-	-	1
2	Gunungdatar	-	-	1	-	1
3	Gunungcupu	-	-	1	-	1
4	Sekong	-	-	-	1	1
5	Cimanuk	-	-	-	-	0
6	Batubantar	1	-	-	-	1
7	Rocek	-	-	1	-	1
8	Kadumadang	-	-	-	-	0
9	Dalembalar	-	-	1	-	1
10	Kupahandap	-	-	-	1	1
11	Kadubungbang	-	-	1	-	1

Source: CimanukSubdistrict, 2016

Characteristics of Informants *Characteristics of Key Informants*

Key informantswere 4 people, pregnant women at risk of complications of pregnancy and childbirth. Distribution of key informants is presented in Table 2.

Table 2. Characteristics of Key Informant

Code	**Age**	**Number of children**	**Occupation**	**Education**	**Gestation (Month)**	**Distance to Health Center**

						(kilometers)
S1	32	3	Housewife	Elementary School	8	3
S2	28	1	Housewife	Elementary School	6	7
S3	26	2	Housewife	Senior High School	6	2
S4	34	2	Labor	Junir High School	5	6

Source: in-depth interview 2016

Characteristics of Supporting Informants

Characteristics of supporting informants as research subjects have been interviewed are presented in Table 3.

Table 3. Characteristic of Supporting Informants

Code	**Age**	**Position**	**Work Period**	**Unit of Work**	**Education**
B1	38	Midwife in Health Center	12	Health Center inCimanuk	Diploma III
B2	40	Coordinator midwive in Health Center	15	Health Center inCimanuk	Diploma IV Midwife
KP	48	Head of Health Center	15	Health Center inCimanuk	Doctor
KD1	40	Health Cadre	10	CimanukSubdistrict	Junior High School
KD2	34	Head of Village	2	CimanukSubdistrict	Senior High

					School
SM	40	Headman	4	Labor	Senior High School
DK1	52	TBAs	20	CimanukSubdistrict	Never Attending School
DK2	58	TBAs	30	CimanukSubdistrict	Not graduated from elementary school

Source: in-depth interview 2016

Thematic Analysis

Qualitative research conducted related to the model of participatory community including community assets, community participation, knowledge, attitudes, and behavior of complications of pregnancy, and also childbirth prevention in pregnant women obtained the research objectives that had been developed previously. The findings of the study can be described in sub-topics below.

Development of Community Assets

Physical assets

Physical assets are the existence of Health Centers and Integrated Health Center (Posyandu) in the area. Based on the results of in-depth interviews and FGD, to date, the TBAs and midwives felt that the assets have been running quite good. Programs conducted by the Health Center have been running well, although it deemed not optimal. To optimize those programs, the Health Center would be assisted by PONED Health Centers and community health posts.

*"... The program has been running, merely perhaps not optimally match the expectation..there are some new assets here.. 1 Health Center, 1 PONED, 1 community health post, in CimanukSubdistrict ..." (*B1)

Other physical assets; Integrated Health Center (Posyandu), has a function as a mediator of implementation of antenatal care. Usually many pregnant women come

to have antenatal care because they know that there will be a midwife in there. To optimize the function of Posyandu related to the prenatal care, midwives coordinate with TBAs to do a "massage service" when Posyandu underway.

Furthermore, the midwives and TBAs said that the function of the community assets that have been implemented so far was enough to help the childbirth by a midwives and TBAs. For example TBA said that Posyandu is an opportunity for pregnant women to be recorded by the midwife, and a place for pregnant women and health cadres interact with and obtain information from a midwife.

" The coordination is through Posyandu and when we meet by chance in the street. If there were a Posyandu, sometimes I participate, but if not, sometimes pregnant women who come by themselves.

Posyandu midwife usually ask pregnant women about their pregnancy interference .. "(B2)

"..We had the post for every Posyandu region. Each Posyandu has a person in charge. Posyandu should approach to the TBAs so we'll know if anyone comes to massage in their place .. (KD1)

b. Economic Assets

Community economic asset in CimanukSubdistrict is good and do not become an obstacle in the prevention of complications of pregnancy and childbirth.

".. Pregnant women want to get antenatal care but not as early as possible ....Posyandu has never charge (free). Payments in Posyandu is voluntary .... If they do not have health insurance (BPJS or Jamkesmas), they must pay for treatment at the Health Center, even so people still want checkups ..soeconomic assets is still pretty good .. "(KP)

c. *Environmental Assets*

One of the programs developed to reduce maternal mortality is Standby Village (DesaSiaga) programs. In Cimanuk, the implementation is not running optimally because there were no ambulances and blood donors' equipment. Nevertheless, according to the results of interviews known that until now DesaSiaga program is already running, equipment that have not exist yet were not really necessary

"... Equipment not fully support, not optimal in the sense ... .. Already have anDesaSiaga activities ... .." (KD1).

".. What has not been taking place is no village ambulance, blood donor. There are families who do not want to because of economic limitations, they usually use SKTM. DesaSiaga is running ... "(KD2)

Human Assets

Human resources are one important aspect in the prevention of complications of pregnancy and childbirth. In addition to

health professionals (Doctors, midwives and nurses), TBAs and cadres is also one asset which can be a partner for health professionals if they were well trained. There are as many as 28 TBA and around 230 people active cadres. TBA's interaction with health professionals has been established. TBA no longer assists childbirths. Still, there are TBAs that still helping childbirths with reason they did not get to call the midwife. For such TBA, intensive coaching is needed, considering that it does increase the risk of childbirth complications. Partnership that exists between the midwife and TBA during the childbirths is in form of midwives that assist childbirths, while TBAs do the massage and give support when the mother bears down.

".. (Human assets) ... there are 28 people TBA in the subdistrict, 230 cadres, a total of about 255 cadres and active TBA .... We actually are already partnered with TBA but some of them are still helping the childbirths, in a variety of different reasons, in this case can not be called a partner ... "(B2).

"... Partnership means cooperation between midwives and TBAs in attending childbirths. Cooperation in childbirths, TBA's portion is the upper part of mother's body, massaging the mother. The midwife's is the lower part of the body, helping the childbirth. By cooperating with the TBA, the works become lighter. In addition TBA helps support the mother to bear down and massage her .. "(B1 / B2)

While the interaction between cadres and midwives have been conducted since 2013. Cadres actively assisting the midwives to distribute iron tablets to pregnant women and at the same time cadres also provide education about the signs and dangers of pregnancy as it is written in the KIA book.

"... We've been partnering since 2013, active cadres runs every month, routinely distribute fe tablet. Facilitated with KIA book, to read the danger signs of pregnancy ... "(KP)

Social assets

Social and cultural characteristics in the Cimanuk District are also a concern in developing YUDHIA models construction. Socially, in women who had desired pregnancies, family provides a good support. It was different when pregnancies are unwanted. The family did not provide support for the pregnancy. Interviews with midwives showed that in taking decisions related to pregnancy and childbirth, the mother should always discuss with her husband and family. So in this case of pregnant women do not have the authority to determine what actions to take related to pregnancy and childbirth.

"... If from the beginning of pregnancy is wanted, the family will support. But if it

does not,l the decision depends on her husband and family. ".. (B1 / B2)

At the time of childbirth, in addition to a midwife, many pregnant women still involves a TBA to support them. When something is not good, then only midwife who take the decision to refer. In this case the TBA only accompany the mother.

"... Who make decision is a midwife. I am as a TBA only follow them. If they say the mother should be referred, I only accompany to refer. "(D1 / D2)

Participation of Community

Dimensions of Community Contribution

Community contributions and services during the childbirths is one appropriate intervention used to achieve a positive childbirth experience. Contributions from Healthcare workers for examples are empathy and patience to support mothers who gave childbirth and her family. Health care workers should be able to support the mother; her partner and family during the childbirths; observe during childbirths; monitor the condition of the fetus and the baby's condition after childbirth; assess risk factors; detect problems as early as possible, do the minor intervene if it necessary such as amniotomy and episiotomy; newborn care, refers to a higher level of care in case of complications.

Most pregnant women maternal stated that the contribution of health workers at childbirths is very important because they provide support and information related to the childbirths process. She feels that the forms of support provided by health workers in childbirths had a positive impact of which can reduce anxiety, decrease pain, and avoid stress and trauma during childbirth.

".. Midwife helped a lot providing socialization about pregnancy and safe childbirth..fairly high contribution of midwives reduce maternal and infant mortality .. so far midwives have sufficient skills in the implementation of the prevention of complications .." (KP)

Results of an interview to the informant indicated that there were supports from community contributions in form of counseling by health workers (Midwives), mutual cooperation, regular meetings of pregnant women, socialization about pregnancy myths, such as the following excerpt explanation.

".. There is a mutual help here ..many community participation such as lectures, RW meetings, Posyandu, pregnant mothers would come to the Posyandu for antenatal care .." (KD1)

" Some pregnant women was coming but there are some of them that did not want to come by reason of the distance and busy .. people here would love to have gathering .... Head of RT / RW ready to assist

residents ....forDesaSiaga, maybe later "(KD2)

Community empowerment

Community empowerment is one of the solutions to reduce maternal and infant mortality. This approach will be especially beneficial in remote area with the very limited access to health services. In Cimanuk and KadubungbangSubdistrict, training for TBA is also needed to be intensified to reduce the maternal mortality rate

In-depth interview showed that the TBA participation in assisting the childbirth process is quite high. According to the TBA in the District of Cimanuk and Kadubungbang, majority of pregnant women in the region came to give childbirth and have routine antenatal care, just like the interview excerpts below:

"Yes, they check here ..give childbirth here .. because there is no certain benchmark price and the place is not far. they are scared of midwives .. afraid of the cost and fear about the sewn they said" (DK1)

"Some of them check the pregnancy here and the others in midwives ..sometimes they give childbirth here or I come to their house ... the cost is more expensive in midwives... they can not afford... and most of them are my relatives" (DK2)

Based on the interview it was known that TBAs include informal leader type. They have the power and authority that is respected by the people around him. The authority especially the charismatic authority. Theoretically, the authority can be distinguished on traditional authority, rational authority and charismatic authority. TBAs are considered as having charismatic authority, the ability or authority specifically contained within them. Authority was held without study, but exists by itself and is an inherent culture. But there are also mothers who prefer to be helped by a midwife. Recognition of pregnant women can be seen as follows:

".. Although the family recommends giving childbirth in a TBA, but because I always check the pregnancy in the midwife, then I gave childbirth there, TBA was also there but just massaging me and reciting prayers ..." (S1)

".. Giving childbirth with a midwife made me calmer because if there was something wrong happer, I can directly be sent to the hospital, but it will be better if there is a TBA too because she was praying '(S2).

"... A time to give childbirth, my mother advised me to gave childbirth in the TBA because of the experience. It was a difficult childbirth, my husband had called midwife to help me but baby still would not come out. The midwife would brought me to the hospital. But my mother forbid it, asked to call the TBA. Then my husband calls TBA .... When the TBA arrived at the

door of the house, the baby was out safely ".. (S3).

The fact that people prefer to be helped by TBA during childbirth is strengthened by the statement of midwives serving in the region. The midwife said that the involvement of the TBAs in childbirth is due to the cultural factors and hereditary tradition. Not the same as a midwife, TBA will give a mantra during the process so that the women who give childbirth will feel calmer.

" People always call a TBA to help thechildbirth. This caused by a matter of tradition, the TBAs will spell the mantra during childbirth in order to run smoothly "(S1)

Another perception that causes many TBA still help the child birthing process is because people felt that there was still a junior midwife. They do not have the childbirth experience so deemed to be incompetent to help childbirth. To handle this, one midwife trying to adopt the services provided by TBAs.

"I'm just partnering. It is odd if they have never given childbirth but helped the childbirth. We have more believe in TBAs ... I worked with TBAs. I said to the patient, how much they pay for TBAs then I'll be at the same rate. I'll wash the clothes, massage, bath, calm the baby, anything done by a TBA I can do it "(S2)

Organizing

The commitment of healthcare workers is to implement a program of prevention of pregnancy and childbirth complications. It is one of the DesaSiaga programs that will be discussed in this study.

"... DesaSiaga already exists but has not run optimally. No structure of RW RT. Some villages using self-help saving called Tabulin and Dasolin. There are villages in Kupahandap which allocates rice aid from the districts into the Dasolin. In Cimanuk village there is also contribution per resident eg IDR.1000,00 to the village cadres then collected to DesaSiaga. Although they haven't running optimally yet but there is an effort for that. So it can help if there is some illness or maternity ... "(KD1)

"..Program of prevention the complications through DesaSiaga that is being run in the Cimanuk village including home visits by health workers, cadres, community leaders, health education, eradication of mosquito larvae, garden nutrition for toddlers and sticker attachment .." (KD2)

Based on the triangulation from supporting informants know that: it can be concluded that the midwives in Pandeglang said that by working with the TBAs makes them feel their work helped or lighter. Moreover, the TBAs are usually those who are already very close to the people, so they are usually the first to know if there

are pregnant women. In addition, sometimes people are still require the presence of a TBAs to help them, especially after childbirth, to help clean the house, wash the baby and spell the mantras.

Partnership in the organization would require clear coordination and function between leaders and subordinates or among subordinates associated with the implementation of tasks. In the context of a partnership between midwives and TBAs, midwives would have to coordinate with the TBAs in terms of referring patients for example. Based on researcher's interviews with midwives and TBAs, most of them said that during this time the midwife who took the initiative to contact the TBAs. Posyandu is an opportunity that is often used by midwives to coordinate with the TBAs. The education given in shaman training program become a recognition for organizing (enforcement) health service to the institution of TBA, especially the implementation of the childbirth process to people living in areas in limited health care facilities. Moreover, with the education that is provided, TBAs are considered to be able to replace the presence of a new health facility that is expected to improve the health of the population.

CONCLUSIONS

Community participation has been running with the formation of DesaSiaga, but until now the DesaSiaga programs has not run optimally. Existence of DesaSiaga can help the pregnant women, maternity and family to save pregnant women and childbirth mothers. Partnership midwives and TBAs have been formed. Organizations are existing according to the needs of the village, along the involvement and participation of the community especially the contribution of time and effort which is good enough.

Community's most important asset is the human assets in the form of partnership midwives and TBAs causing a full commitment to the needs and safety of pregnant women. In the context of a partnership between midwives with TBAs, the commitment of the midwives and TBAs in partnership is a major requirement for this partnership to continue well. The existence of cadre quite helpful in improving maternal and infant health, but cadres have not fully exposed to the program of childbirth planning and complications prevention. They did not know their role in the programs. In the decision to choose a childbirth attendant,

most expectant mothers have the independence in decision-making, but in case of complications and emergencies pregnant / maternity can only surrender to the decision of the husband / family.

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ANALYSIS OF RISK FACTORS CAUSE THE HYPERTENSION

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ABSTRACT
Hypertension is one of the non-communicable diseases which is one of the most serious health problems in Indonesia. It is estimated that there will be an increase in hypertension cases in developing countries in 2025, around 80% or 1.15 billion cases. Based on the results of the 2013 and 2018 basic health research, it was found that cases of hypertension in Indonesia based on measurement results had increased by 8.31%. The purpose of this study is to determine the risk factors for the main causes of hypertension, causal factors based on characteristics and causal factors based on lifestyle. The method used is using the literature review method using a systematic review approach from publications related to hypertension risk factors in Indonesia. The criteria for the article taken are articles that use descriptive and analytic research designs with a cross sectional approach, case control and other criteria are publications that examine the relation to the causes of hypertension in Indonesia published from 2013 to 2017. Based on the literature review results from 13 publications it is known from the review literature that the largest number of percentages that are the cause of hypertension based on respondents' characteristics include gender (66.7%), age (60%) and genetics (57.2%). While based on lifestyle known causes of hypertension are diet (100%), salt consumption (100%), consumption of saturated fat (100%), obesity (75%), and smoking habits (75%). Results of the literature review It can be concluded that the risk factors that cause the highest incidence of hypertension are caused by factors of gender, age, genetics, diet, salt consumption, consumption of saturated fats, and smoking habits. Efforts to prevent the occurrence of hypertension need to be carried out experimental research to change the lifestyle that causes the risk of hypertension.

Keywords: Hypertension, Risk Factors, Non-Communicable Diseases

Introduction

High blood pressure or usually referred to as hypertension is an increase in systolic blood pressure of more than 140 mmHg which shows the phase where blood is pumping the heart and diastolic blood pressure of more than 90 mmHg where blood returns to the heart through two measurements with an interval of five minutes in state of rest / calm. Increased blood pressure that lasts for a long time (persistent) can cause damage in organs such as the kidneys (kidney failure), heart (coronary heart disease) and brain (causing stroke)[1].

Hypertension is one of the non-communicable diseases which is a very serious health problem in the current era of globalization. Based on the research of Rahajeng, uncontrolled hypertension can cause a greater chance of disease such as seven times at risk of stroke, six times at risk for congestive heart failure, and three times at risk of heart attack [2].

It is estimated that around 80% of cases of hypertension occur in developing countries in 2025, in 2000 there were around 639 million cases of hypertension in the world. This hypertension is expected to increase by 1.15 billion cases in 2025[3]. According to the American Heart Association (AHA), Americans over the age of 20 suffer from hypertension, reaching up to 74.5 million, but almost 90-95% of cases are unknown[4]. Based on data from the World Health Organization (WHO), almost 1 billion people worldwide have high blood pressure. Hypertension Often referred to as "Silent killer" (Stealth Killer) is one of the main causes of early death throughout the world. By 2020, an estimated 1.56 billion adults will live with hypertension in the World. Hypertension alone has killed nearly 8 billion people every year in the world and around 1.5 million people each year in the South East Asia region, or about one third of South East Asian adults suffer from hypertension [5].

Based on data from the Riskesdas R & D of the Ministry of Health, in 2013 Hypertension in Indonesia showed that nationally 25.8% of Indonesia's population suffered from hypertension. It is estimated that Indonesia's population of 252 million people, around 65 million people who suffer from hypertension, is very astonishing health conditions in Indonesia, especially as many as 13 provinces, where the percentage exceeds the national figure, with the highest prevalence in the Province of Bangka Belitung (30.9%) or 426,655 soul, followed by South Kalimantan (30.8%), East Kalimantan (29.6%), West Java (29.4%), and Gorontalo (29.4%). [6]

Hypertension is a degenerative disease. Various studies have proven various risk factors that influence the onset of hypertension. Based on the results of previous studies mentioning the triggers of hypertension can be divided into those that cannot be controlled such as family history, gender, and age, and factors that can be controlled such as consumption patterns of foods containing sodium, fat, smoking behavior, obesity, and lack of physical activity[7]. The prevalence of hypertension is increasing in line with unhealthy lifestyle changes such as lack of vegetable and fruit consumption, consumption of Junk Food, smoking, physical inactivity and psychosocial stress.

Hypertension is still a bigger problem if it is not repeated early.[8]

Researchers who conduct research on hypertension are very numerous, therefore it is necessary to know what factors influence the incidence of hypertension in Indonesia studied based on published research results. This can help answer the factors that influence the incidence of hypertension accurately because it is based on published research results.

Methodology

This study uses the literature review method. Data retrieval was carried out on 28 November - 17 December 2018. The data source of this study came from literature obtained through the internet in the form of research results from journal publications in Indonesia. In searching for journals researchers use the web, namely Directory of open access Journal (DOAJ) and Google Scholar, using the keyword "Factors and Hypertension". When using these keywords, the author found 169 journals related to the keywords searched at DOAJ and there were 14,400 journals related to the keywords searched for in Google Scholar. Researchers chose journals to be analyzed using inclusion criteria, namely studies using primary data, studies that examined hypertension risk factors, journals must be the last 5 years, research samples from the ages of 20 years to> 45 years. Based on the specified criteria obtained 13 journals that are suitable and can be used as references in this study.

Results

1. Overview of Hypertension Research Results

Based on research journals that are in accordance with the inclusion criteria, 13 appropriate research publications obtained 13 studies related to the causes of hypertension. The general picture of hypertension research is as listed in table 1 below.

Table. 1 General description of hypertension research

Researcher	Year	Variables		Samples	Research Design	Reference		Measuring Instrument
		Investigated	Sig.			D	O	
Riska[9]	2013	10	6	60	Case Control	10	1	Structured Interview
Aditya[10]	201	10	6	214	Quantitativ	6	-	Questionnaire

	6				e			s
Safriadi[11]	2017	4	1	62	Descriptive Cross Sectional	29	5	Questionnaires
Miftah[12]	2013	4	1	250	Cross Sectional	16	-	Questionnaires
Riri[13]	2016	6	6	152	Cross Sectional	15	-	Questionnaires
Pande[14]	2014	8	4	146	Cross-Sectional	-	11	Questionnaires
Sri[15]	2014	6	1	87	Cross Sectional	15	1	Questionnaires
Rina[16]	2014	6	4	71	Cross Sectional	18	-	Questionnaires
Bertalina[17]	2015	6	6	75	Cross Sectional	27	2	Questionnaires
Dianna[18]	2014	1	1	146	Cross Sectional	5	12	Questionnaires
Yudha[19]	2013	6	6	75	Quantitative Desktiptif	6	6	Questionnaires
Arya[20]	2013	3	3	70	Cross Sectional	13	2	Questionnaires
Previyanti[21]	2013	5	2	55	Quantitative Desktiptif	4	11	Questionnaires

The results of univariate analysis can be seen in table 1 about the general description of hypertension research. Research journals are journals obtained through the selection results of the last 5 years or in 2013 - 2017 with a total of 13 publication journals. The number of studies in 2013 was the highest, namely 5 studies while the lowest was in 2017 and 2015 with each one study. The number of samples studied is quite diverse ranging from 55-250 people and all are primary data. The research design used consisted of 9 publication journals (69%) cross sectional, 1 publication journal (7%) case control and 3 (24%) quantitative descriptive studies. The variables studied consisted of 1 to 8 variables, and there were about 1 to 6 research variables that were significantly at risk for hypertension. In the case of literature, most use domestic literature around 6-29 bibliography and international literature as many as 1-12 bibliography. The average measuring instrument or instrument is not included in the journal and almost all of them use questionnaire instruments.

2. Risk Factors for Causes of Hypertension

The results of identification of risk factors for hypertension can be seen in table 2.

Table 2. Identification of risk factors for hypertension

Variables	Riska	Aditya	Safriadi	Miftah	Riri	Pande	Sri	Rina	Bertalina	Dianna	Yudha	Arya	Previyanti	Total
Gender	0	1	0	0	0	1	1	0	0	0	1	1	1	6
Age	0	1	1	0	0	1	0	0	0	0		1	1	5
Level Of Education	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Knowledge	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Behavior Control Blood Pressure	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Genetic Factors / Family History	1	1	1	0	0	1	1	1	0	0	1	0	0	7
Obesity / BMI	1	1	0	0	0	1	1	1	1	1	1	0	0	8
Waist size	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Physical Activity / Sports Habits	1	1	1	0	1	0	1	1	0	0	0	0	1	7
Time Sports	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Smoking Habit	1	1	1	0	0	1	1	1	0	0	1	1	0	8
Alcohol Consumption	0	0	0	0	0	1		1	0	0	1	0	0	3
Coffee Consumption	0	0	0	0	0	0	0	0	0	0	1	0	1	2
Dietary Habit	0	0	0	0	1	0	0	1	1	0	0	0	0	3
Salt Consumption	1	1	0	0	0	0	0	0	1	0	0	0	0	3
Saturated Fat Food Consumption	0	1	0	1	0	0	0	0	1	0	0	0	0	3
Calorie Consumption	0	0	0	1	0	0	0	0	1	0	0	0	0	2
Fiber Consumption / Fruits And Vegetables Consumption	0	0	0	0	0	0	0	0	1	0	0	0	1	2
Of Vitamin C	0	0	0	1	0	0	0	0	0	0	0	0	0	1

Calcium Consumption	0	0	0	1	0	0	0	0	0	0	0	0	0	1
The Use Of Used Cooking Oil	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Stress Psychic	1	1	0	0	0	0	1	0	0	0	0	0	0	3
Job Status	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Family Income	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Length Of Working	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Family Support	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Role Of Health Personnel	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	10	10	4	4	6	8	6	6	6	1	6	3	5	

Factors causing hypertension include genetic or hereditary factors, health service factors, lifestyle factors or daily behavior and food consumption factors. Table 2 shows that the most studied risk factors for hypertension are smoking and Obesity or Body Mass Index as many as 8 out of 75 variables or 10.7% followed by genetic factors or family history and physical activity / exercise habits as much as 7 research (9.3%) followed by sex as much as 6 studies (8.0%), age variables amounting to 5 studies (6.7%), variables alcohol consumption, dietary patterns, salt consumption, consumption of saturated fat foods, and stress psychic as many as 3 studies (4.0%), variable fiber consumption / fruit / vegetables, calorie consumption and coffee consumption as much as 2 studies (2.7%). Other risk factors are variable levels of education, knowledge, blood pressure control behavior, pingang circumference size, exercise time, vit consumption. C consumption of calcium, use of used cooking oil, employment status, family income, length of work, family support and the role of health workers were only 1 study (1.3%).

3. Factors causing hypertension based on the characteristics of respondents

Factors causing hypertension based on the characteristics of respondents can be seen in table 3 below.

Table 3. Causes of Hypertension Based on Characteristics of Respondents

Characteristics Respondents	Research Result				Total
	Sign.	Samples	Don't Sign	Samples	

Gender	4	214; 75; 70; 55	2	146; 87	6
Age	3	62; 70; 55	2	214; 146	5
Level Of Education	1	146	-	-	1
Genetics / Family History	4	60; 87; 71; 75	3	214; 62; 146	7
Job Status	-		1	60	1
Family Income	-		1	60	1
Length Of Working	-		1	60	1

In table 3 shows the results of hypertension studies according to non-modifiable factors (respondent characteristics), Based on gender known from 6 studies published there were 4 studies which showed significant results (66.67%). The level of education of 1 study shows a 100% significant relationship. Based on the age of the respondents it is known from 5 published studies there are 3 studies that show significant results (60%), based on genetic factors known from 7 published studies there are 4 studies that show significant results (57.14%), while based on employment status factors , family income and length of work did not show a significant effect in causing hypertension.

4. Factors causing hypertension based on lifestyle

Factors causing hypertension based on lifestyle factors are presented in table 4 below.

Table 4. Factors causing hypertension based on respondents lifestyles

Lifestyle Respondents	Research Result				Total
	Sign.	Samples	Don't Sign	Samples	
Knowledge	1	152;	-	-	1
Behavior	1	152;	-	-	1
Obesity / IMT	6	60; 214; 146; 75; 146; 75	2	87; 71	8
Waist size	1	146	-	-	1
Physical Activity / Sports	1	152;	6	60; 214; 62; 87; 71; 55	7
Time Sports	1	214		-	1
Smoke	6	60; 214;	2	62; 87	8

		146; 71; 75; 70			
Alcohol	2	71; 75;	1	146	3
Coffee	1	75;	1	55	2
Dietary Habit	3	152; 71; 75	-	-	3
Salt Consumption	3	60; 214; 75	-	-	3
Saturated Fat	3	214; 250; 75	-	-	3
Calorie	1	75	1	250;	2
Fruit Vegetables And Fiber	1	75	1	55;	2
Vit. C			1	250;	1
Calcium			1	250;	1
Used Cooking Oil	1	60;	-	-	1
Stress Psychic	1	60;	2	214; 87	3
Family Support	1	152;	-	-	1
The Role Of Health Workers	1	152;	-	-	1

Table 4 shows some of the variables studied regarding risk factors for hypertension based on respondents' lifestyles. Based on the variables studied obesity / Body Mass Index (BMI) (75%) and smoking habits (62.5%) are the variables that are the biggest risk factors causing hypertension.

Discussion

As we know hypertension is a condition of the body where blood pressure exceeds its normal limit, many studies related to hypertension have been carried out in Indonesia and have helped a lot regarding the findings of hypertension risk factors in Indonesia that can be modified or cannot be modified. The problem of hypertension itself has a trend that continues to increase every year, so that cardiovascular diseases as the main cause of death in Indonesia every year has increased. Based on the results of a review of several journal publications that have been collected which represent the results of research on hypertension risk factors in Indonesia, it can be said that publications related to the causes of hypertension almost every year there are researches but research is rarely related to solutions and suitable programs to prevent it. As if hypertension is the prima donna in non-communicable diseases so that it can also be known that hypertension or what we often know with "Sillent Killer" disease. The number of research samples varied from 55-250 people and diverse sampling was from hospital based and community, as well as the variables that became increasingly diverse and complete research material. Based on the use of research design, most

(69%) still used a cross sectional research design in the results of the research journal. While the use of case control design is only used in 1 research journal (7%) and for the remainder is descriptive quantitative research design used as many as 3 research journals (24%).

In the sources used in the literature, most of the research uses 6-29 literatures in the form of health magazines, health bulletins, articles, books and domestic health journals. While foreign literature in the form of journal articles and textboxes around 1 - 12 pieces of literature. Most researchers use a lot of old research literature and refer to previous academic researchers. The use of literature can be used as a benchmark, one of which is the use of the latest journals and quite a lot of journals as a basis for conducting research. Judging from the use of literature, the literature is still of poor quality. Research conducted by researchers is a duplication of previous research alone without producing meaningful new findings in the field of health, especially the topic of hypertension which is quite a lot of research [22].

Risk factors for the occurrence of hypertension can be grouped into two, namely those that cannot be modified and which cannot be modified. In table 2 this study shows that the many risk factors studied are from the lifestyle aspects of respondents or modifiable factors, namely BMI which tends to refer to the variables of obesity, smoking habits, physical activity / exercise habits, genetic factors (family history), and types the sexes of the four risk factors are the most studied variables and show significant research results. So it can be concluded that hypertension is a non-communicable or degenerative disease that is very susceptible to occurring or has a greater risk to respondents who have unhealthy lifestyles especially smoking habits and dietary patterns and less vegetable and fruit consumption which causes obesity. While the variables that cannot be modified are gender variables, based on the results of research on sex variables at high risk of causing hypertension.

The causes of hypertension are very diverse, indicating that hypertension is a multicastular disease, and needs more comprehensive research going forward. In table 3 this study shows that hypertension risk factors are gender, age, genetic factors and education level. From several studies showing significant results to be the cause of hypertension, these variables are variables that cannot be modified. In table 4 in this study shows the risk factors based on the lifestyle of the respondents. Some of the variables studied showed significant results in causing hypertension. Smoking behavior and BMI are aspects that have a

trend that increases every year and has a high risk of hypertension. Other aspects also have a significant risk of hypertension, including diet, salt consumption, consumption of saturated fat, consumption of alcohol, coffee, calories, vegetables and vegetables, used cooking oil, waist circumference and psychological stress.

Conclusion

It is known that the most hypertensive risk factors in Indonesia are smoking habits, body mass index (BMI), gender, age and genetic factors. Based on the characteristics of the respondents, various hypertension studies showed age and family history as dominant as a risk factor for hypertension. As for the lifestyle of respondents, BMI factors and smoking habits were the highest risk factors identified in various studies of hypertension in Indonesia. It is better to do a study of hypertension studies in Indonesia involving other variables besides characteristics and lifestyle while the next variable that must be studied is social, economic and cultural variables.

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The Nutrition Assessment in Critically Ill Patients: Analysis Concept

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ABSTRACT

The assessment concept of nutrition needs based on energy calculation is still abstract to understand. Energy is considered as fundamental scientific concept needed by body to perform the biological function. How energy calculation can replace nutrition needs should be clarified. This article emphasizes the assessment of nutrition needs based on the energy expenditure calculation. This analysis is constructed through eight steps developed by Walker and Avant. The chosen concept is energy calculation based on predictive equation, and this analysis aims at finding out the right equation on the population of critically ill patients. The use of this concept is found in critically ill patients based on intrinsic factor, the attributesof energy balance, the accurate estimation and the predictive equation, and the antecedent are physiological stress and energy balance consequence.Case model is shown through borderline and contrary case. Conclusion: the equation concepts by Ireton-Jones (1992) and Penn-State (1998), (2003) are recommended to calculate the nutrition needs of critically ill patients.

Key words: resting energy expenditure, predictive equation

Nutrition Assessment in Critically Ill Patients

How do nurses assess the nutrition needs of critically ill patients in 24 hours?

Nutrition assessment is an effort to determine the nutrition status in critically ill patients. The assessed points include identifying malnutrition risks, anamnesis, physical assessment and energy needs calculation. Identifying malnutrition risks in critically ill patients will help to prevent worse condition. Malnutrition risks cover identifying underweight or index mass body < 18.5 kg/m^2, weight loss experience with more than 10%, mal-absorption experience, hyper metabolic and inability to feed in around five days. Furthermore, the anamnesis assessment is conducted by identifying the patient's clinical status to find patient health level. This is

determined by the function of vital organs such as heart, liver, brain, digestion and lungs influencing energy needs. Vital organ dysfunctions are usually influenced by disease history such as diabetes mellitus, hypertension, HIV, and kidney failure. Physical assessment is performed byidentifying the existenceof edema as the cause of hypoalbuminemiawhich is closely related to the nutrition status, by calculating the liquid balance to prevent over hydrationandto manage the amount of liquid seeing that critically ill patients are often fed in liquid form of food, and by evaluating the laboratory examination related to nutrition status such as albumin concentration, hemoglobin, and blood glucose. Besides, physical assessment contains anthropometric examination determining the nutrition status by calculating the body mass index and by measuring the biceps muscle thickness, where it is known that < 3 mm shows muscles experiencing fat supply fatigue(1–3).

The concept of determining energy needs is the focus in this article. Energy is still too abstract pertained to nutrition needs. It is so far considered as a fundamental scientific concept needed by body to carry outthe mechanical and biological functions. However, the correlation between energy needs and nutrition needs assessment in critically ill patients should be clarified.

Significant Energy Requirement in Nursing Practice

Nutrition therapy is conducted by multidiscipline areas of study namely doctors, pharmacists, nutritionist, and nurses. Nurses's rolesare as management, maintenance and advocacy in nutrition therapy. The function of management pertains to assessing the nutrition status and deciding the method in choosing nutrition treatment, while the function of maintenance deals with assessing the tolerance of digestive function towards foods, maximizing the nutrition target achievement, and minimalizingthe disturbance in nutrition delivery to cells. Lastly,the function of advocacy is to assure that patients get early nutrition therapy, less than 24 hours after negotiation and food order arrangement(4,5).

Identification Concept

Patients have different energy needs than can change in sudden during an ICU treatment. This condition occurs because energy needs is influenced by many factors. Indirect Calorimetry (IC) calculation has been known as standard goal in nutrition fulfillment for critically ill patients. Nevertheless, the weaknesses are its difficult implementation, the high cost, andthe need of special training(6). Thus,

predictive equation can be a solution. Predictive equation can be a common alternative used to calculate resting energy expenditure (REE) because of its simplicity. Predictive equation does not need high cost and it can be used anytime and anywhere(7). This equation is derived from healthy human as the subject and measured when metabolism is in resting or sleeping condition. This equation is then developed in special condition like being sick, stressful, or injured. Since not all equations can be used in critically ill patients, the selected ones are variables having closest criteria with critically ill patients(8). For example, the patients'conditions are in sepsis, post-operative, GGK, burn injury, obesity and mechanical ventilation use.

Definition and Uses of Equation Resting Energy Expenditure (REE)

Energy expenditure is known as energy production process from substrate energy composed from carbohydrate, lipid, and protein(9). The final result is the loss of chemical energy as calorie and rest energy organized in high energized molecule or ATPs (adenosine triphosphate). There are some components influencing energy expenditure including:1) Basal Energy Expenditure (BEE) which is energy needed to maintain homeotsis or body vital function(10); 2) Resting Energy Expenditure (REE), thebasal energy needs in resting or no-fasting condition(11); 3) Thermic Effect of Food (TEF),the energy needed in digestive function, absorbtion and nutrition arrangement (11); 4) Total Component or (TEE), which is the collaboration of BEE, REE and TEF(11).

Energy expenditure equation often uses REE terminology, but few understand the different use of REE or BEE in nutrition needs assessment. REE is an assessment conducted towards sleeping and not fasting patients. Assessment is done if patients have been resting for 30 minutes or in completely relaxed condition. The meaning of resting is not clearly explained in some literatures, whether it is sleeping or just lying in bed. Yet, a reseach affirms that REE is measured after patients bed-rest for about 30 minutes(12). This article further explains that REE measurement has two choices. Firstly, it is done when patients have just arrived at the hospital; to be exact, it is when patients have spent around 10 hours at the night before. Secondly, if patients say that they have taken transportations like cars, buses, or trains, measurement is done 30 minutes after bed-rest(12).

BEE measurement is conducted in humidity and temperature standard setting. BEE is usually measured in normal temperature condition (20°C) in which the

patients have fasted for about 12-14 hours, after having daily physical activity with 8 sleep hours, and phsycological stress; the measurement is performed while the patients are awake, lying in silence, completely relaxed, and breathing normally (7). There is 3%-10% difference in BEE and REE calculation, where BEE is higher than REE (10). Technically, there is a basic difference in the way of calculating BEE and REE. However, nutrition assessment always uses REE terminology and ignores the time and the condition when energy is measured. This technical measurement failure risks getting bias result in research, which is why this point needs important attention(10).

The Aims of Analysis

Nutrition consists of nutrient substances obtained from vegetables and meat consumption. Nutrient is used by body to provide energy and to build, maintain and repair the body tissue. There are two nutrient sources; food and the human bodies themselves. Nutrient sourced from foods are known as essential nutrient. While nutrient sourced from human body is a group of nutrient substance gained from catabolism process or major molecul fission from substrat substance to minor molecul functions as energy producer. In critically ill patients, physiological stress pressures nutrient production through catabolism process due to lack of nutrient substance form essential nutrition(13). Physiological stress suffered by critically ill patients causes smaller energy intake than energy output. As the result, patients starve that they lose their weight. This condition is called imbalance energy(14).

Critically ill patients differ from common illnesses in that the success of critically ill patient recovery depends on nutrition therapy management. Two possibilities in nutrition treatment towards critically ill patients are under and over estimation(15). Hence, nutrition target in critically ill patients must be accurate. Predictive equation has been chosen by practicioners so far because of its easy use dan low cost. However, there are 190 similar predictive equations. Which is the most accurate and appropriate for critically ill patien population?

The Identification of Concept Use

Determining energy in calculating REE has been frequently assessed. Some individual factors affecting the result of calculation are; 1) body temperature that can affect energy output as much as 11% every 1°C body temperature rise; 2) an injury suffered by postoperative patients that increases energy output as much as 5%-20%, center nerve trauma system, sepsis and multiple fracture as much as 50%-60%, medication process increases

10% REE; 3) physical activity increases 15%-30% during 24 hours, bathing 20%, chest physiotherapy 35% and agitation as much as 10% from REE; 4) breathing with insufficiency rises REE to 20%-30%; 5)female is said to expend 3% lower energy compared to male, but it will rise when women menstruate; 6) REE in elderly is higher because of hormonal factor; 7) Body Mass Index (BMI) in obesity experiences energy output increase(7,11,16–18).

To suggest the benefit of nutrition assessment concept with predictive equation, the writer conducts a literature study to show predictive equation review as follows:

Fick Equation Content:(19) Fick Equation is a calculation using hemodynamic data (hemoglobin, compound of oxygen artery-vein, and cardiac output). The measurement of hemodynamic cardiac output uses computer technology. The procedure is by injecting ice D5% through vein to determine heartbeat; it will be compared with thermodelution. The saturation of artery-vein oxygen is gained by spectrophotometrically which is continuously measured, and blood sample taking to check hemoglobin is done at the same time as heart output measurement. **Conclusion:** Fick Equation is not possibly used in the hospital where the research will be done related to *ethical clearance* test and technology inadequacy.
Harris-Benedict Equation Content :(8,20,21) Harris-Benedict (HB) is the first developed equation; this measurement is calculated from variables of weight, height, age, and gender. Initially, it is applied to healthy people, as the research growth, variables of stress and injury are added. The previous result showed equation HB accuracy at 14%, but it has potential to experience over and under estimation between 17% and 67%. **Conclusion:** The test result concludes that it is not recommended to use HB equation in ICU patients.
Ireton-Jones Equation Content : (8,22–24) Ireton-Jones equation was firstly developed in 1992, it calculates multivariable namely weight, height, age, gender, trauma, and burnt injury. The previous validation study showed 23%-83% accuracy for young and obesity category. Retrospective test result showed 43% patients experiences over and under estimation. In 1997, Ireton-Jones equation was re-analyzed, the result showed precise satisfaction with only 8 kcal/day error compared with the Ireton-Jones equation in 1992. In spite of the satisfying result, obesity category test showed Ireton-Jones equitation (1997) experienced bias and was likely to experience under and over

estimation at 52%. **Conclusion:** Ireton-Jones equation (1992) is more recommended because it considers accuracy of under and over estimation.
Penn State Equation Content : (8,22–24) Penn State is an equation published in 1998, initiated by considering trauma and surgery factors. Penn equation calculates weight adjusted to obesity. In 2003, Penn used actual weight while previously adjusted weight was used, the test result of both calculation showed unbiased equation, with the Penn accuracy of 68% (1998) and 72% (2003) respectively. **Conclusion:** recommending Penn equation (1998) which is useful for obesity patients with ventilation problem, while Penn (2003) is possibly useful for non-obese critical patients. Yet, the number of sample needs to be increased.
Swinamer Equation Content : (8,22) Swinamer equation was developed in 1990. It calculates mechanical ventilation variables, critical ill, traumatic patients, surgery and medical diagnosis. In addition, Swinamer also calculates body surface width, age, respiration, tidal volume and temperature. Previous research compared IC and Swinamer with the accuracy of 64,75%, mentioned that IC had lower accuracy than Swinamer, the result may be influenced by different reference and population. Although having good accuracy value, Swinamer equation is rarely used because of difficulty in finding information related to this equation. **Conclusion:** there is not enough proof to use Swinamer equation.

According to the explanation above, there are two recommended equations in critical patients namely Ireton-Jones equation (1992) and Penn equation (1998) and (2003) considering the procedure security, the availability of the equipment, the accuracy and the percentageof possibility under and over feeding of previous test result.

Defining Attributes

Defining attributes is the heart of analysis concept, which is usually showed in articles with different characteristic frequently seen in literatures(25). The definition of attributes of nutrition assessment by determining energy needs includes energy balance, accurate estimation, and predictive equation(7,8). Those three characteristics are described in three different terminologies namely, 1) first attribute as biological function containing nutrient, digestion, input energy, output energy, and energy balance; 2) attribute as an effort maintaining accurate estimation, 3) third attribrute is media to reach goal with predictive

equation.

Case Model

Case model is one of concept attribute definitions explained from daily case(26). This will show borderline case and contrary case. Borderline case is a way to reflect inconsistent attribute definition in the form of case. Here is the example:

Hospital "T" has an ICU room with 10 beds capacity. Nutrition care is handled by multidiscipline namely doctor, pharmacist, nutritionist, and nurse. The nurse plays role to determine patient nutrition status. Mrs. A is treated in intensive room, diagnosed with medical post laparotomy. Installed on patient body are medical equipments like mechanical ventilation, drain, NGT, follycaterer and infuse. Nurse A will measure patient nutrition needs by using Ireton-Jones predictive equation (1992) because this equation considers trauma factor in critically ill patients. Being careless, the nurse uses Ireton-Jones equation (1992) in calculating with spontaneous ventilation category in spite of mechanical ventilation used by the patient. The result of calculation is determined as nutrition estimation target. The order of food type is without discussion between nutritionist and nurse. When the food is ready, the nurse feeds the patient through naso gastric tube. On the third day, the patient suffers hyperthermia and weight loss because of under estimation of nutrition target so that energy balance cannot be reached.

The case model above describes that failure at understanding how to select the accurate and precise media causes the goal unreachable. This leads to the inconsistence of the supposed concept in which the biological function attributes of the energy balance, the attribute to maintain the accurate estimation, and the media used to reach the goal of predictive equation, are not correlated.

Contrary Case

A case model showing that a concept is used unclearly is contrary case(27). This case will show the field condition recording ambiguous concept. The example can be seen as follows:

Nurse A conducts advise to feed patient B through NGT, 100cc milk given once in four hours. Nurse A does not know nutrition target estimation and does not calculate the patient's nutrition needs because she considers that it is the job of a nutritionist. When vital sign examination is done, it is found that the patient's temperature rises to 39°C. Patient shivers and her stomach distends. However, there is no change in nutrition target given by patient for 24 hours. After three day treatments, the patient's condition gets worse; patient's body looks weak and thin. Albumin test result shows that patient

suffers from hypoalbuminemia, meaning that the patient experiences lack of nutrition consumption.

The example above shows the contradiction of uncertain nutrition needs calculation. The case emphasizes failure to understand in providing accurate nutrition estimation and media used in calculation. This failure occurs due to less communication between professionals that fails to reach the goal. To conclude, duty and function clarification among professionals is necessary to create correlative role in each profession. Communication failure among professionals causes unreal description of defining attribute in the field. Thus, it is essential to be firm and clear in critically ill patient's care nutrition.

Antecedents and Consequences

The next step is identifying antecedents and consequences of the concept. Walker explains that antecedents are the ancestors of the concept itself(25). Antecedents can also describe prerequisite events before the concept exists. In conclusion, antecedents are problems while consequences are impacts. Antecedents in critically ill patient energy estimation are physiological stress whereas consequences accepted in energy needs calculation is energy balance.

Empirical Referents

Empirical referents determination is a way to measure a concept which can be applied in real world(25). Identifying nutrition assessment by using predictive equation in critically ill patients proves to help the increase of nutrition therapy quality. Empirical referents are definitely proved through researches, based on the reviews by the research writers using predictive equation in critically ill patients between the years 1999 and 2018. Empirical evidence that predictive equation is useful in energy needs determination is proved by accuracy tools.The tools of Ireton-Jones (1992) have the accuracy value of mechanical ventilation 28%, injury 60%, spontaneous ventilation 35% and non-obesity 28%. The tools of Penn (1998) have the accuracy value of mechanical ventilation 39%, obesity and injury 68%., while the tools of Penn (2003) havethe accuracy value of spontaneous ventilation 43% and non-obesity 72%. The credibility rate of the tools in assessing energy needs becomes the scientific evidence that the concept has been empirically assessed.

Discussion

Nutrition consists of macro and micro nutrient substances. The sources of nutrition itself are divided into two. Firstly, sources taken from the human bodies themselves through substrate

fission from big to small molecules in the muscles. The second source is gained from foods consumed, digested, and delivered to cells for substrate burn that produces energy (13).Energy is used by body as substance to build, maintain, and repair damaged cells. Adequate intake nutrition is described by constant body weight(28). Physiologically, body has three energy needs components. Basal Energy Expenditure (BEE) is the energy needed by body to run its vital organ function, Resting Energy Expenditure (REE) is the energy needed by body during resting, and Thermic Effect of Food (TEF) is the energy needs to run digestive function, to absorb and organize foods(7). However, physiological stress in critically ill patients is caused by inflammation. Body produces cytokines naturally; it is a small molecule of protein produced to carry messages to target cells with the aim of activating body immune system. Basically, cytokines is produced to maintain homeostasis and protect cells from toxic and carcinogenic substance. Yet, if intensity and duration of cytokines release cannot be toleranced, it will endanger body(8). Physiological stress will force body to produce more energy. Body which is lack of essential nutrition will produce substrate substance through catabolism process or fusion of food supply in muscles. Prolonged physiological stress causes patients to starve and to suffer underfeeding(28,29).

Two possibilities in the case of feeding critically ill patients to fulfill nutrition target are underfeeding or overfeeding. Underfeeding occurs when the food intake is <80% from the total of nutrition needs, while overfeeding occurs when the food intake is >110% from the total of nutrition needs (15). Therefore, intake foods in critically ill patients must be precise and accurate. Different clinical condition in critically ill patients causes various energy needs. This is influenced by internal factors such as age, gender, body mass index, temperature, injury, health status, breathing quality and physical activity(7,11,16–18). That the intrinsic factors are dependent to each other causes the fluctuation in energy needs of critically ill patients. Indirect Calorymetry (IC) calculation has been known as goal standard in energy needs calculation(6).Due to the limitation of equipment and facility, nutrition target estimation can be determined by choosing predictive equation. Its strength is empirically proved with the tools of accuracy test. Hence, it is undoubted that the predictive equation can be a media to reach energy balance.

Identifying the first attribute, that is energy balance, depends on the biological function of the body. This statement is

strengthened by the fact that body needs nutrient as substance of building, maintaining, and substituting damaged body tissue. Basically, this concept states that as a human being, humans need foods to run vital organ function and to maintain the tissue and the substrate substance metabolism to survive. It can be concluded that energy balance is a biological concept that exists in human body. This explanation is related to the antecedent invention. Antecedent is found based on how the concept is formerly constructed; the reason of constructing a concept is to solve problems. The problem faced by critically ill patients is that biological function cannot run properly because of physiological stress. Physiological stress is the result of inflammation response which actually occurs to maintain homeostasis. Prolonged physiological stress causes body exhaustion since the body keeps producing energy continually. The impact is that nutrition intake is unable to provide energy to fulfill energy needs.

The second attribute is determining accurate nutrition target, based on the food intake phenomena in critically ill patients, which risks under and over estimation. Therefore, nutrition target must be calculated mathematically to assure precise and accurate number. The third attribute is calculation with predictive equation as a media to reach the goal based on the statement that predictive equation which has been assessed empirically has the credibility to determine energy needs calculation.Consequent is resulted from the correlation of three attributes. Accurate estimation will be reached through the energy calculation with predictive equation. The result of it is energy balance. Regarding to the undertaken literature study, the writers recommend Ireton-Jones (1992) and Penn-State (1998), (2003) to critically ill patients treatment. The considerations are procedure safety, tools accuracy and possible percentage of under and over estimation.

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Key Factors Accosiated with Retention of Health Workers in Rural Areas: A Systematic Review

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ABSTRACT

Background: Healthworkersdisparityremainsprobleminmanycountriesparticularlyinlowandmiddleincome countries, whereas health workers' role is very important in achiving health development goals. This study aims to review the key factors contributing to rural health workersretention.
Method: The data was collected by browsing Proquest, Science Direct, Scopus, EBSCOHOST, Pubmed, and google scholar. By using Preffered Reporting Items for Systematic Review and Meta Analysis (PRISMA) method, 31 articles have been deeply reviewed.
Result: Fromthe31articlesreviewed,therewere11majorthemeemergedasfactorsthatmotivatehealthworkers in rural areas: altruistic factor, financial rewards, professional development, regulation, working condition, availability of resources, education and training, recognition and appreciation, medical facilities, familiy, and community support. Professional development appreared as the biggest motivation while recognition and appreciation was the least motivation of rural healthworkers.
Conclusion: Makinginvestmentintrainingandeducationforruralhealthworkerswouldbeconsideredasbetter strategy in coping with health workersdisparity.

INTRODUCTION

As health policy formulator and implementor, health human resource has a crucial role in undertaking health development. Various health programmes are impossible to meet the success without good plan strategy and excecution aswell.Bothrequireadequateandcompetenthealth workers to achive health development goals. In addition,healthworkersarealsotakinganimportant roleindevelopinghealthandcommunity resilliance in facing disaster and health issues(1).

However, health workers disparityremains problem in many countries particularly in low and middle income countries. On the other hand, the demand of health workers is continuously growing following the increase of population number, transition of epidemiology, and technology update (2). Responding to this situation, WHO recommendstheminimumratioofhealth workersto

achieve 80% of delivery service by health attendance as many as 2,3 per 1.000 population (4). Ifthecalculationisbasedonhealthworkersdemand to achieve Universal Health Coverage (UH) and SustainableDevelopmentGoals(SDGs) ,theratioof health workers (doctors, nurses, and midwives) becomes 4,45 per 1.000population.

In2003,theworldwasexperiencinghealth workers shortage approximately 17,4 million and physiciansastherarestones.Inthiscase,SouthEast Asia becomes the severest region with 6,9 million shortage followed by African countries with 4,2 million shortage of health workers (2). In 2016, *Global Health Observatory Data Repository* reported doctors ratio per 1.000 population in India was 0,758 (3). Althought the physicians ratio was considered low, the ratio of nurses and midwives was better (2,094 per 1.000 population). Countries suffering from war conflict were also having problem with health workersdistribution.

Afganistan, for instance, has a very small ratio of doctors (0,295 per 1.000 population) (3).

InIndonesia,thenumberofdoctorsin2017 had exceeded the demand with 47,6 per 1.000 ratio butmaldistributedatthesametime(4).Reportedin

BasicHealthResearch(Riskesdas)2017, therewere 748 Primary Health Care (PHC) (7,7%)without doctors. They were distributed mostly in 5 provinces consist of Papua, Maluku, West Papua, South East Sulawesi, and East Nusa Tenggara (5). In 2016, the ratio of nurses in Indonesia was 113,4 per 100.000 population (6). It was unsuccessfull to meet the target yet which was 180 per 1.000 population. Eventhough the ratio of nurses was betterthandoctors,thedataindicatedthatt herewere many PHC without nurses. In 2017, as many as 56 PHC reported without nurses and 106 PHC without midwives (5). The majority of them werescattered inPapua.

In 2002, WHO responded the maldistribution problem by enacting some policy recommendations to improve health workers retentioninruralandremoteareas,known as Global Policy Recommenation Increasing Accessto Health Workers in Remote and Rural Areas through Improved Retention. The recommendation offer some approaches to improve health workers retention through education, regulation, insentives, as well as personal and professional support(7).

Many studies carried out show some disparities among health workers in urban and rural areas. Different from urban areas, rural areas especially remote areas, are less interesting for health workers to be dispatched. It causes people in ruralareastohavedifficultaccesstoqualifi edhealth service provided by professional health care providers that can contribute to poor health status. Therefore, a goodunderstanding uppon the factors related to health workers retention in rural areas is needed in formulating a proper policy. This study aims to identify factors related to health workers retention in rural areas based on systematic review. The result of this review could be used as consideration in developing some appropriate strategies to overcome health worker maldistribution issue.

METHOD

This research is carried out by browsing literature database consisting of Proquest, Science Direct, Scopus, EBSCOHOST, Pubmed, and Google Scholar. Access to several database was facilitated by digital library of University of Indonesia. By using Preffered Reporting Items for Systematic Review and Meta Analysis (PRISMA) method, the researcher determined some inclusion and

exclusion criterion. The inclusion criterion was stated using the framework of P (population), I (intervention), C (control), and O (outcome). The population of this research was health workers in rural areas while the intervention was retention and the outcome was decribing the factors related to healthworkersretention.Anotherinclusionsusedin this research was the range of the studies reviewed was between 2008 and 2018. Also, only full-text paper and open access paper had been reviewed. Meanwhile, non-health workers and medical students or fresh graduate population was considered as exclusion criteria. This paper reviews quantitative as well as qualitative research findings related to health workers retention. Using the inclusion criteria, the review was started by browsing articles using key words: “health workers”, “health workforce”, “health human resource”,doctors,physician,nurse,midwivesAND retention ANDrural.

RESULT

Electronic searching through key words resulted in 197.073 titles of articles. Those number were narrowed down through publication year restriction which was from 2008 to 2018, made it into 83.851 finding articles. After being filtered by typeofarticle(full-textandopenaccessarticles),the numberofarticlecollectedbecame232consistingof
49 articles from PROQUEST, 20 articles from Science Direct, 63 articles from Scopus, 43 articles from EBSCOHOST, 31 articles from Google Scholar, and 26 articles from Pubmed. Fromthose

232 articles, the PICO-based selection and deletion of duplicated articles yielded in 31 final articles (figure 1).

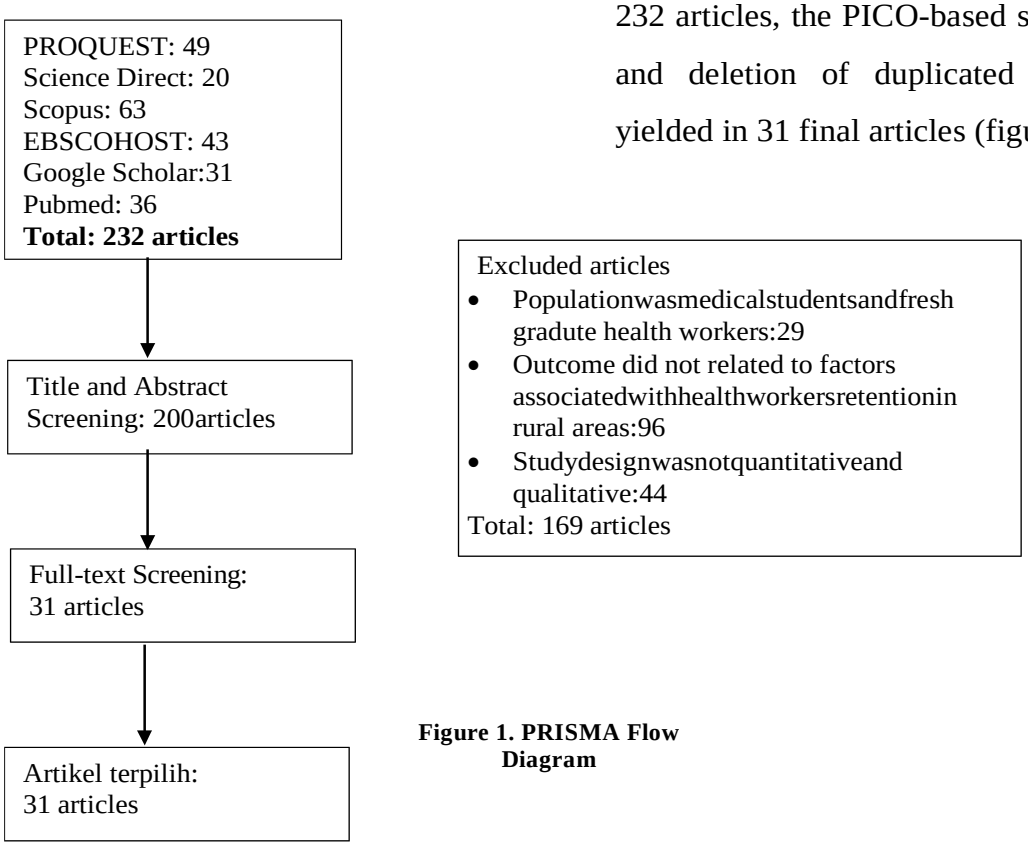

Figure 1. PRISMA Flow Diagram

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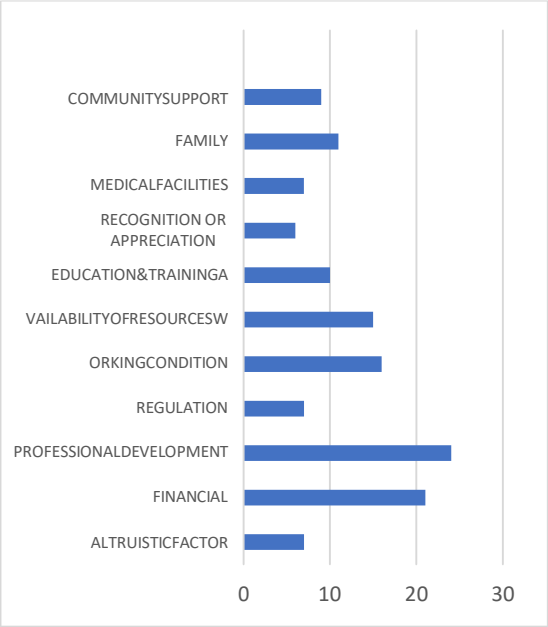
Table 1. Identification of Factors Related to Health Workers Retention in Rural Areas

No	Author	Year	altruism	Financial Insentives	Career &Professio- nal Develop- menet	Regulation	Working Condition	Resources Availabili- ty	Training &Educati on	Recogni- tion &Appreci a- tion	Medical Facilities	Family	Communi- ty Support
1.	Ashgari, et al (8)	2017		X	X		X		X				X
2.	Jenkins LS, et al (9)	2015			X		X	X					X
3.	Gittoes E, et al (10)	2011		X		X		X	X			X	
4.	Zheng J, et al (11)	2015			X	X	X		X	X		X	
5.	Miranda J, et al (12)	2012		X		X						X	
6.	Amalba A, et al (13)	2018	X		X								
7.	Butterworth K, et al (14)	2008	X	X	X		X	X	X	X			
8.	Leonardia JA, et al (15)	2012	X	X	X							X	
9.	Shah SM, et al (16)	2016		X				X	X		X		
10.	Nagai M, et al (17)	2017			X		X					X	X
11.	Sato M, et al (18)	2017		X	X	X	X					X	
12.	Sirili N, et al (19)	2018		X	X			X					X
13.	Dwarka E, et al (20)	2015	X	X	X		X	X			X		X
14.	Li J, et al (21)	2014		X	X								
15.	Hancock C, et al (22)	2009		X			X						X
16.	Witter S, et al (23)	2011		X			X			X	X		
17	Alam K, et al (24)	2012		X						X			X
18.	El-Jardali F, et al (25)	2013			X		X	X				X	
19.	Bocoum FY, et al (26)	2014			X	X		X			X		

No	Author	Year	altruism	Financial Insentives	Career &Professio- nal Develop-menet	Regulation	Working Condition	Resources Availabili-ty	Training &Educati on	Recogni-tion &Appreci a- tion	Medical Facilities	Family	Communi-ty Support
20.	Takemura T, et al (27)	2016		X	X			X	X		X		
21.	Sheik K, et al (28)	2016		X				X	X	X			
22.	Snow RC, et al (29)	2011	X	X	X			X	X		X		
23.	Hatcher AM, et al (30)	2014			X								
24.	Belaid L, et al (31)	2017		X			X	X				X	
25.	Alameddine M, et al (32)	2016		X	X		X						
26.	Ebuehi OM, et al (33)	2011		X	X		X	X				X	
27.	Kiwanuka SN, et al (34)	2017		X	X	X						X	X
28.	Smitz M-F, et al (35)	2016		X	X		X						
29.	Wurie HR, et al (36)	2016	X		X	X	X	X	X	X		X	X
30.	Kadam S, et al (37)	2012	X		X		X	X	X		X		
31.	Chhea C, et al (38)	2010		X	X					X			
Total			7	21	24	7	16	15	10	6	7	11	9
%			23%	68%	77%	23%	52%	48%	32%	19%	23%	35%	29%



Graph 1. The Description of Distribution Frequency of Factors Associated with Rural Health Workers Retention

Table 1 describes the frequency distribution of factors associated with health workers retention in rural areas based on reviewing the selected articles. According to the given information intable 1,factorsthatappearedmostoftenarek nownasthe biggest triggers that can pull or push healthworkers to stay in rural areas. Graph 1 gives the illustration on the biggest as well as the smallest trigger of health frequency were training and education, family, community support, altruism, regulation, and medical facilities. Recognition and appreciaiton was the lowest factor that retain rural health workers.

DISCUSSION

workers retention in ruralareas.

As described in graph 1, career and professional development was the most frequent factor that appeared as trigger of health workers retention in rural areas. The second factor was financial incentives such as wage and financial compensation. Following the financial incentives, working condition and resources availability were also prominent contributing factors to rural health workers retention. Listed orderly based on the Compared to the financial motivation, career and professional development in fact was more insteresting for rural health workers. It was found not only in developing countries but also in modern countries. About 77% of the researchfound career and professional development as

motivating factor for working in rural. It was occurred in Canada, South Africa, China, Ghana, Nepal, Philpines, Senegal, Tanzania, Bangladesh, Australia, United State of America, Mediteranian Region, Burkina Faso, Kenya, Lebanon, Nigeria, Uganda, Timor-Leste, Sierra Leone, India, and Cambodia.Themajorityofruralhealthworkerswas expectingacareerdevelopment.Someofthemwere working in rural district to gain working experience and improve their professional capability. College supportwasalsoneededinhandlinghealthproblems occurred in their place. In this regard, WHO reccomends to all the policy makers in many countries to provide personal and professional support by facilitating career development and developing collaboration network so that the rural health workers are not feeling neglected professionally(7).

However, it should be properly understood thatfinancialsupportwasnomeaningless sothatthe policy might be better if combining some strategy concerned to improve career development and financial incentives. Financial incentives might be given in form of salary, compensation,and retirement security. Rural places generally have different characteristic than urban cities in terms of education,health,sport,andentertainmentfacilities. Urban cities offer more complete and advanced amenitiesthanrural.Therefore,interestingfinancial offers are necessary to pull health worker in rural areas.

The availability of resources emerged in 48% of the research as pulling factor of rural health workers retention. It appeared as the fourth biggest factorafterworkingconditionwhichmarked51%of the research. Some factors considered as resources availability were transportation facility, housing, andagoodeducationfacilityforchildren.However, itdidnotoccurinmoderncountrieslike UnitedState of America, Canada, andAustralia.

Working condition was also proven as a factorthatplaysroleinruralhealthworkerretention. Interestingly, it was

not found in developing countriesbutalsoadvancedcountriess uchasUnited State of America (22). The working condition itself included co-workers relationship, teamwork, heavy workload due to limited number of employee (11)(14). Less-organized work management also contributed to demotivation of rural health workers (39).

From 11 variables identified as retention factors, recognition and appreciation emergedas the lowest factor that retain rural health workers(19%). It found in studies in China, Nepal, India, Ghana, Dhaka, Timor Leste, and Cambodia. Rural health workers mentioned the need og recognition and appreciation either from collegues or community. the isolation led them to feel neglected and less-appreciated(28).

Altruism was the second least motivating factortoretainruralhealthworkersmar kedasmuch as 22% of the studies. This factor only apprearedin low and middle countries like Ghana, Nepal, Philipine, Bangladesh, Sierra Leone, and India. Altruism or known as a noble trait that put the others' concern as priority over ourselves', was proven to retain health worker in less-interesting workplace (13)(14)(15). The rural health workers stated their motivation to help others in seeking proper health service (20). Based on that reality, it implies the necessity to develop some efforts in growing and maintaining altruism habit through formal education. One of strategies could possibly done by developing curriculum related to rural and remote health service that makes students become more aware and concern about health service improvement in difficult areas.

Another weak factor that motivating the retention of rural health workers was regulation (23%). Regulation refered to policy and law that rules health worker deployemnet. Rural health worker prefer the policy that regulate short-time dispatchement in certain area so that it willimprove the retention (36). Furthermore, decentralization policy that possible to recruit and and deployhealth worker based on

their place of origin was proven to be able to improve retention (34). Work placement management that pay attention to the right period of employment contracts can be an alternative policy that can be applied in order to distribute health workersevenly.

Although the availabililty of medical facilities is importantly required in maintaing their job, only 22% of the studies found its role in retaining rural health workers. The issue of medical fasilities emerged in middle-income countries such as India, Pakistan, Bangladesh, Burkina Faso, Kenya, and Vietnam. Rural regions are often associated with transportation and infrastructure difficulties. It led to health facilities development anddistributionofmedicinebecome hampered.The inadequate drugs and poor medical equipment in rural made health workers have to refer the patients to urban health care facilities (27).

CONCLUSION

Rural regions have a specificcharacteristic that make them less interesting as a working place for health workers. In fact, there are many health problems that need to be solved by professional health personnels. The role of qualified health workers are importantlyneededinruralareasinbot h curative andpromotive.

Peranan tenaga kesehatan sangat diperlukan di daerah pedesaan baik dalam hal kuratif, preventif maupun promotif. But unfortunately, the data shows the imbalance in the distribution of health workersbetweenurbanandruralareas. Theproblem of distribution of health workers is not only experienced by developing countries but also developed countries such as the United States, Canada, and Australia. Evidence-based policies are needed that offer a number of benefits for health workers to beabletoincreasetheretentionofhealth workers in thecountryside.

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Interest is not related to Midwife Student Learning Satisfaction (Study of Midwifery Phenomenon)

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ABSTRACT

The number of midwives and student midwives before 2017 has increased considerably. The current increase in the number of midwife students is more than 25% of all health students. However, this was not followed by a significant reduction in the number of mortality rate. The latest phenomenon is the number of midwife students who are currently decreasing by more than 50%. There needs to be a further study to evaluate this phenomenon and the appropriate intervention plan for midwife students. Knowing the student interests and satisfaction with the study process are a good point.

This study conducted to determine the interest and satisfaction of learning and its relationship to students of Diploma IV Educator Midwives. This study was the first step in the assessment of data to carry out interventions and advocacy steps in accordance with the midwifery code of ethics. Besides, to find out the relationship between learning interest and student learning satisfaction. The study conducted with a cross - sectional approach. The results of the study showed that the majority of students had an interest in learning and good learning satisfaction. Statistically, there is no relationship between interest in learning and learning satisfaction.

The author concluded that there were other special conditions such as the lack of jobs and low salaries of midwives, which makes this possible. It is recommended for further studies to do research with additional other variables that have not been studied.

Keywords: Midwives, interests, learning satisfaction.

INTRODUCTION

The number of midwives and midwife students in Indonesia before 2017 increase significantly. This number was not followed by a reduction in the mortality rate in Indonesia. The rate increased from 228 / 100,000 live births to 359 / 100,000 live births.[1] Around 76.9% of Public Health in Indonesia excess the Midwives.[2] Surprisingly, this year the number of midwife students has declined dramatically by more than 50% and many midwife graduates do not work in the health field.

According to Borjian, et al (2011) this occur because of dissatisfaction both during the learning process and during work.[3] One of the most important factors that can increase interest and motivation

about academic studies, graduate students and also job satisfaction is the level of satisfaction of learning in the field of study and relevant work, social position, income and the level of difficulty of work. Dissatisfaction in work causes midwives to leave the field of work.

In addition, interest in learning is also important because it is a part of cognitive which is a behavioral education strategy, promoting self-esteem at a higher level and self-confidence because it allows information internalization and satisfaction with the learning process.[4]

The results of research conducted at the University of medical science showed that 63.6% of students decided to change their field of study and 51.64% of them decided to choose resignation. The lack of a positive social response is considered as the factors of dissatisfaction with midwives and nurse that can cause frustration and resignation among students and avoid continuing professional studies.[5] Sattari et al (2000) mention, about 50% of students care attention to their future work and 35.5% of them have negative views about their chosen field of study. [6]Most students have little satisfaction with their field of study, needing to make an effort to continue to develop quality services.

Satisfaction requires understanding multidimensional aspects and can be visualized through various perspectives.[7] Student satisfaction with simulated learning satisfaction experienced minimizes feelings of fear and anxiety about his profession or work in the future.8

Therefore, studying the possibility of intentions to leave the study among students is important. [(9-11)]The Diploma IV Study Program Midwife Educator of the Respati Indonesia University is one of the study programs that has received B accreditation and has graduated many midwives. The results of the preliminary studies conducted at the University of Respati Indonesia revealed that the number of students entering the last 3 years of the 2013/2014 academic year up to 2015/2016 academic year is 397 students.

It is expected that the phenomenon of increasing the number of students will be followed by the quality of students who will work in the midwifery field. But, what has happened in recent years has decreased the number of students to more than 50%. Therefore, it is necessary to have a primary assessment to evaluate student satisfaction. So that appropriate sustainability advocacy can be carried out in order to create a qualified midwife.

Researchers need to take the first step of intervention, namely the assessment of learning interests and satisfaction in relation to the decline in the number of midwife students.

METHODOLOGY

The design of this study used the Crossectional method. This study used a descriptive analytic approach. The population used all Midwifery students at the University of Respati Indonesia. The sample in this study were all Diploma IV Educator Midwife students in the Respati Indonesia University 2016/2017. This study used a total sampling technique.

The variables of this study included the student's interest and learning satisfaction. Bivariate data analysis used the Chi-square test.

ETHICAL CONSEDERTAION

This research has fulfilled the ethical requirements and has been approved for research to take into account the principles stated by the RSPI Health Research Ethics Committee. Prof. Dr. Sulianti Saroso Number 50 / VII.10 / VIII / 2017.

RISULT AND DISCUSSION

The results of the univariate analysis of the research are shows in the following table:

Table 1. Distribution of Frequency of Respondents' Learning Interests

Component	Clasification	n	Prosentase
Interest of learning	Interest	66	51.96 %
	Not Interest	61	48.04 %
	Total	127	100 %

Table 1 shows that the majority of the respondents were satisfied in learning with 51.96%.

Table 2. Respondents' Frequency Distribution of Learning Satisfaction

Component	Classification	n	Prosentase
Learning Satisfaction	satisfied	60	47.24 %
	No Satisfied	67	52.76 %
	Total	127	100%

Table 2 shows that the majority of respondents (52.76%) were not satisfied in the learning process on campus.

Table 3. Bivariate analysis between interest and learning satisfaction

		Satisfaction			
		No satisfied	Satisfied	Total	P - Value
Interest	No Interest	37	24	61	0.110
	Interest	30	36	66	
Total		67	60	127	

The analysis result showed that the majority of respondents had a good interest in learning. But many of them were dissatisfied in the learning process. Statistically, it showed that there was no relationship between interest and satisfaction of learning. These results are not in accordance with Borjian et al. 2011 theory. (3) These results are also not in line with research on previous health students. (12-15)

Researchers assumed that it was possible because the number of respondents was still inadequate. Besides, there were other factors in learning satisfaction that has not yet been studied. For examples, include learning environments (16-19), curriculum (20-23) and perceptions of work after graduation.

Variable interest in learning was not related to learning satisfaction. It is possible because of the special conditions that are currently occurring in midwife students, lack of research and not yet examined all the existing variables.

This particular condition, for example, is due to the extraordinary surplus of midwives to graduates of previous years. The lack of jobs and other conditions that are not yet known also affect this result. Student satisfaction is complex. It is a multifactorial problem.24 Relevant studies reveal a positive relationship between student satisfaction25 and the quality of student care, a pedagogical atmosphere of environment and leadership style, a sense of belonging26

peer support27 and the level of interest of students 28 which can later be assessed in future studies.

CONCLUSION

The conclusion from this study is there is no relationship between interest in learning and learning satisfaction. There are special conditions or other variables that cannot be studied in this study. There may be a special condition related to learning satisfaction and other possibilities outside the midwifery field.

Therefore, it is needed for further research that studies other factors that have not been studied, uses other methods and uses a greater number of samples.

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TITLE PAGE

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Effect of Soy Milk and Mung Bean Porridge on Waist-Hip Ratio in Postmenopausal Women

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ABSTRACT

Objective: This study aimed to analyze effect of soy milk and mung bean porridge on waist-hip ratio (WHR) in postmenopausal women.
Methods: Design of this study wasexperiment, pre-post testwith control group. Subjects of this study were 30 postmenopausal women aged 45-75 years old inSerengan District, Surakarta. Subjects were divided into control group (n=10), soy milk group (n=10) and combination of soy milk and mung bean porridge group (n= 10).The studywas carried out for 4 weeks from December 2018 to January 2019. The soy milk and mung bean porridge provided were 240 ml and 180 ml per day per person, respectively.WHR was measured with measuring tape based on WHO guidelines. Data collected were analyzed with paired t-test, one way ANOVA and Bonferroni test.
Results:There was a significant decrease in WHRboth in the soy milk group and combination group compared to control group ($p< 0.05$). The average decrease in WHR was -0.02 ± 0.00 cm in the soy milk group and -0.03± 0.01 cm in the combination group of soy milk and mung bean porridge.
Conclusion:Soy milk and mung bean porridge can be alternative therapies to reduce waist-hip ratio for postmenopausal women.

Keywords : soy milk, mung bean porridge, postmenopausal women, waist-hip ratio

INTRODUCTION

Obesity is excess of body fat accumulation. In 2013, the prevalence of obesity for adult women (>18 year-old) was 32.9%. There was an increase of 18.1% compared to 2007 (13.9%) and an increase of 7.5% compared to 2010 (15.4%). Nationally, the prevalence of central obesity in Indonesia in 2013 increased 26.6%, higher than the prevalence in

2007 which was 18.8%.[1] Central obesity, also known as abdominal obesity, is defined as an increase in abdominal fat and is one of signs of metabolicsyndrome and can be identified through anthropometric examination. One simple but very simple anthropometric examination is waist-hip ratio (WHR). The WHR cutoff value for Asian women is ≥ 0.85 cm.[2] Central obesity is a risk factor for cardiovascular disease and often occurs in menopausal women.[3,4]This can be due to rapid hypoestrogenemia, unhealthy nutrition, lack of physical activity and low levels of sex hormone binding globulin (SHBG).[5]

Diet regulation is one of the main pillars in handling obesity.[6]Soybeans (*Glycine max*)and mung beans (*Vignaradiata*) are types of beans that have many health benefits, one of which is as antiobesity.[7,8]Soybeanscontain low calories, cholesterol (0%), trans fatty acids (0%), high in protein, high in isoflavones, high in fiber and low in fat.[9,10] In addition,saponins in soybeans have anti-obesity effects by inhibiting adipogenesis, pancreatic lipase, fat absorption and inhibiting appetite regulation.[11]

Mung beanshave low calories, high in protein and high in fiber which can increase satiety. Moreover, they also contain resistant starch which inhibit fat deposition in adipocyte cells and containvitexin and isovitexin which can prevent inflammation in the body. Allof these can reduce the risk of obesity.[12,13]

Soybeans in the form of milk and mung beans in the form of porridge are one of the most commonly consumed snacks for Indonesian people. Research on soy milk and mung bean porridge and its direct effect on WHR have not been widely done, especially the effect on postmenopausal women. The purpose of this study is to analyze the effect of soy milk and mung bean porridge on WHR in postmenopausal women..

METHODOLOGY

Design of this study wasexperiment, pre-post test with control group. The population was women aged 45-75 years old who wereat least 12 months not gettingperiod. Treatmentwas conducted for 4 weeks from December 2018 to January 2019. The subjects of this study were postmenopausal women residing in Joyotakan Village and Danukusuman

Village, Serengen District, Surakarta. The subjects selected using consecutive sampling. Total subject was30 women which was obtained based on the Murti formula regarding comparison of the mean of two populations.[14,15] A simple randomization was performed to determine the control group (n = 10), the group that received soy milk (n = 10) and the combination group of soy milk and mungbean porridge (n = 10).All subjects received oral and written nutritional counseling about a low-fat and low-cholesterol diet for 4 times according to the guidelines from the Indonesian Ministry of Health.

Soy milk was made according to the study of Fitrianti&Marthandaru which was modified by adding low calorie sugar as much as 0.5 g (1 kcal)/240 ml soy milk.[16]Soybeans that had been rinsed and washed first, were soaked for 8 hours with a ratio of soybean and water 1: 2, then cleaned by removing the skin from soybeans. After that, soybeans were boiled for 15 minutes. Boiled soybeans werethen blended with a ratio of soybean and water 1: 3.5. Furthermore, the soybeans that had become soybean porridge were extracted and boiled while stirring, then cooled.Soy milk used in this study contains95.34% water, 0.23% ash, 1.13% fat, 1.57% protein, 0.21% crude fiber, 1.78%carbohydrates and 25.64 kcal/100 g. While the mung bean porridge contains 89.64% water, 0.47% ash, 0.17% fat, 2.56% protein, 0.30% crude fiber,7.17% carbohydrates and 72.37 kcal/100 g.

Mung bean porridge was made according to the most usual method used by the people in Surakarta. Mung beans that had been washed 4 times were soaked in water with a ratio of mung beans and water 1: 3 for 5 hours, then boiled for about 30 minutes.The porridge then was added brown sugar as much as 5.6 g (22 kcal). Before the intervention, a hedonic test was carried out on a similar population in order to know the preference of prospective subjects. Soy milk was consumed 3 hours after lunch, while mung bean porridge was given 1 hour after soy milk.

The research data used in the study were primary data including WHR. The data consisted of a pretest (before intervention) and posttest (after intervention). Data of WHR collected in pre-test and post-test were measured according to WHO guidelines using measuring tape that had been calibrated and carried out by trained staff.[2] The collected data

werethen analyzed using paired sample t-test, one-way ANOVA and posthoc test (Bonferroni).

ETHICAL CONSIDERATION

This study was approved by Health Research Ethics Committee (HREC) of UniversitasSebelasMaret with certificate number 349/UN27.6/KEPK/2018.Moreover,prior to screening and intervention, all subjects have already signed an informed consent.

Table 1. Characteristics of research subjects (n=30)

Characteristics	**Control Group (n=10) %**	**Soy Milk Group(n=10) %**	**Soy Milk & Mung Bean Porridge Group (n =10) %**
Nutritional Status			
normal	2 (20%)	3 (30%)	2 (20 %)
overweight	2 (20%)	3 (30%)	3 (30%)
preobese	3 (30%)	5 (50 %)	5 (50 %)
obese	3 (30%)	0 (0%)	1 (10%)
Education Level			
Elementary School	1 (10%)	2 (20%)	6 (60%)
Junior High School	3 (30%)	5 (50 %)	2 (20%)
Senior High School	3 (30%)	2 (20%)	2 (20%)
Bachelor	3 (30%)	1 (10%)	0 (0%)
Occupation			
Housewife	8 (80%)	7 (70%)	6 (60%)
Enterpreneur	1 (10%)	1 (10%)	4 (40%)
Employee	1 (10%)	2 (20%)	0 (0%)
Mean of Age	56.1	59.5	58.4
Mean of BMI	27,5	25.9	25,7
Average of Energy Intake (kcal)	1397.6	1696.1	1366.7
Average of Fat Intake (g)	45,8	58,7	48,6
Average of Carbohydrates Intake (g)	209.9	230.9	183.7
Average of GPAQ Score	694	562	536

Source : Primary Data, 2019
GPAQ= global physical activity questionnaire

RESULTS

The subjects who participated in this study were 30 postmenopausal women and there was no drop out**.** The characteristics of the research

subjects consisted of nutritional status, education level, occupation, average of age and average of BMI (body mass index). The highest age average was found in the soy milk group and the highest BMI average was found in the control group. The most obese subjects were found in the combination group of soy milk and mung bean porridge, while the highest level of elementary school education was in the combination group of soy milk and mung bean porridge (table 1).

WHR in the soy milk group decreased significantly. The average decrease is -0.02 ± 0.00 (cm). This also happened in the combination group of soybean milk and mung bean porridge which also had a statistically significant decrease of -0.03 ± 0.01 (cm) (table2). The post hoc test also showed significant decrease among intervention groups ($p < 0.05$) (table 3).

Table 2. Differences of decrease in WHR before and after intervention

Group	**n**	**WHR (Mean ± SD) pretest (cm)**	**WHR (Mean ± SD) posttest (cm)**	**∆Mean (cm)**	**p value**
Control	10	0.93 ± 0.04	0.93 ±0.04	-0.00±0.01	0.117
Soy Milk	10	0.95 ± 0.04	0.93 ± 0.04	-0.02 ±0.00	0.000
Combination	10	0.94 ± 0.05	0.90 ± 0.04	-0.03 ± 0.01	0.000

Source : Primary Data, 2019

Table 3. Result of post hoc testamong intervention groups

Group 1	**Group 2**	**p value (∆of WHR Decrease)**
Control	Soy Milk	0.007
Control	Combination	0.000
Soy Milk	Combination	0.033

Source : Primary Data, 2019

DISCUSSION

The resultis in accordance with Akhlaghi et al.which states soybeans can be useful as antiobesity.[7]The decrease in WHR in soy milk group can be caused by the influence of a low carbohydrate and low fat diet carried out by research subjects according to the recommendations of nutrition counseling carried out for 4 consecutive times and the positive effects of soy milk that contains fiber, omega 3, low carbohydrate, high proteins and many phytochemicals.

The dietary intake of the soy milk group was higher in caloriesand fat compared to other groups. Physical activity of the soy milk group was also low. Global physical activity questionnaire (GPAQ) showed that the lowest physical activity scores occurred in the combination group of soy milk and mung bean porridge, then followed by the soy milk group. Both of these can help get rid of the possibility that decrease of WHR is due to physical activity and food intake. WHR in the combination group also decreased significantly compared to other groups. This can be caused by synergistic effect of soy milk and mung bean porridge. Fat intake in combination group was higher than the control group. This group had also lower physical activity than the control group. This study still has some limitations namely the sample size is small, the scope of the study is not very broad and the duration of the study is only 4 weeks.

CONCLUSION

For postmenopausal women, consumption of 240 ml of soy milk for 4 consecutive weeks can reduce waist-hip ratio significantly and the combination of 240 ml soy milk and 180 ml mung bean porridge for 4 weeks can also reduce the waist-hip ratio more than the soy milk group alone. This can be used as an alternative therapy for postmenopausal women to reduce waist-hip ratio so that it may help reducing the risk of cardiovascular disease.

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THE DIFFERENCEIN EFFECTIVENESSOF LEMON AROMATHERAPY TREATMENT BY INHALATION, TRANSDERMAL AND MASSAGE TO PSYCHOLOGY CONDITION OF POSTPARTUM MOTHERS ATHOSPITAL

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ABSTRACT

Background:
Mild psychological distress affect aproximately from one to fivepostpartum mothers globally. Difficult interactions and communication between these mothers and their children may increase the risk of behavioral disorders and led to cognitive impairment in the children. An alternate approach is used of non pharmacologic therapy.Lemonaromatherapy has been proposed to solve symptoms of mild psychological distress.

Aims
This study investigated theeffectiveness of lemon aromatherapy through three alternate administration routes; inhalation, transdermal and massage on the symptoms ofmild psychological distress in postpartum mothers.

Method
A quasi experimentaldesign with pre and post test was used. The sample included of108 postpartum mothers, divided into four groups each group include 27 respondents; the control group and three treatment groups.

Findings
Before treatment, 49.1% of participants showed the symptoms of mild psychological distress. Following treatment with lemon aromatheraphy there were 43.5% of participants who continued to have symptoms of mild psychological distress(down by 5.6%). The analysis showed that there were significant difference of effectiveness in transdermal treatment group (p value = 0.000) and massage (p value = 0.000) compared to the control group (p value = 0.014) and inhalation group (p value = 0.070);

Conclusion: lemon aromatherapy treatment may be considered as a complementary therapy to reduce depressive symptoms in postpartum mothers.

Keywords: Lemon Aromatherapy, Psychology of Postpartum Mother, Inhalation, Transdermal, Massage.

INTRODUCTION

Puerperal or postpartum period is a period of stress both compared to pregnancy for a mother. Psychology of puerperal mothers often experience emotions that are unstable, sad and irritable, this is the basic of the occurrence of further psychological disorders.[1-2] Most mothers experience of anxiety because they have feelings of neglect, lack of confidence in their role, or feel embarrassed because they need help from others in meeting basic post-maternal needs. In addition, one of the causes of this occurrence is the emergence of new attention centered on the baby,[3] the unstable emotion of postpartum mother is also a consequence of various factors, including emotional disturbances that accompany the joy and fear experienced by the mother during pregnancy and childbirth, discomfort that occurs during the puerperium early, tiredness due to lack of sleep, anxiety about the ability to care for the baby with exact and body image issues.[4] There are three psychological disorders that can occur in the postpartum period are postpartum blues, postpartum depression, and postpartum psychosis. The prevalence of mild psychological disorders of postpartum mothers is about 12-20% in the world.

Based on research Kozhimannil et al 2009 in the State of New Jersey weak economic women who have diabetes pregestasional and gestational risk double postpartum depression. Munk-Olsen et al. 2009 states that women who have had previous psychiatric disorders will experience with increased re-treatment for psychiatric disorders in the first month after delivery. According to the National Mental Health Association 2004 major and minor postpartum depression occurs 10-20% in women.[3] A study in Abdulbari in 2013 in Arab states that 29.4% of mothers are depressed and 26.5% of mothers have anxiety when giving birth to premature babies. Prevalence of postpartum depression in Indonesia has not been presented nationally, but based on research by Ariguna Dira and Wahyuni (2016) in Denpasar there are 20.5% depressed postpartum mothers.[5] Based on Evawati et al (2015) study, the prevalence of postpartum blues in Jember is 25% affected to primiparous mother.

Postpartum blues and postpartum depression have a major impact on the state of the mother and the baby who has

born or in the child who was born before. Difficult interactions and communication between mothers who are experiencing psychological distress and depression with their children increase the risk of behavioral disorders and cognitive disorders of the children can even harm children. Children may experience behavioral disorders, emotional disturbances, delays, language and other cognitive impairments.[6] In addition, some diseases such as hypertension, coronary heart disease, hypercholesterolaemia, glucose balance disorder, and non insulin dependent with diabetes mellitus (NIDDM) are suspected diseases caused by fetal disturbances.[7] One of the causes of fetal origin by adult disorder (fetal origin of adult disorder) is the offspring of depressed mothers both antenatal and postpartum. Some experts recommend the treatment of mothers with mild psychological disorders and postpartum depression with pharmacologic prophylaxis beginning at the end of pregnancy or shortly after the woman gives birth.[3] In addition to pharmacological prophylaxis therapy, non-pharmacological therapy can also be done with psychotherapy, giving antidepressants, aromatherapy and other therapies.[7] The current issue trends of aromatherapy to be one of the complementary therapies developed by researchers in the field of health to cope with stress or assist in stress management. A recent study by Hur et al in 2004 in Korea explained that giving aromatherapy to postpartum mothers can help wound healing in the perineum.[8]

The research of giving aromatherapy to postpartum mothers in Indonesia was carried out by Widayani in 2016, which examined the giving of lavender aromatherapy with decreasing intensity of perineal pain in postpartum mother with the result showed there was decrease of pain before and after lavender aromatherapy inhalation with p-value 0.001 with conclusion that giving aromatherapy lavender can be a complementary alternative therapy to reduce pain in post partum process.[9] A further study was conducted by Widiastuti in Semarang City in 2016. There was an effect of massage, aromatherapy and aromatherapy massage on stress level with each p-value = 0,024, there was a difference of stress level in all four groups with $p < 0.05$ from the four groups that had the most effect of reducing stress level was massage treatment and aromatherapy massage treatment with p-value = 0,014. At interleukin-6 (IL-6) after treatment, the highest concentration of massage was 23,658 pg / mL, aromatherapy 45,643 pg / mL, aromatherapy massage 23,020 pg / mL while control group 55,051 pg / mL.

The analysis test showed that there was influence of massage, aromatherapy, aromatherapy massage to IL-6 (p-Value = 0,000). There was a difference in IL-6 levels in all four groups (p <0.05) and massage treatment, aromatherapy and aromatherapy massage, had the same effect in lowering IL-610 levels.[10]

Aroma therapy is a body treatment technique by using essential oils to help overcome symptoms of depression, indigestion, insomnia, headaches, muscle aches, respiratory problems, skin and joint diseases.[11] Yatri et al (2011) defines that aromatherapy is one form of alternative therapy that uses volatile plants known as essential oils with various scents used to change the mind, mood, cognitive function or health of a person.[12] How to use aromatherapy can be by inhalation, compressing, dyed applying, soaking and will be more effective with massage. Buckle (1999) defines aromatherapy as an alternative treatment process using essential oils with skin absorption or olfactory systems. Volatile compounds in this essential oil will be brought into the body's circulation through the blood and lymphatic system, then from capillary blood vessels to distribute it to the target organs.[13]

The aromatherapy used in this study is lemon-scented (Citrus limon L). Lemon oil itself has properties as antiseptic, astringent, and detoxification. Besides rejuvenating and brightening dull skin, increase the production of white blood cells in the body and boost the immune system. Research results also explain that lemon oil can reduce pain during the first stage of labor and effective to overcome nausea and vomiting.[11] Rahmawati et al (2015) study on the effectiveness of lemon aromatherapy on the intensity of post Sectio Caesarea (SC) wound pain in Budi Rahayu's Magelang Hospital, gave the result that giving lemon aromatherapy was more effective than lavender aromatheraphy in overcoming post SC pain with mean value four times larger than the average lavender aromatherapy of 2.15.[14] Purwandari et al (2014) study on the effectiveness of lemon scent therapy on the decrease of pain scale in post laparotomy patient in Awal Bros's Hospital and Syafira Pekanbaru's Hospital, explained that giving of lemon aromotherapy effective to decrease the pain scale in post laparotomy patients with p-value 0.000.[15]

Research on aromatherapy administration to postpartum mothers was initiated as a complementary therapy in reducing depressive symptoms that may be experienced by the mother. The technique of giving aromatherapy is easier to do and evaluated by the mother herself or assisted by a husband or relatives. Lemon

aromatherapy has also been produced by stakeholders and marketed at low cost and can be found in drugstores or pharmacies, so it does not make a difficult for mom or family to search it.

The purpose of this research is to know the difference of effectiveness of lemon aromatherapy treatment by inhalation, transdermal and massage to psychology condition of postpartum mothers at Tangerang's Hospital in November-December 2017.

METHODOLOGY

This research uses quasi experimental design with pre test and post test quasi experimental design and cross sectional approach. The population is all postpartum mothers from second to seventh day who gave birth at Tangerang's Hospital in November - December 2017, then taken a sample of 108 respondents. Sampling technique using purposive sampling. There are 4 groups consisting of control group, inhalation group, transdermal group and massage group, with the number of each group of 27 people. The study was conducted at Tangerang's Hospital in November - December 2017.

The aromatherapy oil has been used a composition of lemon essential oil (Citrus limon) 0.9%; eucalyptus oil (Cajuputi Oil) 38%; sesame seed oil (Sesamum indicum oil) 10%; and virgin coconut oil to 100%; produced by CV Budhi Nersalindo with LPPOM MUI number: 12290003460816.

The study was conducted by measuring the psychological condition of postpartum mother using the Edinburgh Postpartum Depression Scale (EPDS) questionnaire. Measurements were performed in the treatment group before and after the intervention, while for the control group the psychological condition was measured by two measurements with a 24-hour interval. Interventions are divided into inhalation, transdermal and massage. The inhalation group is given lemon aromatherapy by breathing10-15 minutes, transdermal group is given lemon aromatherapy with applied to the neck, forehead, wrist and ankle, while the massage group is given lemon aromatherapy by doing back massage with technique efflurage, petrissage, and fanning for 10-15 minutes and then measured the psychological condition of the second postpartum mother with a 24-hour interval.

The inclusion criteria of this study were as follows: postpartum mother from second day until seventh day, it has shown mother did not have allergy to aromatherapy oil, history of mother's delivery can be normal and abnormal labor, postpartum mother with history of SC will be done intervention on third day until the seventh postpartum.

The data that has been collected and then processed through the process of editing, coding, cleaning, and analysis. Data analysis was done univariat and bivariate. The bivariate analysis of this study used the Wilcoxon test because the data were not normally distributed.

ETHICAL CONSIDERATION

3.1 Respect for Person

This research will be carried out by one researcher, this study does not have a minimal risk, but researchers must still be given clarity about the research procedures, benefits and sense of discomfort that may arise in the research process.

Respondents who stated voluntarily were willing to take part in this study were then asked to state written approval by signing the informed consent as the respondent. Data or results of research relating to respondents are guaranteed confidentiality, and are only used for research needs.

In this study there is no coercion for the respondent, because the researcher works in an institution that is different from the respondent. If the respondent feels uncomfortable with the questions or the research process carried out by the researcher, then the respondent has the right to stop the interview or research activities.

3.2 Beneficence and non maleficence

The benefits of this study are to provide an overview of changes in the psychological condition of the mother and its alternative treatment, and as a consideration in making policy changes to improve the quality of giving postpartum care, and help improve the development of midwifery. There is certainly risk about allergic in aromatheraphy by message, so before the treatment, respondent will be done allergic test, if they result was no allergic reaction, the research will be continued.For psychological condition of women this research raises inconvenience because respondents need to provide information related to the topic of research, and answer various questions about the psychological and feelings of the mother, as well as the time taken to carry out the research process with treatment.

3.3 Justice

All respondents who were the subjects of this study were treated equally and did not discriminate in the interview process or other data collection. After the research is completed, all respondents who have been involved in this study will be given contact materials according to the ability of the researcher.

RESULT& DISCUSSION

Based on the research that has been done got the following results:

Table 1.1 Characteristics of Postpartum Mother in Tangerang's Hospital in November -December 2017

Characteristic	n=108	Percentage
Age		
• < 20 y	3	2,8
• 20-35 y	83	76,9
• > 35 y	22	20,4
Occupation		
• Work	24	22,2
• Housewife	84	77,8
Education		
• Primary School	35	32,4
• Junior High School	26	24,1
• Senior High School	41	38
• College	6	5,6
Parity		
• Primiparous	36	33,3
• Multiparous	72	66,7
Birth		
• Spontaneous	32	29,6
• Vacum or extraction	9	8,3
• SC	67	62

Based on table 1.1 respondents in this study has shown 76.9% of postpartum mothers aged 20-35 years; 77.8% as housewives; 38% have senior high school education; 66.7% were multiparous, and 62% were in SC.

The National Center for Health Statistics explains that age is unrelated to the incidence of postpartum depression, but older mothers tend to have an increased risk of hypertension and diabetes and are highly associated with a high risk of having symptoms of depression. Based

on research Giulia et al, the age of mothers susceptible to depression is about 40-44 years higher than the mother's age between 30-35 years.[16]

Housewives tend to have symptoms of depression more often than working mothers, Neha's research suggests that working mothers can meet social needs and have alternatives to domestic routine at home. Working moms also have the same feelings with a partner as compared to the housewife, who gets the strengthening of the bond between couples.[17]

Education plays an important role in the life of a woman, mothers who have higher education more easily understand and think using logic well, but education is not related to the emergence of symptoms of depression in postpartum mothers. It is therefore necessary to provide assistance and provide information on early detection or signs and symptoms of postpartum depression in postpartum mothers before returning home.

The process of labor has an influence in the psychological state of the postpartum mother, the mother with uncomplicated spontaneous delivery has the ability to meet her own basic needs faster than the mother in labor. The researcher assumes field findings that maternity mothers with SC need to adapt to post-SC wound pain, requiring assistance from husbands, relatives or health workers to meet their own basic needs, as well as thinking of her new role as a mother to breastfeed and care for her baby. If the post-maternal mother can not relax or shoote by herself, she is likely to have symptoms of depression more often than a spontaneous delivery mother.

Table 1.2 Frequency Distribution of Postpartum Maternal Psychology Condition at Tangerang's Hospital in November - December 2017 (n=108)

Psychology Condition	Pre Test	%	Post Tes	%
Normal	55	50,9	61	56,5
Have symptom Depression	53	49,1	47	43,5

Based on Table 1.2 it is known that before treatment, mothers who have depressive symptoms of 49.1%, and after treatment decreased to 43.5%. This reduction is very small (5.6%) compared to expectations. The researcher assumption is giving aromatherapy can cause psychological effect if it has done correctly, appropriately and supported by adequate facilities and infrastructure. As explained Yatri et al (2011) suggests that essential oils are pure essence from plants that can provide physiological and psychological benefits if used properly and appropriately. When aromatherapy is inhaled it can stimulate the brain of the limbic system to react, then if aromatherapy is applied to the skin it will be absorbed by blood flow that can help the health, beauty, and hygiene conditions of its users.[12]

In this study, the percentage of postpartum maternal psychological condition decreased slightly, because the research was conducted in two recovery rooms, namely class II and class III of hospitals, whose atmosphere was not fully support for aromatherapy. In class III, in one room there are six beds, with one bathroom, for air ventilation using a fan that sometimes if the daytime feels hotter, then the privacy is rather less, and many people are going back and forth, for example the family of patients who visit that room. This is what the researchers said who does not support the results of the study. Compared if the room where the postpartum mother given aromatherapy is cooler, not too crowded, quiet and awake privacy may result will be different than the results of this study.

Table 1.3 Wilcoxon Test Results Differences of Postpartum Maternal Psychological Conditions with Lemon Aromotherapy in Tangerang's Hospital in November-December 2017

	Median	P value
Control group (n=27)		0.014
• Before	12 (5-25)	

• After	12 (6-25)	
Inhalation group (n=27)		0.070
• Before	9 (1-17)	
• After	10 (5-13)	
Transdermal group (n=27)		0.000
• Before	10 (7-22)	
• After	10 (5-13)	
Masase group (n=27)		0.000
• Before	11 (4-18)	
• After	5 (2-14)	

Based on Table 1.3 The Wilcoxon analysis results showed that there were significant differences in effectiveness in control group (p value = 0.014), transdermal treatment group (p value = 0.000) and massage treatment group (p value = 0.000) compared with the inhalation group (p value = 0.070), with 2,467 difference for the control group; 1,814 for inhalation group; 3,915 for the transdermal group and 4,382 for the massage group. Due to the difference in effectiveness of less than 10, so there is no clinically significant difference between the psychological condition of postpartum mother before and after giving aromatherapy.

Table 1.4 Wilcoxon Test Result of Lemon Aromatherapy In Postpartum Mother Tangerang's Hospital In November - December 2017

Ranks

		N	Mean Rank	Sum of Ranks
Posttest control - Pretest control	Negative Ranks	6[a]	10,75	64,50
	Positive Ranks	18[b]	13,08	235,50
	Ties	3[c]		
	Total	27		
Posttest Inhalation - Pretest Inhalation	Negative Ranks	9[d]	10,67	96,00
	Positive Ranks	16[e]	14,31	229,00
	Ties	2[f]		
	Total	27		

Posttes Transdermal - Pretest Transdermal	Negative Ranks	23[g]	13,35	307,00
	Positive Ranks	2[h]	9,00	18,00
	Ties	2[i]		
	Total	27		
Posttes Masase - Pretest Masase	Negative Ranks	25[j]	13,00	325,00
	Positive Ranks	0[k]	,00	,00
	Ties	2[l]		
	Total	27		

Based on Table 1.4 Wilcoxon test of the control group: 18 respondents had symptoms of depression, 6 respondents had no symptoms of depression, and 3 respondents settled. Wilcoxon inhalation group test: after being given an inhalation aromatherapy there were 9 respondents had symptoms of depression, 16 respondents had no symptoms of depression, and 2 respondents settled. Wildoxon test of transdermal group: after giving transdermal lemon aromatherapy there are 2 respondents have symptoms of depression, 23 respondents have no symptoms of depression, and 2 respondents settled. Wilcoxon test of the massage group: after being given lemon aromatherapy in massage no respondents had symptoms of depression, 25 respondents had no symptoms of depression, and 2 respondents settled.

The results of this study explain that giving inhaled aromatherapy does not give differences in the effectiveness of psychological conditions of postpartum mothers. This is in accordance with a study conducted by Dalinda et al (2016) states that Aromatherapy has the potential to be a complementary therapy to reduce depressive symptoms in various subjects, especially for aromatherapy massage provides a beneficial effect compared to inhalation of aromatherapy.[18] Xiong et al conducted a study by comparing aromatherapy administration with aromatherapy massage in elderly with age> 60 years. The results of the study Xiong et al (2018) stated that giving

aromatherapy and aromatherapy massage has important implications to complement the care of parents who experience depressive symptoms than if only giving aromatherapy inhale.[19] While Hou (2010) in his research explained that massage therapy is significantly related to relieve symptoms of depression. But the operational standard of the massage therapy procedure needs to be re-developed.[20]

Lemon aromatherapy can be used as an antidepressant or antistress. A study in Japan states that giving lemon aromatherapy using vapour can reduce stress in experiment mice. Researchers at Ohio University also explained that lemon aromatherapy can improve mood and help relaxation.[12] although Coelho (2008) states that massage therapy does not have enough evidence to treat people with depressive symptoms.[21]

CONCLUSION

There were significant differences of effectiveness in the transdermal treatment group (p value = 0.000) and massage (p value = 0.000) compared with control group (p value = 0.014) and inhalation group (p value = 0.070), although difference only 2,467 for control group; 1,814 for inhalation group; 3,915 for the transdermal group and 4,382 for the massage group. Lemon aromatherapy treatment may be considered as a complementary therapy to reduce depressive symptoms in postpartum mothers.

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Quality of Life in Type 2 Diabetes Mellitus and Factor Affecting it in West Jakarta Health Center 2018

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ABSTRACT
Background: The prevalence of diabetes increased in 2007 by 1.1% to 2.1% in 2013. If diabetes is not managed well, it will develop into complications that can threaten health, endanger life and cause a low quality of life.
Objective: This study studied the quality of life patients with type 2 diabetes mellitus using a cross sectional design with a structural equation modeling (SEM).
Methods: The Variable consist of demographic factors, psychosocial factors, medical social factors, and medical factors. The sample in this study were patients with type 2 diabetes mellitus in all West Jakarta health centers taken using purposive sampling as many as 246 respondents.
Results: The relationship between medical social factors on quality of life is significantly positive, meaning that the lower the social medical factor, the quality of life will decrease. In the relationship of variables between psycho-social factors to quality of life, the negative value is significant, meaning that the lower the psycho-social factor, the quality of life will increase. The structural models of factors affecting the quality of life in patients with Type 2 Diabetes Mellitus in West Jakarta Health Center are: Quality of Life = -0.24 medical -0.55 social psycho +0.30 social medical.
Conclusion : Diabetics are expected to be able to regulate the daily stressors that arise when doing activities, this is overcome by good self-management for example by taking medication regularly, eating food according to the recommended diet and routinely doing physical activities.

Keywords: Diabetes Mellitus, Quality of Life

INTRODUCTION

Diabetes Mellitus is a chronic disease that occurs when the pancreas cannot produce enough insulin or when the body cannot effectively use the insulin. Insulin is a hormone that manages blood sugar levels. A common effect due to an increase in uncontrolled blood sugar levels is the occurrence of Hypeglycemia, serious damage of many body systems, especially nerves and blood vessels(1).

In 2000, there were 171 million people in the world suffering from diabetes (2). Whereas, in 2014, 8.5% of adults aged 18 years and over had diabetes (3). It is projected that by 2030 the number will increase to 366 million (2). In 2012 diabetes was the direct cause of 1.5 million deaths (3).

Diabetes classified to Diabetes Mellitus type 1, Diabetes Mellitus type 2, Diabetes Mellitus in pregnancy / Gestational Diabetes Mellitus, and other types of diabetes(1). Diabetes Mellitus type 2 is 90% of all diabetes mellitus events (4).

Diabetes Mellitus type 2 (previously called as NIDDM / Non Insulin Dependent of Diabetes Mellitus) occurs because of the ineffective use of insulin in the body. This incident is a result of being overweight and lacking physical activity. Therefore, most people in the world suffer from this type of diabetes (3).

The prevalence of diabetes is increasing faster in middle and low income countries (3). Indonesia which is a developing country with low income has a high risk as well. Based on data, the prevalence of diabetes in Indonesia in the 1980s at the age above 15 years was 1.5% -2.3% (4). While according to the results of the RISKESDAS (RisetKesehatanDasar) there was an increase in the prevalence of diabetes 1.1% in 2007 to 2.1% in 2013 (5).

Diabetes risk factors include genetic factors / family history, age, overweight / obesity, unhealthy diet, lack of physical activity and smoking (3). Several researches conducted in Indonesia produced several risk factors for diabetes including> 45 years; more weight: (Relative Body Weight) BBR> 110% ideal weight or (Body Mass Index) BMI> 23 kg / m2; hypertension (> 140/90 mmHg); history of DM in the lineage; history of recurrent abortion, giving birth to a disabled baby or a newborn baby> 4000 g; HDL cholesterol <3 mg / dL and / or triglycerides> 250 mg / dL(6).

If diabetes is not managed properly, it will develop into complications that can threaten health and endanger life. Acute complications are a significant contributor to mortality, cost loss and poor quality of life (3).

The illness and the length of the treatment process in diabetic patients can affect physical, psychological, social and welfare functions which are defined as the quality of life (Quality of Life). According to WHO, quality of life is the individual's perception of their position in life in the context of the culture and values in where they live and in relation to their goals, hopes, standards and concerns (7).

There is a world standard in measuring quality of life in diabetic patients made by WHO namely SF-36 HRQOL. In Indonesia, there have been people who have made quality of life measurement instruments in Diabetes

Mellitus type 2 patients with the Indonesian version of the SF-36 HRQOL and have been validated with Cronbach's alpha value. The overall item is 0.9426 (8)

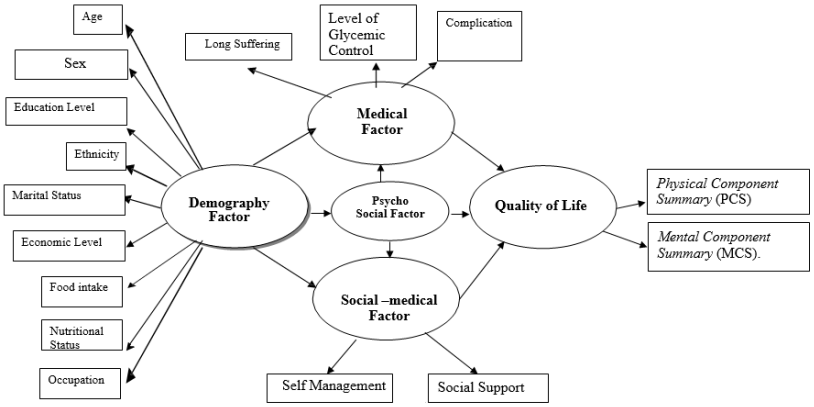
In this study focused only on 8 sub-district health centers (puskesmas) in West Jakarta as a population. Based on the results in the field, there are 238 people obtained as samples that met the criteria. The inclusion criteria in this study are respondents age less than 60 years, able to read and write, willing to be respondents by signing informed consent, as well as conducting blood sugar checks at the health center during the study.

The variables measured to analyze the factors related to the quality of life of patients with diabetes mellitus type 2 in West Jakarta health centers use the statistical method SEM (Structural Equation Model) where there are two types of variables, namely latent variables and observed variables. The Latent Variables in this study are quality of life, demographic, psychosocial, medical factors and social - medical factors. Observed Variables are measures of Latent

METHODOLOGY

Variables. Observed Variables of quality of life are measured using Short Form 36 which is a questionnaire from The Medical Outcomes Study. The Observed Variables of demographic factors were age, sex, education level, ethnicity, marital status and economic level, Food intake, nutritional status, and occupation. The Observed Variables of psychosocial factors were anxiety levels, stress levels and depression levels measured using the Depression Anxiety Stress Scale (DAAS). Observable Variables from medical factors include long suffering, level of glycemic control, and complications. While the Observed Variables from social-medical factors include self-management measured using the Indonesian version of the Diabetes Self-Management Questionnaire (The DSMQ) validated by Fatimah (9) and social support measured using the Hensarling Diabetes Family Support Scale (HDFSS) Indonesian version validated by Yusra(9)

Pict 1. SEM Model, is adaptation model of Song, et al(10)Rubin &Peyrot(11), Kalda, et al(12), Laoh, (13), Lee et al,(14), Roman et al(15), Trikkalinou et al(16).

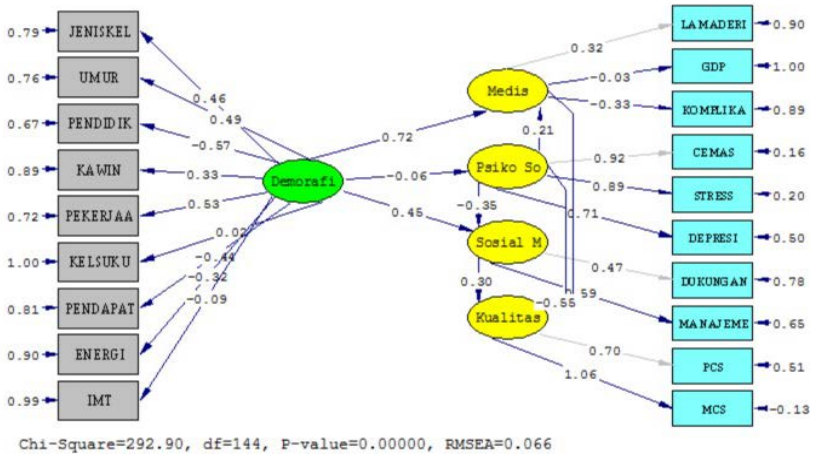


ETHICAL CONSIDERATION

This research has gone through an ethical approval process by obtaining a certificate of passing the ethical review no: 218-18.146 / DPKE-KEP / FINAL-EA / UEU / IV / 2018 issued by the Ethics Commission of EsaUnggul University. In this case, the researcher is obliged to maintain the confidentiality of the identity of the respondent by not asking the name and address of the respondent, reporting serious unwanted events, not taking any action to the subject before passing the ethical review and informed consent by the subject.

RESULTS AND DISCUSSION

Pict 2. Structural Equation Model



The model that has been formed, several tests must be carried out so that it can be declared feasible, valid and significant so that the meaning of the model that has been formed can be interpreted. The following test results are carried out:

Tab. 1 Feasibility Test

No.	Indicator	Value	Standard	Remark
1	Chi-square	0.000	≥ 0.05	No Fit
2	RMSEA	0.06	≤ 0.08	Fit
3	GFI	0.9	≥ 0.90	Fit
4	AGFI	0.85	≥ 0.80	Fit
5	RMR	0.071	≤ 0.05	No Fit

Based on the results of the feasibility test, it can be seen that the results are RMSEA, GFI and AGFI (Fit), so that the model is considered feasible and further steps can be taken in data analysis.

Tab.2Structural Equation Model

Based on the results of the structural model test, the results show that the direct and indirect variables significantly influence the quality of life. This can be seen from the value of the t-value.

No.	Effect	Koefisien Standard Value	t-*Value*	Remark
Direct				
1	Medical Factor→ Quality of Life	-0.24	-1.91	No Significant
2	Social medical→Quality of Life	0.30	2.41	Significant
3	Psycho social → Quality of Life	-0.55	-5.48	Significant
Indirect				
1	Demography→ Medical Factor	0.72	3.14	Significant
	Medical Factor→Quality of Life	-0.24	-1.91	No Significant
	Total	-0.1728		
2	Demography→social medical	0.45	3.39	Significant
	Social medical→ Quality of Life	0.30	2.41	Significant
	Total	0.135		
3	Demography→Psycho social	0.06	-0.66	No Significant
	Psycho social →Quality of Life	-0.55	-5.48	Significant
	Total	-0.033		

The causal relationship between medical latent variables on quality of life is not significantly negative with a P-value -1.91. The path coefficient value for medical factors is -0.24 means that the lower the medical factor, the quality of life will increase by

0.24. Vice versa, if medical factors increase, the quality of life will increase by 0.24.

The relationship between variables between medical social factors on quality of life is significant, namely 2.41. The path coefficient value is 0.30 which means that the lower the social medical factor, the quality of life will decrease by 0.30.

Significant medical social factors in this study are self-management. Patients who have good self-management will improve their quality of life, in line with Chaidir's research which states that the relationship between self-management and quality of life of patients with diabetes mellitus type 2 is directly proportional and has a level medium correlation (17). People who can manage themselves well will tend to pay attention to the food consumed, drugs taken as well as physical activities carried out. This is also corroborated by research conducted by Rantung where an increase in one unit of self-management will improve quality of life by 6.1% after sex control and depression (18).

The variables relationship between psycho-social factors on quality of life is significant, which is -5.48. The path coefficient value of -0.55 means that the lower the psycho-social factor, the quality of life will increase by 0.55.

The significant psycho-social factors in this study consisted of stress and depression. The results of the study state that patients who are increasingly stressed will reduce their quality of life. In line with Zainuddin's research which states that stress can cause changes in a person's views and perceptions of the meaning, purpose and satisfaction of his life which will ultimately affect his quality of life. Stress in diabetic patients arises due to changes in lifestyle, continuous treatment, complications and a less favorable surrounding environment (19). Other psycho-social factors are depression, patients who experience depression are higher, and the quality of life will be lower. The research that is in line with these results include Safitri who states that there is a significant relationship between the level of depression and the quality of life of patients with diabetes mellitus type 2. This is due to the burden felt by diabetics make all activities in his life limited. Even though it does not always cause sadness and disappointment, the limitation of activity causes some of his hopes to fail, leading to depression and resulting in poor quality of life (20).

The demographic variable is the only variable that does not directly affect

to the quality of life, where if the demographic variables influence the quality of life through social medical values are significantly positive. The path coefficient value is 0.135, which means that the lower the demographic, the quality of life will decrease by 0.135. In this study, for example, education was taken, patients who had higher education, tended to conduct self-management well so as to improve quality of life. Based on these explanations, obtained a structural model of Life Quality = -0.24 medical -0.55 psycho social +0.30 social medical.

CONCLUSION

1. Indicators that can measure significant quality of life are significant demographic factors such as gender, age, education, marital status, employment, income, and energy intake. Significant psycho-social factors are stress and depression, a significant medical factor is only complications. Significant social medical factors are self-management. A significant quality of life is Mental Component Summary (MCS)
2. The causal relationship between the latent variables of the medical factor on the quality of life is not significant.
3. The relationship between medical social factors variables to the quality of life has significant positive value means that the lower the medical social factors, the quality of life will decrease.
4. In the relationship between psychosocial factors variables on quality of life is significantly negative, meaning that the lower the psycho-social factor, the quality of life will increase.
5. Structural models of factors that affect to the quality of life in patients with Diabetes Mellitus Type 2 in West Jakarta health centers are: Quality of Life = -0.24 medical -0.55 social psycho +0.30 social medical

ACKNOWLEDGEMENT

1. Patients who have been diagnosed as diabetics are expected to be able to manage the daily stressors that arise when doing activities. This is overcome by good self-management for example by taking medication regularly, eating according to the recommended diet and routinely doing physical activities.
2. Further research is needed to determine other determinant factors that can cause the incidence of diabetes mellitus type 2, especially in other regions.

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Evaluation of Health Promotion Innovation Based OnThe Personnel Competence

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ABSTRACT
Health promotion is one of essential services at public health centers in Indonesia, but many health promotion personnel haven't yet implemented standard services. Currently implemented Healthy Indonesia Program that's more nuanced promotive preventive that requires innovation of health promotion in the field. In effort to motivate and improve performance, the selection of exemplary personnel is based on merit and dedication. The objectives research analyzed the innovation based on the competencies performed, as useful for policy-setting input. The research is qualitative design, analyzed the innovation activities papers made by exemplary personnel and validated through in-depth interviews with stakeholders at their workplace.Data analysis by arranging main items of activity in paper, determine competency type carried out in the activity validated findings on in depth interviews, compare with the regulation of the level of education and the competence of the placement of health promotion personnels currently.The results show the innovation activitiesrequire some competence including needs assessment, planning, advocate stakeholders, communicating with potential change agents, identifying selected networks, empowerment techniques, media development. During process, their take spirit of leadership, acting as catalyst community empowerment, enabler, mediator, advocate. All activities based on knowledge, ethics and health promotion value. The current policy places health educator (skilled workers); while to create innovation required higher level of competence is expert workers (health promoter). In order for health promotion programs to be optimal, a health promoter is needed. Ongoing technical training and guidance needed to solve the problems faced in the field with creative innovating activities.

Keywords: health promotion; innovation; competence.

INTRODUCTION

Health promotion is one of the core community health services in Public Health Center (PHC) as well as other public health services and individual health services. Health promotion is a process to empower the community through activities to inform, influence and assist the community to play an active role to support changes in behavior and the environment and maintain and improve health to the optimal health level. Health promotion is implemented at various levels including in PHC.[1] Health promotion services is an important service to support the implementation of healthy indonesia program with family

approach which is currently a health policy in Indonesia.[2]

The competencies required to engage in health promotion practice are outlined into eight domains as assesment, planning, implementation, evaluation, the catalyzing change, leadership, advocacy and partnership ara competencies of health promoter.[3] The IUHPE Core Competencies Framework for Health Promotionis recognized ethical values and the health promotion knowledge base underpin all health promotion action detailed in the nine other domains. The remaining nine domains : enable change, advocate for health, mediate through partnership, communication, leadership, assessment, planning, implementation, evaluation and research, each deal with a specific area of health promotion practice with their associated competency statements articulating the necessary skills needed for competent practice. It is the combined application of all the domains.[4]In Indonesia, health promotion competencies are formulated in accordance with the Indonesian National Qualification Framework. The competencies as level 5 (Diploma 3) are health problem solving cycle, basic health promotion knowledge, communication, teamwork and leadership, media development. The competencies level 6 (Diploma 4) are competencies level 5 plus community empowerment, networks and partnerships, advocacy. The competencies level 6 (S1 PH) are competencies level 6 (D4) plus health promotion financing. The competencies level 7 (profesi) are competencies level 6 plus professional ethics and practice. The competencies level 8 (S2) are competencies level 7 plus Health behavior research.The competencies level 9 (S3) are competencies for level 8 plus Health-oriented public policy.[5]

Every PHC personnels must be able to conduct health promotion. PHC personnels in Indonesia are still many who do not have a quality competence in doing health promotion efforts standardized and understanding the implementation of health promotion efforts that are still not appropriate. This has resulted in health promotion services at PHC merely disseminating information only and not yet doing behavior change intervention.[6] Technical training of health promotion for PHC personnel was conducted, the evaluation result showed that there was a significant increase of trainee knowledge after training but the effectiveness of training in improving

participants knowledge into the high category less effective.[7] There isn't significant change in the coverage of health promotion services before and after training, so still needed the technical training and continues technical guidance for PHC personnels.[8]

The question arises whether the competence of health promotion officers meets the demands in the implementation at the PHC? Competence means authority (power) to determine (decide something). Competence of health promotion is the minimum set of competencies that constitutes

a common baseline for all health promotion roles. They are what to do efficiently, effectively and appropriately in the field.[9]Analysis of the implementation of tasks associated with the competencies that should be owned by personnels who implement it will be useful, as one of the efforts to improve the performance of officers to work according to applied policies and answer the problems emerging communities.In facing the problems of emerging community behavior and to support the achievement of the indicators listed in the minimum health service standard, it's necessary to make various innovations in the implementation of services at the PHC.

Every year there is a selection for awarding health workers in PHC. The activity is intended to motivate and improve the performance of health personnel in providing health services to the community, especially health workers working in PHC including health promotion staff. Exemplary health workers are health workers with dedication and achievement in health development. Selection of health workers expected to be a motivation to increase the interest of health workers working in PHC so that it can become the motivator to create health workers who have nationalist, ethical and professional attitude, have high dedication, discipline, creative, knowledgeable, skillful, noble and can hold firm ethics profession[10]. In implementing the selection of exemplary health promotion personnel, the participants are requested to create a paper on the innovations that are carried out in performing their duties.

Are the innovations carried out in the field accordance with the competencies required as the regulation on the placement of health promotion personnel at public health center now ? Are there gaps between

the demands in the field and the competencies required in accordance with current personnels placement regulation?

METHODOLOGI

The research used the qualitative design. The informans set gradually, begins with the selection of health promotion officers PHC in 27 districts/municipalities in West Java Province. They are assessed performanceas a driving force for health-oriented development, cross-sector drivers etc. Fifteen people were elected and asked to write a paper about health promotion innovation activities at their PHC, but only 13 people present in the selection and assessment by a group of judges that determines the best three health promotion officers from three PHC from three districts in West Java. These three people were the key informants, with secondary informants are their colleagues at work as stakeholders eg. leader, peers of health workers, cross-sector officials, village heads, cadres, community leaders.

Data was collected through analysis of paper about innovation in health promotion program at PHC made by the best three health promotion personnels. After that conducted in-depth interviews with the stkaeholders at their workplace. The analysis of paper made is done by

examining the innovation activities done in accordance with the health promotion competencies required for the implementation of the activity. In-depth interviews with the best three health promotion their stkaeholders at least two people for each personnels with the total number six people interviewed. In-depth interviews are meant to explore and validate how the innovation process is done and how the role and competencies need to to conduct activities. The developed instrument refers to the program development step, the personnels role and the competencies to perform activities well. Analysis of in-depth interview results through the process of describing, classification and connecting. Do arranging transcripts, reading the whole to build general sense information and reflecting overall meaning, detailed analysis by coding the data, describing categories and themes, interpreting. Further interpreted and prepared in accordance with the constructs and research objectives.

ETHICAL CONSIDERATION

Author is have not competing interest.

RESULTS AND DISCUSSION

Results.

Health Promotion Innovation Paper Summary

The following is a summary of health promotion innovation paper written by three best health promotion personnels the chosen.

1. ***Sabilulungan***(together) keep pregnant women.Innovation in mentoring pregnant women by cadres and Traditional Birth Attendants (TBAs). Activities related efforts to increase the coverage of childbirth at health facilities conducted through early detection of pregnancy and maintain the continuum of care for pregnant women during pregnancy. This is due to the *high number of maternal and infant mortality* in the work area of the Community Health Center Cik. at Bandung District. Activities labeled *Sabilulungan* (together) keep pregnant women. Activity begins with the identification of the number of pregnant women, cadres and traditional birth attendants who are there and which stakeholders associated with the efforts made. The activities started by advocating to the related stakeholders among others sub-district head, police, village head, RW/RT (residents and neighborhood associations) chairman, etc. on the need for support from stakeholders to keep pregnant women safe and childbirth at in health facilities. Subsequently, the activities included a cadre of assistant mothers who were recruited from traditional birth attendants and health cadres. They are trained first by midwives about the importance and how to accompany pregnant women to be safe and childbirth by health personnel at health facilities. The activities could Increase coverage of childbirth by health personnel at local community health centers with basic emergency neonatal obstetric programs facilities.
2. **Giat RAS.** RAS toward non-smoking area. RAS = Rumbetako, ApatardanSiagaremaja. (free house without cigarette smoke, smart kids without smoking, teen

alert).Innovation encouraging free house without smoke, children smart anti-smoking, teen alert. Activities related to improved hygiene and healthy living behavior among adolescents through Junior High School and communities in specific areas (residents at Peg. at Crb. City). The activity based on by the number of smokers in the work area of community health center including teenagers. Activities are based on concerns that more and more teenagers are smoking and getting younger age start smoking. Activities are preceded by advocacy to school leaders, teachers and residents and neighborhood associations. In addition, advocacy to related stakeholders is national narcotics agency officers in cirebon, education officers, sub-district head and residents and neighborhood associations chairman as pilot. A number of 90 students (5 students / class) trained on schools that behave in good health, students are expected to be peer facilitators for their friends in encouraging healthy behaviour including smoking, alcohol and drugs behavior. In resident association pilots, a number of teenagers gathered to discuss about healthy behaviour in households including non-smoking, alcohol and drug behavior. Based on the information of school teachers, students are rarely even almost no longer smoke in school.

3. **DesaPanah** (peduliatasinapza, AIDS/HIV) - Village Arrows (concerned drugs, AIDS/HIV).Innovation increasing awareness about drugs, AIDS / HIV. Activities related to efforts to increase the coverage of healthy behaviour in the household, especially smoking behavior in the home, concerned with drugs, AIDS/HIV. If not smoking is not expected will to do alcohol behavior, drugs and the impact of HIV / AIDS. This is based on by the high smoking behavior in the household as a result data collection. The activity begins with advocating to the relevant stakeholders (sub-district head, police, village head, residents and neighborhood associations chairman, etc.) on the need for support from stakeholders to prevent the community, especially teenagers from smoking behavior which is often the entrance of drug

abuser behavior , alcohol which may continue to be affected HIV / AIDS. Furthermore, activities include health cadre training, socialization to religious leaders and adolescents as group counseling targets. Compiled integrated management in the alert village is intended for activities to be carried out continuously. Activity was given labeling DesaPanahthats mean the Village Arrows at Panc. CHC Kng. District.

The types of innovation activities and competencies are needed.

The following is table of the types of activities carried out and the competencies needed in carrying out these activities, olso a table compatibility of competencies needed with the criteria of personnel.

Table 1. Types of Activities and The Competencies Needed in Innovation 1

Step / type of activity[7]	Competencies Type[7]	Findings in paper	Findings in in-depth interviews	Findings of competencies needed
1. HP needs	1. Health problem solving cycle	Healthy family data collection	Leader: done as basic data (there is a data document)	D3 – level 5
2. HP Planning		Framework for innovation	Leader: the stages of activities carried out	D3 – level 5
3. HP Strategies		Framework for innovation	Leader: the stages of activities carried out	D3 – level 5
4. Work plan		Schedule of activities	Partners cross sectors: stages and times of activities carried out	D3 – level 5
5. Monitoring HP		Item of monitoring and evaluation activities	Co workers : stages, times activity. Cadre: there are regular meetings	D3 – level 5
-	2. Basic HP knowledge	Healthy family indicators, family approach	Cross-sector partners: healthy family knowledge needs to be understood, health promotion officers are the driving force.	D3 – level 5
6. Health Communication	3. Communication	Reflected in strategies advocacy, partnership, com. empowerment.	Cross-sector partners: There is a meeting discussing pregnant women, giving birth.	D3 – level 5
7. Partnerships	4. Teamwork and leadership	Partnership	Cadre: we support, happy to help mothers to deliver at PHC.	D3 – level 5
8. Dev. MethodeTechnology	5. Media development	Advocacy	Head of sub-district: several times came, explained the problem and asked for his support. A meeting with the village head was held.	D3 – level 5
9. Community empowerment	6. Community empowerment	-	Cadres: get transport stimulants between mothers giving birth at health facilities. The leader: the health promotion officer made a proposal and was financed by the BOK	D4/S1 – Level 6
Partnerships	7. Networks and partnerships	Reflected in strategies advocacy, partnership, com. empowerment.	Partners: In carrying out the activities of health promotion officers, they are very kind, polite, friendly (shows ethics at work)	D4/S1 – Level 6
10. Advocacy	8. Advocacy	-	-	D4/S1 – Level 6
HP planning	9. Health promotion financing	Reflected as a result of advocacy	The sub-district head: approached me and asked to make an agreement to carry out the activities delivered orally to the meeting participants.	S1 – Level 6
-	10. Professional ethic	Partnership	Cadre: we support, happy to help	Profesi / Level 7

			and practice		mothers to deliver at PHC.	
11.	Assesment HP	11.	Health behavior research	Advocacy	Head of sub-district: several times came, explained the problem and asked for his support. A meeting with the village head was held.	S2 / level 8
12.	Reccomendation HP Policies	12.	Health-oriented public policy	-	Cadres: get transport stimulants between mothers giving birth at health facilities. The leader: the health promotion officer made a proposal and was financed by the BOK	S3 / Level 9
13.	Dev. HP Policies			-	-	S3 / Level 9

Table 2. Types of Activities and The Competencies Needed in Innovation 2

Step / type of activity[7]		Competencies required[7]		Findings in paper	Findings in in-depth interviews	Findings of competencies needed
1.	HP needs	1.	Health problem solving cycle	Healthy family data collection	Leaders: carried out according to the instructions as the basis of activities.	D3 – level 5
2.	HP Planning			An innovative mindset of healthy behavior	Leadership: formulated - basic discussion on the preparation of activities	D3 – level 5
3.	HP Strategies			Framework for innovation	Leader: framework of activities for implementation.	D3 – level 5
4.	Work plan			Schedule of activities	Cross-sector partners: steps and timing of activities	D3 – level 5
5.	Monitoring of HP			Monitoring and evaluation steps	Cross-sector partners: steps to discuss the progress activities. there is a meeting	D3 – level 5
-		2.	Basic health promotion knowledge	Healthy family indicators and healthy behavior.	Cross-sector partners: indicators of behavior and healthy families are known to all, health promotion is the driving force .	D3 – level 5
6.	Health Communication	3.	Communication	Partnership Strategy	Cross-sector partners : There is a forum and counseling done.	D3 – level 5
7.	Partnerships	4.	Teamwork and leadership	Partnership Strategy	Cross-sector partners : rumbetako, apatar for supporting activities	D3 – level 5
8.	Dev. Methode& technology	5.	Media development	Empowerment strategy	Cross-sector partners : there are posters, banners, etc.	D3 – level 5
9.	Community empowerment	6.	Community empowerment	Community movement.	Cross-sector partners : adolescents are informed about cigarettes, the teacher monitors	D4/S1 – Level 6
Partnerships		7.	Networks and partnerships	Partnership	Cross-sector partners: formed apatar, rumbetako agreement.	D4/S1 – Level 6
10.	Advocacy	8.	Advocacy	Advocacy	Cross-sector partners : there is a youth alert MOU.	D4/S1 – Level 6
HP planning		9.	HP financing	-	Leader: make a BOK proposal	S1 – Level 6
-		10.	Professional ethiccs&practice	Reflected in strategis	Cross-sector partners : health promotion officers are deft, polite, friendly etc. (shows work ethics).	Profesi / Level 7
11.	Assesment HP	11.	HB research	-	-	S2 / level 8
12.	Reccomendation HP Policies	12.	Health-oriented public policy	Reflected as a result of advocacy	Cross-sector partners / Head of sub district :there is a youth alert MOU.	S3 / Level 9
13.	Dev. HP Policies			-	-	S3 / Level 9

Table 3. Types of Activities and The Competencies Needed in Innovation 3

Innovation paper						
Step / type of activity[7]		Competencies required[7]		Findings in paper	Findings in in-depth interviews	Findings of competencies needed
1.	HP needs	1.	Health problem solving cycle	Collection of healthy family data	Leaders: beginning with a healthy family data collection, analyzed the priority of the problem	D3 – level 5
2.	HP Planning			The Role of Resource-Based Health Efforts in the Panah Village Community	Leader: Description of planning activities	D3 – level 5
3.	HP Strategies			The Role of Resource-Based Health Efforts in the Panah Village Community	Leader: Description of planning activities	D3 – level 5
4.	Work plan			Healthy family	Leader: Activity description	D3 – level 5
5.	Monitoring of HP			Monitoring	Leader: changes in activities	D3 – level 5

-		2.	Basic health promotion knowledge	Chapter I, II: Background, Village Arrow Scheme	Cross-program partners: health promotion officers have adequate health knowledge base	D3 – level 5
6.	Health Communication	3.	Communication	Arrow Village for Healthy Families	Cadres and community leaders: meetings and discussion of drug problems are conducted	D3 – level 5
7.	Partnerships	4.	Teamwork and leadership	Arrow Village for Healthy Families	Partners: together convey to the community at recitation, meetings etc.	D3 – level 5
8.	Dev. Methode& technology	5.	Media development	Arrow Village for Healthy Families	Cross program partners: banners, leaflets, etc. Health education on various occasions	D3 – level 5
9.	Community empowerment	6.	Community empowerment	The Role of Health Efforts SourcedCommunities →Village Arrow	Cross-sector partners: together convey to the community at recitation, meetings etc.	D4/S1 – Level 6
Partnerships		7.	Networks and partnerships	Arrow Village for Healthy Families	Cross-sector partners: together convey to the community at recitation, meetings etc.	D4/S1 – Level 6
10.	Advocacy	8.	Advocacy	Arrow Village for Healthy Families	Standby village administrators: formed on the basis of the District Head's Decree and conducting joint activities	D4/S1 – Level 6
HP planning		9. HP. financing		-	-	S1 – Level 6
-		10. Professional ethics &practice		Reflected in the description of the activity	Community cadres and figures: friendly, polite, communicative officers, close to the community.	Profesi / Level 7
11.	Assesment HP	11. HB research		-	-	S2 / level 8
12.	Reccomendation HP Policies	12. Health-oriented public policy		-	-	S3 / Level 9
13.	Dev. HP Policies			-	-	S3 / Level 9

Table 4. Compatibility Of Competencies Needed With The Criteria Of Personnel

Findings of conducted / needed competencies				Competence according to functional level	Suitability with current officer placement rules (D3)	Conclusion
Type of competence	Paper 1	Paper 2	Paper 3			
Health problem solving cycle	Yes	Yes	Yes	D3 – level 5	Suitable	-There are 5 competencies at level 5 (D3 education - health educators) carried out / needed in health promotion innovation activities. -There are 3 competencies at level 6 (D4 / S1 education - health promoters) carried out / needed in health promotion innovation activities. -There is 1 competency at level 7.8 (professional, S2) conducted / needed in health promotion innovation activities. -Health promotion innovation activities can be carried out if the officers have competencies at level 6 and 7, expert functional officials (health promoters). -Note : Education officers currently on duty as S1.
Basic health promotion knowledge	Yes	Yes	Yes	D3 – level 5	Suitable	
Communication	Yes	Yes	Yes	D3 – level 5	Suitable	
Teamwork and leadership	Yes	Yes	Yes	D3 – level 5	Suitable	
Media development	Yes	Yes	Yes	D3 – level 5	Suitable	
Community empowerment	Yes	Yes	Yes	D4/S1 – Level 6	Non Suitable	
Networks and partnerships	Yes	Yes	Yes	D4/S1 – Level 6	Non Suitable	
Advocacy	Yes	Yes	Yes	D4/S1 – Level 6	Non Suitable	
HP financing	No	No	No	S1 – Level 6	-	
Professional ethics and practice	Yes	Yes	Yes	Profesi / Level 7	Non Suitable	
Health behavior research	No	No	No	S2 / level 8	-	
Health-oriented public policy	No	No	No	S3 / Level 9	-	

There are 5 competencies needed and carried out in the development of health promotion innovation activities that are in accordance with level 5 competencies (D3 education), namely functional educators (health educators). There are 4 competencies needed and carried out, which are level 6 - D4 / S1 competencies (3 competencies) and level 7 - S2 (1 competency). Health promotion innovation activities can be carried out if officers have level 6 and 7 competencies or the level of functional officials expert (health promoters).

Discussion

Activities that are considered health promotion innovative in PHC basically is the effort of developing methods in achieving certain goals based on the needs assessment / problems that are revealed in the society of various order. The method is developed according to the opportunity and target characteristic target in the various arrangements. Beginning the planning has been carried out, at relatively the same time do advocacy to stake holders related and potential agents of change in the community and communicate with various parties including identifying the selected empowerment techniques and networks that need to be developed. In the implementation of changes proven health promotion personnels need to have leadership spirit, acts as a catalyst for change in community empowerment, catalyst for change agents in institutions and society. Roles taken as enabler (facilitator), mediation and advocacy are clearly performed. The competencies needed to contribute more effective work.

Based on data analysis the ability to catalyze change, the advocate who has leadership competence

has been implemented in the field, which is the competence of expert health promotion officer. This interpreted as any number competences is needed for the implementation of health promotion innovation at PHC. The key ingredients for successful innovation in health were inferred from the literature. The literature suggests that the development of graduate skills in the areas of communication, problem solving, team work is critical to meet needs and enable innovation.[11]

The best three officers were selected to have a bachelor degree. The current Indonesia policies at PHC are placed by skilled health promotion officer with competency of problem solving cycle, communication, cooperation, leadership and media development.[5]The same as Canada that health promoters are divided into two types of competencies, namely health promoter competencies - level 1 and health promoter competencies - level 2.[12]This is in line too with recommendations qualifications for health promotion practitioners in Saskatchewan as a minimum of a bachelor's degree in health promotion or related areas of study.[13]To make health promotion innovations required more competency as level experts officer who have community empowerment competence, development of partnership network, do advocacy and financing.[13] Observing the workload in PHC, it's necessary to think the're two health promotion officers, they're expert

(health promoter) and a skilled (health educator).

Information about health promoter competencies useful for inform health promotion training programs and continuing education[12] where is needed now for health promotion officers in Indonesia.[8]Agreed health promotion competencies can significantly impact on recruitment, training, employment policy and health promotion practice. Dialogue between experts, practitioners, trainers and employers can help to further articulate and implement the potential uses of these competencies.[14]The study inform the competency analysis needed for health promotion, it's necessary to think about and compile models and guidelines for training and health promotion practices adjusted local characteristics.[15]In Indonesia that are adjusted to the characteristics of the needs of a Healthy Indonesian Program and characteristics of the community olso the relevant sectors.Associated with training materials that need to be provided and importance of continuous technical guidance for health promotion staff at PHC are the competence of advocacy, partnership, leadership and catalyzing change needs to be given, besides the strengthening of assessment, planning, implementation and evaluation competences. The deepening of knowledge, ethics and the value of health promotion as basis of competence should be constantly updated and encouraged implementation in every form of work. The material needs to be packaged as training model according to characteristics of needs in Indonesia, olso useful for health promotion workforce and health sector workforce development.[3]Efforts to increase competency are very important because performance is influenced by competency [16,17], so refreshing training, ongoing guidance and training of trainers for health promotion personnel in PHC are needed.[16]However performance also influenced by knowledge, motivation, compensation, organizational climate.[18]

The ability to develop innovation activities needs to be prepared since the time of education in college, in supporting professional development and finding solutions via collaboration, need to educate and train students with more experiential learning to become catalysts for creating a culture of health.[19]Development of innovation of prospective officers needs developed through leadership education. Although influential and important public health leaders have emphasized the importance of training transdisciplinary public health professionals. It's important for the public health field to embrace this approach to create a cadre of transdisciplinary scientists and practitioners who will

promote systemic change. Students expected motivated to apply this approach to public health education and research.[20]Continuing evaluation of the education of prospective public health workers is needed because it was revealed that the hard skills achievement of the final year students showed satisfactory results but limited satisfactory achievement of soft skills.[21]

Health needs to be understood from the perspective of those we try to reach. Many time health promotion programs are designed by experts who don't understand the cultural realities of target population. Cultural irrelevance can fast be achieved when we fail to take into account regional variations in language or the literacy level of target population.[22]Cultural competence among healthcare professionals is acquired partly through leadership, social relationships and leadership effects within health services should be considered when developing and implementing culturally competent strategies. This requires a cautious approach as the most central individuals are not always the same persons as the formal leaders[23].In addition, need implementation of inter professional education on health sciences campus.[24]

The three innovations above are examples of follow-up results of data collection on healthy family profiles in the healthy Indonesia program with a family approach in the form of community development in order to be able to behave in a healthy life. There are only three competencies that are not actually carried out in the implementation of innovation activities, namely financing, research and development of public health public policy. Indeed, these three competencies exist but are not structured in their implementation. Regarding the implementation of health promotion strategies, namely advocacy, partnership and community empowerment, the three strategies were identified in carrying out innovation activities.

Many problems detected from the family health profile as well as the results of healthy clean behavior data collection that required follow-up intervention at the individual, family, group and community levels. In planning, implementing intervention and evaluating, health promotion competencies are needed in various levels. Health promotion process and competenciesto support achievement of healthy indonesia program assituation assesment, planning with innovative labelling, new approach and methods, cathalyzing change through advocacy to stakeholders, build partnership with potential change agent, implementing with various communication methods and channels to enable, mediate well-behaved society, leadership in program

implementation, monitoring evaluation, report writing, results dissemination, The thing to consider also to be trained is entrepreneurial leadership.[25] In response to innovations that are beginning to develop, there needs to be an evaluation step in the maturity of innovation before it's disseminated. There are instruments that helps stakeholders identify the stage of maturity of their innovation, helps facilitate deliberative discussions on the key considerations for each major stakeholder group and the major contextual barriers that the innovation faces. Need to identify potential problems that the innovation will face and facilitates early modification, before large investments are made in a potentially flawed solution.[26]

Some technical abilities that need to be trained include eHealth, the use of information technology to improve or enable health and health care, has recently been high on the health care development agenda. In line with this rather instrumental focus, the concepts Health ePromotion would come close to describing the role of information technology in health promotion.[27]Further research needs to be done in the form of examining other factors that influence the development of health promotion innovations, as well as reviews the role of social innovations in transforming the lives of individuals and communities including gender equality.[28]

CONCLUSION

The competencies are needed and carried out in implementing innovation health promotion activities as five competencies (health problem solving cycle, basic health promotion knowledge, communication, teamwork and leadership, media development) are accordance with level 5 (D3 education-health educators); three competencies (community empowerment, networks and partnerships, advocacy) which are level 6 - D4 / S1 competencies and one competency level 7 - S2 (professional ethics and practice). Health promotion innovation activities carried out if officers have level 6 and 7 competencies as health promoters. The Indonesia current policy places health educator in PHC, while to create innovation required a higher level of competence that health promoter. Continuous technical guidance for health promotion officer at PHC still needed, olso research other factors influences the implementation of innovations and training that encourage innovation in solving problems in the field.

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CHARACTERISTICS OF DIABETES MELLITUS OUTPATIENT IN THE dr. DODY SARJOTO AIR FORCE HOSPITAL DISTRICTS OF MAROS SOUTH SULAWESI IN 2018

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Abstract

Background: Diabetes Mellitus (DM) is a health problem in the world and is the 10 leading cause of death globally. The prevalence of DM in the world increases every year by around 48% from 425 million in 2017), estimated to be 629 million in 2045, in Indonesia the number of DM continues to increase from 10.3 million in 2017 to 16.7 million in 2045, and there is an increased incidence of DM complications.

Objective: To understand the characteristics of DM patients outpatient in thedr.DodySarjotoair force hospital Districts Of Maros South Sulawesi in January-December 2018.

Methods: This study was descriptive using a case-series design. Samples were taken using a simple random sampling method of 102 cases.

Results: Characteristics of DM patients based on age and sex were greatest in the age group of 46-54 years, namely men (19.7%) and women (17.6%) and at least in the age group 28-36 years namely males male (3.9%) and female (2.9%). The biggest proportion of patients with complications is 65 patients (63.72%) acute complications, namely hyperglycemia 42 (64.61%) and the least in chronic complications, namely DM 4 neuropathy (6.15%)

Conclusion: The highest DM patients aged 46-54 years in men and acute complications, namely hyperglycemia.

Keywords: Diabetes mellitus, type 2 DM,

Introduction

Diabetes mellitus is the main cause of hyperglycemia, where there is excess glucose in the blood that fails to enter the cell. These failures occur due to interference with the hormone insulin both in amount or disruption of function. Insulin is a hormone that helps enter blood sugar into cells so that it can be used as energy (WHO, 2017). Diabetes mellitus is a chronic disease that can cause complications to other organs in the body so that the function of these organs is disturbed, for example in organs: eyes, kidneys, nerves, heart and blood vessels etc.

The highest prevalence of diabetes is type 2 diabetes mellitus compared to type 1 diabetes mellitus, this is due to various factors related to environmental andhereditary. Environmental Factors because of the major bad lifestyle in consuming food and exercise, there is a change in the consumption of foods that are healthy and nutritious from nature into

consumption of low-fiber fast food.Fast food has a high risk while having a risk four times greater will increase type 2 DM than people with normal nutritional status (WHO, 2017). Type 2 DM can also be susceptible to infection, this is related to hyperglycemia, so the ability of macrophage cells to phagocytosis increases, special infections needed are lung infections (Wijayanto, 2015)

According to Waspadji, 2009 there was an increase in the incidence of DM which would affect the increase in the incidence of chronic complications (Waspadji, 2009), DM patients had twice the risk of experiencing coronary heart disease, were more susceptible to gangrene five times, seven times more susceptible to kidney failure, and 25 times more susceptible to damage to the retina which results in blindness in people with type 2 diabetes than nonDM patients (Waspadji, 2007).Diabetes mellitus if uncontrolled can attack all organs of the body and cause complaints (Tandra, 2008). Complaints in DM patients in all people are not the same, it depends on individual characteristics, including gender, age, education level, type of work, income, number of family members, medical history (Trisnawati, 2013). DM patients are important to comply with a series of intensive and routine controls. If the patient is negligentin controlling blood sugar, then blood can go up or down as extreme as that which will cause complications.

Diabetes mellitus (DM) is a health problem in the world and is one of the top 10 causes of global death. The prevalence of DM patients increases every year, around 48% of 425 million (2017) is estimated to be 629 million (2045), with the largest increase occurring in Africa at 156% from 16 million (2017) to 41 million (2045) (IDF, 2017). While in Indonesia the number of people with DM is estimated to increase from 10.3 million (2017) to 16.7 million (2045) (IDF, 2017)The increased incidence of DM is associated with an increased incidence of DM complications. According to the results of the Basic Health Research (Riskesdas) in 2013, the trend of DM prevalence in Indonesia increased by 1%, from 1.1% in 2007 to 2.1% in 2013. The proportion of DM at the age of 15 years was 6.9%. South Sulawesi also increased 2.6% from 0.8% in 2007 to 3.4% in 2013 and is one of the provinces with the third highest prevalence of DM in Indonesia. The reason for this study was because there were no studies on outpatient DM at the Air Force Hospital dr. Dody Sarjoto to date. The purpose of this study was to study the characteristics of existing DM patients in outpatient care in Air Force Hospital dr. Dody Sarjoto,

districtsof Maros, South Sulawesi in January-December 2018.The specific objectives of this study were:

a. Knowing the proportion distribution of DM patients based on sociodemography (age, sex, religion, and marital status).

b. Knowing the distribution of the proportion of DM patients by type DM.

c. Knowing the distribution of patient contributions based on family distribution.

d. Know the distribution of the proportion of patients.

e. Know the distribution of the proportion of patients

f. Determine the proportion distribution of patients based on the duration of DM publication.

g. Knowing the distribution of the proportion of patients based on the number of visits in the distribution

h. Knowing the distribution of patient contributions based on medical management.

I. Knowing the proportion of DM patients based on type DM.

J. Knowing the proportion of DM patients based on the type of complication

Benefits of research

a.For information about the characteristics of people with DM inthe dr. DodySarjotoAir Force Hospital districts of MarosSouth Sulawesi in January-December 2018.

b. As an experience and knowledge that can add insight to Indonesian writers and society.

c. As reference material and information for researchers who want to do research on DM.

Methods

This research is descriptive research using a case-series design. Location of the study at. The population in this study were all data on DM patients at Air force hospitaldr. DodySarjoto districtof Maros, South Sulawesi. which were 400 cases of DM patients. Samples were taken using a simple random sampling method of 102 cases. Sampling is done by simple random sampling method, using the Statistical Product and Service Solution (SPSS) program. Samples are taken from populations randomized by computers. The data collected was taken from secondary data obtained from the medical record book and status card for DM patients who were outpatientin Air force hospital dr.DodySarjoto from

January to December 2018, then record according to the specified variable. The collected data is processed by a computer using the SPSS program, then analyzed descriptively and by using the Chi-Square test and Exact Fisher. presented in narrative form, distribution table.

Results and Discussion

Table 1 Proportion Distribution of Outpatient DM Based on Age and Gender inthe dr. DodySarjotoAir Force Hospital in 2018

Age	Gender					
	Male		Female		Total	
	f	%	f	%	F	%
28-36	4	3,9	3	2,9	7	6.8
37-45	15	14,7	11	10.7	26	25.4
46-54	20	19,7	18	17.6	38	37.3
55-63	10	9,9	7	6.8	17	16.7
64-72	9	8,9	5	4.9	15	13.8
	58	57.1	44	42.9	102	100

Based on table 1, the proportion of DM patients based on age and sex was the highest in the 46-54 year age group, namely male (19.7%) and female (17.6%) and at least in the age group 28-36. years namely male (3.9%) and female (2.9%).

Table 2 Proportion Distribution of Outpatients with DM Based on Sociodemographyin the dr. Dody Sarjoto Air Force Hospitalin 2018.

	Sociodemography	f	%
Religion	Moslem	99	97.05
	Christian	3	2.94
	Buddha	-	-
	Hindu	-	-
	Total	102	100

		f	%
Status marriage	Single	4	3.92
	Mate	90	88.23
	Widow/windower	8	7.84
	Total	102	100

Based on Table 2, the proportion of DM patients based on sociodemography (religion and marital status) is as follows. Based on Religion, DM patients had the most religion in moslem 99 (97.05%) and at least in Christianity 3 (2.941%). Based on the marital status, DM patients have the highest marital status of 90 (88.23%) and at least unmarried status 4 (3.92%

Table 3 Proportion Distribution of Existing DM Patients in Outpatient Based on Disease History of Family Members in in the dr. Dody Sarjoto Air Force Hospitalin 2018.

History of DM family members	f	%
Ada	86	84.31
Tidak ada	16	15.68
Total	102	100

Table 3, the proportion of DM patients is based on family history, most in patients who have a history of 86 family members (84.31%) and at least in patients who do not have a family history (15.68%).

DM sufferers who know that they have a history of family members, both parents, grandparents, and siblings whose DM tends to suffer from DM disease. While DM patients who do not have a history of family members suffering from DM consider their chances of developing DM disease is very small, this depends on lifestyle, patients who lack physical activity, obesity, eating patterns that contain high levels of glucose, carbohydrates and fat are at risk for DM .

Table 4 Proportion Distribution of Outpatients with DM Based on Type DM in in the dr. DodySarjoto Air Force Hospital in 2018.

Type DM	f	%
Type1	5	4.90
Type2	97	95.09
Total	102	100

Table 4, the proportion of DM patients based on type of DM, the most is Type 2 DM, 97 (95.09%), at least Type 1 DM is 5 (4.90%).

Patients with type 2 diabetes are more than type 1 DM, caused by one of the factors of modern lifestyle, causing someone to prefer to eat or instant food, increasingly sophisticated technology creates sedentary life, lacks physical activity. Patients with type 1 DM are less likely to have type 1 diabetes mellitus due to insulin deficiency caused by autoimmune or viral infections, where this is rare in Indonesia (Sudoyo, 2006).

Table 5 Proportion Distribution of Outpatients with DM Based on number of visits in in the dr. Dody Sarjoto Air Force Hospital in 2018.

	f	%
≤6 visits	75	73.52
>6 Visits	27	26.47
Total	102	100

Table 5 the proportion of DM patients based on the number of visits in the year at most at ≤6 visits 75 (73.52%) and at least> 6 visits 27 (26.47%). In controlling DM disease, it is necessary to maintain health, especially in in the dr. Dody Sarjoto Air Force Hospital in 2018. which advises patients to always check their DM condition, to treat the complaints that are felt to increase the supply of drugs and insulin, and to consult with the educator doctor and specialists every two months, so the number of visits is six visits a year.

Table 6 Proportion Distribution of Outpatients with DM Based on Complications in the dr. Dody Sarjoto Air Force Hospital in 2018.

complications	f	%
Yes	65	63.72
No	37	36.27
Total	102	100

Table 6 the proportion of patients with DM based on complications, most patients with complications 65 (63.72%) and at least patients without complications 37 (36.27%).

This can occur because most of the DM patients who come to Air Force Hospitaldr Dody Sarjoto are already in a bad condition. Some patients come with a condition that has experienced complications and some patients are diagnosed with DM, he has been suffering from diabetes for more than 4 years.

Table 7 Proportion Distribution of Outpatients with DM Based on Types of Complications in the dr. Dody Sarjoto Air Force Hospital in 2018.

Types of complications		f	%
Acute of complication	Hiperglikemia	42	64.61
	Hipoglikemia	9	13.84
	Ketoasidosis DM	-	-
Chronic of complication	Kaki DM	10	15.38
	Neuropati	4	6.15
	total	65	100

Based on table 7, the proportion of DM patients based on the most complications type in acute complications is hyperglycemia 42 (64.61%) and the least in chronic complications is DM neuropathy 4 (6.15%)

Table 8 Proportion Distribution of Outpatients with DM Based on Medical Management in the dr. Dody Sarjoto Air Force Hospital in 2018.

Complications	f	%
≤ 5 years	57	55.88
> 5 years	45	44.11
Total	102	100

Table 8 contributes DM patients based on the reporting duration of DM patients at most in patients with a duration of ≤5 years 57 (55.88%) and at least in patients> 5 years 45 (44.11%). Common complications arise in all people with DM, both in mild and severe degrees after the disease 5-10 years (Sudoyo, 2009)

Table 9 Proportion Distribution of Outpatients with DM Based on Medical Management in Air Force Hospital dr Dody sarjoto in 2018

Medis Management	f	%
OHO	63	61.76
Insulin	9	8.82
OHO+Insulin	30	29.41
Total	102	100

Table 9 the highest proportion of DM patients based on medical management in patients with OHO (Oral hypoglycemic drugs) treatment 63 (61.76%) and the least on insulin treatment 9 (8.82%).

In Air Force Hospital dr. Dody Sarjoto's medical management in patients with type 1 DM uses insulin. In patients with type 2 diabetes using OHO (Oral hypoglycemic drugs). However, if type 2 DM patients with OHO cannot reach the targeted Blood Sugar Level (KGD), then insulin treatment will be given.

Table 10 Proportion Distribution of DM Patients in Outpatient Based on Medical Management

Blood Sugar Level	f	%
Low	37	36.27
Moderate	40	39.21
Hight	25	24.50
Total	102	100

Table 10 the proportion of DM patients based on Blood Sugar Level at moderate level is 40 people (39.21%) and the lowest in Blood Sugar Level is 25 people (24.50%).

Monitoring controls in dr. Dody Sarjoto's Air Force Hospital using the fasting Blood Sugar Level test. do not control the HbA1C test because of expensive laboratory costs, so doctors cannot force patients to control with the HbA1C test.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

A. The biggest proportion of DM patients based on age and sex in the age group 46-54 years is male (19.7%) and female (17.6%) and at least in the age group 28-36 years by male (3.9%) and female (2.9%).

b. The proportion of characteristics of DM patients based on the greatest sociodemography is: Moslem 99 (97.05%) and the least in Christianity 3 (2.941%). Based on the marital status, DM patients have the highest marital status of 90 (88.23%) and at least unmarried status 4 (3.92%).

c. The proportion of DM patients is based on the highest number of family members in patients who have 86 family members (84.31%) and the least in patients who do not have DM in 16 family members (15.68%).

d. The proportion of DM patients based on the biggest type of DM is Type 2 DM, 97 (95.09%), the least is Type 1 DM, which is 5 (4.90%).

e. The proportion of DM patients based on the number of visits in the largest number at ≤6 visits 75 (73.52%) and at least> 6 times visits 27 (26.47%).

f. The biggest proportion of DM patients based on complications was 65 patients (63.72%)

g. The proportion of DM patients is based on the biggest type of complication most in acute complications, namely hyperglycemia 42 (64.61%) and the least in chronic complications is DM neuropathy 4 (6.15%)

h. The proportion of DM patients is based on the history of DM at most in patients with a history of ≤5 years 57 (55.88%)

i. The proportion of DM patients based on the highest medical management is OHO 63 (61.76%)

j. The proportion of DM patients is based on the worst final blood sugar level of 25 people (24.50%).

Suggestion

a. To dr. Dody sarjoto Air Force Hospital district of Maros, South Sulawesiit is recommended to use the HbA1C test method to control blood sugar levels in DM patients.

b. To dr. Dody sarjoto Air Force Hospital district of Maros, South Sulawesi educates about healthy eating patterns and lifestyle in daily life both at home and the surrounding environment. So that DM patients who have children can prevent their children from suffering from DM disease, by avoiding DM risk factors that can be modified.

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DIFFERENCE BLOOD PRESSURE BEFORE AND AFTER RELAXATION TECHNIQUE IN HYPERTENSION PATIENTS

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Abstract: Hypertension as a risk factor for cardiovascular disease.The risk of cardiovascular disease tends to increase progressively with systolic blood pressure. Increased blood pressure plays an important role in the determining cardiovascular morbidity and mortality in the future. Treating an increase in systolic blood pressure and a combination of systolic and diastolic blood pressure reduce the risk of cardiovascular disease. Some experts are recommend nonpharmacological treatment for prevention and therapy of hypertension. This study aims to determaine differences in systolic and diastolic blood pressure before and after relaxation technique to hypertensyion patients. The method used a pre experiment with design one group pretest posttest. The method of sampling used accidental sampling. The amount of samples were 31 respondents and collected data used primary data. Analysis data used univariat and bivariat with uji t dependen to α 5%. The results showed that there were differences in systolic and diastolic blood pressure before and after relaxation techniques in hypertensive patients in the Puskesmas Pasar Ikan Bengkulu province (n = 31) and (p = 0,000). Based on this study, it can be concluded that relaxation tecniques can be used to reduce blood pressure in hypertensive patients.

Keywords: Blood pressure, Relaxation technique, hypertension

INTRODUCTION

Hypertension, known as a silent killer with high prevalence throughout the world. In 2010, hypertension caused more than one million deaths globally, hypertension is a major risk factor of cardiovascular disease, stroke, kidney failure and premature death. In Indonesia, cardiovascular disease is the number one cause of death[9]. Hypertension is also kown as high blood pressure (HBP) is a noncommunicable disease, which is associated with high morbidity and mortality. Pre hypertensive indications state that systolic blood pressure is between 120 and 139 mmHg and diastolic blood presssure between 80 and 89 mmHg.

At the age of 50 years and over indicates the presence of hypertension. Risk factors for coronary heart disease, heart failure, stroke, peripheral artery disease, kidney failure and atrial fibrillation have been identified as an increase in blood pressure. According to Framingham Heart Study, blood pressure 130-139/85-89 indicates an increased risk of cardiovascular disease. This study

shows that increased pulse pressure after age 55 years[6].

Some factors that can cause hypertension are stress.Continuous exposure to stress willcause an increase in cardiovascular diseases such as cardiomyopathy. All stressor can increase blood pressure with an average of 23 mmHg and a heart rate of 15 beats per minute which will affect target organ damage and predict future hypertension. this is based on research that repeated exposure to stress can cause ongoing hypertension[6].

According to (Chang, 2015) that to reduce stroke, coronary disease and death is influenced by a decrease in systolic blood pressure and diastolic blood pressure. A person suffering from an secondary hypertension will experience an increase inage and systolic blood pressure. There are a number of risk factors to reduce the incidence of modifiable hypertension which include diet, physical activity, diabetes, obesity and smoking[5].

An increase in blood pressure, the incidence of cardiovascular disease and kidney disease can be reduced by antihypertensive treatment and lowering blood pressure. Blood pressure must be lower to < 140/90 mmHg (systolic/diastolic) in the general hypertensive population and at least < 150 mmHg systolic in elderly patients. Antihypertensive treatment with no drugs or combination of drugsused has a beneficial effect on lowering blood pressure[6].

Some experts and clinical guidelines recommend nonpharmacological treatmentsfor the prevention and treatment of hypertension. This therapy is caused by the increasing prevalence of hypertension. There is more evidence that relaxation methods and other methods prevent the development of hypertension and lower blood pressure[6].

METHODOLOGY

1. Design

This study uses a type of Pre Experimental research with the design of "one group pretest postest"[8].

2. Population

The population in this study were all hypertensive patientsat the Puskesmas Pasar Ikan Bengkulu City. The sample was 31 patients. Samples used "Accidental Sampling" with criteria : will to be a sample, cooperative and patientsnot using antihypertensive drugs.

3. Data Collection

Data was collected by looking at the patient's diagnosis, and then asking for approval to become a respondent and then askingfor name and age, 5 minutes later to take blood pressure measurement before relaxation techniquesafter which the

patients performed relaxation techniques as recomended for 20 minutes then rested for 5 minutes later back to blood pressure after relaxation techniques.

4. Data Processing and Data Analysis

Data processing was Editing, Entry Data, Cleaning data. Data analysis was Univariat and bivariate used Uji T dependen in computer.

RESULTS

A total of 31 subjects with hypertention were examined. Based on table 1 the result of the analysis showed that the characteristics of respondents who experienced hypertension were mostly women (54,8%) and aged 55 years.

Variables	Mean	SD
diastolic blood pressure before	132,9	7.391
diastolic blood pressure after	86,7	8.321

Table 2. Presentingthe result of systolic blood pressure. There were significant differences between systolic blood pressure before the average relaxation technique (141,4-146,3) and systolic blood pressure after the average relaxation technique (86,7-94,5).

Table 3. Presents diastolic blood pressure. There were significant differences between diastolic blood pressure before relaxation technique of mean (130,1-135,6) and diastolic blood pressure after relaxation technique of mean (83,7-89,8).

The analysis used a dependent T test and there were significant differences between blood pressure before and after relaxation techniqueslisted in table 4.

Table 1:Prevalence of hypertension by characteristic.

	Frequency n = 31	Percentage (%)
Gender		
Male	14	45,2
Female	17	54,8
Age	Mean	Median
35-82	55	56

Table 2:Systolic blood pressure.

Variables	Mean	SD
Systolic blood pressure before	143,87	6.672
Systolic blood pressure after	90,65	10.626

Table 3:Diastolic blood pressure.

Table 4:Differences between blood pressure before and after relaxation technique.

Blood pressure	Df	P Value
Systolic blood pressure	31	0,000
Diastolic blood pressure	31	0,000

Table 5 : Pre-Post Systolic and Diatolic blood pressure.

No	Pre Sistolik/ Diastolik	Post Sistolik/ Diastolik
1.	140/90	130/90
2.	150/90	140/90
3.	140/100	130/90
4.	140/90	120/90
5.	140/90	130/80
6	140/80	130/80
7.	140/90	140/90
8.	140/90	130/90
9.	140/90	130/100
10.	150/80	140/80
11.	140/100	130/90
12.	140/80	140/80
13.	150/70	130/80
14.	150/100	130/80
15.	150/100	140/100
16.	150/100	120/80
1.7.	140/100	130/90
18.	150/90	140/80
19.	140/90	130/90
20.	140/90	130/80
21.	140/80	130/80
22.	140/90	130/90
23.	140/90	130/90
24.	140/80	130/80
25.	140/110	130/100
26.	140/100	130/90
27.	150/70	140/70
28.	150/80	140/80
29.	140/90	130/80
30.	170/120	160/110
31.	140/90	130/90

DISCUSSION

Hypertension accounts for up to 6% of adults deaths worldwide and its believed that there is a global epidemic whose roportion is unkown as abnormal blood pressure increases are often asymptomatic[7].

There are 20-50% of the adult population in developed countries affected by cardiovascular disease due to hypertension. Systolic blood pressure increases throughout adulthood in most populations, while diastolic blood pressure peaks at about 60 years in men and 70 years in women and falls gradually afterwards. Increased blood pressure with greater age at systolic blood pressure. In young adults and middle age, systolic and diastolic blood pressure is higher in men than in women. Therefore, the prevalence of hypertension in the elderly is higher in women[4].

Above blood pressure of 115/70 mmHg, the risk of cardiovascular events doubled for every 20/10 mmHg increase in blood pressure. Most cardiovascular events are therefore related to blood pressurerather than related to hypertension[1].

In people older than 45 years, the risks of stroke and coronary heart disease is more closely related to systolic blood pressure. Isolation of systolic hypertension becomes more common with age and may result in brachial artery thickening. Systolic hypertension is an accurate predictor of cardiovascular risk[1].

Many lifestyle factors can increase blood pressure and modifyit can reduce blood pressure in patients with or without hypertension. Non pharmacological lifestyle modification that is effective can reduce blood pressure[1].

Methods for dealing with hypertension and reducing blood pressure can be done by using natural remedies and nonfarmakologis treatments, while taking into account the disadvantages of taking drugs and possible side effects[1].

Relaxation therapy effectivelyimproves cardiovascular disease and hypertension but a lot of ambiguity arises from a lack of rigorous and long term scientific research. Evidence is still convincing that relaxation therapy is protective of cardiovascular disease. There is also evidence that relaxation can reduce blood pressure with a reduction of 5/3 mmHg shown in people with hypertension[2].

It is assumed thatrelaxation therapy can improve cardiovascular health and reduce blood pressure. Many techniques regulate breathing patterns carefully, which has a powerful effect. Some methods such as transcendental meditation, zen yoga, and hatha yoga can be use to treat hypertension. New approaches, such as progressive relaxation, focus on body awareness and relaxation. When relaxation causes blood vessels to dilate with increased blood flow to the fingertips and increased temperature. As blood pressure also decreases with dilation of the vessels. This shows that relaxation techniques can reduce blood pressure[2].

The Food and Drug Administration (FDA) has agreed that relaxation therapy is usedto treat hypertension and reduce blood pressure through breathing techniques. Respiration affects regional blood flow and blood pressure throughout the body. This is consistent with the theory of changes in blood pressure changes and chemoreceptors that feel changes in the level of blood chemicals such as oxygen and carbondioxide. These receptors are stimulated differently during parts of the respiratory cycle and they regulate the sympathetic nervous systemwhich then changes blood vessel tone and blood pressure. Slower respiratory rates with a prolonged expiration phase cause a decrease in sympathetic nervous system output and lower blood pressure[2].

Relaxation therapy mechanisms can reduce blood pressure which involves a decrease in sympathetic nervous system output. This causes dilation of blood vessels and decreases renin and aldosterone levels by decreasing the input of the nervous system to the kidneys and adrenal glands.Therefore, it is a mixed V- and R (renin) to lower blood pressure[2].

Treatment with a decrease in blood pressure or preventing hypertension can develop in the coming years, patients must be told that yoga and relaxation have little value to lower blood pressure. These

changes help reduce overall cardiovascular risk along with blood pressure control[7].

CONCLUSION

The conclusion of this study is that there is a significant diference between pre systolic/diastolic with post systolic/diastolic blood pressure. This is consistent with the theory that relaxation technique can reduce blood pressure in hypertensive patients.

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Research Methods in Policy Analysis : Lesson Learned from Qualitative Study in JKN Implementation

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ABSTRACT

Introduction.JaminanKesehatanNasional (JKN) is Indonesia's health policy in order to achieve universal health coverage (UHC). JKN policy analysis is needed to identify how the policy will be implemented and the benefits. In contrast to quantitative research, qualitative research has always been criticized and underestimated because of the lack of consensus to assess its validity and reliability. This article was designed to explore a qualitative approach in the analysis of JKN policies in two regions in Central Java Province.
Methods.The method used in this article was observation and documents analysis related to the experience of the author while conducting two studies in two different regions in Central Java Province. The author observed and wrote down the strength and limitation of the qualitative method in analyzing JKN policies in the two regions.
Result. The location of the research were the two region with different JKN participant, which had achieved universal health coverage andhad the lowest achievements in the area. The strength of qualitative methods in analyzing policies werethey can explore a policy in depth. In addition, the researchers also obtained a more holistic description of the factors that influenced JKN participants. Moreover, qualitative methods had a flexible structure design, thus allowing emergent design as experienced by researchers. Some of the limitation of this method were difficulties in conducting in-depth interviewing techniques, because some informants were difficult to explore. Researchers must also triangulate carefully because the content of information was not always synergistic.
Summary.Qualitative methods are recommended for analyzing policies becausethis method can answer research questions in depth.

Keywords: Policy Analysis. JaminanKesehatanNasional. Qualitative Method

INTRODUCTION

Universal Health Coverage (UHC) requires a comprehensive approach to the health care provider, health financing, and political economy and health policy[1]. Achieving UHC usually requires a gradual and systematic policy approach[2]. Indonesia implements “JaminankesehatanNasional” (JKN) policies through the SistemJaminanKesehatannasional (SJSN) to achieve the global goal of UHC[3]. Health Policy is the key to the implementation of helath care system and fundamental guidelines to make

decisions[4]. Therefore, there is a need to analyze policies to understand how and why certain policies are developed in certain contexts and what their effects on the health sector[5]. The method can be used in policy analysis is a qualitative method[6]. Qualitative research has made a significant contribution to service, administration and health policy [7.8]. In contrast to quantitative research, qualitative research has always been criticized and underestimated because of the lack of consensus to assess its validity and reliability[8]. Therefore, this article aims to explore qualitative methods used by researchers in analyzing JKN policies carried out in two regions in the Central Java province.

METHODOLOGY

The researcher used the document analysis and observation method to write down the research experience in this article. Document analysis was done on logbooks or research records based on activities while conducting the research, starting from the determination of research ideas, preparation of research proposals, discussions with counselors, licensing processes involving government bureaucracy, and data collection. While observations were done simultaneously with the process experienced by researchers from the beginning until data collection process.

The study was conducted in September 2018-February 2019. JaminanKesehatanNasional (JKN) was chosen by researcher because it wasoneof health issues that developed at that time[9]. Researchers conducted research in two regions with different JKN participant achievements in the Central Java province, which had reached UHC and had not yet achieved UHC. The two studies were conducted at the same time with the same method. The schedule for conducting research was made systematically so that the two studies could run simultaneously. The sampling technique used by the researcher was purposive sampling technique, that means the informants who were appointed later were the informants who understand the most about JKN policies in the area. The researcher used a qualitative method with a case study approach to determine the factors that influenced the achievement of participants of the JaminanKesehatanNasional (JKN). Data collection techniques used were in-depth interviews, focused group discussions and document analysis. They were used to answer the research questions listed in table 1. Data analysis techniques used in the study were interactive analysis models. While the validity test of the data were triangulation, member checking, and peer debriefing.

Table 1. Qualitative Research Questions in the analysis of JKN policies used by researcher

No	Research Question
1	BagaimanaimplementasikebijakanJaminanKesehatanNasional (JKN) di daerahini ?

2	Apasajafaktor-faktor yang mempengaruhicapaianpeserta JKN di daerahini ?
3	Apasajaperanmasing-masingpemangkukebijakandalamimplementasiJKN ?
4	Apasajastrategi yang sudahditerapkanuntukmeningkatkancapaianpesertajaminankesehatannasional (JKN) di daerahini ?

The experience of researchers in conducting the research, then written in this article to illustrate how qualitative methods were used in the policy analysis.

ETHICAL CONSIDERATION

The researcher asked the informed consent from informants before conducting an in-depth interview, including asking permission to record the interview process. Similarly, when conducting focused group discussions. The informant's identity was kept confidential. This study received ethical clearance from the Ethics Committee, Dr. Moewardi Surakarta hospital.

RESULTS AND DISCUSSION

Research process

Researchers chose the theme of JaminanKesehatanNasional (JKN) based onthe main target of 2015-2019 national development in the health sector, which is expected to reach 95% by 2019, in accordance with the Universal Health Coverage (UHC) target [10]. This research is expected to be able to identify the factors that influence the achievement of participants of the JaminanKesehatanNasonal (JKN) in two regions with <60% and more than 95% participants of JKN participants[11]. The researcher used the technique of in-depth interviews, focused group discussions, and document analysis in this study. The informants consisting of the leadership of regional government, the leadership of the public health department, the leadership of the social department, the leadership of Department of Population and Civil Registration, the leadership of the labor department, and the community. Document analysis wasdone to many documents that support the information given by informant, such as government regulations, presidential instructions, regional head regulations, regional head circulars, and regional head instructions.

Before data collection, researchers conducted a licensing process involving government bureaucracy. After applying for permission, the researcher waits for the disposition of the leadership of each department.The process of waiting for this disposition takes approximately one week. The disposition determine individuals who are understand the most of JKN implementation in that department, the individual who will be the research informant. The researcher then met with the informant to determine the in-depth interview schedule and focused group discussion. This interview and focus group discussion’s topic were based on the health policy triangle. This framework focuses

on content, context, processes, and actors. The framework helps systematically exploring a health policy and can be applied in countries with low, middle and high income[12,13].

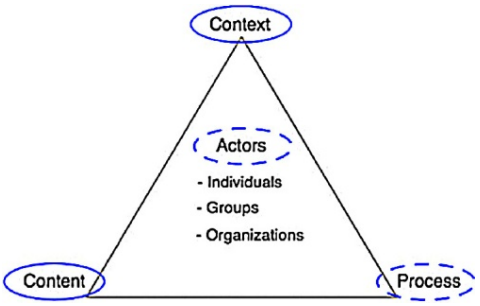

Figure 1. Policy Analysis Triangle [13]

Strengths of qualitative methods in areas that had reached UHC

Based on this study, qualitative methods could analyze the JaminanKesehatanNasional policy in depth especially regarding the achievements of participants. The information obtained was very detailed, including how the JKN participants' journey in this region began from the beginning of JKN implementation until it reached UHC. This method could extract information from informants who really understand the implementation of JKN in the area, so that researchers got answers to research questions. Furthermore, qualitative research could also provided a holistic description on the factors that drive the area in achieving UHC.The supporting factors of UHC in area included what strategies were applied, who were the actors behind this achievement, and what were the roles of each actor. This research illustrated how all of the stake holder tried to give contribution, so the area could reach UHC.

Limitations of qualitative methods in areas that had reached UHC

Beside of the qualitative methods' strength, the researchers noted several limitation of this method. First, some informants were difficult to explore because of their positions. Some informants tend to cover up important information related to policy. After further analysis, this was caused by the informant position was under the leadership element so they had to be careful in providing information to the public regarding the condition of the department. To overcome this difficulty, the researcher then took data using another method to complete the data that could not be obtained through the research informant. The method used was document analysis. The researcher also conducted document analysis of the data that was published through mass media such as documentation of socialization conducted by the government in increasing JKN participants and documentation of increasing quality services by government.

Strengths of qualitative methods in areas that had not reached UHC

During the research process, qualitative methods could also explore in detail the factors that

influence JKN participants in that region. The information provided by informants was deep enough to be able to describe how the journey of JKN implementationso that researchers could draw conclusions about whatever factors influenced JKN participants. In addition, qualitative methods could also analyze JKN policies holistically, not only from policy makers, but also from the community as policy targets. The researcher conducted in-depth interviews with the community both those who had become JKN members and those who had not yet become JKN members. Furthermore, the researchers analyzed the information provided by policy makers and policy targets so that the factors that influence JKN could be seen holistically.

Another strengthof qualitative methods in the areawas qualitative research design had a flexible structure so that research design could be changes during the data collection. It's called emergent design. Emergent design conducted by the researcher was focused group discussion. Focused group discussion wasconducted by request of one research informant The focused group discussion was attended by representatives from each department involved in this research, including the health department, social department, and population and civil registration department. In addition to discussing the topic of research, this discussion was also an opportunityfor data confirmation among government agencies.Through this focused discussion the researcher obtained a lot of detailed and holistic information about JKN implementationthearea from 2014 until 2018, who should play a role in JKN implementation, what strategies were implemented, and what was the barrier for increasing JKN participants.

Limitation of qualitative methods in regional studies that had not yet reached UHC

During the process of analyzing data and drawing conclusions, researchers needed precision in determining which information can be verified. The limitation was overcome by carried out several processes to obtain valid and reliable data including the process of member checking, peer debriefing, and data triangulation. Member checking started at the time of data collection (in-depth interviews) and after the interview (the interview transcript check). Peer debriefing was done by a coding process carried out by two researchers with the same competencies. While the data triangulation was done by document analysis.

The next limitation is the interpretation and analysis of data was more difficult and more complex, so it required a lot of time. The data analysis technique used in the study was an interactive analysis model. In the interactive analysis model, three components, data collection, data presentation and conclusion were made in the form of interactions with the data collection process as a cycle process[14].

CONCLUSION

Based on the experience of researchers in conducting research, qualitative methods are recommended for analyzing the JaminanKesehatanNasional (JKN) policy because this method can answer research questions in depth and even though there are some disadvantages of this methods, it can still be overcome with certain techniques.

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The Influence of Counseling on Knowledge of Adolescents' Mental Health in Bakti Putra Mandiri Vocational School In Bogor Period of 2018

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Abstract

Background Some facts about adolescents are as follows: Every year, around 20% of teens will experience mental health problemswhich are most often depressed or anxious. Whereas mental health problems occur in 15-22% of adolescents, yet those who get treatment are less than 20%. Diagnosis of mental disorders in adolescents is behavior that either is not in accordance with the level of age or deviates when compared with cultural norms that result in lack or disruption of the function of adaptation (Teenage Health, 2012). **The aim** of this study was to see differences in mental health knowledge before and after counseling. **The research method** was a Quasi Experiment approach by conducting pre and posttests. **The results** obtained that there were differences in knowledge of adolescents which after counseling became better. **Conclusion**: counseling is very influential on the knowledge of adolescents in order to better understand themselves so that mental health will be maintained.
Keywords: Counseling, MentalHealth

A. Background

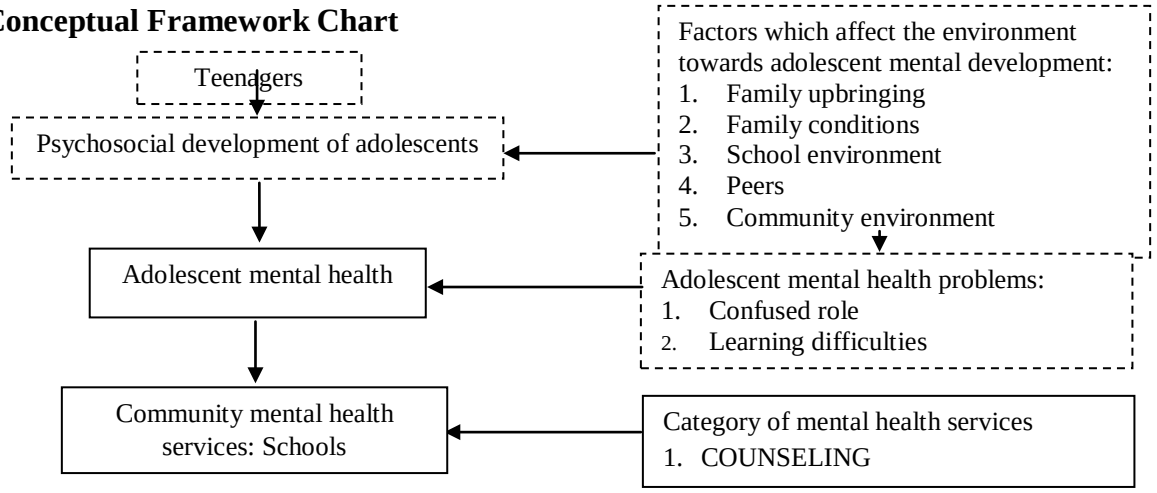
The demographic bonus that is echoed as an issue that will occur in 2025-2030 is a challenge that must be faced by Indonesia so that at the age of reproduction it can be productive and creative. Counseling is one way for students to know about mental health in accordance with the conditions of a very significant change that occurs and is a test in the child's transition to adulthood. Based on data from the National Population and Family Planning Agency (BKKBN) there are 64 million Indonesian teenagers who are vulnerable to have free sexual behavior and to use dangerous addictive substances. In the BKKBN's record, the birth of adolescents' population tended to increase by 48/1000 births. The percentage can illustrate that teenagers nowadays already have free sex (Palembang, 21 October 2013). Some

facts about adolescents are as follows: Every year, around 20% of teens will experience mental health problems which are most often depressed or anxious. Whereas mental health problems occur in 15-22% of adolescents, but those who get treatment are less than 20%. Diagnosis of mental disorders in adolescents is behavior that either is not in accordance with the level of age or deviates when compared with cultural norms which result in lack or disruption of the function of adaptation (Adolescent Health, 2012).

Some Public Health Centers have conducted counseling in junior and senior high schools, once a year during new teaching. They also have conducted counseling in collaboration with several other programmers namely ARU (Children, Youth and Adolescents), Health Promotion, Environmental Health, and Nutrition. Though most of the Public Health Centers in schools only carry out promotion and prevention since until now health centre officers have never found teenagers with severe mental problems.

B. Theoretical Framework

Conceptual Framework Chart



Problems

Based on data from the National Population and Family Planning Agency (BKKBN) there are 64 million Indonesian teenagers who are vulnerable to have free sexual behavior and to use dangerous users addictive substances. In the BKKBN's record, the birth of adolescents' population tended to increase by 48/1000 births. The percentage can illustrate that teenagers nowadays already have free sex (Palembang, 21 October 2013). Some

facts about adolescents are as follows: Every year, around 20% of teens will experience mental health problems which are most often depressed or anxious. Mental health problems occur in 15-22% of adolescents, though only less than 20% get the treatment. Moreover, there is also 30% of learning difficulties.

Objective

The objective of this study is to determine the effect of counseling on student perceptions of mental health in BAKTI PUTRA MANDIRI VOCATIONAL SCHOOL BOGOR in 2018. The results of this study are expected to provide information on mental health problems wisely, to inform negative impact of it for adolescents and to give solutions through counseling.

LITERATURE REVIEW

Adolescent

Adolescence is defined as a period of transition from the development of childhood to adulthood which includes aspects of biology, cognitive, and social change that lasts between the ages of 10-19 years. Adolescence consists of early adolescence (10-14 years), middle adolescence (14-17 years), and late adolescence (17-19) (Aryani, 2010).

Early adolescence is a period characterized by a variety of rapid body changes, often resulting in difficulties in adjusting, and at this time adolescents begin to seek self-identity. **Middle adolescence** is characterized by a body shape that resembles an adult. Therefore, teenagers are often expected to behave like adults, even though they are not psychologically prepared. At this time conflict often occurs, because adolescents have begun to want to freely follow peers who are closely related to identity seeking, while on the other hand they are still dependent on parents**. Late adolescence** is characterized by biological growth that has slowed down, but is still ongoing in other places. Emotions, interests, concentration, and the late teenager's way of thinking are stabilizing. The ability to solve problems has started to increase.

Adolescence comes from the Latin word *adolescare* which

means growing into adulthood (Bobak, 2004). Adolescence is defined as a period of developmental transition between childhood and adulthood which includes biological, cognitive, and social-emotional changes (Santrock, 2003). According to Soetjiningsih (2010) adolescence is a transitional period between the childhood period that begins when sexual maturity is occurring between 12-20 years which will experience biological, cognitive, and social-emotional changes.

Changes experienced by adolescents from the phase of children to adults affect their growth and development. Growth that occurs in adolescents causes physical and hormonal changes. Physical changes seen in adolescents are changes in sound to be greater in adolescent boys and enlarged breasts in adolescent girls (Hurlock, 2004). In adolescents, young men will experience wet dreams and young women will experience menstruation. These will cause many conflicts due to sexual satisfaction needs of adolescents (Sullivan, 1953 in Sunaryo, 2002).

Hormonal changes in adolescents result in them having less stable emotions. Emotions in adolescents arise due to social pressure in the face of new things in the process of development to the adult stage. Emotional imbalances are caused by emotional conditions that are constantly changing so that teenagers tend to not understand themselves. Then teenagers try to get moral support from their peers (Semiun, 2006).

Adolescents in achieving appropriate development tasks need adaptive coping mechanisms (Erickson, 1963 in Semiun, 2006). When adolescents conduct self-identity searches, teens often try various kinds of roles to find roles that suit themselves. This trial and error attitude will plunge teenagers into negative things. Parents as self-identification figures will fade then teens will become other identification figures (Sunaryo, 2010).

According to Havighurst (1988), from the book of Health Polytechnic authors team of the Ministry of Health, Jakarta 1 (2010), there are tasks that must be completed well in each period of

development. Development tasks are things that adolescents must fulfill or do and are influenced by social expectations.

Job description of development contains environmental expectations which are demands for adolescents in behaving. As for the developmental tasks in adolescents are as follows:

a. Accepting conditions and appearance, and using his/her body effectively.
b. Learning plays a role according to gender (as male or female).
c. Looking for new and more mature relationships with peers, either with the same or the opposite sex.
d. Expecting and achieving responsible social behavior.
e. Looking for independence emotionally towards parents and other adults.
f. Preparing for a career and making it economically independent.
g. Preparing themselves (physically and psychologically) in the face of marriage and family life.
h. Developing intellectual abilities and skills to live in society and for the future (in the field of education or employment).
i. Achieving maturity values.

Counseling

1) Definition of Counseling

Counseling is an effort to help other people to recognize themselves, understand the problem, set alternative solutions to problems and make decisions to overcome the problem in accordance with the conditions and self-needs that are recognized not because of coercion (Taufik, 2012).

Referring to some of the previous definitions, it can be concluded that counseling is a relationship between someone giving counseling by an expert (counselor) and individuals who are experiencing problems or who are given counseling (counselee/client) which leads to the overcoming of problems faced by clients, with characteristics as follows (Taufik, 2010):

a. Counseling is a relationship in the atmosphere of teaching and learning
b. The relationship between counselor and condition is face-to-face relationship
c. Counseling is held to solve a problem (problem solving)
d. The purpose of counseling is that the client knows himself/herself, accepts realistically and develops goals, can make choices, and develops wiser plans so that he/she could develop constructively in his/her environment.
e. Counseling provides assistance to individuals to develop knowledge, mental health, and changes in behavior.

Midwifery counseling is a process of learning, fostering good relations, providing assistance, and forming cooperation that are done professionally (in accordance with their fields) by midwives to clients to solve problems, overcome developmental barriers, and meet client needs. According to Yulifah(2009), in the practice of midwifery counseling there must be at least these following elements:

a. Participants

Generally there are two people (midwives and clients), can also be in groups with special roles or professional affiliations, namely midwives who have knowledge in their fields.

b. Aim

Needed to be able to adjust to a better and functioning direction, that is clients can make changes in a better direction.

c. Learning outcomes

Given the importance of midwifery counseling in helping clients achieve independence as individual, social, religious, cultural, and increasingly complex problems faced by clients, then midwives as counselors are required to continue to improve themselves so that the knowledge, skills and

attitudes related to counseling services continue to develop.

The Purpose of Counseling

The purpose of counseling is intended as a service to help clients' problems because client problems which really have occurred will harm themselves and others, so they must be prevented immediately and do not cause new problems to arise. Another problem is that the client is unable and understands about the potential that exists in him/her, counseling tries to help his/her potential, so that it can be used effectively. The purpose of counseling can be explained as follows:

In general, the purpose of counseling is to help clients in trying to change behavior related to health problems, so that the client's health becomes better. Altered knowledge includes the domain of attitudes, the realm of knowledge, and the domain of skills (Supariasa, 2012).

According to McLEOD (2013) the objectives of counseling activities are:

a. Understanding. The understanding of roots and the development of emotional sensitivity, leads to increased capacity to prefer rational control over feelings and actions.
b. Connect with other people. Being more able to form and maintain relationships that are meaningful and satisfying to others.
c. Self-awareness. Become more sensitive to the thoughts and feelings that have been detained or rejected, or develop more accurate feelings regarding how others accept themselves.
d. Accept yourself. The development of a positive attitude towards oneself which is characterized by the ability to explain

experiences that are always the subject of criticism and rejection.

e. Self-actualization or individual. The movement towards fulfilling the potential or acceptance of integration of previously self-contradictory parts of oneself.
f. Enlightenment. Helping clients achieve high levels of spiritual awareness.
g. Problem Solving. Finding solutions to certain problems that cannot be solved by the client him/herself. Demanding general competence in problem solving.
h. Psychology education. Make clients capture ideas and techniques for understanding and controlling behavior.
i. Have social skills. Learn and master social and interpersonal skills such as maintaining eye contact, not interrupting speech, assertiveness, or anger control.
j. Cognitive change. Modify or replace irrational beliefs or thought patterns that cannot be adapted which are associated with self-destructive behavior.
k. Behavior change. Modify or replace maladaptive or destructive behavior patterns.
l. System change. Introducing change by the operation of the social system.
m. Strengthening. With regard to skills, awareness and knowledge that will make the client able to control his/her life.
n. Restitution. Helping clients make small changes to destructive behavior.
o. Production and social action. Inspire in a person the desire and capacity to care for others, share knowledge, and contribute to the common good through community work.

Factors affecting counseling

According to MakmuriMuchlas (2008), there are several factors that influence perception such as:

1. Parenting

2. Social support
3. Past experience

Mental Health

Mental health is the realization of genuine harmony between mental functions and the creation of adaptation between the individual and him/herself and his/her environment based on faith and piety and aims to achieve a meaningful and happy life in the world and the hereafter (Drajat, Z). Mental health is an inner condition that is always in a state of calm, safe, and tranquil. The efforts to find inner calm can be done, among others, through resignation adjustment (complete surrender to God), (Jalaluddin). Mental health is a condition that allows optimal physical, intellectual and emotional development of a person and the development goes hand in hand with the circumstances of others. If mental health is achieved, then individuals have integrity, positive adjustment and identification towards others, achieve behavioral integration and learning individuals, and also accept responsibility and become independent.

Effects of counseling on mental health in adolescents

Counseling is very influential on mental health in the hope that students can be more sensitive and able to adapt to themselves and their environment. Afterward the student will become a tough and productive person.

RESEARCH METHODS

The research was planned to be held at Bakti Putra Mandiri Vocational School Bogor in 2018.The tool in this study is a questionnaire to determine the effect of counseling on mental health of adolescents in Bakti Putra Mandiri Vocational School Bogor in 2018.

Work Step

Data collection was done by previously giving an explanation to the respondents about the purpose of the research, the benefits of

respondents' participation in this study, how to fill in the questionnaire with alternative closed answers and ensuring the confidentiality of the respondents.Providing code for data obtained in the field and entering data from research forms into data processing programs, namely SPSS version 17.0. and presented in the form of a table.In order to be able to see the frequency distribution of both dependent variables and independent variables, the table of frequency distribution of all the variable distributions found in this study was made.

The bivariate analysis of this study is the influence before and after counseling. Before the data normality test is carried out, if the data are normally distributed then it will use the *Paired Sample T Test*. However, if the data is not normal, then it will use the *Wilcoxon Test*.

This study was not only analyzed by connecting between independent variables with dependent variables but also pre test and post test with experiment or treatment. To find out whether there was influence between dependent variables and independent variables, it used cross table and identified meaningful variables using the T-test with a significance level of 95%. This means if the P value ≤0.05 then there is significant relationship between pre and post treatment, and if P value is .≥ 0.05 then there is not any significant relationship.

The t-Paired test is used to determine whether there are differences in the average of two free samples. The two samples in question are the same sample yet has two data. (Sujarweni, 2012)

a) If –t table < t count < t table then Ho is accepted. It means that there is no influence of knowledge before and after counseling (Sig > 0.05).
b) If t count < - t table and t count > t table then Ho is rejected which means that there is influence of knowledge before and after counseling (Sig < 0.05). (Sujarweni, 2012).

Research Results

This study was conducted towards 48 respondents who joined in 1 experimental group. Data retrieval was done by giving pre-test in the form of a watershed questionnaire (mental health) consisting of 30 questions, then the counseling was conducted talking about mental health and types of mental health problems. Afterwards, the post-test questionnaire will be given the same as the previous questionnaire. The purpose of data collection in this study is to determine whether there are changes in mental health before and after counseling.

Univariate Analysis

Univariate analysis in this study was conducted to provide an overview of the distribution of the dependent variables studied.

Adolescent Mental Health before Intervention at Bhakti Putra Mandiri Vocational School Bogor in 2018

Pre Test	N	Percentage (%)
Less	33	68.8
Good	15	31.3

Based on table 4.1, the results of the knowledge level obtained from 48 respondents were as much as 33 respondents got less value (68.8%) while 15 respondents (31.3%) got good value.

Table 4.2
Adolescent Mental Health after Intervention at Bhakti Putra Mandiri Vocational School Bogor in 2018

Post Test	N	Percentage (%)
Less	7	14.6
Good	41	85.4

According to table 4.2, it was known that mental health in adolescents after intervention by giving counseling has increased with only 7 respondents of less value (14.6%) and as many as 41 respondents (85.4%). with good value.

Bivariate Analysis

Table 4.3

Adolescent Mental Health before and after Intervention at Bhakti Putra Mandiri Vocational School Bogor in 2018

Vari	M	SD	SE	P	N

able	ea n			*Va lue*	
Pre Test	0.3 1	0.4 86	0.0 68	0.0 00	4 8
Post Test	0.8 5	0.3 57	0.0 51		

From table 4.3 above, the results showed that the value of p < 0.05. This indicated that there was an influence of counseling on improving Mental Health before given an intervention and after given an intervention.

Discussion

4.2.2 Univariate Discussion

1. Adolescents Mental Health before Intervention

The results of the distribution of respondents showed that mental health level in adolescents who less know mental health before intervention as many as 33 respondents(68.8%), while as much as 15 respondents (31.3%) in good mental health knew their mental health conditions before being intervened. If we see these results of mental health, adolescents experienced irregularities before giving intervention through counseling because more levels of knowledge were lacking.

This indicates that counseling is part of a health education strategy to get information about good health. In this case, through counseling with the counseling method there will be information about the types of contraception devices.

2. Adolescents Mental health after Intervention

The results showed the distribution of respondents had been known based on the level of mental health in adolescents after being intervened by giving counseling. Once the counseling done, the health status of adolescents had increased to good with the number of 41 respondents (85.4%). Furthermore, the level of poor mental health was also decreased with the number of 7 respondents (14.6%).

This is due to the provision of counseling to adolescents in Bakti Putra MandiriVocational School for 6 months using leaflets

and *SAP*which attract attention, so as to increase the enthusiasm of respondents who read leaflets to find out about kinds of mental health problems. During the provision of counseling conducted by researchers, counselors explained the types of mental health problems in adolescents. Through those processes, it is expected to make respondents understand and increase adolescent knowledge about mental health.

Bivariate Discussion

1. **Effects of Counseling on Mental Health in Adolescents.**

Based on the results of the study, they showed that before (pre-test) and after (post-test) intervention was given by counseling with leaflet media, the value of p = 0.000 or p = <0.05 which means that there was an influence on improving metal health in adolescents before beingintervented and after being intervented. The results of this study indicated that providing counseling to adolescents can increase the knowledge of fertile couples who have not previously known mental health problems.

Conclusions

Based on the study about the influence of counseling on improving adolescents' mental health at Bakti Putra MandiriVocational School Bogor in 2018, it was concluded that the mental health of adolescents before being intervened and after being intervened had been known after conducting research and giving counseling to them about mental health, mental health problems and repetition. In this study there was a significant influence on increasing adolescent knowledge about mental health before and after the intervention which proved with significance value of 0.000 (p *value*<0.05).

Suggestions

1. **For Schools/Counseling officers (BK)**

Schools/counseling officers are expected to provide complete information about the mental health problems in adolescents, the types and management. It is also necessary to improve the

competence of schools' counseling officers on providing mental health counseling and on maximizingthe counseling to female students.

2. For Adolescents

It is expected for adolescents to be able to strengthen understanding of themselves, their families and the environment in conducting relationships and living their lives.

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IMPLEMENTATION OF SOUL HEALTH SERVICES IN PREGNANT WOMEN IN THE PUSKESMAS REGION OF BOGOR DISTRICT

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ABSTRACT

The period of pregnancy is an amazing event for women so that with many changes both physically and mentally there needs to be special attention so that the period of pregnancy, childbirth and the puerperium period and the breastfeeding period can be passed well. Health care efforts that need to be implemented include promotive, preventive, curative, and rehabilitative. The purpose of the study was to determine the implementation of mental health services for pregnant women in the Parungpanjang health center area.

The design of this study was descriptive design, with a population of all officers handling mental programs in the Kawedanan Pare Health Center area as many as 24 people and a sample of all officers handling mental programs in the Bogor Regional Health Center area of 24 respondents with total sampling technique. The variable in this study was the implementation of adolescent mental health services in the Parungpanjang Health Center area in the Bogor Regency Region and then analyzed by the percentage formula (%). Research on 2 - 16 January 2019.

From the results of the study, a small proportion of respondents, namely 4 respondents (18.18%) carried out mental health services and almost all respondents numbered 18 respondents (81.82%) did not carry out adolescent mental health services.

Puskesmas that do not implement mental health programs because the officers who are also multiple programs, one of them is mental health, ispa, and senses (eyes and ears), so that they do not focus on the 1 program. The activities carried out by the puskesmas should be in accordance with the main efforts of the puskesmas service, which are promotive, preventive, curative and rehabilitative. The implementation of mental health programs for pregnant women through the class of pregnant women can reduce the number of mental health problems during childbirth which are often caused due to depression. As health workers, especially midwives, they need to participate in providing promotive actions to pregnant women.

Keywords: Services, Pregnancy Mental Heath

Introduction

The target of the Sustainable Development Goals (SDGs) that expects the Maternal Mortality Rate (MMR) of 70 per 100,000 births is a challenge that must be well supported. In line with that, a bonus demographic of 70% in 2025-2030 (Evidence Summit on Reducing Maternal and Neonatal Mortality in Indonesia 2016-2017) is also a challenge for the Indonesian nation to be faced to prepare a

healthy and quality reproductive age as a support for main resources of development and economic growth. In connection with that, health is an investment as a guarantee of quality human resources, socially and economically productive. To achieve a healthy person, the individual first recognizes and understands his/her condition as a whole with all its limitations and strengths',[1,]

Other research also revealed1.2.1. that due to the lack of health education in adolescents, it results in unwanted young pregnancies and unsafe abortions. Desired and unaffected teen pregnancy has the same risk (Tahitahe and Thato, 2011). Pregnant young people will face various developmental challenges related to the responsibility of being a mother. In addition, striving to eliminate negative stigma, lack of empathy from health workers and lack of knowledge about pregnancy, low self-confidence are also other mental impacts happened so that strengthening from midwives needs to be well prepared (Mohammmadi, et al, 2015).

Problem Formulation

From the description above, the research problem can be formulated as follows:

How is the implementation of mental health services by midwives in improving pregnancy mental health in the Health Center of Bogor District?

Research Goals

This study aims to determine the implementation of mental health services in pregnancy in Bogor District

RESEARCH METHODS

Research design is a research strategy in identifying problems before the final planning of data collection (Nursalam, 2003; 81). The design used in this study was descriptive design which aimed to describe and define the events occurred (Nursalam, 2011; 80)

The conceptual framework of the research is an affiliation or relationship between one concept to another concept of the problem to be studied (Notoatmojo, 2005: 43).

Search outcome

The number of sample is as many as the members who will become sample (Nursalam, 2003). The number of the sample in this study was some of the officers who handled the Classroom program for pregnant women and the Health Public Center (Posyandu) in the Parungpanjang Public Health Center area as many as 22 people

Population is the overall object of research or object under study

(Notoatmodjo, 2002). In this study the population was all officers who handled mental programs in the area of Parungpanjang Health Center for 24 people.

Research criteria are as follows:

a. Doctors who are responsible or who carry out mental programs
b. Midwives who are responsible or who carry out the Class Program for pregnant women, Local Health Post (Posyandu)
c. The Public Halth Centers (Puskesmas) that are willing to become respondents

In this study, the sampling technique used was accidental sampling, a sampling technique that was carried out by taking cases or respondents who happened to be present or available somewhere according to the research context (Notoatmodjo, 2010).

The place of the preliminary study and research was carried out in the Parungpanjang health center area. The study was conducted on January 2 to 16, 2018.

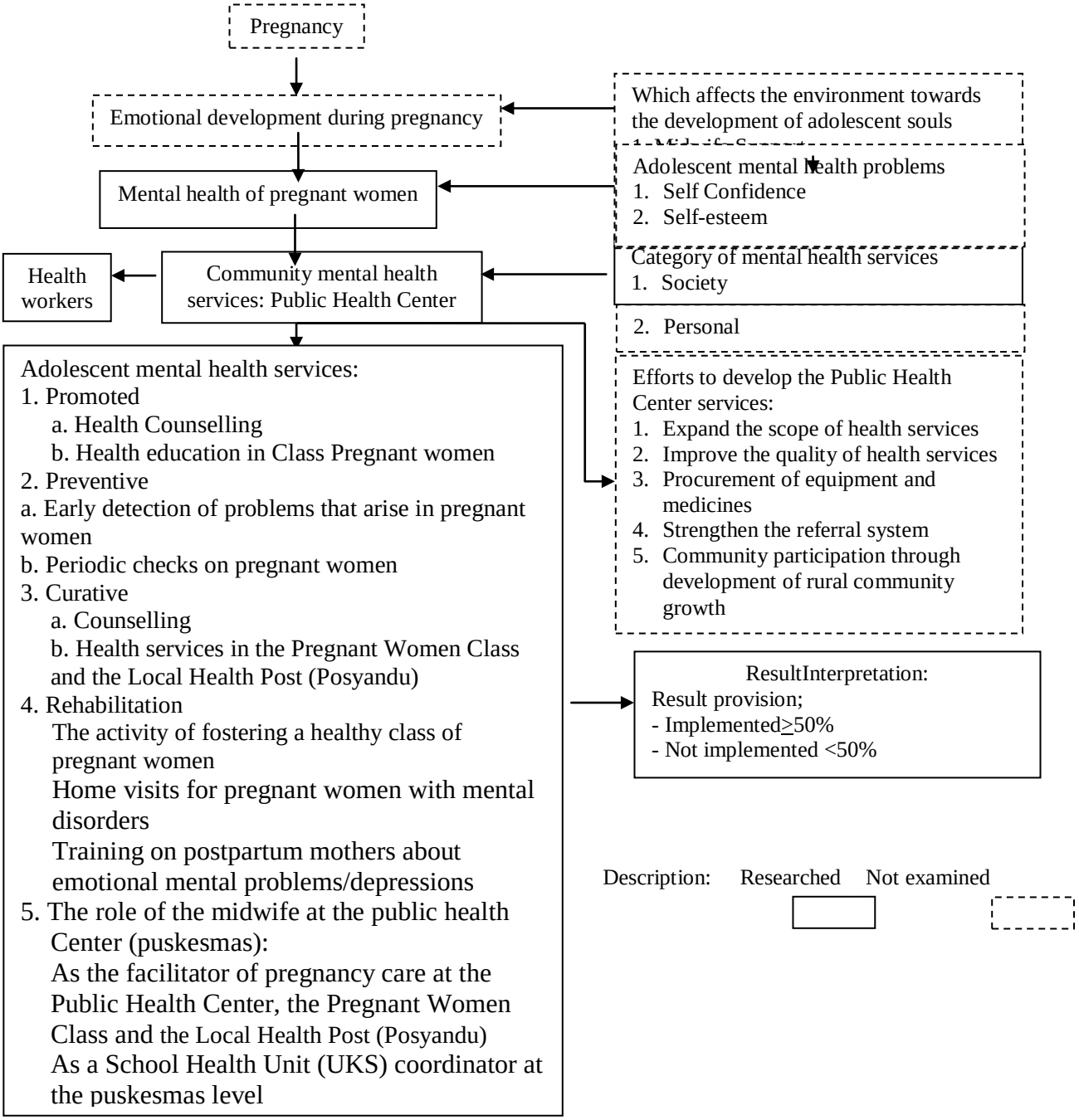

Figure 1. Results of the search strategy and reasons for excluding articles

ETHICAL CONSIDERATION

The study was aprroved by the university

RESULTS

This data illustrates the characteristics of respondents in the Public Health Center of Kawedanan Pare area including age, gender, education, employment status, and length of work.

Table 5.1 Distribution Table of characteristics of respondents

No.	Characteristics of respondents	Frequency	Percentage
1	Age		
	a. 21-25 y.o.	1	4.54%
	b. 26-30 y.o.	4	18.18%
	c. 30-50 y.o.	17	77.28%
Total		22	100%
2	Gender		
	a. Man	0	0%
	b. Woman	22	100%
Total		22	100%
3	Education		
	a. S1 (Bachelor Degree)- Medical	1	4.55%
	b. DIV (Diploma) - Midwifery	4	18.18%
	c. DIII (Diploma) Midwifery	17	77.27%
Total		22	100%
4	Occupation		
	a. Civil Servant	8	36.63%
	b. Contract Worker	16	63.46%
	c. Others	0	0
Total		22	100%
5	Length of work		
	a. 1-2 year	0	0
	b. 3-4 year	4	18.18%
	c. 5-6 year	0	0
	d. > 6 year	18	81.82%
Total		22	100%

Source of data: Questionnaire Paper, 2 -16 January 2018

Special Data

This data presents the Implementation of Mental Health Services for pregnant women in the Parungpanjang Public Health Center area, Bogor District.

Table 5.2 Results of the Implementation of the Mental Health Service Questionnaire for Pregnant Women in the Kawedanan Pare Health Center Area on January 22-16, 2018.

No.	Result Provision	Frequency	Percentage
1.	Implemented	4	18.18%
2.	Not Implemented	18	81.82%
Total		22	100%

Source of data: Questionnaire Paper, 2 -16 January 2018

Based on table 5.2 above, it can be seen that a small number of respondents as many as 4 respondents (18.18%) carried out mental health services and almost all respondents as many as 18 respondents

(81.82%) did not carry out mental health services for pregnant women.

Discussion

Based on the results of research and calculations obtained from 22 respondents, almost all respondents (81.82%) did not carry out adolescent mental health services and a small proportion of respondents (18.18%) carried out mental health services for pregnant women.

This chapter would discuss research on the Implementation of Mental Health Services for Pregnant Women in the Parungpanjang Health Center Area, Bogor District.

Conclusion

Almost all respondents in the Bogor Parungpanjang Health Center area did not carry out mental health services for pregnant women in their target areas.

Suggestion

The researcher should expand this research by conducting more perfect research with more respondents to find out mental health services in the area of Bogor Parungpanjang Health Center. Moreover, researchers can add information needed by reading books, and looking for the latest information from the internet and researchers can channel the knowledge they get to everyone without any difference.

For educational institutions

Educational institutions work together with Public Health Center (Puskesmas) in implementing maternal and child health services in the Puskesmas area by providing promoted actions.

Educational institutions should be able to add a collection of books on mental health services for pregnant women in order to provide wider insight to the readers.

For Respondents

Respondents should be willing to provide information and carry out maximal health services in handling mental health problems for pregnant women, so as to reduce the problems that arise during pregnancy, childbirth, postpartum. Besides when breastfeeding, pregnant women would be able to recognize and resolve the problem independently.

For Public Health Center (Puskesmas)

Puskesmas can improve the quality of health services such as promotion (counseling) by providing adolescent counseling to get information about problems that often arise in adolescents,

and officers can also ask for help from students in the health sector to carry out counseling. Furthermore, conducting pre-treatment (early detection) from officers would make them easier and faster to find out the problems that arise in adolescents through screening at school every once a year. Then, conducting curative (counseling), through the counseling adolescents will be open and officers can also find out what causes that often arise in adolescents who have problems. In fact, health workers can also cooperate with psychologists and rehabilitative experts and learn about the importance of mental health services to officers who handle Mother and Child Health Care (KIA) and mental programs.

6.2.5 for the Health Office

The Health Office should monitor and evaluate each service in all programs in the Public Health Center (Puskesmas) so that it can be implemented properly according to the main program of the puskesmas, and provide an opportunity to work with other schools and institutions

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THE DIFFERENCES OF BIRTH WEIGHT AND MATERNAL ASPHYXIA with SEVERE PRE-ECLAMPSIA AND NON-PRE-ECLAMPSIA IN SYAMSUDIN SH HOSPITAL, SUKABUMI – WEST JAVA, 2018

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ABSTRACT

Maternal Mortality Rate is the number of maternal deaths during pregnancy, childbirth and the puerperium period caused by pregnancy and childbirth in every 100.000 live births. The three main factors of maternal mortality are bleeding 40-60%, preeclampsia and eclampsia 20-30%, and infections 20-30%. Severe pre-eclampsia is the second highest factor with estimates as many as 24% after bleeding as many as 28%. The purpose of this study is to determine differences in birth weight and maternal asphyxia with severe pre-eclampsia and non-pre-eclampsia. The population of this study is all maternity women who had experience of preeclampsia, and as many as 750 people had chosen as a sample (consisted of pre-eclampsia severe and mild). The results of the study showed that there were differences in birth weight and maternal asphyxia with a p-value of 0,000 in the control and case groups. As a suggestion for the hospitals can apply midwifery care to pregnant women who have severe pre-eclampsia, encourage and improve the competence of health workers to improve the quality of services and empowered services to provide health, especially Antenatal Care services as an early detection of emergency management in maternity, especially in the treatment of severe cases of Pre-eclampsia.

Keyword: Low Birth Weight, Asphyxia, Pre-Eclampsia, Non-Pre-Eclampsia

INTRODUCTION

The mortality and morbidity of pregnant and maternity women is a big problem for developing countries — the number of maternal deaths estimated at 303.000 deaths worldwide. In 2016, the World Health Organization (WHO) recorded the maternal mortality rate as many as 289.000 women who died from pregnancy and childbirth. According to the World Health Organization (WHO) estimates that there are 216 maternal deaths per 100,000 live births due to complications of pregnancy and childbirth (1). Every minute in the world a woman dies because of complications related to pregnancy and childbirth. Besides, the World Health Organization (WHO) states that the incidence of preeclampsia extensive ranges between 0.51% -38.4%. Pre-eclampsia is the third largest cause of death in pregnancy in the world.

The Maternal Mortality Rate (MMR) in the United States is 9300, North Africa 179000, and Southeast Asia 16000. The maternal mortality rate in Southeast Asian countries is Indonesia 214 per 100000 live births, Philippines 170 per 100000 live births, Vietnam 160 per 100000 live births, Thailand 44 per 100000 live births, Brunei 60 per 100000 live births, and Malaysia 39 per 100000 live birth.

Based on WHO, hypertension in pregnancy (pre-eclampsia and eclampsia) can cause 16% of all maternal deaths in developing countries. Developed countries such as the United States have a reported 5-6% Pre-eclampsia incidence, and severe Pre-eclampsia incidence ranges from 6-7% and eclampsia 0.1-0.7%, while in Africa and Asia 9% and in Latin America and the Caribbean which reached 26% (2). The incidence of pre-eclampsia in Indonesia is around 7-10% of all pregnancies (3).

Pre-eclampsia is a disorder in pregnancy which includes hypertension which affects pregnancy and infant mortality. Pre-eclampsia is one of the causes of perinatal death and is prevalent throughout the world (4). Pre-eclampsia classified into two, namely mild pre-eclampsia and severe pre-eclampsia. Severe pre-eclampsia is pre-eclampsia with systolic blood pressure> 160 mmHg and diastolic blood pressure> 110 mmHg accompanied by proteinuria + 4 g / 24 hours, oliguria, elevated plasma keratin levels, visual and cerebral disorders, epigastric pain, pulmonary edema and cyanosis, hemolysis, microangiopathic, severe thrombocytopenia and HELLP (hemolysis, elevated liver enzymes, and a low platelet count) syndrome (5).

The cause of pre-eclampsia has not yet known. On the other hand, many theories explain but have not been able to provide satisfactory answers until now, as for the factors that cause pre-eclampsia itself according to reproductive status (age, parity, multiple pregnancy and genetic factors), health status (history of Pre-eclampsia, hypertension, diabetes mellitus, nutritional status, stress / anxiety), healthy behavior (Antenatal Care, contraceptive use), education level, socio-economic and employment. Besides, the causes of Maternal Mortality Rate (MMR) in the world are 25% bleeding, 15% infection, and 12% hypertension disorder (Doctor Blog, 2018).

Based on the Cedergren study (2007) obtained data wherein maternal weight gain of 5-7 kg during pregnancy there were 8% suffering from pre-eclampsia, an increase in maternal weight gain of 7.5-12.5 kg there were 10% suffering from pre-eclampsia, also the weight gains 12.5-17.5 kg as many as 12% had pre-eclampsia and the weight of pregnant women with weight gain >17 kg there were 17% suffering from pre-eclampsia. The risk of pre-eclampsia increases with increasing maternal weight during pregnancy; there are 16.3% of cases (6). Developed countries have the highest causes of maternal mortality, namely Bleeding (14%), Hypertension (11%) and Infection (8%). Severe pre-eclampsia is a history of diabetes mellitus (2%), with severe pre-eclampsia being the second highest factor of 24%, and the most common cause of severe pre-eclampsia is 12% at the age of pregnancy and socioeconomic. In Southeast Asian countries such as Indonesia, the roots of maternal mortality in still dominated by bleeding 28%, pre-eclampsia-eclampsia 24%) and infection 22% (WHO, 2014).

Maternal mortality rates generally occur due to the delay in handling and ignorance of the mother regarding Pre-eclampsia-eclampsia. In some cases of pre-eclampsia, the condition remains mild throughout pregnancy while getting appropriate treatment. In the late stages of pre-eclampsia called eclampsia, eclampsia patients will experience seizures. If eclampsia not treated quickly, there will be a loss of consciousness and death due to heart failure, kidney failure, liver failure or brain bleeding. According to the National Institute for Health and Clinical Excellence (2010), hypertensive disorders in pregnancy also have an impact on the

baby. Premature birth also occurs in pregnant women with preeclampsia, one of 250 women in their first pregnancy will give birth before 34 weeks, and 14-19% in women with Pre-eclampsia experiencing low birth weight (LBW).

Indonesia is one of the highest contributors to the maternal mortality rate in the world with 126 per 100,000 live births with a total of 6,400 in 2015. The most top cases of severe pre-eclampsia in Indonesia are in West Java Province at 16.5%. These are all related to access, social-cultural, educational and economic factors. Severe pre-eclampsia becomes the second highest factor (24%) after bleeding reaches 28% (7).Based on the previous study shows that severe pre-eclampsia is still the highest cause of both maternal and perinatal mortality and morbidity. The roots of pre-eclampsia are reproductive status (age, parity, multiple pregnancy, and genetic factors), health status (history of pre-eclampsia, hypertension, diabetes mellitus, nutritional status, stress/anxiety), healthy behavior (Antenatal Care, contraceptive use), education level, socio-economic and employment. All of these factors can affect the increase in blood pressure so that they can lead to pre-eclampsia.

According to the Ministry of Health, there were about 103 cases per 100000 live births with highest causes of maternal mortality include bleeding (28.7%), hypertension (25.4%), infection (4.9%). So the data above shows that the maternal mortality rate still high in Sukabumi –West Java. Based on the report of the 2016 Health Office of Sukabumi occupying the second position after Merauke for the severe pre-eclampsia incidence rate of 33%, bleeding 23% and others by 2%, its show that the city of Sukabumi has a higher incidence severe pre-eclampsia is compared to Merauke Regency, which is 22%. The cause of the high incidence of severe pre-eclampsia in Sukabumi is 10% ANC adherence, age at pregnancy (8%) and 5% parity (8).

Sukabumi Regional General Hospital is one of the hospitals referring to midwifery cases. Based on the data obtained by the severe pre-eclampsia Case the most referral cases in the hospital. In 2016 there were 26 (34%) cases of out severe pre-eclampsia of 89 reference cases, whereas in 2018 in January-December 2018 there were 113 (30%) cases of severe pre-eclampsia out of 373 mothers who came to the delivery room of Syamsudin SH Hospital. So that, there was an increase of 3 times fold from the number of previous cases with the causes of severe pre-eclampsia, namely maternal age (5%), maternal parity (3%), ANC (6%), socio-economic (6%), employment (4%). The impact of severe pre-eclampsia on sustainable pregnant women can cause seizures (eclampsia) as much as (25%) until the death of the mother and fetus (10%) if the treatment delayed. The differences of this study with the previous study are many previous researchers saw a pre-adaptive correlation to birth weight and perinatal asphyxia but did not see the difference between severe pre-exposure and mild pre-exposure.

METHODOLOGY

This study uses a case-control design because after the normality test obtained abnormal data so that it uses non-parametric, namely the Mann Whitney test. Univariate analysis to see the frequency and bivariate analysts using Mann Whitney. The population in this study were all pregnant women who had pre-eclampsia with a total sample of 750 respondents. This study was carried out at

Syamsudin SH Sukabumi Hospital in 2018.

ETHICAL CONSIDERATION

According to Hidayat (2010), to conduct a study, the writer applied for a research permit to the head of the Dr. H. Abdul Moeloek Hospital in Lampung Province to carry out research (27).

In emphasizing ethical issues include:

1. Research Permit
   The research letter gives to the head of the room whose purpose is to find out the aims and objectives of the study. If the head of the office is willing to permit research in the place, then he must sign the consent sheet. If the head of the room refuses to give research permission, the researcher will not force and continue to respect his rights. The research reply letter numbered 070//284/KESBANGPOL/2018.
2. Anonymity
   To maintain the confidentiality of the respondent's identity, the researcher will not include the name of the subject on the data collection sheet. The sheet will give a specific code.
3. Confidentiality
   The researcher guarantees the privacy of the respondent's information. Only certain data groups will present or report as a result of the study.

RESULT

Univariate Analysis

Table 1. Frequency Distribution of Pre-eclampsia respondent in Syamsudin SH Hospital

Pre-Eclampsia	Frequency (f)	Percentage (%)
Severe Pre-Eclampsia	450	60.0
Non-Pre-Eclampsia	300	40.0
Total	750	100

Table 2 Frequency Distribution of Respondent based on the Birth Weight in the cases group

Birth Weight	Case Group	
	Frequency(f)	Percentage (%)
LBW	127	28.3
Normal	305	67.8
Over Weight	18	4.0
Total	450	100

Table 3. Frequency Distribution of Respondent based on the Birth Weight in the Control Group

Birth Weight	Control Group	
	Frequency (f)	Percentage (%)
LBW	54	18.0
Normal	239	79.7
Over Weight	7	2.3
Total	300	100

Table 4. The Average of Newborn Weight in the Case and Control Group

Birth Weight	*Mean*	*Median*	*SD*	*SE*
Case Group	0.76	1.00	0.514	0.024
Control Group	0.84	1.00	0.424	0.024

Table 5. Frequency Distribution of Respondent based on the newborn asphyxia in the case group

	Case group	
Asphyxia	Frequency (f)	Percentage (%)
Severe Asphyxia	71	15.8
Moderate Asphyxia	112	24.9
Mild Asphyxia	267	59.3
Total	450	100

6. Frequency Distribution of Respondent based on the newborn asphyxia in the case group

	Control Group	
Asphyxia	Frequency (f)	Percentage (%)
Severe Asphyxia	27	9.0
Moderate Asphyxia	58	19.3
Mild Asphyxia	215	71.7
Total	300	100

Table 7. The Average of Newborn Asphyxia in the Case and Control Group

Asfiksia	*Mean*	*Median*	*SD*	*SE*
Case Group	1.44	2.00	0.750	0.035
Control Group	1.63	2.00	0.644	0.037

Bivariate Analysis

Table 8. The Differences in Birth Weight and Maternal Asphyxia with Severe Pre-eclampsia and Non-Pre-eclampsia

	Mann Whitney U-Test	Z	Asymp. Sig. (2-tailed)
Birth Weight	57032.000	-3.601	0.000
Asphyxia	60003.000	-2.681	0.007

The results of the bivariate analysis of statistical tests obtained at birth weight p-value = 0.000 which mean that H0 rejected because p-value <0.05, then there was a difference in birth weight in the case group and control group. Furthermore, asphyxia obtained p-value = 0.007 which means that H0 rejected because p-value is <0.05, so there is a difference in asphyxia in the case group and the control group.

DISCUSSION

Based on Table 8, the data obtained on the birth weight of p-value = 0.000 which means that H0 rejected because p-value is <0.05, then there is a difference in birth weight in the case group and the control group. The results of the study by Utami (2017) state that there is a significant correlation between severe preeclampsia and the incidence of low birth weight babies at Dr.Oen Surakarta (10). Research on pre-eclampsia weight related to birth weight was carried out by Fauziah (2017) there is a correlation between the level of preeclampsia and the incidence of birth weight babies where there is a correlation between low birth weight (LBW) in mothers giving birth at the DR. H. Abdul Moeloek Lampung Province period October 1, 2015 – October 1, 2016, with p-value 0.026. Besides, factors of birth weight can show in tables 2 and threewherein the case group of low birth weight (LBW) more is 127 (28.3%) than the control group only 54 (18.0%) babies born with weight low.

Pre-eclampsia and eclampsia can result in fetal growth delay in the womb or Intrauterine Growth Restriction (IUGR) and stillbirth, and this is due to the presence of calcification in the placental area so that the food supply and oxygen to the fetus are reduced (11). Table 8 obtains asphyxia results in newborns obtained p-value = 0.007 which means H0 rejected because p-value <0.05, then there are differences in asphyxia in the case group and the control group.

At-risk maternal factors such as pre-eclampsia can affect infants born with asphyxia (12). Preeclampsia is a disease with signs of hypertension, edema, proteinuria arising from pregnancy. Preeclampsia decreases cardiac output due to vasospasm of blood vessels, causing endothelial damage which results in a balance disorder between hormone levels, vasoconstrictors (endothelin, thromboxane, angiotensin) and vasodilators (nitrite and prostacyclin), and diseases of the blood clotting system (13) (14) (15). Extensive vasoconstriction causes hypertension, if the blood supply to the placenta decreases, the fetus will experience hypoxia, which results in a disruption of gas exchange between oxygen and carbon dioxide resulting in asphyxia (16) (13), where pre-eclampsia

mothers have a tendency to give birth to asphyxia (17) (18) (19).

The results of this study are similar to the theories expressed by Manuaba (2010) stated that one of the factors that can lead to neonatal asphyxia include preeclampsia and eclampsia in the mother during pregnancy. Another argument that supports this research is the theory of JNPK-KR (2007) which states that some of the factors that trigger asphyxia are preeclampsia during pregnancy (20) (21) (22). It showed in tables 6 and seven that in the case group of infants with severe asphyxia more than 71 (15.8%) compared to the control group, namely 27 (9.0%).

CONCLUSION

Respondents who experienced severe eclampsia numbered 450 respondents and were more significant than those who suffered severe non-eclampsia totaling 300 respondents. In the case group, the baby's body weight was mostly healthy, amounting to 305 respondents and the control group amounted to 239 respondents. The frequency of asphyxia in newborns is mostly mild asphyxia, with 267 respondents (59.3%) in the case group and the majority having mild asphyxia as many as 215 respondents (71.7%) in the control group.

There is a difference in birth weight and asphyxia in maternity with the incidence of severe pre-eclampsia and severe non-pre-eclampsia in Syamsudin General Hospital, Sukabumi Regency, West Java Province in 2018 (p-value 0.000).

SUGGESTION

For hospitals this study can apply in providing midwifery care to pregnant women who have severe pre-eclampsia, also encourage and improve the competence of health workers to improve the quality and empowered services to provide health, especially antenatal care services as an early detection of emergency management in pregnant women, especially in the case of severe pre-eclampsia cases. It is a contribution to science and research techniques in knowing the problems faced by pregnant women and as a comparison for the world of science in enriching information about factors that affect the incidence of severe pre-eclampsia in pregnant women, especially in the third trimester of pregnancy and during labor. Become a reference in developing a service system for future researchers who are interested in researching the factors that influence severe preeclampsia.

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LEPROSY IN PREGNANT WOMEN: A CASE STUDY IN Dr. SITANALA HOSPITAL TANGERANG BANTEN PROVINCE YEAR 2018

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Abstract:

Leprosy (leprosy; Morbus Hansen) is a chronicinfectious disease caused by *Mycobacterium leprae*, which especially attack peripheral nerve, skin, and other organs except central nervous system. The research aims to reveal how the process of pregnancy, the labor, and postnatal period on leprosy patients. This research employed qualitative with case study approach. The research was conducted in a Leprosy Hospital Dr. Sitanala, Tangerang,Banten Province. The samples of this research were pregnant women with leprosy. The expert interviewees are Obstetrician and doctor. In-depth interview was applied to collect the data.The result showed that there were three patients who had been cured from the leprosy. They didn't have any problem during their pregnancy both leprosy and other pregnancy problems. One of the patients who still suffered from leprosy experienced some problems such as numbness, peeled skin, and dizzy which were the effects of leprosy. The treatment of leprosy on the patient was still conducted during pregnancy. The pregnancy period of the patients was not different from other (normal)pregnant women. The service of antenatal care among those who had leprosy and those who had not was not different.The process of labot on the patient with leprosy could be conducted normally or by *sectiocaesarea*according to obstetric indications. During postnatal period, patients with leprosy and those who had been healed were able to breastfeed their infant while consuming leprosy medicines.

Keywords: Leprosy on pregnant women;*Mycobacterium leprae*; Qualitative research, Case Study

Introduction

Leprosy (or Morbus Hansen) is a chronic infectious disease caused by *Mycobacterium leprae*, which mainly attacks the peripheral nerves, skin and other body organs such as the upper respiratory tract mucosa, liver and bone marrow except the central nervous system (Soedarjatmi, 2008). Mycobacterium leprae was first discovered by G.A. Hansen in 1873. These germs are shaped rods with a length of 1-8 microns and a width of 0.2 - 0.5 micron, usually in groups and some are scattered one by one, live in cells and are acid resistant. The splitting time is very long, which is 2-3 weeks. Outside the human body (in tropical conditions) leprosy germs can last up to 9 days. M. leprae is obligate

intracellular and has a budding period of 40 days - 40 years. (Ministry of Health, 2006).

In Indonesia, Leprosy is a significant health problem. According to the World Health Organization report (2012), the prevalence of leprosy sufferers is 181,941 people (0.34 per 10,000 population), most of which are in the Southeast Asia region reaching 117,147 (0.64 per 10,000 population) followed by the American region 34,801 (0.40 per 10,000 residents), African region 15,006 (0.37 per 10,000 population), and the rest are in other regions of the world. Indonesia is the third largest number of leprosy cases in the world after India and Brazil. The emergence of leprosy is an interaction between several factors, namely factors causing agents *Micobacterium leprae*, host or host factors, namely age and sex, and environmental and socio-economic factors (Ministry of Health, 2007).

Leprosy is a type of chronic infectious disease that could cause a variety of complex problems. The problem is not only medically but also extends as a national social, economic, cultural, security and health problem. Leprosy is a disease that is scary and feared by the community. Leprosy sufferers do not only suffer because they have the disease, but also because they are ostracized by the surrounding community. This is caused by the damage of the peripheral nerves that persist on the face and limbs, motor and sensory, and with repeated damage to the numb area accompanied by paralysis and reduced muscle tone (Djuanda, 2008). If leprosy is not diagnosed and treated early, it will cause permanent disability. If there has been a disability, then some families and communities will stay away from, exclude and ignore patients so that patients will find it difficult to find work. This is because families and communities and even sufferers have the wrong knowledge and understanding and erroneous beliefs about leprosy and the disability it causes. The lack of correct information about leprosy makes a wrong perception in the community so that it often regards leprosy as a cursed disease, hereditary disease, due to witchcraft, wrong eating to a highly contagious and incurable disease. Incorrect understanding lead to an inappropriate actions by the community. The fear of the community of the diseasecauses the to expel lepers. Even those who have recovered and don't transmit the disease again will find it difficult to start their lives (Dian et al., 2011)

Pregnancy on women with leprosy will cause hormonal changes, which sometimes will trigger a leprosy reaction. Some studies have concluded that pregnancy is a risk factor for the reaction of leprosy. This is understandable because during pregnancy there is an increase in endogenous corticosteroid levels, alpha macroglobulin and other substances that can affect the function of the immune response of T lymphocytes which can result in decreased immune response against *Mycobacterium leprae* (Guerra, 2002). The most dangerous pregnancy is in the third trimester, when the infection can cause obstetric and fetal abnormalities such as Low Birth Weight (LBW), premature, exfoliative dermatitis in infants and erythematic in pregnant women (Soedarjati, 2008). The leprosy reaction itself consists of two types, type I and type II. Type I leprosy reactions are caused by cellular hypersensitivity (reversal

upgrading reaction) while type II leprosy reactions are caused by humoral ENL hypersensitivity (Erythematic nodules Leprosum). The results of Duncan's (2003) study in 116 patients, 40 cases experienced worsening to type I (16 cases occurred during pregnancy and 24 cases during post partum) and overall cases occurred in the third trimester, and 26 cases experienced worsening to type II (ENL). The study also showed that 68.7% of patients with a bacterial index of more than +4 had experienced deterioration in type II (ENL) reactions during pregnancy.

Lepers who are breastfeeding are at risk of experiencing a leprosy reaction. Kumar et al (2004) stated that lactation is a risk factor for reversal reactions and ENL. Guerra (2002) and Dave et al (2003) state that lactation is associated with the occurrence of ENL. During lactation, endogenous corticosteroid levels, alpha-macroglobulin and other substances will increase and affect the function of the T lymphocyte immune response which results in decreased immune response against *Mycobacterium leprae*(Duncan, 2003).

Leprosy in pregnancy can be treated safely and effectively by combination drug therapy. But early detection, planned health education for leprosy patients and the highest standard of clinical supervision during pregnancy are key strategies in reducing the problems associated with disease and also the best way to prevent disability (Lopes, 1999).

Dr. Sitanala Leprosy Hospital is a Grade B hospital belonging to the Ministry of Health of the Republic of Indonesia. It is located in the Tangerang City, Banten Province occupying 54 hectares of land, built as a national referral hospital specifically for leprosy sufferers since 1956. Since 2010 Dr. Sitanala Leprosy Hospital had become a public hospital that can serve referrals from general patients not only leprosy.

Data on leprosy cases up to 2018 were 350 cases of new cases from several referral hospial, and there were 9 cases of leprosy sufferers who experienced pregnancy until delivery. Up to the present Dr. Sitanala Leprosy Hospital still provides leprosy referral services (Dr. Sitanala SSR Annual Report, 2018). Based on the background above, the authors are interested in conducting research entitled "Midwifery Care for Leprosy Patients: A Case Study in Leprosy Hospital Dr. Sitanala Tangerang, Banten Province in 2018 ”

The research aims to find out how the process of pregnancy, labor and postnatal period in patients with leprosy. The results of this study are expected to add insight and deepen the knowledge of the incidence of pregnant and maternal mothers who have leprosy in Dr. Sitanala Leprosy Hospital, Tangerang, Banten Province.

Research Method

a. Research Design

This is qualitative research with a Case Study approach. Qualitative research is a research procedure that produces descriptive data in the form of written or oral words and not in the form of numbers, observable behavior so as to find truths that can be accepted by human reason. Case Study means that this study focuses on a particular case, namely pregnant women with leprosy (Martha and Kresno, 2016).

b. Time and Place of the Research

1. Time of the research
   The research was conducted I 2018
2. Place of the research
   This research was conducted in Dr. Sitanala Leprosy Hospital Tangerang, Banten Province that function as a referral hospital for leprosy.

c. Research Sample

A sample is a partor representative of the population studied. In other words the sample is a part or subset of the population chosen in a certain way, so that it is considered to represent the population (Arikunto, 2013). The samples in this study were pregnant women with leprosy in Dr. SitanalaLeprosy Hospital, Tangerang, while obstetricians and general practitioners as resource persons. Samples were taken by purposive sampling or samples based on criteria set by the researcher. The number of samples in this study is not determined until saturation.

d. Method of collecting the Data

Data collection wasconducted by in-depth interview techniques. In-depth interview isa type of interview conducted by an interviewer to gather information, understand the views, beliefs, experiences, knowledge of informants about things in their entirety (Evi and Sudarti, 2016).

In-depth interviews in this study were conducted to the mothers with leprosy who experienced pregnancy, childbirth and childbirth, as well as doctors and midwives who took care of these respondents. Data collection was completed with a complete history of leprosy from the patient's medical report.

e. Technique of Analyzing the Data

The type of data analysis technique used in this study is a non-statistical data analysis technique that is descriptive qualitative. This technique describes data that are reflected through words or sentences. The technique was used because the analysis activities carried out was related to interpreting and finding the problem of leprosy in pregnancy. The data analysis used was an interactive model analysis technique according to Miles and Huberman with four stages, namely:

1. Collecting the Data

The process of collecting the data was carried out before the study, at the time of the study even at the end of the study, conducting in-depth interviews with pregnant women with leprosy, as well as documenting the incident by making notes on questions and results of interviews.

2. Reducing the Data
   This stage is the process of combining and classifying the form of data obtained into the form of writing to be analyzed. At this stage, the data that had been collected were converted into writing then the data that were needed were selected. The data chosen were important data, while unimportant data were not used.
3. Displaying the Data
   It means processing semi-finished data that has been in the form of brief descriptions, charts, relationships between categories, flowcharts etc. With data display, it will make it easier to understand what is happening, plan the next work based on what has been understood. In this study the data that has been reduced will be presented in the form of a brief description.
4. Conclusion /Verification
   This is the final stage in the data analysis series. The process of taking the conclusion is based on the diagram and data that support it. From these conclusions, the previous research questions can be answered

f. Data Validation

Data validation wasconducted by triangulation by checking the data from in-depth interviews compared to direct observations made by researchers

g. Ethic of the Research

Research ethics that must be considered according to Hidayat (2011) are as follows:

1. *Informed Consent* (approval sheet to be a respondent)
   Informed Consent is a form of agreement between the researcher and the respondent by giving the consent sheet given before the research is conducted to the prospective respondent. It is intended that the subject understands the purpose and objectives of the research, as well as knowing the effects and benefits. After being given an explanation, the approval sheet was given to the research subjects. If the research subjects are willing to be examined, they must sign the consent sheet, but if the research subject refuses to be investigated, the researcher will not force and continue to respect his rights.
2. *Anonimity* (anonymous/without name)
   To maintain the confidentiality of research subjects, the researcher did not put respondent's name on the data collection sheet, just initials

and numbered each of the sheets.

3. *Confidentiality*
   Confidentiality of all information obtained from research subjects is guaranteed by researchers; only certain data groups will be presented or reported on the results of the study

Result of the Research

a. The History of Dr. Sitanala Leprosy Hospital

Dr. Sitanala Leprosy Hospital was a transfer from the South Jakarta Leprosy Hospital LentengAgung which at that time was headed by Dr. E.G.E. Van Der Heydethat was a Dutch citizen. On July 2, 1951 the Leprosy Hospital was taken over by the Ministry of Health of the Republic of Indonesia and was given the name "Leprosarium Sewan" located in Karangsari Village, Batuceper,Tangerang,Banten Province, approximately 26 km west of DKI Jakarta with an area of approximately 54 hectares.

The first construction was carried out by Mrs. RachmiHatta, and on March 3, 1956 the Leprosarium Sewan Hospital was inaugurated by the Vice President Dr. Mohammad Hatta. In 1962 the Leprosarium Sewan Hospital changed its name to Dr. Sitanala Rehabilitation Hospital by the Minister of Health of the Republic of Indonesia at that time named Prof. Dr. Satrio. Based on the Decree of the Minister of Health of the Republic of Indonesia No 140 / Men.Kes / SK / IV / 1978, it changed again to Dr. Sitanala Leprosy Hospital Tangerang which was a technical implementation unit within Ministry of Health and was directly responsible to the Director General of Health Services.

Finally, based on the Decree of the Minister of Health of the Republic of Indonesia No. 4 / KMK.05 / 2010 dated January 5, 2010 Dr. Sitanala Leprosy Hospital Tangerangwas transformed into a General Hospital in the form of a Public Service Agency (BLU). Dr. Sitanala Hospital,Tangerang, continues to develop and make improvements up to the present, and it has won the title of Plenary Accredited Hospital based on the provisions of the Hospital Accreditation Commission (KARS) No. KARS-SERT / 164 / XII / 2015.

b. Respondents' Characteristics

Based on the selection of respondents, the respondents involved in this study were four people affected by leprosy, an obstetrician, and a general practitioner who worked in Dr. Sitanala Leprosy Hospital. Characteristics of respondents with leprosy in this study include age, parity, education, employment and the length of suffering from leprosy. Out of the 4 respondents who were interviewed in depth,

there were the characteristics showed in Table 1.

Table 1.
The Characteristics of respondents of pregnant, maternity and postnatal mothers who suffer from leprosyin Dr. Sitanala Leprosy Hospital, Tangerang

No Respondent	Age	Education	Occupation	Parity	The length of leprosy suffering	The status of recent leprosy
1	34	Vocational school	Cadre	5	>10 years	Not active (cured)
2	30	Primary School	Crafter	2	>10 years	Not active (cured)
3	43	Junior School	Cadre	5	>10 years	Not active (cured)
4	44	Primary School	Farmer	4	1,5 years	Active (int the treatment)

c. The Information about Leprosy

In-depth interviews were conducted on 4 people suffering from leprosy who were pregnant, gave birth, and were in the postnatal period. Based on the results of in-depth interviews with lepers about pregnancy, childbirth and childbirth, it was found that all respondents had never known about leprosy before, which was explained as follows:

"I did not understand before about leprosy ... once I knew from TV that leprosy was a sign that there were white spots like skin fungus" (Respondent 1)

"I don't know ma'am ... I don't understand and I never hear about leprosy" (Respondents 2 & 3)

"Do not know at all the doctor, when I arrived at the Puskesmas, I was told that I had leprosy and had to be sent to the Dr. Sitanala Hospital in Tangerang, Mam" (Respondent 4)

d. The Length of Leprosy suffering

When trying to find the information about when the first time they were diagnosed with leprosy, all the respondents immediately recalled the first time they had been affected by leprosy, except for 1 respondent who was still newly affected by leprosy and still in frequent control.

"I have had this disease since 2002". (Respondent 1)

"I got it when I was in 4th grade, around the year 97". (Respondent 2)

"I have been a sufferer for a long time since 1985" (Respondent 3)

"I was still new, I got leprosy about 1.5 years ago" (Respondent 4)

e. Early Symptoms of Leprosy

When they were questioned about how they experienced the disease, the early symptom, all respondents experienced the symptom more than one year.

"At the beginning, on my first class of Vocational High School, it often appeared red spots, and there were patches of phlegm. Then I see a health officer near my house, and he said that it was allergic, and then I took the medicine to heal. After that it relapsed again often almost a year. Finally referred by the midwife to the public health services, it was discovered that I had leprosy. " (Respondent 1)

"The initial symptoms that I experienced were spots like phlegm, a feeling of numbness. But it was thought to be normal, but it got bigger and bigger and continued to be smeared with red galangal to blister and peel, but there was no feeling of heat. Until a year or so it get wider, finally I was taken to the PondokGedePublic Health Center and immediately told that I had leprosy. I had been treated in the Public Health Center for 3 years, to the alternative traditional treatment also but there is no change. Until finally I was referred to Dr. SitanalaLeprosy Hospital and immediately hospitalized for 9 months and given a high-dose medication until the wound surgery / amputation of my left foot, ma'am ". (Respondent 2)

"At that time, I was almost 2.5 years of treatment at public health center not recovering, until when I was in the first grade of junior high school there was a severe reaction from leprosy and all the body felt numb until the blistered foot hit the bus engine beside the driver. Finally in 2000 I was referred to and treated for 9 months at this hospital. In 2012 I experienced another wound reaction until finally my right leg was amputated ". (Respondent 3)

"There were red spots for almost a year.It got bigger and bigger, and it became very wide... and then my

lips were cracked, there was a wound in my genitals.It was painful. There was tingling in my hands and feet, all aches and pains, nausea and dizziness, body heat to feel shivering. Weight continues to fall because of difficulty of eating. I went to Public Health Center and was immediately sent here and treated directly "(Respondent 4)

f. The Information about the Causes and the Spread of Leprosy

From the interviews, it was found that most respondents said that they did not know the causes and transmission of leprosy as described below:

"Don't know ma'am ... just what I know is consuming food like mutton or durian. After getting treatment here, I just found out that the cause of leprosy is Germs and their spread is in prolonged contact with patients continuously. " (Respondent 1)

"I don't know, ma'am, I just found out when I was getting it here if it was caused by Leprae bacteria. After that, we are explained here how it spread and how to treat wounds with ward staff here ". (Respondent 2)

"I never knew ma'am ... I know just when I was explained by the officer here. And I just remember if I have had frequent contact with active leprosy sufferers but I did not try to treat it out. I joined the parents selling on the market ". (Respondent 3)

Lack of information and stigma about leprosy makes people not understand about the initial symptoms or prevention. The community still considers that this disease is a curse disease, a dangerous and embarrassing disease that results in psychological trauma for sufferers and sometimes hides or alienates themselves from surrounding communities including their families. This is as expressed as follows:

"I don't know at all ... I think I got a curse or wretched ma'am. That is what the people in my village said. I was once evicted by my family for fear of being infected with my illness". (Respondent 4)

The response was similar to what was revealed by resource person 2 (general practitioner) that one of the problems that inhibited leprosy prevention efforts was the inherent stigma of leprosy and people affected by leprosy and even their families, as revealed below:

"Leprosy here ... a lot of negative views and discriminative treatment toward people affected

by leprosy ... there is a stigma of leprosy which causes a leper to be lazy for treatment because he is afraid that his condition is known by the surrounding community ... so it can continue with the chain of leprosy spread and infection, disability in the person sufferers so that there is a vicious cycle that is not resolved ". (Resource 2)

g. The Effect of Leprosy toward pregnancy

From the results of in-depth interviews, information was obtained that their leprosy did not affect their pregnancy.

> *"It didn't influence Mom as long as we were obscured and healed. In the past, when I was treated here for 6 months, I was told that the doctor was okay if I later had children. Then I see a lot of sufferers here, their children are all good ... normal, ma'am. (Respondent 1)*
>
> *"What I know is there is no effect on my baby. In the past, when I was treated, I was told by the doctor here that this disease is not hereditary, so I am not afraid that if I become pregnant, then here I also see that many of the previous patients are healthy and normal. (Respondents 2 & 3)*

The opinion of some of the respondents was in accordance with the responses of the informant 1 (Obstetrics and Gynecology Specialist) who said that there was no effect of leprosy in pregnancy, both on the mother and the fetus.

> *"Leprosy in pregnancy will not directly affect pregnancy, as long as the itis dry type leprosy. It becomes a problem if it is wet type. So, as much as possible avoid the wet type being the dry type so that it is not contagious ”(Resource 1)*

In contrast to the following respondents who were still newly suffered from active leprosy and still in treatment, they were worried about the condition of their fetus and would have an effect on their baby later, because the previous pregnancy history had not yet suffered from leprosy. The expression of worries are as follows:

> *"Yes ma'am ... I'm afraid my child will be disabled later, afraid to spread to my child. I still continue to treat leprosy. I am also pregnant. This is 4th pregnancy, I didn't get leprosy before. I am really scared of what happened to my baby later ”(Respondent 4)*

h. Problems and changes that occur during

Responses from some respondents revealed that they had no problems or changes during pregnancy in general, such as nausea, vomiting, dizziness and so on, especially those related to the reaction of leprosy. Respondents were sure that their leprosy treatment had been completed and did not affect their pregnancy. These expressions are as follows:

> *"During this pregnancy there are no special complaints, especially when there is no leprosy related to the disease, ma'am, because the age factor is only my mother, I feel tired quickly, mom" (Respondents 1 & 3)*

However, there weresome respondents who still feel some problem from the slight reaction of leprosy they experience. Responses to problems in their pregnancy are as follows:

> *"There are no specific complaints or changes during pregnancy. There is a feeling of pain / pain when the baby is 7 months pregnancy until birth yesterday, because there is still a little influence from the leprosy reaction". (Respondent2)*

> *"There must be, because my leprosy is still active. I still continue to take leprosy medicines. Complaints of tingling in the hands and feet still continue ma'am, sometimes often dizzy with weakness ma'am. On the face, I was still a little bit burnt about this because I drank leprosy medicine"(Respondent 4)*

i. Expectation during Pregnancy

Respondents in expressing their hopes in their pregnancy state the same thing as pregnant women in general, the natural thing in every pregnant woman is as follows:

> *"Surely my child is healthy, born normally and smoothly until the delivery" (Respondent 1)*

> *"I hope itwill be smooth, ma'am, healthy and all normal" (Respondents 2 & 3)*

> *"I want my baby to be normal, I don't want my child affected by leprosy just like me. Even though my doctor had already explained it, my baby is healthy on the USG and it's okay because I have leprosy, but still I am scared .. I am afraid that my child will be handicapped from my leprosy "(Respondent 4)*

j. Feeling and worry in facing labor

Feelings and worries in dealing with childbirth were asked to the respondent with the following expression:

"The feeling was anxious and worry that there will be something with my baby, but there was no concern about leprosy if the baby was disabled later due to leprosy" (Respondent 1)

"It's just normal, ma'am ... I have to be enthusiastic ... sincere ... A little worry but nothing to do with leprosy" (Respondent 2)

"Yes, I am a little worried ma'am, because I am going to be planned for SC surgery because I have had a lot of children, all are born normally" (Respondent 3)

"I was really horrified, ma'am ... because the 3 children of mine were born all normally, now I am facing SC because the doctor said my baby's position is crossing ... I was very scared ... really worried ..." (Respondent 4)

k. The Process of Labor and the Condition of the Baby

From the results of in-depth interviews, information was obtained that the birth process they experienced was in accordance with the expectations of the respondents, expressed as follows:

"Alhamdulillah (Thanks God), it went on normally there was no difficulty. My baby was born breech, healthy and complete. Baby was born with a weight of 2.9 kg and a body length of 48 cm ". (Respondent 1)

"At first the doctor said that the baby was breech so I will almost have my surgery operated on, but thank God, finally it was born normally, it didn't breech, the baby was only 2.5 kg." (respondent 2)

"The birth process is surgery, because the number of my children is already high, the risk factors for age are also stated by the obstetrician, so it's not because of leprosy ... Thank God the baby is healthy and normal". (Respondent 3)

"Alhamdulillah (Thanks God), my baby is healthy, my baby is complete with no disability ... I gave birth with surgery because my membranes had already broken, but there was no opening for the ma'am". (Respondent 4)

The same thing was conveyed by resource person 1, that the delivery process of leprosy sufferers was the same as maternity in general.

"*The delivery process of lepers is not different from the labor in general. It*

could be with SC, or normally. SC is conducted because of pregnancy indication of labor process not because of the leprosy. (resource person 1)

l. Postnatal Condition

From the results of in-depth interviews about the conditions of the postnatal period respondents were as follow:

"I have no problem whatsoever. I breastfeed my baby, thank God I have a lot of milk. " (Respondents 1 & 2)

"There is no ma'am ... I also immediately get a sterile birth control and there are no problem until now". (Respondent 3)

"There are no problem, Mom, I also breastfeed my child". (Respondent 4)

Discussion

a. Respondent Characteristics

The characteristics of the respondents that are pregnant women with leprosy in this researchinclude age, education, occupation, parity, and the length of leprosy suffering.

1. Age

In this research, the age of respondents ranged from 30-44 years, and had undergone a process of pregnancy, childbirth and postnatal period. The age criteria are the categories of women of childbearing age or reproductive women, namely women whose reproductive organs function well between the ages of 20-45 years. The majority of respondents at the time of suffering from leprosy mostly occur in productive age which is around 12-45 years.

This is in accordance with the results of Hiswani (2004) study which states that leprosy generally occurs in the productive age group. Ranque et al (2004) state that the age ofmore than 15 years is a risk factor for the reaction of leprosy, while the age of less than 15 years tends to experience fewer leprosy reactions. This is because in the child's immune system, Th2 is strongly suspected of being able to overcome the occurrence of infection so that the frequency of leprosy reactions is smaller in children. Whereas in adults the availability of more memory T cells causes a higher frequency of occurrence of leprosy reactions and can trigger cross reactions between M. leprae antigens and non M. leprae antigens such as M. tuberculosis.

The results of this research are also the same as the study of Schollard et al (1994) which stated that the reaction of type I leprosy was experienced by many people with leprosy during adolescence until older age. Type II leprosy reactions are more common in people

affected by leprosy in the second decade of their lives. This is due to the influence of the endocrine that causes immunological changes in lepers.

2. Education

Education is often associated with the ease of someone to receive new information or ideas. The higher the education, the easier it will be for someone to accept new information or ideas. The level of education of a person can support or influence the level of one's knowledge, and a low level of education is always related to limited information and knowledge, while the higher a person's education, the more information and knowledge obtained (Prawoto, 2008).

In this research, the results showed that most respondents had low education. Low education is one of the factors that influence the lack of seeking treatment for lepers, so that treatments are carried out at the time of severe leprosy. Low education also results in a lack of knowledge of sufferers of leprosy, so that patients do not understand the adverse effects of leprosy (Susanto, 2006)

Patients, who have a higher level of education, tend to implement more actions (Notoatmodjo, 2012). Research shows that patients with higher education respond more quickly to what is happening to them and better understand the process of healing the disease more quickly without experiencing severe disability.

3. Occupation

Some respondents worked as health cadres around Dr. Sitanala Leprosy Hospital and one respondent worked as craftsmen or workers who assisted in training programs in rehabilitation work for former lepers. One respondent who has active leprosy, her previous activity was farming.

According to Hurlock (2007) occupation is an activity or activity of a person to earn income for their daily needs. The work carried out by the respondent was in accordance with his condition to help his husband who was also a leper who worked as a janitor and hygiene at Dr. Sitanala Hospital.

The occupation of the majority of respondents is light or moderate work that does not cause leprosy reactions during pregnancy. One of the respondents who experienced a complaint or a slight reaction to leprosy in her pregnancy is because of her work that spent a lot of energy as a farmer. This is consistent with the study of Ghimire (1996) which

states that excessive expenditure of energy will have an impact on reducing stamina so that leprosy sufferers can experience physical stress and changes in immune responses that can trigger ENL

4. Parity

Based on the number of children born both live and stillbirth, most respondents have more than 4 children, and only one respondent has 2 children. There is no visible impact on the fertility of women affected by leprosy with the number of children born. Based on the analysis of the researcher and supported by the results of in-depth interviews with experts, it shows that there is no relationship between parity and leprosy.

Leprosy is a curable disease as long as the treatment is routine and complete. The main purpose of leprosy treatment is to break the chain of spred, reduce the incidence of disease, treat and cure patients, and prevent disability. Leprosy in pregnancy can be treated safely and effectively by combination drug therapy (Duncan et al, 2003). This shows that leprosy does not prevent patients from becoming pregnant, which in turn determines the number of births (parity) experienced by lepers who are undergoing leprosy treatment.

5. The Length of Leprosy Suffering

Respondents in this research were identified as suffering from leprosy for a long time, this was stated by the respondent based on the symptoms and initial signs they experienced until the respondent came to the public health center and was diagnosed with leprosy. Respondents in this research had experienced symptoms without treatment and care for approximately 1 year, so that some respondents had experienced hand and foot defects. This shows that lepers who experience symptoms without treatment and care for more than one year can cause disability (Witama, 2014).

The lateness of the patients in seeking treatment is influenced by how quickly the disease progresses so that it can cause significant complaints to the sufferer and most of the patient's awareness of the first symptoms and signs of leprosy that mostly resembles mild skin disease (Nicholas et al., 2003).

Some respondents had had leprosy for more than ten years, and one new respondent had had leprosy for approximately two years. Some of the respondents had undergone treatment and

treatment at Dr. Sitanala Leprosy Hospital for six to nine months and has been declared cured of leprosy, only one respondent was still undergoing leprosy treatment routinely and was complete and was currently undergoing pregnancy, childbirth and postnatal. The treatment of leprosy in pregnancy was continued by respondents who were still exposed to active leprosy, while some of the other respondents had not been given leprosy drugs because they had been declared cured, only their disability could not be cured.

6. Information about Leprosy

Respondents in this research generally did not know leprosy well and did not know the cause of a leprosy problem. This is consistent with Rachmalia's (1998) study of the development of leprosy prevention models in endemic areas with a socio-cultural approach in Banyusangkah Village, Bangkalan Regency, East Java Province, which showed that 48.5% of the people did not know the cause of leprosy, 10.6% said because of God's curse and 24.2% said because of germs.

Based on the results of in-depth interviews in this research, one respondent considered leprosy because of magic or witchcraft. There are other respondents who think because of germs. This is in line with what was suggested by Foster and Anderson (1986) regarding the concept of disease which is divided into two, namely personalistics and naturalistic. They interpret personalistics concepts as emergence of illness (illness) caused by the intervention of an active agent, which can be either supernatural beings (supernatural beings or gods), non-human beings (ghosts, ancestral spirits or evil spirits) or humans (sorcerers, handyman) (Durmatubun, 2002).

The perception of leprosy has a huge impact on the sufferer because it ultimately determines the condition of his/her body, whether to recover or be disabled. This is in line with Susanto's (2006) study which stated that the incidence of leprosy disability occurs mostly in patients who have a low or erroneous understanding of leprosy.

7. Early Symptom of the Disease

Respondents in this study examined themselves at the public health center because of the perceived prominent complaints. Respondents revealed signs and symptoms they experienced such as patches on the skin, phlegm which developed into the appearance

of a wound on the body and abnormalities in the limbs.

Signs and symptoms experienced by people affected by leprosy are dry skin, injury, spots on the face, ears and nose. Lepers in this research also showed the location of the signs and symptoms that they felt. Respondents generally experience spots on the back such as phlegm which increasingly spread throughout the body surface. Places that are attacked by germs are tissues with lower temperatures such as skin and peripheral nerves in the hands, feet and face (Ministry of Health, 2006).

This is in accordance with the opinion of the resource person 2 a general practitioners in Dr. Sitanala Leprosy Hospital.Those who come are usually referred to and have been treated at a health center but are not cured, and the initial symptoms are the appearance of thin spots like phlegm on the patient's body, usually the first white spot is only a little but widens and many. The presence of reddish nodules (leproma, nodules) that spread on the skin. There are also general reactions to symptoms of leprosy such as heat, anorexia, nausea and irritation.

This research identified the majority of respondents experiencing leprosy over a period of more than ten years, with the nature of the disease disappearing associated with existing signs and symptoms. Respondents in this research generally had leprosy treatment at public health center on average 3-11 months. This is because at the beginning of feeling the signs and symptoms, the patient is treated independently into a traditional medical treatment in a mystical manner, so that the patient's condition is severe when he goes to the health center.

8. The Information about the Cause and the Spread of Leprosy

Respondents in this research did not know about the causes of leprosy, the signs and symptoms experienced. Some respondents stated that leprosy is a non-contagious disease and there are some that said that it is an infectious disease. The other one said that the cause of leprosy is black magic sent by other to harm the person. It was based on the characteristics and symptoms they experienced and felt.

Rachmalia's (1998) research on the development of leprosy prevention models in endemic areas with a socio-cultural approach in Banyusangkah Village, Bangkalan Regency, East Java Province, identified that some of the lepers believed that leprosy was a hereditary

disease or magic. Because of their long treatment, they tend to look for alternative treatments to dukuns who, according to them, can cure leprosy more quickly.

Lepers in this study were identified as having less understanding about the source of leprosy spread. Only one respondent stated that he was infected by the environment and people who suffered from the same disease in the surrounding community. Rachmalia's (1998) research shows that 45.5% of respondents did not know how to transmit leprosy.

b. Leprosy, Pregancy, Labor, and Postnatal

1. The Effect of Leprosy toward Pregnancy

Pregnancy is a natural and physiological process. Every woman who has a healthy reproductive system and has undergone menstruation and sexual intercourse with a man whose reproductive organs are healthy is more likely to experience pregnancy (Mandriwati, 2007)

Among lepers, what is attacked is the nervous system, especially the nerves in the extremities of the hands and feet which then attack the motor nerves (MOH, 2007). Based on this, leprosy does not cause damage to the reproductive organs so that a woman who has leprosy can still experience pregnancy.

2. Special Problem experienced during pregnancy

Special problems experienced by pregnant women in general such as nausea, vomiting, dizziness / headache, vaginal discharge and so on, in this study were denied by all respondents. Even the changes in the leprosy reaction, most of the respondents did not experience it, only experienced by one of the respondents whose leprosy was still active. This is consistent with Duncan (1999) study in the USA that 9 out of 25 tuberculoid and borderline leprosy patients who received single therapy experienced recurrence in the third trimester of pregnancy. Other studies also showed the same thing, 18 women with TT leprosy and BT active who received single therapy, experienced active skin lesions in the third trimester of pregnancy. In Mexico it was also reported that a woman who had completed treatment for leprosy after two years later became pregnant, also experienced a relapse in the third trimester.

This happens because in pregnancy there is a decrease in the immune system, which is characterized by a decrease in IL-2, especially in the third

trimester. This situation explains the condition of exacerbations in leprosy germs in pregnant women which tend to occur in the trimester.

The same opinion was expressed by resource person 1 that leprosy reactions can occur in the condition of pregnant women with wet types. So avoid the wet type as much as possible, become the dry type.

3. Hope during the Pregnancy

Every pregnant woman must have hopes for herself and for the fetus in her womb, as well as pregnant women with leprosy. The respondents' expectations in this study are a description of the desires of lepers, who want themselves and their babies to be healthy, normal, and not disabled. One respondent was still worried about transmission to her baby and was afraid that her baby would experience a disability such as herself or a result of her leprosy.

This situation is in accordance with Reva Rubin's theory, which states that a woman since her pregnancy has expectations such as the welfare of mother and baby, acceptance of the community, determination of identity, knowing about the meaning of giving and receiving (Sujianti, 2010).

4. Worry in facing the Labor

Facing labor is a difficult time for a woman. Before labor, many worrying things arise in the mind of the mother, fear of a disabled baby, fear of surgery, fear of long labor and so on.

It is in accordance with the results of this study, generally the respondents experienced concerns, which generally occur in every normal woman, and there is no specificity of the concerns of leprosy they suffer.

5. The Labor Process

In this study some respondents experienced a normal or spontaneous labor process and some were performed by SectioCaesaria surgery due to indications related to pregnancy, not due to leprosy. One of the respondents indicated because of the early broken membrane case and another respondent because of high risk factors (age and parity). This is in accordance with the opinion of Duncan (1993) that there were no significant differences in the delivery of leprosy patients. Labor can be done normally, unless there are other meaningful indications.

Likewise with the statement from source person 1 that the birth process of leprosy sufferers is not special treatment, it is similar with normal patients in general, can be born spontaneously. Even if SC surgery is done it is due to an indication of pregnancy or childbirth, not because of leprosy. It's just that you need to pay attention to the use of parturition equipment and delivery room to separate from general patients.

6. Problem during Postnatal Period

In this study, all respondents did not experience problems related to the reaction of leprosy during the postnatal period. Problems or complaints experienced during postnatal period such as severe bleeding, dizziness, anemia, swollen breasts and so on, were experienced by all respondents. Babies of all respondents were given exclusive breastfeeding in accordance with the counseling of health workers in the hospital. Another thing that must be considered is maintaining personal hygiene, environmental cleanliness, nutrition and fluids, resting needs and so on (Gulardi, 2002)

Conclusion and Suggestion

a. Conclusion

From the results of qualitative research on leprosy case studies in pregnant women at Dr. SitanalaLeprosy Hospital, Tangerang, it can be concluded that three respondents of leprosy patients who have not reacted or have been declared cured, have no problem in pregnancy, both from leprosy and complaints in pregnancy in general. One leprosy patient, who is still actively reacting to leprosy and still under treatment, has problems such as numbness, flaky skin and dizziness which are complaints from leprosy reactions. Treatment of leprosy can continue during pregnancy.

The pregnancy period experienced by lepers is not different from normal pregnant women in general. Giving standard antenatal care services between lepers and normal pregnant women, no differences were found.

Labor among lepers can be done through normal labor and Sectio Cesaria surgery in accordance with the obstetric indications found. During the postnatal period, lepers who have recovered or who are still reacting, can give breast milk to their babies by continuing to consume leprosy drugs if the patient is still undergoing treatment.

b. Suggestion

It is expected that health officers can provide assistance to pregnant women with leprosy so that mothers can undergo their pregnancies well and face problems arising from the reaction of leprosy. It is also recommended to continue to improve the detection of new leprosy sufferers and ensure leprosy patients complete treatment in order to break the chain of leprosy spread and infection.

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HISTORY OF OBESITY, OBESITY STATUS AND POST PARTUM DEPRESSION

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ABSTRACT

The impact of postpartum depression (PPD) that is not handled properly will cause severe and dangerous consequences, namely neurological disorders and the desire to commit suicide, or kill other people including their children. This impact is possible to be one of the factors that cause the number of violence and killings that occur in children under the age of three that often occur lately. It is known that PPD cases can be prevented with appropriate efforts in accordance with emerging risk factors. According to some literature states that history and obesity status are associated with the incidence of PPD. This study was conducted with the aim of proving that obesity status is associated with the incidence of postpartum depression. Studies conducted on pregnant women with a minimum gestational age of 34 weeks or more, carried out by a prospective cohort method followed by a maximum of 6 weeks postpartum period.The results of this study show significant results that obesity status is closely related to the incidence of PPD with the p-value of less than 0.05.It is expected that from the initial assessment of history and obesity status associated with this PPD a screening model and prevention of PPD can be established through weight control.

Keywords: Postpartum mothers, postpartum depression, obesity.

INTRODUCTION

Recently there have been cases of violence and killing of children committed by parents, especially in children under one and three years of age[1]. One of the causes of this incident is a psychological disorder from parents, especially mothers[2]. Psychological disorders that often occur in the mother include psychosis, postpartum depression, and the baby blues syndrome or postpartum blues (PPB)[3]. PPB can be very bad and severe if not treated and given management right, it can even continue to become PPD[4]. This dangerous PPD period can cause a mother to do things out of control and even hurt her child[5].

The effects of the PPD that are protracted and untreated include neurological disorders in children, unsuccessful breastfeeding, stimuli for chronic diseases and

other psychiatric diseases, worsening conjugal and family relationships.[6.7]

The most dangerous impacts are the emergence of ideas, suicidal intentions or murders with desires, intentions or plans to injure or harm oneself and or others, including babies.[3,7] According to some literature the incidence of depression is triggered by obesity.[8 – 9] However, this is not the case with some other literature.[10 - 11] According to Krause et al.2009 states that the Body Mass Index and obesity status are not related to the incidence of postpartum depression.

METHODOLOGY

The design of this study used a prospective cohort method with a descriptive and analytical approach, where pregnant women were followed up to the measurement of EPDS in first week. This study conducted at the "X" Health Center in July - October 2018. The study used primary data, recorded questionnaire sheets by direct contact with the respondent. History of obesity and obesity status asked at the time of contact interview. The number of respondents was 36 people who fulfilled EPDS feedback until the end of the study from 136 respondents contacted. Respondents were pregnant women over 34 weeks who were willing to be followed until the puerperium period. Data analysis used Chi-Square test.

ETHICAL CONSIDERATION

This research has gone through an ethical review and was declared to have passed the ethical review through the University of Indonesia's Health Research Ethics Committee. Ethics test letter number 03 / KE / UNR / IV / 2018

RESULTS AND DISCUSSION

a. Univariate Analysis Results Characteristics of Respondents Based on PPD Incidence

Tabel 1: Table of Characteristics of Respondents Based on the incidence of DPP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less	16	44,4	44,4	44,4
	Normal	20	55,6	55,6	100,0
	Total	36	100,0	100,0	

Table 1 shows that the majority of respondents were Normal (52.8%).

b. Characteristics of Respondents Based on History and Status of Obesity

Tabel 2: Table of characteristics of Respondents Based on History and status of Obesity.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Obest	12	33,3	33,3	33,3
	Normal	24	66,7	66,7	100,0
	Total	36	100,0	100,0	

Table 2 shows that the majority of respondents were not obese (66.7%)

c. Relationship between History and Status of Obesity and DPP Incidence

Tabel 3. The Relationship between history and status of obesity with PPD Incidence.

		IMT		P – value	OR
		Obest	Normal		
EPDS	"Risk"	11	6	0.000	14.266
	"Normal"	1	18		
Total		12	24		

Table 3 shows that the history and status of obesity has a very close statistical relationship with the incidence of DPP. Obese women have 14 times more chance of experiencing PPD.

It is known from the analysis that the majority of respondents were not obese. The results of the bivariate analysis revealed that obesity was associated with PPD. This is in accordance with some of the results of research, state that obesity, overweight and excessive gestational weight gain is related to potential short and long-term consequences for mother and baby, including the risk of depression.[8,9]

This study can have more empirical evidence that obesity status and history of obesity related to postpartum mental disorders.[(13-17)] Similarly, Molyneaux et al (2014) stated that health providers should realize that mothers who are obese during pregnancy are more risky to experience increased antenatal and postpartum depressive symptoms than normal-weight mothers, with medium risk and overweight mothers.[9,18-21]

Other positive relationships are also mentioned simultaneously with the presence of mental disorders and postpartum anxiety that occur in obese mothers.[22 - 27]

In women who are obese, there are special fatty tissues that have been chronic such as forming inflammation that leads to anxiety, especially in the mother. Also triggers the incidence of depression [(20 – 21)]. This fat cannot be instantly removed. Need regular treatment to reduce it. Therefore, mothers with this risk need special exercise to avoid obesity.

CONCLUSION

An overview of the characteristics of respondents shows that most mothers are not obese. Obesity history and status are related to PPD incidence.

It is expected that from the preliminary assessment of the history and obesity status associated with this PPD a precautionary. An early screening model can be established regarding the increase in abnormal maternal weight as an effort to prevent PPD.

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Editorial Department of the 1st International Conference on Health Sciences
Nasional University

Dear Editor,

I am submitting a manuscript for consideration of publication in the 1st International Conference on Health Sciences. The manuscript is entitled Government's Commitment to Reach Universal Health Coverage in Surakarta. This manuscript is a qualitative study. Authors'names: RizkyAmaliaPuspitaningrum; Ari Probandari, dr, MPH, Ph.D; Dr. EtiPoncoriniPamungkasari, dr, M.Pd. Affiliations: Master Program in Family Medicine University of SebelasMaret and Department of Public Health, Faculty of Medicine, University of SebelasMaret, Indonesia

In this manuscript, we show that the existence of a strong commitment from the local government can encourage the achievement of UHC, so the results of this study are expected to provide input and contribution especially for other Districts / Cities that have the same characteristics so that the target towards UHC in Indonesia can be realized soon. We believe these findings will be of interest to the reader of your conference.

We declare that this manuscript is original, has not been published elsewhere and that it has not been submitted simultaneously for publication elsewhere. We also have no conflicts of interest to disclose.
As corresponding Author, I confirm that the manuscript has been read and approved for submission by all the named authors.

Thank you very much for your consideration.

Yours Sincerely,

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GOVERNMENT'S COMMITMENT TO REACH UNIVERSAL HEALTH COVERAGE IN SURAKARTA

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ABSTRACT

Background: Universal Health Coverage (UHC) is a global health priority which is one of the main elements in the SDGs. The target for UHC in Indonesia began in 2014 with the launch of the JaminanKesehatanNasional (JKN) program. The city of Surakarta became the third city government in Central Java that was able to reach UHC. The purpose of this study was to describe the government's commitment in achieving UHC in Surakarta City.

Method: This type of research is a qualitative study with a case study approach. The research was conducted in Surakarta City, Central Java, from September 2018 to February 2019. Data collection was carried out through in-depth interviews and document analysis. Sampling technique with criterion sampling. The research informants were five people who were leaders of the Surakarta City Government. The validity of the data is done by triangulation techniques and member check.

Result: The implementation of JKN in Surakarta City to achieve UHC was influenced by the commitment of the city government with the existence of health insurance policies for the near poor, JKN integration, poverty reduction policies, UHC socialization policies, and budget availability.

Conclusion: The commitment of the city government is the key to achieving UHC in Surakarta City

Keywords: JaminanKesehatanNasional , Universal Health Coverage, Commitment, Surakarta City Government

INTRODUCTION

Universal Health Coverage (UHC) is a global health priority and is one of the main elements in the Sustainable Development Goals (SDGs) listed in the third objective, which is "ensuring a healthy life and improving prosperity for everyone". The main goal of UHC is to ensure that all people can access health services of good quality without causing financial difficulties. [1,2]The target towards UHC in Indonesia began in 2014 with the launch of a national social health insurance scheme through the National Health Insurance or JaminanKesehatanNasional (JKN) program which aims to provide health insurance for all Indonesians. The JKN program is implemented by the Social

Security Organizing Agency named BPJS Kesehatan.[3] The Indonesian government has set 2019 as a target to reach UHC, which is 95% of the Indonesian population covered by JKN.

The city of Surakarta became the third city government in Central Java after the City of Semarang and Demak Regency were able to achieve UHC.[4] The percentage of JKN membership coverage in Surakarta City in July 2018 was 95.54% which fulfilled the coverage to achieve Universal Health Coverage which was 95%.[5]Surakarta City is a lowland area with an area of 44.06 Km². Administratively, Surakarta City is divided into five sub-district administrative areas and 51 sub-districts. The population of Surakarta City in 2018 was 563,814 people, consisting of 278,187 men and 285,627 women. Population density in Surakarta City is the most densely populated in Central Java, which is 12,802 people / km2.[6]

Table 1. Population of Surakarta City Per District in 2018

No	District	Male	Female	Total
1.	Laweyan	49.361	51.303	100.664
2.	Serengan	26.286	27.357	53.643
3.	PasarKliwon	42.753	43.391	86.144
4.	Jebres	71.704	72.847	144.551
5.	Banjarsari	88.083	90.729	178.812
	Total	278.187	285.627	563.814

Source: Data KonsolidasiBersih Semester 1 Kota Surakarta, 2018

One of the factors driving the achievement of UHC is the existence of strong political and policy commitments.[7,8] Therefore researchers want to describe the commitment of the Surakarta City government in achieving UHC in Surakarta City.

METHODOLOGY

This type of research is a qualitative study with a case study approach. This research is located in Surakarta City, Central Java. The research was conducted from September 2018 to February 2019. Data was collected through in-depth interviews and document analysis. In-depth interviews with informants were conducted to understand social phenomena from the perspective of participants. Sampling technique with criterion sampling. The sample criteria included informants knowing the problem of the JKN in the Surakarta city, informants were those who carried out JKN optimalization activities in Surakarta

City, informants were officials in the Surakarta City environment so that informants had knowledge in practice and at the policy level taken and were competent in providing explanation and opinion about the object of research namely Universal Health Coverage in Surakarta City. The informants in this study were five people who came from the leadership elements of the Surakarta City Government. The validity of the data is done by triangulation techniques and member check.

ETHICAL CONSIDERATION

The researcher asked the informant's informed consent before conducting an in-depth interview, including asking permission to record the interview process. The informant's identity was kept confidential. This qualitative research has been received ethical clearance from the Ethics Committee, Dr. Moewardi Surakarta hospital.

RESULTS

Based on the research data collected from the results of in-depth interviews and document analysis, there were several things that influenced the implementation of national health insurance in Surakarta City to be able to reach UHC.

City Government Commitments

JKN travel in Surakarta City was inseparable from the commitment of the Surakarta City government in supporting JKN policies and achieving UHC in Surakarta City.

> *"Related to UHC here, indeed the commitment from the city government is indeed extraordinary. Commitment of regional leaders in this matter the Mayor did prioritize service. This was reflected in the mission of the city government where health services were the first mission in the Surakarta city government. "(Informant 1)*

> *"If you support the UHC, of course there will be many factors. First from the side of the active role of the Surakarta City government itself. Here the City Government of Solo plays a role in this UHC, where the municipal government of Solo makes policies related to JKN. Like the Surakarta mayor's regulation Number 21-A in 2017 regarding regional health insurance for the near poor, then there was a circular letter number 440/571 dated February 28 regarding Universal Health Coverage in Surakarta City, as well as a strong commitment from the Surakarta City Government to prosper the people of Surakarta City by ensuring that all citizens get health insurance. "(Informant 5)*

"The city of Surakarta already has a local regulation, a regulation on poverty reduction. In it there is governance of poverty data, so that people who enter the database who have not been accommodated in the National Budget JKN KIS program, that is funding from the Surakarta City Budget. It is legitimate with regard to budget resource use. "(Informant 1)

"If there are existing health regulations that prioritize SKD there are several priorities about then there are some policies that must be accommodated so that the issue becomes a regional health system SKD. If the Regional Regulation is signed by the Regional Head and the DPRD, it is already the highest document, the manifestation of that commitment is the local regulation. "(Informant 1)

The commitment of the Surakarta City government in supporting the achievement of UHC is very strong. The government's commitment is reflected in the first mission of the Surakarta City government namely "Waras". The mission of "Waras" is to create a society that is physically, mentally, and socially healthy in a healthy environment towards a productive, creative and prosperous society and to cultivate clean and healthy living behaviors. One form of embodiment of the mission is to have health insurance for all Surakarta people. To realize comprehensive health insurance or UHC for the people of Surakarta City, the city government issues policies that support the implementation of health insurance in Surakarta. Policies to achieve UHC in the form of Surakarta Mayor Regulation Number 21A 2017 concerning regional health insurance for the near poor, Mayor regulation Number 11 of 2016 concerning procedures for establishing and working procedures for urban poverty reduction teams in Surakarta City, Circular letter number 440/571 about the Surakarta City Universal Health Coverage, as well as the Surakarta City Regional Regulation Number 11 of 2017 concerning the Regional Health System.

Health Insurance Policies Forthe Near Poor

Surakarta Mayor Regulation Number 21A 2017 concerning regional health insurance for the near poor state that everyone has the right to the highest degree of health, one of which is the existence of health insurance. In addition to the poor who have been registered in the data of the poor population of Surakarta City, there are residents of Surakarta who cannot afford health insurance, thus requiring the intervention of the Surakarta City government to provide health insurance. borne. The regulation of regional health insurance for the near poor in this pilot has a scope regarding participation, integration of

BKMKS participants, contributions and funding, and health services. The regional government will collaborate with BPJS Kesehatan to ensure the health of the near poor in Surakarta. With the existence of this regulation, the health insurance covered by the Surakarta City Government is not only limited to the poor but also includes the near poor. So that the coverage of JKN participation funded by the Surakarta City Budget can increase.

JKN Integration Policy

Health insurance trips in Surakarta City begin with the PemeliharaanKesehatanMasyarakat Surakarta (PKMS) program which is a regional health insurance program originating from the Surakarta City Regional Budget for Surakarta residents. PKMS is regulated in mayor regulation number 26 of 2013.

> *"This health insurance before JKN in Surakarta City is called the PKMS (Surakarta Public Health Maintenance) which is purely from the regional budget. JKN is implemented with 2 funding frameworks. The first from the APBN for citizens who are included in the indicators is vulnerable and poor. Those who have not been covered by JKN with the regional program (Informant 1).*

> *"That is health insurance in the city of Surakarta, which is the first PKMS (Surakarta Community Health Care) that was first form a card. There are 2 PKMS cards, namely Silver and Gold (Informant 4).*

Furthermore, with the existence of mayor regulation number 37 of 2016, PKMS was changed to BantuanKesehatanMasyarakat Kota Surakarta or BKMKS. BKMKS is assistance for the community who are not able and not guaranteed with national health insurance as a form of responsibility from the local government in providing services to the community.

> *"Then after that it was changed to BKMKS. The BKMKS is with the 37th anniversary of 2016. BKMKS is assistance. So if there are people who are sick at the hospital, they will get assistance in the amount of Rp. 5,000,000. "(Informant 4)*

> *"So if you end up Rp. 3,000,000 or 5,000,000, the system will claim in the hospital to the health office or if it runs out 7,000,000 - 8,000,000, the residents will pay the rest. So what can be claimed is only 5,000,000. "(Informant 4)*

BKMKS itself is assistance from the city government with a large number of claim claims borne by a maximum of Rp. 5,000,000. Reality in the field shows that this assistance has not been effective enough in helping residents. Because there are still many disadvantaged people who are burdened with the amount of maintenance costs. The Surakarta City Government then issued a policy to

integrate BKMKS health insurance into JKN as stated in Chapter IV of Surakarta Mayor Regulation Number 21A 2017 concerning the integration of BKMKS participants.

> *"Because JKN had already become a National policy so that the process of the journey merged into KIS." (Informant 1)*

> *"Earlier this PKMS initially with officers because there was already a law JKN finally merged into KIS. The trust was finally revoked, merged into KIS, which covered the health protection with the premium paid by the region. "(Informant 1)*

The integration of BKMKS into JKN has a positive impact on citizens. The burden of citizens will be on health financing when the illness is reduced. With JKN the claim of payment is not only limited to a nominal Rp. 5,000,000, but payment can be fully borne according to JKN participation class. So, the people who were previously guaranteed by BKMKS did not have to bother thinking about financing shortages.

> *"Then the Surakarta City Government with the help will not solve the problem. Because there are still many poor people who are unable to afford to pay the shortfall. Finally the government policy, the policy of the mayor for BKMKS was integrated into all KIS, supported by the President's instructions that the entire Indonesian population must have health insurance and the UHC earlier and that later the trust can be copied and can be explained by themselves. So a trip like that then the BKMKS was integrated by KIS. Then now the BKMKS has become KIS. "(Informant 4)*

> *"From the integration of BKMKS, it has now been felt that we do not have to take care of the difficult process of the assistance survey if we already hold the card, reducing the burden on the people in health services due to illness." (Informant 4)*

> *"Once assistance is integrated into KIS. Now it began to aggressively start entering all KIS. All covered. In 2018 January, the 2018 BKMKS program for assistance in January 2018 was integrated. So the size of the Surakarta city is in 2018 January-March. That later the data will be visible. "(Informant 4)*

Table 2. Population of Surakarta City Funded by APBD

Months (2018)	**Funded by APBD**
JANUARY	55.284
FEBRUARY	96.388
MARCH	100.218
APRIL	106.653
MAY	113.072
JUNE	116.732
JULY	119.661
AUGUST	121.865
SEPTEMBER	121.722
OCTOBER	123.846
NOVEMBER	126.468
DECEMBER	127.870

Source: DinasKesehatan Kota Surakarta, 2018

In January 2018, a total of 4693 participants were successfully integrated into JKN and increased rapidly in February with 41,105 BKMS participants integrated into JKN. The coverage of

JKN membership, especially in the APBD financing sector, is increasing rapidly. As of July 2018, the integration of JKN increased by 23,273 participants so that the total number of participants covered by the Surakarta Regional Budget reached 119,661 inhabitants.[9] With the integration of BKMKS to JKN, besides being able to reduce the burden on citizens in terms of health financing, it was also able to increase JKN membership coverage in Surakarta City.

Poverty Reduction Policy

Poverty reduction policies in Surakarta City are regulated in Mayor Regulation No. 11 of 2016 concerning the procedures for the establishment and working procedures of urban poverty reduction teams in Surakarta City. In the pilot it regulates the establishment of the TimKoordinasiPenanggulanganKemiskinan (TKPK) and the Tim PenanggulanganKemiskinanKelurahan (TPKK) which functions as a cross-sectoral and cross-stakeholder coordination forum that functions as a coordination forum and implements poverty reduction policies and programs in the Kelurahan.

> *"Then there is a regulation regarding the procedure for the establishment of the kelurahan poverty reduction team which will also be encouraged regarding regional data-based enumeration. Because there is a function of the wire comb so that the national data does not represent the data needs in the area, so the data sent by TPKK is combed into the data base. So that the funding framework needed by the community can be covered with the APBD. That's the dynamics of the process"(Informant 1)*

> *"It was deliberately the same as the Mayor, given the TKPK team, TKPK personnel because of helping the service there too. But indeed the main task is to process poverty data." (Informant 3)*

> *"After collecting these requirements, the Urban Poverty Reduction Team (TPKKel) / Home Visit Team will conduct a home visit to the applicant / respondent. Time at Home Visit, respondents were given 46 (forty-six) questions / questionnaires. After doing the home visit to the concerned / applicant / respondent, the results of the home visit / coklit were entered / processed into the e-SIK. "(Informant 3)*

The poverty reduction team has the task of managing and updating data and profiles of poor families, facilitating, verifying and coordinating poverty alleviation activities, monitoring, monitoring and evaluating the implementation of poverty reduction programs. JKN also relates to poor population data because it is related to financing in the contribution recipient sector or PBI. Therefore, updating poor population data is very important. With the presence of TKPK and TPKK in Surakarta City, data collection on the

poor and vulnerable social risks has become more valid. So that people who are entitled to health insurance will be right on target and data on PenerimaBantuanIuran (PBI) participants will be accurate and up to date.

UHC Socialization Policy

Circular letter 440/571 about UHC instructed the leaders of companies / BUMN / BUMD / Private, Head of Sub-District and Village Head of Surakarta City, and all Surakarta City community to become JKN participants to realize UHC in Surakarta City. For people who cannot afford to immediately register with the Kelurahan in accordance with the terms and conditions. For people who are able to immediately register as JKN participants with independent fees, for people who work in BUMN / BUMD / Large, Medium and Small Businesses to coordinate with the leadership to register as JKN participants. For employers to immediately register their employees as JKN participants.

> *"The strategy is with officers, circulars [the mayor's circular letter about UHC] with socialization". (Informant 4)*

This circular letter is one form of JKN socialization from the city government to all elements of Surakarta City so that all parties can find out about the importance of participating in JKN so that the coverage of JKN participation in Surakarta City can increase.

Budget Availability

Budget is needed in JKN premium financing. The Surakarta City Government has allocated a number of budgets originating from the Surakarta City Budget to finance the premium payment of PBI APBD participants in the city of Surakarta with a number that is not small. The budget is regulated in regional regulation Number 11 of 2017 concerning the Regional Health System listed in chapter VI concerning health financing in article 55 which states that the regional government allocates a budget for health at least 10% of the APBD after deducting salary expenditure.

> *"The local regulation is the signature of the Regional Head and the DPRD so that it is the highest document, the manifestation of this commitment is the regional regulation. Because the Regional Regulation will have implications for budget politics regarding the provision of coverage, the premium payment that I delivered 47 billion yesterday was not small in a year. "(Informant 1)*

> *"So the entire operation regarding the service has been provided by the government with the APBD. Even though our APBD is not much but a commitment to maintain the quality of service remains a priority. "(Informant 1)*

"Surely here is also very related to the budget, especially participants in the APBD Contribution Beneficiary (PBI) segment, so that later it can be asked directly to the Surakarta City Government because the source of funding comes from the Surakarta City Budget." (Informant 5)

The budget for premium payments for citizens who are included in the PBI APBD Surakarta City category is also not limited in the amount of the budget. As long as residents fulfill the requirements to become PBI participants, the premium will be paid for with the Surakarta City Budget.

"If you meet the requirements, it will definitely be printed. Printed and financed by the Surakarta city government "(Informant 4)

"There must be a budget to pay BPJS premiums for the poor and the poor. That the availability of funds must be available by each city district, like that. "(Informant 4)

"We maintain a budget for payment of health insurance premiums." (Informant 4)

With the availability of regional budgets to pay for JKN premiums, the scope of participation in the APBD PBI category will increase.

DISCUSSION

The Surakarta City Government has a strong commitment to provide comprehensive health protection to the entire community by optimizing the implementation of the JKN program in Surakarta City to be able to reach UHC. The results of this study are consistent with the research conducted by Iyer et al and Minh et al which states that one of the drivers of achieving UHC is strong commitment and policy.[7,8] The government's commitment is in the form of policies to optimize the implementation of JKN. These policies include regional health insurance policies for the near poor and integration of JKN as regulated in Surakarta Mayor regulation Number 21A 2017, poverty reduction policies stipulated in Mayor's regulation Number 11 of 2016, UHC socialization policies through circular letter number 440/571 and the availability of the budget stipulated in the Surakarta City Regional Regulation No. 11 of 2017. With a strong commitment from the Surakarta City government, the coverage of JKN participation in Surakarta City has increased. As of July 2018, as many as 547,726 people or 95.54% of Surakarta residents have been covered by JKN. So that as of July 2018, Surakarta City has reached UHC where the coverage of JKN participation is more than 95%. For

residents financed by the Central Java Provincial Budget 1.704 people, and the APBN as many as 159.288 people, and NON PBI as many as 267,073 people.[10]

The existence of a strong commitment from the local government can encourage the achievement of UHC, so the results of this study are expected to provide input and contribution especially for other Districts / Cities that have the same characteristics so that the target towards

UHC in Indonesia can be realized soon.

CONCLUSION

The implementation of JKN in Surakarta City to achieve UHC was influenced by the commitment of the city government to the existence of health insurance policies for the near poor, JKN integration, poverty reduction policies, UHC socialization policies, and budget availability.

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RELATIONSHIP BETWEEN WAITING TIME AND ATTITUDE OF MIDWIVES RELATED TO PATIENT SATISFACTION TOWARDS ANTENATAL CARE IN PRIMARY HEALTH CARE TANGERANG SUB DISTRICT- BANTEN2018

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ABSTRACT

Introduction : Many factors related to patient satisfaction such as length of waiting time and attitude of providers. because the fast waiting time and the attitude of a friendly and caring midwife are an illustration of the quality of a service
Objective:to identify relationship about length of waiting time and attitude of midwives toward satisfaction of pregnant women during antenatal care.
Method:this study was quantitative research with *cross sectional*design. The sample size was about 90 pregnant women whom have attended antenatal care regularly in Primary Health CareWest Kedaung Tangerang Sub District-Banten.
Result: Respondent showed the satisfactionprocentageabout 56,7% and the results of the chi square test showed that there was a significant relationship between waiting time and satisfaction p value 0,02 and there was a relationship between the attitude of midwives and the satisfaction of pregnant women with a p value of 0,01.
Conclusion :waiting time and attitude of midwives related to respondents satisfaction

Keyword: Waiting time, attitude, satisfaction, antenatal care.

INTRODUCTION

Satisfaction is a level of feeling that arises as a result of the service performance obtained and compares it with what he expected (Pohan, 2007). One of supporting factors in quality antenatal care is waiting time of patient. Patient needs time from the beginning of administration process until entering to examination room. Excessive waiting time becomes barrier for patients satisfaction(French, Lindo, Williams Jean, & Williams-Johnson, 2014). Waiting time indirectly influence patient health condition. Hence, it tends to affect the effectiveness of antenatal care. The more of waiting time of patient, the health condition become getting worse and antenatal care be less effective (G., L., & Tonei V. AO - Moscelli, 2016). It caused by unexpected the number of patients so anticipation attempt is needed in order to maintain patient satisfaction. Quality of

antenatal care in Primary health care could be influenced by many factors such as waiting time, knowledge, skill, and attitude of providers(Oyetunde & Eleri, 2014).

However, waiting time has not affected patient health condition directly but it tends to affect the effectiveness of treatment and excessive waiting time will be barrier in patient satisfaction. Based on previous study concluded that 60% pregnant women less satisfied with obtained antenatal care because long waiting time and less responsive provider. From those reason, this study will identify the relationship of waiting time and attitude of midwives towards pregnant women satisfaction during antenatal care inPrimary health careTangerang Sub district 2018. The author believe that patient satisfaction has lingkage either to wating time or attitude.

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METHODOLOGY

This study was quantitative research with cross sectional design. The sample size was about 90 pregnant women whom have attended antenatal care regularly in Primary health care West Kedaung Tangerang Sub District-Banten. The data was collected by purposive sampling technique.

ETHICAL CONSIDERATION

The study was aprroved by the university

RESULT

This part will explain about the statistical result regarded to waiting time, attitude of midwives, and the relationship to patient satisfaction

Table 1.Distribution of Waiting Time, Attitude Of Midwives and Pregnant Women Satisfaction in PrimaryHealth Care Tangerang Sub District –Banten2018

Variabel	F	(%)
Length of time		
Long	41	45,6
Short	49	54,4
Total	**90**	**100**
Attitude		
Less good	38	42,2

Good	52	57,8
Total	**90**	**100**
Satisfaction		
No	39	43,3
Yes	51	56,7
Total	**90**	**100**

Based on Tabel 1 showed that respondent experienced for long waiting time 41 (45,65%) and patient with short waiting time 49 (54,4%). For attitude variable was obtained midwives with less good about38 (42,2%) and in good level 52 (57,8%). Respondent was not satisfy about 39 (43,3%) and satisfy 51 (56,7%).

Table2.Relationship Between Waiting Time, Attitude of MidwivesandPregnant Women Satisfaction in Primary Health Care Tangerang Sub District - Banten2018

Variabel	Satisfaction						Pvalue
	Dissatisfiedd		Satisfied		n	%	
	n	%	n	%			
Waiting time							
Long	23	56,1	18	43,9	41	100	0,02
Short	16	32,7	33	67,3	49	100	
Total	**39**	**43,3**	**51**	**56,7**	**90**	**100**	
Attitude							
Less good	22	57,9	16	42,1	38	100	0,01
Good	17	32,7	35	67,3	52	100	
Total	**39**	**43,3**	**51**	**56,7**	**90**	**100**	

Tabel 2 presented that respondent with long waiting time 23 (56,1%) and short waiting time 33 (67,3%) and they stated that they satisfied with provided antenatal care. From chi square result was obtained p value 0,02< alpha 0,05 mean significant relationship between waiting time and patient satisfaction.

Variabel attitude obtained for less good level 22 (57,9%) and it made patient not satisfied enough with the antenatal care. Respondent with good level of attitude 35

(67,3%) it increased patient satisfaction. Chi square result showed p value 0,01< alpha 0,05 mean significant relationship between attitudes of midwives and patient satisfaction.

DISCUSSION

Relationship Between Waiting Time and Pregnant Women Satisfaction

Waiting time is the timeused by patients to gethealth care beganregistration place to enter the doctor's examination room. This study showed there was significant relationship between waiting time and patient satisfaction presented by p-value 0,02. This result is supported by the study of Muthia (2017), there is a relationship between service waiting time and the level of patient satisfaction in the obstetrics and gynecology policlinic in Surakarta CityHospital. French et al (2014). Stated the same thing that excessive patient waiting time became a barrier in terms of patient satisfaction

It related to Wahono (2011) who conclude that stong relationship between waiting time and family satisfaction (p<0,05).Wijono (2008), waiting time become potential component for patient dissatisfaction, patient assume that a healthcare facilities have a bad reputation once it has longer time of hospitalization, longer waiting time, and unfriendly healthcare professional even they are professional.

Based on Ministry of Health Indonesia regulation No.129/Menkes/SK/II/2008 regarding minimum standart of health care in healthcare facilities mentioned that the standart of patient waiting time around ≤ 60menit(KemenkesRI, 2008).

Patient waiting time is taken as the total time needed by patients to enter health facilities until they leave the health facility(Tshabalala et al., 2018).

The researcher assessed that waiting time is one of the factors that influence patient satisfaction, long time agopatient waiting time reflects the quality of service providedbecause if the patient has to wait long it will reduce the patient's health condition

Relationship Between Attitude of Provider And Pregnant Women Satisfaction

The most important element when giving service is the attitude of the officer, because the attitude can provide satisfaction to the patient, this illustrates that the services provided by midwives are not optimal

In this study there is still the attitude of midwives who are considered less by the respondent which is 57.0% and based on the chi square test results obtained p <0,05, which means there is a relationship

between attitudes and satisfaction of pregnant women.

This is in line with the research of Adeyemoet all (2014) which states that the attitude of midwives influences patients' perceptions of midwives, the attitude of a good midwife will result in normal pregnancies and deliveries. Attitudes of midwives that often occur in services are lack of communication, lack of service, and harsh words that will affect the emotional health of patients (Mannava, Durrant, Fisher, Chersich, &Luchters, 2015), but the friendly attitude of the officers will be a consideration to continue to use the service

This is in line with the research of Adeyemoet all (2014) which states that the attitude of midwives influences patients' perceptions of midwives, the attitude of a good midwife will result in normal pregnancies and deliveries. Attitudes of midwives that often occur in services are lack of communication, lack of service, and harsh words that will affect the emotional health of patients (Mannava, Durrant, Fisher, Chersich, &Luchters 2015)

Notoatmodjo (2005) states that attitude is readiness or willingness to act, and not an implementation of certain motives. The function of attitude is not an action (open reaction) or activity, but it is a predisposition of behavior (action) or an open reaction.

Attitudes are considered the most important in social interaction. Change of attitude is neededin health services because as humans we sometimes act asagent of change and sometimes as the subject of change (Azwar, 2013).

According to researchers, the open attitude shown by midwives can make pregnant women feel comfortable and safe while getting antenatal care, so that eventually they will be satisfied with the services provided.

CONCLUSION

Respondent stated satisfy with antenatal care 51 (56,7%), and 2 variables in this study those were waiting time and attitude of midwives had significant relationship towards patient satisfaction.

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THE RELATIONSHIP BETWEEN DM DURATION AND PHYSICAL ADHERENCE IN PATIENT WITH TYPE 2 DM AT PUBLIC HEALTH CENTRE CILEGON CITY

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ABSTRACT

Type 2 Diabetes Mellitus (T2DM) is metabolic and chronic diseases. The complications of T2DM are divided into two, there are macrovascular andmicrovascular. To prevent their complications can be done by performing physical adherence regularly. The aim of the study was to identify the relationship between DM duration and physical exercise in patient with T2DM at the Public Health Centre, Cilegon City, Indonesia. This study was a descriptive correlation and a cross sectional method. There were 50 respondents and simple random sampling was used to approach them. The instrument of the study was a physical adherence questionnaire which modified by the researchers, the higher score of its indicated the better of physical adherence. The result showed that respondents more than 45 years and they werediagnosed T2DM since 1-5 years ago. There was a significantly relationship between DM duration and physical adherence in patient with T2DM at the Public Health Centre, Cilegon City Indonesia ($p < .05$). Physical activity is one of the Nursing intervention which can be performed by patient with T2DM to prevent DM complications.

Keywords: Physical adherence, T2DM, DM duration

INTRODUCTION

Diabetes Mellitus (DM) is the metabolic and chronic diseases characterized by increasing blood glucose called hyperglycemia[1]. DM was classified into 4 types, they are type 1 DM (β-cell impairment), Type 2 DM (T2DM) called insulin hormone decrease, Gestational DM (it occurred after pregnant), and other types of DM caused by autoimmune system[2].

The prevalence of T2DM was increased each year. In Indonesia, WHO predicted that there will increase become 21.3 million in 2030 from 8.4 million in 2000, while another study reported that there will be a higher of DM prevalence in Indonesia from 9.1 million in 2014 to be 14.1 million in 2035[3,4].

There are four main to manage and to control blood glucose as well as to prevent its complications[5]. There are 1)

dietary behaviour by managing dietary habit, type of foods, meal portion, and time for meal by considering carbohydrate intake, 2) physical activity, 3) pharmacology therapy to decrease, and 4) smoking cessation. Physical exercise is a basic management of T2DM. A physical exercise can be performed by walking, it is the easiest and the most efficient to be done[6]. Walking can be carried out within 1-3 times in a week and 15-30 minutes for each exercise. Patient with T2DM needs more attention regarding before, during, and after performing physical exercise. A physical exercise could increase oxygen intake and increase cardiovascular function as well as respiratory system[7].

There were 69% patient with T2DM who did not compliance to perform physical exercise, due to they have lack of information regarding the benefit of the physical exercise[8]. A study reported that there was a positive correlation between better knowledge and improve physical exercise in patient with T2DM[9].

Knowledge of physical exercise in DM patients is a form of obedience and discipline of physical activity. It is influenced by DM duration, the longer of DM duration is more often to receive much information regarding management of DM. One of them is physical activity[10].Knowledge is the result of knowing that occurs through a sensory process especially the eyes and ears of a particular object[11]. A good understanding of physical activity in patients with T2DM is a factor that influences the successful of therapy in preventing complications of DM[12].

Some studies have been conducted. A previous study reported that patients with T2DM who have better knowledge indicated that they have a better physical activity in patient with T2DM in Public Health Centre, Malang City[13]. Another study showed that there was a significantly relationship between knowledge and prevention of diabetic ulcer in patient with T2DM[14].

According to previous studies which concerned on the relationship between DM complications, knowledge, and DM duration. However, there is a limited study regarding a physical exercise and DM duration in patient with T2DM. Thus, researchers was interested to conduct a study entitled "the relationship between DM duration and physical activity adherence in patient with T2DM at the Public Health Centre, Cilegon City, Indonesia.

METHODOLOGY

This was a cross sectional study. There were 50 respondents with T2DM at the Public Health Centre, Cilegon City, Indonesia. The instruments used of the study were demographic data and Physical Activity Adherence Questionnaire (PAAQ). The PAAQ was consisted of 10 questions, used a Likert-scale. The higher score of PAAQ indicated the better adherence in performing a physical activity in patient with T2DM. The PAAQ was modified from a previous study[15], it had a good validity and alpha cronbach was .08. Data were analysed by using Chi-square to identify the relationship between DM duration and physical activity adherence in patient with T2DM at the Public Health Centre, Cilegon City, Indonesia.

ETHICAL CONSIDERATION

This study was granted permission (Approval No. Unas/005/03/2018) to access the respondent. Informed consent was obtained from each respondent with the standard informed consent procedure and principles of respect for autonomy, anonymity, confidentiality, and privacy of the respondents were practiced. The respondents were treated with respect and were well informed of their right to freely determine whether to participate in this study, with the right to withdraw at any time without penalty[16].

RESULTS

Demographic data respondents

Demographic data respondents in this study consisted of age, educational background, and DM duration of the respondents. The detail of these is presented in the table 1.

Table. 1 Demographic data of the patients with T2DM at the Public Health Centre, Cilegon City Indonesia

Variable	n	%
Age		
31 – 45 years	7	14
> 45 years	43	86
Educational background		
Elementary school	9	19
Junior high school	8	16
Senior high school	25	50
Diploma degree	5	5
Bachelor degree	3	6
DM duration		
1-5 years	30	60
> 5 years	20	40

According to table.1 showed that majority of the respondents were > 45 years who diagnosed with T2DM. In term of educational background, mostly they graduated from senior high school (50%) with they have been diagnosed T2DM since 1-5 years ago.

The relationship between DM duration and physical activity adherence among patient with T2DM at the Public Health Centre, Cilegon City, Indonesia

The objective of the study was to identify the relationship between DM duration and physical activity adherence among patient with T2DM. There were 50 respondents who diagnosed with T2DM. The result of the study is presented in the table 2.

Table. 2The relationship between DM duration and physical activity adherence in patient with T2DM at the Public Health Centre, Cilegon City, Indonesia

DM duration	Physical activity adhrence				x^2	*p*
	Good		Not Good			
	n	%	n	%		
1-5 tahun	16	16.8	4	3.2	3.39	.04
> 5 tahun	26	25.2	4	4.8		

According to table. 2 can be concluded that majority of the respondents diagnosed with T2DM since > 5 years were good in term of performing physical activity (25.2%), while not good (4.8%). In addition, there was a significantly relationship between DM duration and physical activity adherence among patient with T2DM at the Public health Centre, Cilegon City, Indonesia ($p < .05$).

DISCUSSION

Demographic data respondent

Based on the results of the study showed that more than 45 years were commonly diagnosed T2DM. When people are getting older, the organ functions will decrease including insulin production. The result of this study was similar with a previous study reported that getting older will affect to decrease insulin secretion, it occurred due to there was a endothelial impairment which commonly happened in the older adults[17].

Regarding educational background, the result of the study reported that majority of the respondents graduated from senior high school. It was similar with another study which concluded that educational background was influenced to motivation of the patient with T2DM to perform physical activity. The higher education, the better to perform physical activity in patient with T2DM[18].In term of the DM duration of the respondents, the majority of them were diagnosed T2DM since 1-5 years ago. Therefore, the health professionals at the Public Health Centre, Cilegon City, Indonesia were easy to conduct health education to the patient with T2DM regarding the important of physical activity performing on the blood glucose.

The relationship between DM duration and physical activity adherence in patient with T2DM.

Based on the result of this study showed that there was a relationship between DM duration and physical activity adherence in patient with T2DM at the Public Health Centre, CilegonCity, Indonesia ($p < .05$). This was supported with another study which reported that the longer DM diagnosed is the most understand about DM management including dietary behaviour, physical activity, medication and education regularly. Patient with T2DM who diagnosed more than 5 years had a better knowledge to perform DM management well, although there were not compliance and understand regarding DM management on improving blood glucose. Majority of DM patients visited Cilegon Public Health Centre regularly to control their blood glucose and also they received health education about DM management in brief. Then they will be motivated by health professional to control periodically according to their schedule.

The result of this study was opposite with a previous study reported that there was no relationship between DM duration and physical activity adherence in patient with T2DM. This happened due to patient who diagnosed T2DM for a longer than others will feel bored in performing physical activity, dietary behaviours, medication intake. Furthermore, they did not have support from their family member, therefore they feel unhappy to perform DM management regularly especially physical activity[19].

CONCLUSION

Based on the result of the study concluded that there was a relationship between DM duration and physical activity in patient with T2DM at the Cilegon Public Health Centre ($p < .05$).

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CHARACTERISTIC OF TYPE 2 DIABETES MELLITUS PATIENTS IN THE WEST JAKARTA COMMUNITY HEALTH CENTER

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ABSTRACT

Introduction : Diabetes Mellitus is chronic disease that occurs when the pancreas cannot produce enough insulin or when the body cannot produce enough insulin or when the body cannot effectively use the insulin. In 2000, there were 171 million people in the world suffering from diabetes, while in 2014 as many as 8,5% adults aged 18 years and over suffered from diabetes. It is projected that by 2030 the figure will increase to 366 million.
Method:This research was conduct using quantitative descriptive method where each characteristics was describes individually without statistical test
Result:The results showed that average age of respondents is 54-years-old, majority respondents are female (72%), have primary education level (34.5%),Betawi(46.6%), married (91.6)%, have income below average (68%). Nutrition intake data showed that the average of energy intake 1296.22 ± 260/66 kcal, protein intake 51.8 ± 12.62 g, fat intake 46.04 ± 15.48 g and carbohydrate intake 173.59 ± 41.87 g. The results also showed that average body mass index (BMI) of respondents is 25.63 kg/m^2 and the majority of respondent are housewives (53.8%).
Conclusion:patient who have been diagnosed as diabetics are expected to be able to regulate the daily stressor that arise when doing activities, this is overcome by good self-management for example by taking medication regularly, eating food according to recommended diet and routinely doing physical activity.

Keywords: diabetes type 2, characteristics

INTRODUCTION

Diabetes Mellitus is a chronic disease that occurs when the pancreas cannot produce enough insulin or when the body cannot effectively use the insulin. Insulin is a hormone that regulates blood sugar levels. The common effect of an increase in uncontrolled blood sugar levels is the occurrence of hyperglycemia, over time causing serious damage to many body systems, especially nerves and blood vessels[1].

In 2000, there were 171 million people in the world suffering from diabetes[2]. While in 2014 as many as 8.5% of adults aged 18 years and over suffered from diabetes[3]. It is projected that by 2030 the figure will increase to 366 million[2]. In 2012 diabetes was the direct cause of 1.5 million deaths[3].

The classification of diabetes consists of Type 1 Diabetes Mellitus, Type 2 Diabetes Mellitus, Diabetes Mellitus in pregnancy / Gestational Diabetes Mellitus, and other types of diabetes[1]. Type 2 diabetes mellitus constitutes 90% of all diabetes mellitus events[4].

Type 2 Diabetes Mellitus (previously referred to as NIDDM / Non Insulin Dependent of Diabetes Mellitus) occurs because of the ineffective use of insulin in the body. This incident is a result of being overweight and lacking physical activity. Therefore most people in the world suffer from this type of diabetes[3].

The prevalence of diabetes is increasing faster in middle and low income countries[3]. Indonesia which is a developing country with low income has a high risk too. Data said that the prevalence of diabetes in Indonesia in the 1980s at the age above 15 years was 1.5%-2.3%[4]. Whereas according to the results of RISKESDAS (Basic Health Research) there was an increase in the prevalence of diabetes in 2007 by 1.1% to 2.1% in 2013[5].

Diabetes risk factors include genetic factors / family history, age, being overweight / obese, unhealthy diets, lack of physical activity and smoking[3]. Several studies conducted in Indonesia produced several risk factors for diabetes including> 45 years; more weight: (Relative Body Weight) BBR> 110% ideal weight or (Body Mass Index) BMI> 23 kg / m2; hypertension (> 140/90 mmHg); history of DM in the lineage; history of recurrent abortion, giving birth to a disabled baby or a newborn baby> 4000 g; HDL cholesterol <3 mg / dL and / or triglycerides> 250 mg / dL[6].

If diabetes is not managed properly, it will develop into complications that can threaten health and endanger life. Acute complications are a significant contributor to mortality, cost loss and poor quality of life[3].

The illness and the length of the treatment process in diabetic patients can affect physical, psychological, social and welfare functions which are defined as the quality of life (Quality of Life). According to WHO, quality of life is the individual's perception of their position in life in the context of the culture and values in which they live and in relation to their goals, hopes, standards and concerns[7].

METHODOLOGY

This research was conducted at the West Jakarta Health Center. The Puskesmas in West Jakarta consists of 8 sub-district health centers and 66

kelurahan puskesmas. In this study focused only on 8 sub-district health centers because the highest non-communicable disease services were in sub-district health centers. The 8 sub-district health centers included Taman Sari District Health Center, Kebon Jeruk District Health Center, Grogol Petamburan Sub-district Health Center, Palmerah Sub-district Health Center, Tambora District Health Center, Cengkareng District Health Center, Kalideres District Health Center, Kembangan District Health Center. The data used in this study are primary data. The research conducted is a descriptive quantitative study. The study design used a cross sectional study design. The data collection technique used is interview technique.

The variables in this study consisted of demographic characteristics including age, gender, education level, ethnicity, marital status, economic level, intake, nutritional status, and occupation.

ETHICAL CONSIDERATION

This research has gone through an ethical approval process by obtaining a certificate of passing the ethical review no: 218-18.146 / DPKE-KEP / FINAL-EA / UEU / IV / 2018 issued by the Ethics Commission of Esa Unggul University. In this case, the researcher is obliged to maintain the confidentiality of the identity of the respondent by not asking the name and address of the respondent, reporting serious unwanted events, not taking any action to the subject before passing the ethical review and informed consent by the subject.

RESULTS

Variable	Mean	Youngest	Oldest	SD	95% CI
Age	53,82	22	65	6,916	52,94-54,71

Table 1. Age of Respondents

Of the 238 respondents obtained, the average age is around 54 years. Where is the youngest respondent aged 22 years and the oldest is 65 years old. This is distributed in all Puskesmas areas in West Jakarta.

Table 2. Overview of Respondent Intake

Variable	Mean	Min	Max	SD	95% CI
Intake of Energy	1296.22	559.4	2258.4	260.66	1262.2-1329.5
Intake of Protein	51.8	19.8	90.65	12.62	50.19-53.41
Intake of Fat	46.04	12.5	100.2	15.48	44.07-48.02
Intake of Carbohydrate	173.59	75.3	305.5	41.87	168.24-178.94

Data on respondents' intake taken in this study included energy, protein, fat and carbohydrate intake. Where to get the respondent intake data, it is done using the

food recall method. For the mean of each intake including energy intake 1296.22 ± 260.66 kcal, protein intake 51.8 ± 12.62 g, fat intake 46.04 ± 15.48 g and carbohydrate intake 173.59 ± 41.87 g. In energy intake, respondents in this study had the highest energy consumption of 2258.4 kcal, but there were still respondents who only consumed about 559.4 kcal.

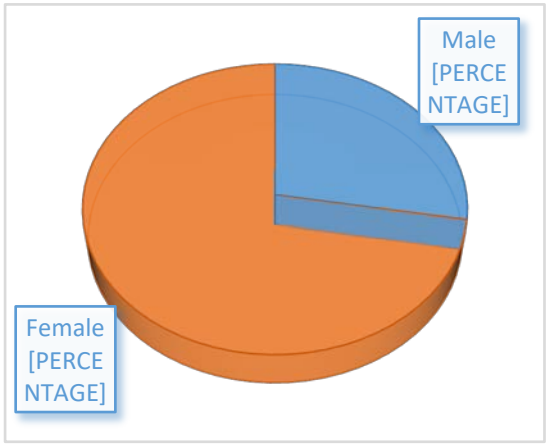
For protein intake, the largest consumption of respondents is 90.65 g while the lowest is 19.8 g. In contrast to protein intake, the highest fat intake consumed by respondents is 100.2 g, while the lowest is 15.48 g. Intake of other macro nutrients, namely carbohydrates consumed by respondents at most amounted to 305.5 g while at least respondents consumed carbohydrates as much as 75.3 g.

Table 3 Overview of Respondents' Body Mass Index

Variable	Mean	Min	Max	SD	95% CI
BMI/Body Mass Index	25.63	16.68	38.83	4.28	25.09-26.18

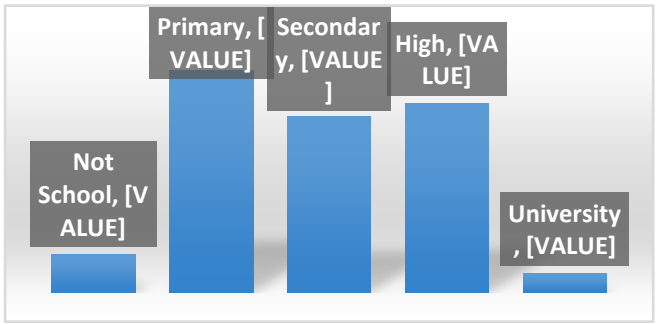
The nutritional status of respondents in this study is stated in BMI (Body Mass Index), where the average BMI of respondents is 25.63 kg / m2 with a standard deviation of 4.28 kg / m2. The lowest BMI of respondents in all Puskesmas areas was 16.68 kg / m2, while the highest BMI of respondents reached 38.83 kg / m2.

Figure 1. Overview of the Respondents' Gender



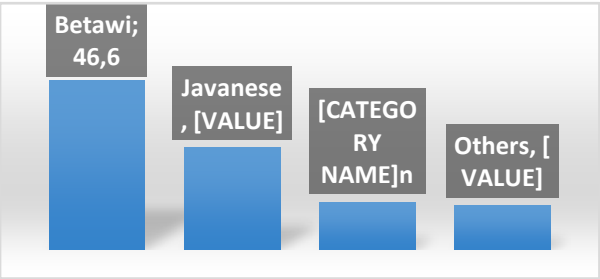
Most of the respondents in this study had female gender which was equal to 72%, compared to men, which was 28%. This proves that women have a higher risk of suffering from diabetes mellitus throughout the Puskesmas area in West Jakarta.

Figure 2. Description of respondents' education level



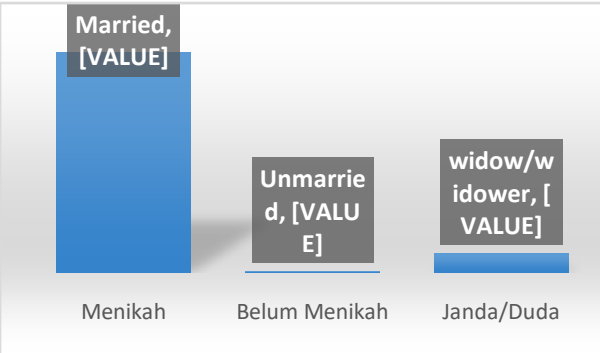
Of the 4 criteria for respondent's education level spread throughout the West Jakarta Puskesmas area, the level of education that is most widely owned is primary school, which is 34.5%, followed by high school at 29.4%. For the lowest education, the number possessed by respondents is University, which is 2.9%.

Figure 3. Overview of Respondent Tribes



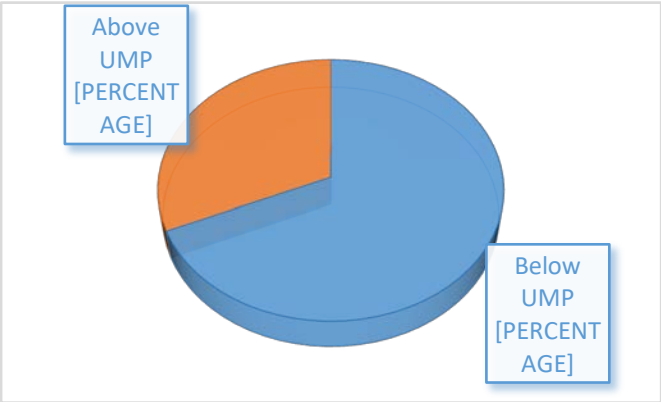
In tribal theory, it influences the risk of diabetes mellitus. Based on the results of the survey conducted in this study, the most dominant tribe of respondents is Betawi with a total of 46.6% of the total respondents, while the Javanese are 28.2%, the next tribe is the Sundanese as many as 13% and the other 12.2% consisting of Batak, Chinese, Manado, Padang and Dayak tribes.

Figure 4. Description of the Respondent's Marriage Status



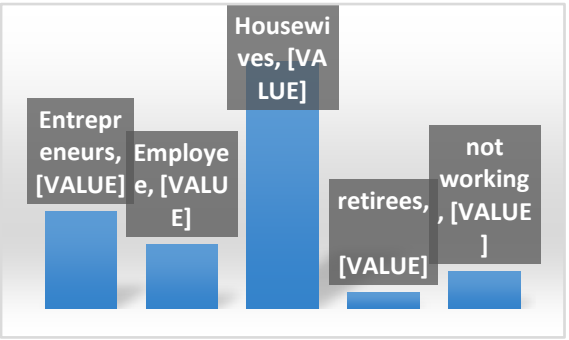
The marital status of most of the married respondents was 91.6%, while the rest with widow / widower marriages only amounted to 8% of the total respondents in the entire West Jakarta Puskesmas area. Respondents with unmarried marital status were 0.4%.

Figure 5. Overview of Respondents' Economic Levels



If seen from the economic status of the majority of respondents is less than the Provincial Minimum Wage (UMP), for the DKI Jakarta area, the UMP of a worker in 2017 is IDR 3,355,750.8 - Based on the results of the study indicate that most respondents have income below the UMP which is 68%. While respondents who had more than UMP income were 32%.

Figure 6. Overview of Respondent's Work



As many as 53.8% of respondents in this study were Housewives, with daily living at home followed by respondents who worked as entrepreneurs 21% and private employees at 13.9%. The jobs that the respondents have the least are not working 8% and retirees at 3.4%.

DISCUSSION

Based on the results of data analysis, it is known that respondents aged over 34 years. From the WHO data it was found that after reaching 30 years of age, blood glucose levels would rise 1-2 mg% / year during fasting and would increase by 5.6-13 mg% / year at 2 hours after eating. Along with increasing age, the elderly experience physical and mental setbacks that cause many consequences. In addition, the elderly also experience special problems that require attention, including more vulnerable to macrovascular and microvascular complications of DM and the presence of geriatric syndrome[9]. Based on this, the respondent's blood glucose was influenced by the age of not being young anymore.

Gender is a factor that cannot be released in the analysis of diabetes mellitus, based on the results of the study found that the majority of respondents had a female gender that is equal to 71%, compared to men which is 29%. This proves that women have a higher risk of suffering from diabetes mellitus compared to men. Lawrence's research results[10]states that women have worse glycemic control than men, besides that, women tend to do unhealthy weight-loss programs which cause a higher risk of drops.According to Tuzun, women tend to have a higher body mass index and body fat percentage[11]because women have a monthly cycle, premenstrual syndrome can cause body fat to accumulate hormonally so that women are more at risk of developing type 2 diabetes mellitus[12].

A person's knowledge is very closely related to education that has been achieved. In people who have low levels of education, knowledge about health is certainly not too deep. This could be the reason they did not know about Diabetes Mellitus more deeply[13]. Most of the respondents in this study had a low level of education, namely high school, so the possibility of having less knowledge about health.

Indonesia has a lot of cultural and linguistic diversity. The Indonesian nation has around 500 ethnic groups with a variety of lifestyles that guide people to behave and fulfill their basic biological needs, including food needs. Lifestyle is a risk factor with different behavioral characteristics in each tribe will affect the increase in the number of people with diabetes mellitus. Malays have a tendency to like coconut milk with the motto "biarrumahruntuhasalgulailemak" which means that the house will collapse from the origin of eating fat curry, while the Batak tribe tends to consume meat and eat

a lot of frequency [14]. Based on the results of data analysis, most of the respondents were Betawi. This has an effect on the consumption of respondents which ultimately also affects blood glucose.

Marriage status is very influential on the incidence of diabetes, people who have a partner, tend to be passionate in self-management such as food consumed, medication, and physical activity [15]. In contrast to the research results obtained in this study, most of the respondents were married (91%), the rest were widows / widowers (9%). This happened because data collection was carried out at the Puskesmas which had the dominant tendency for visitors to be married people.

Palimbunga's research results [16]show that people who have income levels <UMP have a chance of 0.33 times lower to suffer from DM and in this case the level of income is a protective factor against the incidence of Type 2 diabetes. Indonesia as a developing country, with socio-economic changes and tastes eating this results in a changing lifestyle pattern. The diet of the people who used to provide food with many types of food but a little menu of food, but has changed into many dishes with a small selection of foods. Respondents with high income levels consume more outside snacks with their families after going home from work. However, individuals with low income levels can also influence the incidence of Type 2 Diabetes Mellitus. This is due to the difficulty in reaching health services with health costs that can be said to be expensive. In this study, most respondents had a high economic level, so they would likely consume more outside snacks with their families. The World Health Organization (WHO) estimates that more than 347 million people worldwide suffer from diabetes. This number is likely to more than double by 2030 without intervention. Nearly 80% of diabetes deaths occur in low and middle income countries [17].

Type II Diabetes Mellitus is strongly influenced by its food intake so that medical therapy should control glucose, fat and hypertension. Meal planning should be with sufficient nutrient content, along with a reduction in total fat, especially saturated fat. Energy consumption that exceeds the body's needs causes more glucose in the body. Sugar is a source of food and fuel for the body that comes from the digestive process of food. In patients with type II diabetes mellitus, their body tissue is unable to store and use glucose, so blood glucose levels will rise and will become toxic to the body. High blood glucose levels are influenced by high energy intake from food [18]. So it is important for patients with diabetes to pay attention to their food intake such as

energy intake, carbohydrates, protein and fat. Respondents in this study had a fairly high intake compared to their adequacy, and this risked increasing blood glucose levels.

Nutritional status is one of the risk factors for high blood glucose. Respondents in this study mostly have more nutritional status and obesity, so it is very possible to have high blood glucose in people with diabetes mellitus. The results of the study stated that weight gain would potentially pose a risk of hypertension, diabetes mellitus, as well as a combined incidence of hypertension and diabetes mellitus, with the highest risk found in the combined incidence of hypertension and diabetes mellitus compared to single events, both in hypertension alone or diabetes mellitus alone[19].

A person's work influences his physical activity. Groups not working tend to lack physical activity so that there is no movement of the members of the body, this results in easier access to diabetes mellitus. The results of the Chi Square test analysis showed that there was a relationship between the level of work and the incidence of Type 2 DM in outpatients at the RSU GMIM Internal Medicine Polyclinic of Pancaran Kasih Manado. This is because the respondents in this study with the status of not working are mostly housewives and retirees[16].

Based on the results of interviews conducted by respondents working as IRTs, they only do homework in a short time such as cooking, sweeping, washing, etc. But on the contrary they use more time to relax (sitting, watching etc.) so as to enable respondents to lack physical activity. Respondents who worked as retirees were also found in old age so they no longer carried out heavy work. These things affect the incidence of Type 2 DM[16]. This is in line with the results of this study which most of the respondents were housewives.

CONCLUSION

The average age of respondents is 54 years, dominated by 72% female, the highest level of education is elementary school which is 34.5%, the most dominant tribe of respondents is Betawi with a total of 46.6%, almost all respondents are married as many as 91.6%, mostly respondents had less than UMP income of 68%, intake distribution consisted of energy intake 1296.22 ± 260/66 kcal, protein intake 51.8 ± 12.62 g, fat intake 46.04 ± 15.48 g and carbohydrate intake 173.59 ± 41.87 g, nutritional status of respondents in this study stated in BMI,

where the average BMI of respondents is 25.63 kg / m2, 53.8% of respondents in this study are Housewives.

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The Influence of Counseling on Knowledge of Adolescents' Mental Health in Bakti Putra Mandiri Vocational School In Bogor Period of 2018

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Abstract

Background Some facts about adolescents are as follows: Every year, around 20% of teens will experience mental health problemswhich are most often depressed or anxious. Whereas mental health problems occur in 15-22% of adolescents, yet those who get treatment are less than 20%. Diagnosis of mental disorders in adolescents is behavior that either is not in accordance with the level of age or deviates when compared with cultural norms that result in lack or disruption of the function of adaptation (Teenage Health, 2012). **The aim** of this study was to see differences in mental health knowledge before and after counseling. **The research method** was a Quasi Experiment approach by conducting pre and posttests. **The results** obtained that there were differences in knowledge of adolescents which after counseling became better. **Conclusion**: counseling is very influential on the knowledge of adolescents in order to better understand themselves so that mental health will be maintained.
Keywords: Counseling, MentalHealth

A. Background

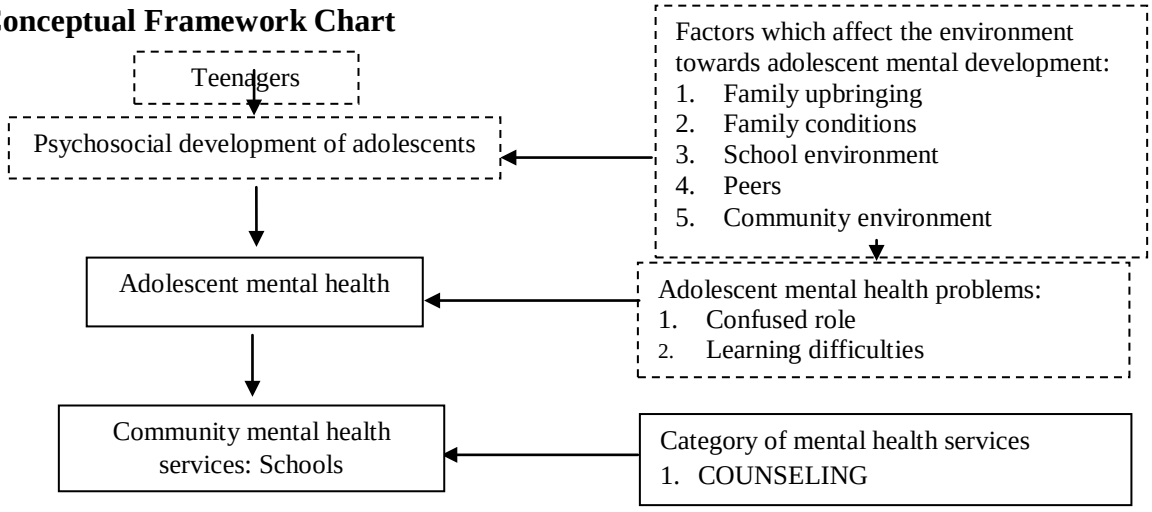
The demographic bonus that is echoed as an issue that will occur in 2025-2030 is a challenge that must be faced by Indonesia so that at the age of reproduction it can be productive and creative. Counseling is one way for students to know about mental health in accordance with the conditions of a very significant change that occurs and is a test in the child's transition to adulthood. Based on data from the National Population and Family Planning Agency (BKKBN) there are 64 million Indonesian teenagers who are vulnerable to have free sexual behavior and to use dangerous addictive substances. In the BKKBN's record, the birth of adolescents' population tended to increase by 48/1000 births. The percentage can illustrate that teenagers nowadays already have free sex (Palembang, 21 October 2013). Some facts about adolescents are as follows: Every year, around 20% of teens will

experience mental health problems which are most often depressed or anxious. Whereas mental health problems occur in 15-22% of adolescents, but those who get treatment are less than 20%. Diagnosis of mental disorders in adolescents is behavior that either is not in accordance with the level of age or deviates when compared with cultural norms which result in lack or disruption of the function of adaptation (Adolescent Health, 2012).

Some Public Health Centers have conducted counseling in junior and senior high schools, once a year during new teaching. They also have conducted counseling in collaboration with several other programmers namely ARU (Children, Youth and Adolescents), Health Promotion, Environmental Health, and Nutrition. Though most of the Public Health Centers in schools only carry out promotion and prevention since until now health centre officers have never found teenagers with severe mental problems.

B. Theoretical Framework

Conceptual Framework Chart



Problems

Based on data from the National Population and Family Planning Agency (BKKBN) there are 64 million Indonesian teenagers who are vulnerable to have free sexual behavior and to use dangerous users addictive substances. In the BKKBN's record, the birth of adolescents' population tended to increase by 48/1000 births. The percentage can illustrate that teenagers nowadays already have free sex (Palembang, 21 October 2013). Some

facts about adolescents are as follows: Every year, around 20% of teens will experience mental health problems which are most often depressed or anxious. Mental health problems occur in 15-22% of adolescents, though only less than 20% get the treatment. Moreover, there is also 30% of learning difficulties.

Objective

The objective of this study is to determine the effect of counseling on student perceptions of mental health in BAKTI PUTRA MANDIRI VOCATIONAL SCHOOL BOGOR in 2018. The results of this study are expected to provide information on mental health problems wisely, to inform negative impact of it for adolescents and to give solutions through counseling.

LITERATURE REVIEW

Adolescent

Adolescence is defined as a period of transition from the development of childhood to adulthood which includes aspects of biology, cognitive, and social change that lasts between the ages of 10-19 years. Adolescence consists of early adolescence (10-14 years), middle adolescence (14-17 years), and late adolescence (17-19) (Aryani, 2010).

Early adolescence is a period characterized by a variety of rapid body changes, often resulting in difficulties in adjusting, and at this time adolescents begin to seek self-identity. **Middle adolescence** is characterized by a body shape that resembles an adult. Therefore, teenagers are often expected to behave like adults, even though they are not psychologically prepared. At this time conflict often occurs, because adolescents have begun to want to freely follow peers who are closely related to identity seeking, while on the other hand they are still dependent on parents**. Late adolescence** is characterized by biological growth that has slowed down, but is still ongoing in other places. Emotions, interests, concentration, and the late teenager's way of thinking are stabilizing. The ability to solve problems has started to increase.

Adolescence comes from the Latin word *adolescare* which

means growing into adulthood (Bobak, 2004). Adolescence is defined as a period of developmental transition between childhood and adulthood which includes biological, cognitive, and social-emotional changes (Santrock, 2003). According to Soetjiningsih (2010) adolescence is a transitional period between the childhood period that begins when sexual maturity is occurring between 12-20 years which will experience biological, cognitive, and social-emotional changes.

Changes experienced by adolescents from the phase of children to adults affect their growth and development. Growth that occurs in adolescents causes physical and hormonal changes. Physical changes seen in adolescents are changes in sound to be greater in adolescent boys and enlarged breasts in adolescent girls (Hurlock, 2004). In adolescents, young men will experience wet dreams and young women will experience menstruation. These will cause many conflicts due to sexual satisfaction needs of adolescents (Sullivan, 1953 in Sunaryo, 2002).

Hormonal changes in adolescents result in them having less stable emotions. Emotions in adolescents arise due to social pressure in the face of new things in the process of development to the adult stage. Emotional imbalances are caused by emotional conditions that are constantly changing so that teenagers tend to not understand themselves. Then teenagers try to get moral support from their peers (Semiun, 2006).

Adolescents in achieving appropriate development tasks need adaptive coping mechanisms (Erickson, 1963 in Semiun, 2006). When adolescents conduct self-identity searches, teens often try various kinds of roles to find roles that suit themselves. This trial and error attitude will plunge teenagers into negative things. Parents as self-identification figures will fade then teens will become other identification figures (Sunaryo, 2010).

According to Havighurst (1988), from the book of Health Polytechnic authors team of the Ministry of Health, Jakarta 1 (2010), there are tasks that must be completed well in each period of

development. Development tasks are things that adolescents must fulfill or do and are influenced by social expectations.

Job description of development contains environmental expectations which are demands for adolescents in behaving. As for the developmental tasks in adolescents are as follows:

a. Accepting conditions and appearance, and using his/her body effectively.
b. Learning plays a role according to gender (as male or female).
c. Looking for new and more mature relationships with peers, either with the same or the opposite sex.
d. Expecting and achieving responsible social behavior.
e. Looking for independence emotionally towards parents and other adults.
f. Preparing for a career and making it economically independent.
g. Preparing themselves (physically and psychologically) in the face of marriage and family life.
h. Developing intellectual abilities and skills to live in society and for the future (in the field of education or employment).
i. Achieving maturity values.

Counseling

1) Definition of Counseling

Counseling is an effort to help other people to recognize themselves, understand the problem, set alternative solutions to problems and make decisions to overcome the problem in accordance with the conditions and self-needs that are recognized not because of coercion (Taufik, 2012).

Referring to some of the previous definitions, it can be concluded that counseling is a relationship between someone giving counseling by an expert (counselor) and individuals who are experiencing problems or who are given counseling (counselee/client) which leads to the overcoming of problems faced by clients, with characteristics as follows (Taufik, 2010):

a. Counseling is a relationship in the atmosphere of teaching and learning
b. The relationship between counselor and condition is face-to-face relationship
c. Counseling is held to solve a problem (problem solving)
d. The purpose of counseling is that the client knows himself/herself, accepts realistically and develops goals, can make choices, and develops wiser plans so that he/she could develop constructively in his/her environment.
e. Counseling provides assistance to individuals to develop knowledge, mental health, and changes in behavior.

Midwifery counseling is a process of learning, fostering good relations, providing assistance, and forming cooperation that are done professionally (in accordance with their fields) by midwives to clients to solve problems, overcome developmental barriers, and meet client needs. According to Yulifah (2009), in the practice of midwifery counseling there must be at least these following elements:

a. Participants

Generally there are two people (midwives and clients), can also be in groups with special roles or professional affiliations, namely midwives who have knowledge in their fields.

b. Aim

Needed to be able to adjust to a better and functioning direction, that is clients can make changes in a better direction.

c. Learning outcomes

Given the importance of midwifery counseling in helping clients achieve independence as individual, social, religious, cultural, and increasingly complex problems faced by clients, then midwives as counselors are required to continue to improve themselves so that the knowledge, skills and

attitudes related to counseling services continue to develop.

The Purpose of Counseling

The purpose of counseling is intended as a service to help clients' problems because client problems which really have occurred will harm themselves and others, so they must be prevented immediately and do not cause new problems to arise. Another problem is that the client is unable and understands about the potential that exists in him/her, counseling tries to help his/her potential, so that it can be used effectively. The purpose of counseling can be explained as follows:

In general, the purpose of counseling is to help clients in trying to change behavior related to health problems, so that the client's health becomes better. Altered knowledge includes the domain of attitudes, the realm of knowledge, and the domain of skills (Supariasa, 2012).

According to McLEOD (2013) the objectives of counseling activities are:

a. Understanding. The understanding of roots and the development of emotional sensitivity, leads to increased capacity to prefer rational control over feelings and actions.
b. Connect with other people. Being more able to form and maintain relationships that are meaningful and satisfying to others.
c. Self-awareness. Become more sensitive to the thoughts and feelings that have been detained or rejected, or develop more accurate feelings regarding how others accept themselves.
d. Accept yourself. The development of a positive attitude towards oneself which is characterized by the ability to explain

experiences that are always the subject of criticism and rejection.

e. Self-actualization or individual. The movement towards fulfilling the potential or acceptance of integration of previously self-contradictory parts of oneself.
f. Enlightenment. Helping clients achieve high levels of spiritual awareness.
g. Problem Solving. Finding solutions to certain problems that cannot be solved by the client him/herself. Demanding general competence in problem solving.
h. Psychology education. Make clients capture ideas and techniques for understanding and controlling behavior.
i. Have social skills. Learn and master social and interpersonal skills such as maintaining eye contact, not interrupting speech, assertiveness, or anger control.
j. Cognitive change. Modify or replace irrational beliefs or thought patterns that cannot be adapted which are associated with self-destructive behavior.
k. Behavior change. Modify or replace maladaptive or destructive behavior patterns.
l. System change. Introducing change by the operation of the social system.
m. Strengthening. With regard to skills, awareness and knowledge that will make the client able to control his/her life.
n. Restitution. Helping clients make small changes to destructive behavior.
o. Production and social action. Inspire in a person the desire and capacity to care for others, share knowledge, and contribute to the common good through community work.

Factors affecting counseling

According to MakmuriMuchlas (2008), there are several factors that influence perception such as:

1. Parenting
2. Social support
3. Past experience

Mental Health

Mental health is the realization of genuine harmony between mental functions and the creation of adaptation between the individual and him/herself and his/her environment based on faith and piety and aims to achieve a meaningful and happy life in the world and the hereafter (Drajat, Z). Mental health is an inner condition that is always in a state of calm, safe, and tranquil. The efforts to find inner calm can be done, among others, through resignation adjustment (complete surrender to God), (Jalaluddin). Mental health is a condition that allows optimal physical, intellectual and emotional development of a person and the development goes hand in hand with the circumstances of others. If mental health is achieved, then individuals have integrity, positive adjustment and identification towards others, achieve behavioral integration and learning individuals, and also accept responsibility and become independent.

Effects of counseling on mental health in adolescents

Counseling is very influential on mental health in the hope that students can be more sensitive and able to adapt to themselves and their environment. Afterward the student will become a tough and productive person.

RESEARCH METHODS

The research was planned to be held at Bakti Putra Mandiri Vocational School Bogor in 2018.The tool in this study is a questionnaire to determine the effect of counseling on mental health of adolescents in Bakti Putra Mandiri Vocational School Bogor in 2018.

Work Step

Data collection was done by previously giving an explanation to the respondents about the purpose of the research, the benefits of respondents' participation in this study, how to fill in the questionnaire with alternative closed answers and ensuring the confidentiality of the respondents.Providing code for data obtained in the field and entering data from research forms into data processing programs, namely SPSS version 17.0. and presented in the form of a table.In order to be able to see the frequency distribution of both dependent variables and independent variables, the table of frequency distribution of all the variable distributions found in this study was made.

The bivariate analysis of this study is the influence before and after counseling. Before the data normality test is carried out, if the data are normally distributed then it will use the *Paired Sample T Test*. However, if the data is not normal, then it will use the *Wilcoxon Test*.

This study was not only analyzed by connecting between independent variables with dependent variables but also pre test and post test with experiment or treatment. To find out whether there was influence between dependent variables and independent variables, it used cross table and identified meaningful variables using the T-test with a significance level of 95%. This means if the P value ≤0.05 then there is significant relationship between pre and post treatment, and if P value is .≥ 0.05 then there is not any significant relationship.

The t-Paired test is used to determine whether there are differences in the average of two free samples. The two samples in question are the same sample yet has two data. (Sujarweni, 2012)

a) If –t table < t count < t table then Ho is accepted. It means that there is no influence of knowledge before and after counseling (Sig > 0.05).
b) If t count < - t table and t count > t table then Ho is rejected which means that there is influence of

knowledge before and after counseling (Sig < 0.05). (Sujarweni, 2012).

Research Results

This study was conducted towards 48 respondents who joined in 1 experimental group. Data retrieval was done by giving pre-test in the form of a watershed questionnaire (mental health) consisting of 30 questions, then the counseling was conducted talking about mental health and types of mental health problems. Afterwards, the post-test questionnaire will be given the same as the previous questionnaire. The purpose of data collection in this study is to determine whether there are changes in mental health before and after counseling.

Univariate Analysis

Univariate analysis in this study was conducted to provide an overview of the distribution of the dependent variables studied.

Adolescent Mental Health before Intervention at Bhakti Putra Mandiri Vocational School Bogor in 2018

Pre Test	N	Percentage (%)
Less	33	68.8
Good	15	31.3

Based on table 4.1, the results of the knowledge level obtained from 48 respondents were as much as 33 respondents got less value (68.8%) while 15 respondents (31.3%) got good value.

Table 4.2
Adolescent Mental Health after Intervention at Bhakti Putra Mandiri Vocational School Bogor in 2018

Post Test	N	Percentage (%)
Less	7	14.6
Good	41	85.4

According to table 4.2, it was known that mental health in adolescents after intervention by giving counseling has increased with only 7 respondents ofless value (14.6%) and as many as 41 respondents (85.4%). with good value.

Bivariate Analysis

Table 4.3

Adolescent Mental Health before and after Intervention at Bhakti Putra Mandiri Vocational School Bogor in 2018

Variable	Mean	SD	SE	P *Value*	N
Pre Test	0.31	0.468	0.083	0.000	48
Post Test	0.85	0.357	0.051		

From table 4.3 above, the results showed that the value of p < 0.05. This indicated that there was an influence of counseling on improving Mental Health before given an intervention and after given an intervention.

Discussion

4.2.2 Univariate Discussion

1. Adolescents Mental Health before Intervention

The results of the distribution of respondents showed that mental health level in adolescents who less know mental health before intervention as many as 33 respondents(68.8%), while as much as 15 respondents (31.3%) in good mental health knew their mental health conditions before being intervened. If we see these results of mental health, adolescents experienced irregularities before giving intervention through counseling because more levels of knowledge were lacking.

This indicates that counseling is part of a health education strategy to get information about good health. In this case, through counseling with the counseling method there will be information about the types of contraception devices.

2. Adolescents Mental health after Intervention

The results showed the distribution of respondents had been known based on the level of mental health in adolescents after being intervened by giving counseling. Once the counseling done, the health status of adolescents had increased to good

with the number of 41 respondents (85.4%). Furthermore, the level of poor mental health was also decreased with the number of 7 respondents (14.6%).

This is due to the provision of counseling to adolescents in Bakti Putra MandiriVocational School for 6 months using leaflets and *SAP*which attract attention, so as to increase the enthusiasm of respondents who read leaflets to find out about kinds of mental health problems. During the provision of counseling conducted by researchers, counselors explained the types of mental health problems in adolescents. Through those processes, it is expected to make respondents understand and increase adolescent knowledge about mental health.

Bivariate Discussion

1. **Effects of Counseling on Mental Health in Adolescents.**

Based on the results of the study, they showed that before (pre-test) and after (post-test) intervention was given by counseling with leaflet media, the value of p = 0.000 or p = <0.05 which means that there was an influence on improving metal health in adolescents before beingintervented and after being intervented. The results of this study indicated that providing counseling to adolescents can increase the knowledge of fertile couples who have not previously known mental health problems.

Conclusions

Based on the study about the influence of counseling on improving adolescents' mental health at Bakti Putra MandiriVocational School Bogor in 2018, it was concluded that the mental health of adolescents before being intervened and after being intervened had been known after conducting research and giving counseling to them about mental health, mental health problems and repetition. In this study there was a significant influence on increasing adolescent knowledge about mental health before and after the intervention which proved with significance value of 0.000 (p *value*<0.05).

Suggestions

1. **For Schools/Counseling officers (BK)**

   Schools/counseling officers are expected to provide complete information about the mental health problems in adolescents, the types and management. It is also necessary to improve the competence of schools' counseling officers on providing mental health counseling and on maximizingthe counseling to female students.

2. **For Adolescents**

   It is expected for adolescents to be able to strengthen understanding of themselves, their families and the environment in conducting relationships and living their lives.

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ABSTRACT

FACTORS RELATED TO MOTHERS' ANXIETY TO FACE HIV EXAMINATION AT KERANGGAN PUBLIC HEALTH CENTER SETU DISTRICT, SOUTH TANGERANG CITY2017

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ABSTRACT

Introduction: Cases of HIV / AIDS among the community, especially women of reproductive age have an increasing tendency, so it can be a potential threat to public health in Indonesia. According to the Directorate General of P2P Ministry of Health RI, the number of HIV / AIDS cumulative cases in Indonesia occurred in 1987-2015 in 208,909 cases of HIV with 14,234 deaths. **Objective:** This study aims to determine the factors that affect the anxiety of pregnant women in HIV testing at Puskesmas Keranggan.

Method: The study design was cross sectional with the population of all pregnant women in the work area of Puskesmas Keranggan (89 people) and the sample was 56 people. Data analysis with univariate and bivariate analysis with Chi-square test using computer program.

The results of the study: The results showed there were 33.93% of pregnant women experiencing anxiety. However, the results of statistical tests show that there is no significant relationship between knowledge, husband support, print media, electronic media with anxiety of pregnant women in HIV examination at Puskesmas Keranggan 2017. The result of p value test showing all variables have p value> alpha (0,05) that is: p value of knowledge = 0,157> alpha (0,05); P value of husband support = 0, 982> alpha (0,05); P value print media = 0, 191>
alpha (0,05); P value of electronic media = 0, 192> alpha (0,05).

Conclusions and Suggestions: To increase the participation of pregnant women in the HIV examination, Puskesmas should be proactive to conduct public education either through Posyandu activities, film screenings or provide posters, banners, leaflets and the like relating to the importance of HIV testing.

Keywords: HIV, Anxiety, Knowledge, Husband Support, Media

INTRODUCTION

HIV / AIDS is one of the biggest killer diseases in the world. This is because in January 2006, according to UNAIDS and WHO, it is estimated that AIDS had caused the deaths of around 25 million people since it was first recognized on June 5, 1981. Since HIV became a pandemic in the world, an estimated 5.1 million children in the world have been infected with the virus HIV. Every year around 400,000 babies are born infected with HIV due to transmission from mother to child (vertical transmission). According to a report by the Directorate General of P2P - Ministry of Health, the number of cumulative cases of HIV / AIDS in Indonesia in the period beween 1987 - 30 June 2015 was 291,465 consisting of 208,909 HIV and 82,556 AIDS with 14,234 deaths. While the stimation of HIV / AIDS cases in Indonesia reached 600,000, which was detected only half. Of the detected numbers, only 70,000 took antiretrorival drugs (ARVs). The data raises many concerns because the threat of HIV is a latent danger for pregnant women that is difficult to detect without going through early examnation (Ministry of Health, 2015). Based on the explanation above, the Government issued Minister of Health regulation number 21 of 2013 concerning "HIV and AIDS Management" and Health Minister Regulation Number 51 of 2013 concerning "Guidelines for Preventing HIV Transmission from Mother to Child". This means that all pregnant women are required to carry out HIV examination. But not all pregnant women are willing to take the HIV test. This is because pregnant women feel anxious or afraid of the results of their examination.

In 2016-2017 in the work area of the Keranggan Public Health Center there were already 5 HIV cases, consisting of 2 productive age women and 3 men. Up to the , they are still under the supervision of the health staff of the Public Health Center. Therefore, in order to anticipate the next occurrence of similar cases and in the context of implementing the Minister of Health Regulation on HIV, the Public Health Center has organized a Mother to Child HIV Transmission Prevention Program (PPIA). Every pregnant woman who comes to the Puskesmas is recommended by officers to take an HIV examination. The PPIA program is implemented from January 2016 to April 2017, it turns out the participation rate of pregnant women who are willing to take an HIV examination is still low, with 489 pregnant women out of 868 pregnant women or an average of 56.34% (Keranggan Health Center, 2016).

The low level of participation is possibly because there is no obligation for pregnant

women to take an HIV test. According to Appendix No.Permenkes No. 46 of 2014, officers were only obliged to offer pregnant women to take an HIV test as part of an integrated ANC care package that starts from the first ANC visit until before delivery. If the mother refuses to be tested, the officer can carry out HIV pre-test counseling or refer to voluntary counseling and testing services.

Based on the description above, it is necessary to conduct research to determine what factors are related to the anxiety of pregnant women toward HIV testing Kerangan Public Health Center, South Tangerang City in 2017.

This study aims to determine the factors related to the anxiety of pregnant women in HIV testing around Keranggan Public Health Center, South Tangerang City in 2017.

METHODOLOGY

This study uses an Analytical Observational type research, using cross sectional approach. This study uses primary data obtained directly from pregnant women by conducting a general examination, and direct interviews conducted using a questionnaire containing questions about the factors that were related to anxiety of pregnant women in HIV testing in the South Tangerang City Public Health Center 2017.

There were 60 respondents as samples of the research, who were pregnant women in the Keranggan Health Center who were in accordance with the inclusion criteria. The technique used was Notoatmodjosampesaize (2010).

ETHICAL CONSIDERATION

RESULTS

Table 4.1
The Frequency Distribution of Anxiety, Knowledge, Husband Support, Mass Media Information, and Health Personal Support toward Pregnant Mother about HIV Testing at Keranggan Public Health Center South Tangerang 2017

Independent Variabls	Category	Frequency	Percentage (%)
Anxiety of Pregnant Mother	Not Anxious	37	61,7
	Anxious	23	38,3
Knowledge about HIV	Bad	32	53,3
	Good	28	46,7
Husband Support	Less Supporting	32	53,3
	Supporting	28	46,7
Mass Media Information	Not exposed	21	35,0
	Exposed	39	65,0
Health Personal Support	Less Supporting	20	33,3
	Supporting	40	66,7

Based on Table 4.1, it can be concluded that from 60 respondents there were 37 respondents of pregnant women (61.7%) who did not experience anxiety about HIV testing and 23 respondents (38.3%) pregnant women experienced anxiety about HIV testing. 32 respondents (53.3%) who had less knowledge about HIV and 28 respondents (46.7%) had good knowledge about HIV. 32 respondents (53.3%) who lacked husband's support for HIV testing and 28 respondents (46.7%) who received support from their husbands on HIV testing. 21 respondents (35.0%) who were not exposed to mass media information and 39 respondents (65.0%) were exposed to mass media information. 40 respondents (66.7%) pregnant women who received support from health workers and who did not receive the support of good health workers as many as 20 people (33.3%).

Table 4.2
Relationship between Knowledge and Anxiety among Pregnant Women in HIV Examination at Keranggan Public Health Center 2017

Pengetahuan	Kecemasan				Total		p value	OR (Odds Ratio)
	Cemas		Tidak Cemas		N	%		
	n	%	n	%				
Kurang	24	75,0	8	25,0	32	100	0,034	3,462
Baik	13	46,4	15	53,6	28	100		
Total	37	61,7	23	38,3	60	100		

Based on table 4.2, it can be concluded that from 32 respondents those who had less knowledge were 24 respondents (75.0%) who had anxiety about HIV testing and from 28 respondents those who had good knowledge were 13 respondents (46.4%) who had anxiety about examination HIV.

The statistical test results showed that p-value = 0.034 so that p <α 0.05, then Ho is rejected, which means that there is a significant relationship between knowledge and anxiety of pregnant women in examining HIV in Keranggan Public Health Center 2017. OR = 3.462 which means that respondents who have less risk of knowledge are 3.4 times more likely to experience anxiety than respondents who have good knowledge.

Table 4.3

Relation between Husband's Support and Anxiety among Pregnant Women in HIV Examination at atKeranggan Public Health Center 2017

Husband Support	Kecemasan				Total		p value	OR (Odds Ratio)
	anxious		Not Anxious		N	%		
	n	%	n	%				
Kurang	25	78,1	7	21,9	32	100	0,008	4,762
Mendukung	12	42,9	16	57,1	28	100		
Total	37	61,7	23	38,3	60	100		

Based on table 4.3, it can be concluded that from 32 respondents those who had less husband support were 25 respondents (78.1%) who had anxiety about HIV testing and from 28 respondents those who had good husband support were 12 respondents (42.9%) who had anxiety against HIV testing. The statistical test results showed that p-value = 0.008 so that p <α 0.05, then Ho is rejected, which means there is a significant relationship between husband's support and anxiety of pregnant women in examining HIV in 2017. The result of OR = 4.762 means that respondents who lack support from their husbands are at risk 4.7 times more likely to experience anxiety compared to respondents who receive support from their husbands.

Table 4.4

Relation between Mass Media Information and Anxiety among Pregnant Women in HIV Examination at Keranggan Public Health Center in 2017

Media Massa	Kecemasan				Total		p value	OR (Odds Ratio)
	Anxious		Not Anxious		N	%		
	n	%	n	%				
TidakTe rpapar	16	76,2	5	23,8	21	100	0,104	2,743
Terpapar	21	53,8	18	46,2	39	100		
Total	37	61,7	23	38,3	60	100		

Based on table 4.4, it can be concluded that out of the 39 respondents those who were

exposed to mass media were 21 respondents (53.8%) who experienced anxiety about HIV testing and from 21 respondents those who were not exposed to mass media were 16 respondents (76.2%) who had anxiety about HIV testing.

The statistical test results showed that p-value = 0.104 so that p> α 0.05, then Ho is accepted, which means that there is no significant relationship between information on mass media and the anxiety of pregnant women in HIV testing at the 2017 Public Health Center.

Table 4.5

Relation between Health Personals' Support and Anxiety for Pregnant Women in HIV Examination at Keranggan Public Health Center in 2017

Dukungan Tenaga Kesehatan	Kecemasan				Total		p value	OR (Odds Ratio)
	Cemas		Tidak Cemas		N	%		
	n	%	n	%				
Kurang Mendukung	10	50,0	10	50,0	20	100	0,261	0,481
Mendukung	27	67,5	13	32,5	40	100		
Total	37	61,7	23	38,3	60	100		

Based on table 4.5, it can be concluded that out of the 40 respondents who had health personnel support were 27 respondents (67.5%) who had anxiety about HIV testing, and out of the 20 respondents those who received less support from health workers were 10 respondents (50.0%) who have anxiety about HIV testing.

The statistical test results showed that p-value = 0.261 so that p> α 0.05, then Ho is accepted, which means that there is no meaningful relationship between the support of health personals with anxiety among pregnant women in HIV examination at Keranggan Public Health Center in 2017.

DISCUSSION

UnivariateAnalisys

1. **Anxiety among Pregnant Mother**

There are still 61.7% of pregnant women who are not anxious about HIV testing at Keranggan Public Health Center in 2017. This is because the support from health personals is maximized and there are many pregnant women who understand the importance of HIV testing.

2. **Knowledge about HIV**

There are still 53.3% of pregnant women who have less knowledge about HIV. The low level of knowledge of pregnant women may be due to their lack of information about HIV. In the work area of Keranggan Public Health Center there are 19 Posyandu (Integrated Health Care) that are spread in two sub-districts. The extent of the area and the number of posyandu locations but with the limited time and number of health personals in the Keranggan Health Center led to less optimal counseling in all posyandu.

Meanwhile, the presence of pregnant women at the posyandu is also still low. So, this could be one of the causes of the low knowledge of pregnant women about the importance of HIV testing for pregnant

women.

3. Husband' Support

There are still 53.3% of pregnant women who lack the support of husbands in examining HIV at Keranggan Public Health Center in 2017. During the examination of pregnant women, most husbands do not want to accompany their wives. This shows that the husband's concern is still low, so that support for HIV testing is also low. In fact, husband's support in the opinion of experts is very important. Based on the results of interviews with pregnant women who participated in the examination, the support obtained from the husband or family will lead to feelings of calm, pleasure, positive attitude.

4. Information from MassMedia

There are still 65% of pregnant women exposed to information about the importance of HIV testing for pregnant women through mass media. This is possible because the UPT Keranggan Public Health Center has already had a complete counseling facility on HIV in the form of back sheets and banners installed in each Sub-district and Integredted Health Care in the working area of Kranggan Public Health Center.

5. Health Presonal Support

There are 66.7% of pregnant women who have the support of health workers. This figure shows that the support of health workers is large enough for the participation of pregnant women in HIV testing.

Bivariate Analisys

1. Relation between Knowledge and Anxiety among Pregnant Women in HIV Examination at Keranggan Public Health Center in 2017

Based on the results of the study, it can be concluded that there is a significant relationship between knowledge and anxiety of pregnant women in HIV testing at Keranggan Public Health Center in 2017.

The results of this study are in line with the results of research conducted by LaelatulMubasyiroh (2013) entitled "Relationship between Knowledge Levels and Anxiety of Primigravida Pregnant Women About Sexual Relationships During Pregnancy in Jatibarang District Health Center, Brebes Regency" whose results showed a significant relationship between knowledge and anxiety. Notoatmodjo (2003) also states that low knowledge results in a person experiencing stress easily. Conversely, the more knowledge a person has will affect the level of anxiety.

The author's analysis stated that knowledge has an influence on one's anxiety. The low level of knowledge can cause anxiety levels to be higher than someone who has sufficient knowledge. A person will easily feel anxious when facing problems that are not mastered

or there is not enough knowledge about the problem. The HIV problem is not a trivial problem because the amount of information that gives rise to wrong perceptions when getting an incorrect and reliable source of information.

2. Relationship between Husband's Support and Anxiety among Pregnant Women in HIV Examination at Keranggan Public Health Center

Based on the results of the study, it can be concluded that there is a significant relationship between husband's support and the anxiety of pregnant women in HIV testing at Keranggan Public Health Center in 2017.

The results of this study are in line with those conducted by Nasihah and Hidayah (2015) which showed that there was an influence between husband's participation in the anxiety level of pregnant women in Tejoasri Village. Similarly, the results of Rohmah's (2016) study showed that husband's support was significantly associated with pregnant women visiting HIV / AIDS examinations in the working area of BergasPublic Health Center in Semarang Regency.

This is also in line with Imam's theory (2005) which states that the involvement of husbands from the beginning of pregnancy until the delivery will reduce the anxiety of pregnant women.

According to the author's observation, husband's support is needed by pregnant women, especially during HIV testing, but many of them do not want to accompany pregnant women during the HIV testing. Thus it can be said that husbands lack support, so many pregnant women feel anxious when facing examinations.

3. Relation between Mass Media Information and Anxiety among Pregnant Women in HIV Examination at Keranggan Public Health Center in 2017

Based on the results of the study, it can be concluded that there is no significant relationship between mass media information and the anxiety of pregnant women in HIV testing at Keranggan Public Health Center in 2017.

The results of this study are in line with the results of a study conducted by Catarina et al (2011) in their study entitled "The Influence of Delivery Pamflet on the Level of Knowledge and Anxiety of Pregnant Women" which showed that giving pamphlets did not have a significant effect.

The unsignificance of the relation between mass media and anxiety among pregnant women in examining HIV at Keranggan Public Health Center in 2017 according to the authors shows that mass media is not the only factor that causes anxiety in pregnant women. According to the author's observation, mass

media broadcast programs, especially television media, rarely display or promote things related to HIV. The lack of such shows is very possible. The distribution of information, especially for pregnant women, is very lacking. Meanwhile, other electronic media such as Youtube shows that provide more global information on the internet are still an obstacle due to maternal care, technology and costs.

4. Relationship between Health Personals' Support and Anxiety among Pregnant Women in HIV Examination at Keranggan Public Health Center in 2017

Based on the results of the study, it can be concluded that there is no significant relationship between the support of health personals and the anxiety of pregnant women in HIV testing at Public Health Center in 2017.

The results of this study are in line with the research conducted by Ayuningtias (2013) which can be concluded that there is no relationship between the supports of health workers with the level of anxiety of parents at RT 23 KelurahanSidomulyoSamarinda at the 0.05 level of significance.

The results of the author's analysis that health personnel support did not affect the anxiety of pregnant women in HIV testing because the Keranggan Public Health Center has a sufficient number of health workers and is able to provide motivation, good communication with pregnant women and open 24-hour counseling services 7 days a week. Pregnant women can consult anytime without any time limit and free of charge.

CONCLUSION

Based on the results of the research and discussion, conclusions can be drawn from the study entitled "Factors Associated with Anxiety in Pregnant Women in HIV Examination Keranggan Public Health Center Setu District South Tangerang City in 2017" as follows:

1. Anxiety in pregnant women on HIV examination is 38.3%.
2. 53.3% of pregnant women have less knowledge about HIV.
3. Husband's support for HIV examination in a Public Health Center is 53.3%
4. Pregnant women who get mass media exposure are 65.0%
5. 66.7% of pregnant women receive support from health workers.
6. Husband's knowledge and support factor has a significant relationship to the anxiety of pregnant women in HIV testing with p value of knowledge of 0.034 and husband's support of 0.008
7. The mass media and the support of health

workers do not have a significant relationship to the anxiety among pregnant women with p value of mass media 0.104 and the p value of health workers support 0.261

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THE EFFECT OF IRON WITH COMBINATION OF ORANGE EXTRACT ON HEMOGLOBIN AMONG ANEMIC PREGNANT WOMEN IN NUSA TENGGARA BARAT IN 2017

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ABSTRACT

Background: Iron deficiency is the most common pathologic cause of anemia among pregnant women. Pregnant women with clinically significant iron deficiency may present with fatigue, weakness, pallor, tachycardia, and shortness of breath. An intervention is needed to improve hemoglobin among anemic pregnant women.
Purpose: this study aims to know the effect of iron with orange extract on hemoglobin among anemic pregnant women in the Brang Rea health centers, Sumbawa Barat Regency, Nusa Tenggara Barat Province in 2017.
Methodology: The design is quasy experimental study. The population were 30 pregnant women who were anemic at the Brang Rea health center. A total population was used to be a sample. 30 anemic pregnant women were devided into experiment and control group. The data were analyzed using descriptive statistics and inferential statistics.
Results: The results showed that there was a significant difference of hemoglobin before and after intervention (p = 0.001, t=-21.1), and there was a significant difference of hemoglobin between the experimental group and the control group (p = 0.001, t= 5.19).
Conclussions and recommendation: consuming iron and orange extract could increase hemoglobin among anemic pregnant woman. Nurses and midwives need to share the health education about the way to consume iron to prevent anemia among pregnant women.

Keywords: anemia, pregnant women, iron, orange extract, vitamin C

INTRODUCTION

Iron deficiency is the most widespread nutritional deficiency in the world. It is the most common cause of anaemia among pregnant women[1]. Overall, prevalence of iron deficiency in pregnant women in the United States is 18%, with anemia in 5% of pregnant women and rates of iron deficiency increasing across trimesters from 6.9% to 14.3% to 28.4% (Mei et al., 2012).

Beside iron deficiency, other factors related to anemia among pregnant women are malaria, hookworm infection, and schistosomiasis; micronutrient deficiencies including folic acid, vitamin A, and vitamin B12; and genetically inherited haemoglobinopathies such as

thalassaemia[2]. Iron deficiency may lead to maternal morbidity through effects on immune function with increased susceptibility or severity of infections, poor work capacity and performance and disturbances of postpartum cognition and emotions[6,7].

Clinical trials of prenatal iron supplementation have shown improvement in haemoglobin concentration, however evidence of an effect on birth outcomes has been found to be inconclusive. Anaemia is defined by Hb < 110 g/l in the first trimester, <105 g/l in the second and third trimester, and < 100 g/l in the post-partum period[3]. In Indonesia, majority of anemia in pregnancy was caused by iron deficiency (37.1%) and bleeding (30.3%), which can overcome the effects of Low Birth Weight (10.2%) and Abortions (Ministry of Health of Indonesia, 2014)[4]. In absorption of iron (Fe) vitamin C is very necessary. Thus, vitamin C plays a role in the formation of hemoglobin, so it can deal with anemia. Vitamin C is very easy to be found in Indonesia, such as in some kind fruits. One fruit that is rich in vitamin C is sweet orange fruit with a vitamin C content of 49 mg. Ascorbic acid (vitamin C) is the most important nutrient in orange juice. Previous study stated that Vitamin C has an effect on HbA1C among patients with type 2 diabetes mellitus[5]. Effective management is needed to prevent maternal and pregnancy outcomes. There is inconclusive evidence that prenatal supplementation for IDA improves maternal or infant clinical health outcomes, but supplementation may improve maternal hematologic indices[8]. Thus, this study aims to analyze the effect of iron with combination of orange extract on Hemoglobin among pregnant women in Nusa Tenggara Barat in 2017.

METHODOLOGY

The design of this study is quasy experimental with a control group. This study was conducted in Brang Rea Health Centre, Sumbawa Barat Regency Nusa

Tenggara Barat Province Indonesia from January to May in 2018. The population were 30 pregnant women who were anemic. A total population was used to define the sample size. The inclusion criteria are anemic pregnant women and be able to participate the study. While, the exclusion criteria are anemic pregnant women with some diseases such as leukemia, intestinal worms, malaria, pulmonary tuberculosis, mall nutrition, and bleeding. In addition, anemic pregnant women who resign as samples for certain reasons were excluded from the study. The instruments used in this study is Hemoglobin test equipment. It was use to analyze the hemoglobin.

The intervention is iron tablet supplementation with orange extract. The intervention was delivered for 30 days. The researcher checked the hemoglobin before the intervention and noted.

The process of extracting orange as follows; (1) squeeze 2 oranges fruits (100 g) into a glass that is 100 ml without added water and sugar; (2) stir with a tablespoon; (3) drink a glass of orange extract a day with iron tablet (200 mg) in the morning after breakfast for 30 consecutive days. After 30 days of intervention the researcher re-checked the hemoglobin and noted. The data were analyzed using a descriptive statistics and inferential statistics. Paired sample t-test was used to analyze the difference of hemoglobin within group, while an Independent t-test was used to analyze differences of hemoglobin between groups. A normality test was conducted before using inferential statistics.

ETHICAL CONSIDERATION

This study has gained the ethical consideration by the ethic committee of Faculty of Health Science Universitas Nasional with the letter number is 994/D/Fikes/XI/2017 and by the Local Development Plan and Research Agency of Sumbawa Barat Regency with the letter number is 070/117/Bappeda Litbang/XI/2017.

RESULTS

1. **The differences of the level of Hemoglobin before and after intervention in the experiment group**

   Table 1. The differences of the level of Hemoglobin before and after intervention in the experiment group

No	Kadar Hemoglobin	Mean	Standard Deviation	T	*p*
1	Hemoglobin Pre-test	9.07	0.71	-21.15	0.000
2	Hemoglobon Post test	11.57	0.47		

The table 1 shows that the average (mean) difference between hemoglobin levels before the intervention is 9,067 g/dl and after the intervention is 11,57 g/dl. It can be concluded that the Hemoglobin level was increased after intervention. In addition, it can be concluded that there is a significance difference of hemoglobin levels within group or before and after intervention (p= .001, t = -21,15).

2. The differences of level of Hemoglobin between experiment and control group after intervention

   Table 2. The differences of Hemoglobin level between experiment and control group after intervention.

No	Group	Mean	SD	t	p
1	Experiment	11.57	0.47	5.199	0.001
2	Control	10.6	0.45		

The table 2 shows that the average (mean) difference between group. The hemoglobin levels in the experiment group is 11.57 g/dl and the hemoglobin level in the control group is 10.6 g/dl. It can be concluded that the Hemoglobin level of experiment group was higher than control group. In addition, it can be concluded that there is a significance difference of hemoglobin levels between experiment and control group (p= .001, t = 5.199).

DISCUSSION

The result showed that the hemoglobin was increased after intervention. It was caused by the effect iron consumption together with orange extract. Orange fruits contained the vitamin C which is useful in absorbing iron. This is consistent with a previous study which found that consumption of nonheme source foods with vitamin C is needed to convert folic acid into an active form, increase iron absorption, and help form connective tissue[10].

In the opinion of the researchers, the differences in the results of these studies are thought to be due to risk factors for anemia such as lack of nutritional intake, lack of iron absorption, bleeding, and due to chronic diseases. As an illustration of the Brang Rea Health Center in rural areas, most pregnant women still lack knowledge about the benefits of Fe and the danger of anemia. This is thought to be another factor that can trigger a high incidence of anemia in the Brang Rea Health Center as study revealed that iron deficiency can occur due to unbalanced food consumption or disruption of iron absorption which is one of the factors causing anemia[11].

Based on observations in research conducted by the researchers at the Brang Rea Health Center, it was found that most anemia occurred due to economic status factors and lack of knowledge of pregnant women about anemia, so the majority of respondents lacked nutritional intake needed during pregnancy. This is in accordance with the theory of the causes of the aforementioned anemia. Therefore, pregnant women need to be given education about nutrition needed during pregnancy and the danger of anemia to reduce the incidence of anemia.

Based on the results of the study, it is known that the average hemoglobin level before and after the intervention has increased. From the statistical test using paired t-test p-value = 0.000 showed that there were significant differences before and after administration of Fe tablets with sweet orange juice in anemic pregnant women. Vitamin C plays a role in the formation of hemoglobin thus accelerating the healing of anemia. Sweet oranges are rich in nutrients, especially vitamin C and Bioflavonoids which are important to prevent bleeding, mental and physical deterioration, and reduce the presence of bruises[12].

This is in line with the research based on the results of independent t-test and paired t-test. The results of the analysis showed that there were significant differences (p = 0.001) before and after treatment[13]. The difference in hemoglobin levels between the two treatment groups also showed a significant difference (p - 0.001), namely the treatment group I experienced an increase in hemoglobin level of 0.91 gr% while the treatment group II was 0.43 gr%. So that there is a significant effect on Fe, which is accompanied by vitamin C to help increase hemoglobin levels.

The results of this study are different from (Purwaningtyas and Prameswari, 2017) in his study entitled "Factors of Anemia Occurrence in Pregnant Women in Undaan Health Center

in 2017" which among the variables stated that there was no relationship between iron coverage and vitamin C with the incidence of anemia in pregnancy[14]. The differences in the results of the study were allegedly due to other factors which was not examined such as the compliance of women in consuming Fe tablets, women knowledge about anemia and how to consume Fe tablets.

The majority of respondents did not know how to consume Fe tablets correctly so that this affected the mindset of pregnant women to consume Fe tablets with anything that could affect iron absorption, respondents usually consumed Fe tablets with milk, and tea or usually 5 minutes after take Fe tablets, so that it can inhibit iron absorption. With these habits, it can trigger anemia.

Based on observations of the researchers, some pregnant women consuming Fe tablets with sweet tea or milk for reasons to reduce the nausea they experienced because of the effects of Fe tablets. This habit can shake the absorption of iron so that it can trigger anemia. Therefore, health workers need to encourage pregnant women to consume Fe tablets with sweet orange water because the content of vitamin C in sweet orange juice can help absorb iron, so it can accelerate the increase in hemoglobin levels of pregnant women.

From the results of the independent t-test conducted with a confidence level of 95%, it was found that the hemoglobin levels of the two treatment groups were significant ($p = 0.000$). Which means that there are significant differences between the two treatment groups. This is in accordance with a previous research which found that anemia in pregnant women is caused by iron deficiency resulting in a lack of hemoglobin (Hb) where iron is one of the constituent elements[15].

Many factors affect absorption, one of which is organic acids, such as vitamin C which greatly helps the absorption of iron non hem by changing the shape of

ferries into ferrous forms, ferrous forms are more easily absorbed, therefore, it is highly recommended to eat food sources of vitamin C every meal[16]. This is consistent with research that based on a comparative analysis of the effects of supplementation of iron tablets with and without vitamin C on hemoglobin levels in pregnant women with gestational age 16-32 weeks and found that there are differences in the effect of supplementation of iron tablets with and without vitamin C on hemoglobin levels in pregnant women[17].

Based on observations in research conducted by the researchers at Brang Rea Health Center, the lower the women knowledge about how to consume Fe tablets correctly, the higher the chance for anemia, because how to consume Fe tablets correctly affects the process of iron absorption, where hemoglobin can increase if you experience absorption of iron. In addition, it will also disturb the nutritional intake of pregnant women.

Conclusions

The conclusion is the iron tablet consumption with orange extract has a significant effect on improving hemoglobin among anemic pregnant women. It is suggested to pregnant women to consume daily iron tablet with orange extract to improve anemia and prevent maternal and neonatal complications. This study has no control over the quality of oranges as an experimental material, so there is no known similarity in the quality of oranges given to respondents.

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THE CORRELATION OF LOW BIRTH WEIGHT (LBW) WITH THE INCIDENCE OF NEONATAL SEPSIS AT DR. H. ABDUL MOELEK HOSPITAL, LAMPUNG IN 2017

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ABSTRACT

Introduction: Infection is one of the leading causes of high maternal and neonatal mortality. Low Birth Weight (LBW) be the one factor who can influence the disease in infants. The aims of this study to determine the correlation between Low Birth Weight (LBW) with the incidence of Neonatal Sepsis at Dr. H. Abdul Moeloek Hospital, Lampung in 2017.
Method: This study used an analytical design with a case-control approach. The population of this study is the case population of 123 infants and control as many as 1363 infants. This study used the Simple Random Sampling technique to take 94 infants as case samples and 94 infants as control samples. Data is obtained by looking at medical records and processed by univariate and bivariate analysis.
Results of the study showed that as many as 63 infants (67%) in the case group have low birth weight (LBW), while 53 infants (56.4%) in the control group did not have LBW (p-value = 0.002 and OR = 2.627). Conclusion: It means there is a correlation between Low Birth Weight (LBW) and the incidence of neonatal sepsis. The suggestion to the hospital to make early detection of antenatal care so that it would not complicate childbirth, newborns and provide counseling to maintain health in pregnancy as well as how to care for infants with neonatal emergencies.

Keyword: Low Birth Weight, Neonatal Sepsis

INTRODUCTION

Infection is one of the leading causes of high maternal and neonatal mortality. Mothers who receive medical and health services, whether in a hospital or maternity clinic, are faced with the risk of infection. The incidence of disease can prevent and the occurrence minimized by efforts to implement infection prevention measures in providing health services[1,2].

Prevention of infection is essential in providing complete care given to mothers and newborns. It must be carried out routinely during antenatal examinations, especially when assisting and during childbirth. These actions must be applied in every aspect of care to minimize and reduce risk contracted or infected with microorganisms that cause dangerous diseases and nosocomial infections against mothers in particular and newborns[3,2,4].

According to the World Health Organization (WHO) in 2013, there were 10 million neonatal deaths every year from 130 million babies born. Child mortality in 2013 amounted to 4.6 million (74% of all toddler deaths), occurring in the first year of life. The highest incidence in the African region is 60 per 1000 live births, five times higher than the European area which is 11 per 1000 od live birth[5]. The infant mortality rate (IMR) in the world has now declined from the estimated level of 63 deaths per 1000 live birth in 1990 to 34 people per 1000 live birth in 2013. The Basic Indonesian Health Survey in 2007 received an infant mortality rate as many as 32 per 1000 of live birth. On the other hand, the national infant mortality rate has a target

for 2015 as many as 23 per 1000 live birth[6]. Meanwhile the Infant Mortality rates (IMR) at Lampung in 2012 (based on the result of Indonesian Health Demographic Survey) showed as many as 20 per 1000 live birth of neonatal deaths, as many as 10 per 1000 live birth of postneonatal deaths, and 8 per 1000 live birth of child mortality[7,8].

The incidence of sepsis in developing countries is still quite high (1.8 - 18/1000) than in developed countries (1 - 5/1000 births). In male infants, the risk of sepsis is two times greater than female infants. The incidence of sepsis also increases in toddler family development and low birth weight. In low birth weight (<1000 gr) sepsis incidence occurs in 26/1000 births and this condition is different from birth weight babies between 1000 - 2000 gr whose frequency is between 8 - 9/1000 births. The risk of LBW mortality is higher than infants with enough months[9,10].

According to Kosim, the neonatal sepsis in national incidence does not yet exist. The report on hospital incidence shows much higher, especially if the hospital is a reference place[9]. In Cipto Mangunkusumo Hospital, the frequency of neonatal sepsis shows a high rate of 13% and a mortality rate of 14%. According to Arif, several factors causing death in newborn infants include 36% infection, 28% prematurity, and 23% asphyxia[11,8,9].

The perinatal and neonatal period is a critical time for the life of the baby. Two-thirds of infant deaths occur within four weeks of childbirth, and 60% of newborn deaths occur within seven days after birth. Factors that cause perinatal death include bleeding, hypertension, infection, preterm abnormalities or low birth weight, asphyxia and hypothermia[12].

According to Kosim, sepsis in newborns is an infectious blood flow infection and characterized by the discovery of bacteria in body fluids such as blood, bone marrow fluid or urine. According to Maryunani[9], the consequences of neonatal sepsis are pneumonia (inflammatory lung disease), urinary tract infections, congestive heart failure, metabolic disorders, meningitis (inflammation of the lining of the brain and spinal cord), shock, and death[9,10,13, 14].

Symptoms of neonatal sepsis can prevent from breathing disorders, attacks of apnea, deflated nostril lobes, deep chest retraction, prominent large fontanel, convulsions, moaning, hyperthermia, unconsciousness, unwilling to suckle, reluctant to drink[15,16]. Besides, in neonatal sepsis the risk factors are maternal factors (childbirth and fewer months of birth, ruptured membranes more than 18 - 24 hours, urinary tract infections in the mother, maternal socioeconomic and nutritional factors) and infant factors (perinatal asphyxia, low birth weight babies, infants less months, invasive procedures, congenital abnormalities)[17,9,18,19].

Based on the relevant study it can be concluded that there are differences in the results of the correlation between low birth weight and the incidence of neonatal sepsis[20,21]. So the writer interesting in conduct this study because to determine the correlation between low birth weight and the incidence of neonatal sepsis[22]. The writer has an initial survey in 2013 at Dr. H. Abdul Moeloek Hospital there were 86 neonatal cases (6.5%) from 1,325 infants treated in the Perinatology room, then in 2014, there were 107 cases of neonatal sepsis (7.6%) of 1,408 infants treated in the Perinatology room[23].

METHODOLOGY

This study uses analytical design, which is a study that tries to find out why these health problems can occur, then analyze the Correlation between risk factors (factors that influence effects) and effect factors (factors that are affected by risk). The design of this study aims to find whether or not the correlation. This study used the Case Control approach, meaning research by identifying groups affected by disease or specific effects (cases) and groups without effects (controls), then comparing the results of case groups with the results of the control group[24,25].

This research conduct at the DR. H. Abdul Moeloek Hospital in Lampung Province. The population in this study were infants who had neonatal sepsis at Dr. H. Abdul Moeloek Hospital as many as 123 babies. The control population was infants who did not have neonatal sepsis at Dr. H. Abdul Moeloek Hospital as many as 1363 babies. The sample in this study amounted to 94 infants (used Random Sampling technique)[26].

ETHICAL CONSIDERATION

According to Hidayat (2010), to conduct a study, the writer applied for a research permit to the head of the Dr. H. Abdul Moeloek Hospital in Lampung Province to carry out research[27].

In emphasizing ethical issues include:

1. Research Permit

   The research letter gives to the head of the room whose purpose is to find out the aims and objectives of the study. If the head of the office is willing to permit research in the place, then he must sign the consent sheet. If the head of the room refuses to give research permission, the researcher will not force and continue to respect his rights. The research reply letter numbered 420/6901/11.14/6.2/XII/2017.

2. Anonymity

   To maintain the confidentiality of the respondent's identity, the researcher will not include the name of the subject on the data collection sheet. The sheet will give a specific code.

3. Confidentiality

   The researcher guarantees the privacy of the respondent's information. Only certain data groups will present or report as a result of the study.

RESULT

Here is the result of a study on the correlation between low birth weight and preterm premature rupture of membranes with neonatal sepsis at Dr. H. Abdul Moeloek Hospital, Lampung in 2017 which conduct with two methods of analysis, namely univariate analysis,and bivariate analysis.

Univariate Analysis

Frequency Distribution of Neonatal Sepsis in Dr. H. Abdul Moeloek Hospital at Lampung in 2017.

Table 1. Frequency Distribution of the incidence of Neonatal Sepsis

Neonatal Sepsis	Frequency	Percentage (%)
Case Group	123	8,3
Control group	1363	91,7
Total	1486	100

Based on the table above, the rate of neonatal sepsis as a case is 123 infants (8.3%),and the incidence of neonatal sepsis as control is 1363 infants (91.7%).

Frequency Distribution of Low Birth Weight in Dr. H. Abdul Moeloek Hospital, Lampung in 2017

Table 2 Frequency Distribution of Low Birth Weight in Case Groups

Low Birth Weight (LBW)	Frequency	Percentage (%)
Have a normal Birth Weight	31	33
Low Birth Weight	63	67
Total	94	100

Based on the table above, the majority of infants in the case group who experienced Low Birth Weight were 63 infants (67%).

Table 3. Frequency Distributionof Low Birth Weight in the Control Group

Low Birth Weight	Frequency	Percentage (%)
Normal Birth Weight	53	56,4
Low Birth Weight	41	43,6
Total	94	100

Based on the table above show that most of the control group infants who did not experience Low Birth Weight were 53 infants (56.4%).

Bivariate Analysis

The correlation between LBW and the incidence of neonatal sepsis in Dr. H. Abdul Moeloek Hospital, Lampung in 2017

Table 4.Correlation Between LBW and the Incidence of Neonatal Sepsis

Low Birth Weight	Neonatal Sepsis				Total		*p-value*	OR
	Control		Case					
	n	%	n	%	N	%		
Normal Birth Weight	53	56,4	31	33	84	44,7	0,002	2,627 (1,453 – 4,751)
Low Birth Weight	41	43,6	63	67	104	55,3		
Total	94	100	94	100	188	100		

Based on the table above show that out of 94 infants in the case group, most experienced LBW as many as 63 babies (67%), while from 94 infants in the control group, most did not experience LBW as many as 53 babies (56.4%).

Based on the results of statistical tests using chi-square, obtained p-value = 0.002 or p-value <0.05, then Ha is accepted. So it can be concluded that there is a correlation between LBW with the incidence of neonatal sepsis in Dr. H. Abdul Moeloek Hospital, Lampung Province in 2017. The results of the statistical analysis obtained Odds Ratio (OR) = 2.627 which means that infants with LBW events had a chance of 2,627 times to experience neonatal sepsis than infants without LBW.

DISCUSSION

Univariate analysis

The results showed that the incidence of neonatal sepsis as a case group was 123 infants (8.3%) and the frequency of neonatal sepsis as a control group was 1363 infants (91.7%). This result is similar to Nursasmita Ningsih's study (2016) in the Benyamin Guluh Hospital, Kolaka Subdistrict, stating that there were 79 infants with neonatal sepsis[21]. In Cipto Mangunkusumo Hospital, the incidence of neonatal sepsis reached 13%.

According to Maryunani (2009), sepsis is a severe infection that is generally caused by bacteria, which can come from organs in the body such as the lungs, intestines, urinary tract, or skin that produce toxins/toxins that cause the immune system to attack organs and own body tissue. Sepsis arises when severe infection can cause a standard body response to infection to be excessive. Bacteria and poisons produced can result in changes in temperature, heart frequency, and blood pressure and cause physical organ disorders[15].

According to researchers, the incidence of sepsis in newborns can occur when bacteria enter the baby's body during pregnancy and can also happen during childbirth. Some risk factors for neonatal sepsis include low birth weight (LBW). Therefore, the expected that health workers can provide information about the importance of pregnancy checks at least four visits, treat mothers with fever with suspected severe infections or intrauterine infections, and notify signs and symptoms of neonatal sepsis, and can provide treatment/follow-up for neonatal sepsis correctly.

Bivariate analysis

The results showed that in the case group most of the infants had LBW and in the control group most infants did not experience LBW. The results of this study found that there was a correlation between LBW and neonatal sepsis incidence with (p = 0.002 and OR = 2.627) which

means that infants with LBW incidence were 2,627 times to experience neonatal sepsis than infants without LBW.

Based on the theory stated that LBW relatively unable to form antibodies and the power of phagocytosis and the reaction to inflammation was still not right so that the body's resistance to infection reduced due to the low levels of gammaglobulin 19E which would cause sepsis[28].

According to Raden (2008), LBW is one of the risk factors for sepsis because 37% - 80% of LBW cases are cases of prematurity. Babies born with prematurity cause immune system immaturity in the form of suppressing the formation of gamma globulin by the lymphoid system[29]. Instability of the immune system will cause immunological dysfunction in the way of a decrease in phagocyte activity in white blood cells and a decrease in cytokine products, and a failure of the humoral immune system will occur. Infection in the neonate more often found in babies born in hospitals than babies born outside the hospital, so the presence of nosocomial infections in hospitals that cause failure of immune function to overcome the disease occurs. About 60% - 70% of cases in LBW resuscitation interventions carried out, in which 20% - 30% of these actions caused secondary infections. Failure of the immune function will cause neonatal sepsis. Nosocomial infection is still the cause of neonatal sepsis, which is one-fifth of the cases of babies born with LBW.

CONCLUSION

Based on the results of the research and discussion, it can conclude 1. The prevalence of neonatal sepsis at Dr. H. Abdul Moeloek Hospital, Lampung in 2017, which is 123 babies (8.3%) from 1486 babies treated in the Perinatology room. 2. Most infants in the case group of LBW infants were 63 babies (67%). 3. There is a Correlation between LBW and the incidence of neonatal sepsis in Dr. H. Abdul Moeloek Hospital, Lampung Province in 2017.

SUGGESTION

The suggestion for Dr. H. Abdul Moeloek Hospital; the expected that early detection of antenatal care can wait so that complications do not occur during childbirth and can provide counseling about maintaining health in pregnancy and how to care for babies with neonatal emergencies, and for future researchers.

The expected that the next researchers to develop their knowledge to be better, can continue this research by examining further, and in the study, it is supposed to be able to add the variables to be studied and have more samples with different techniques/designs.

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PENGARUH PIJAT AROMATERAPI LAVENDER TERHADAP NYERI PERSALINAN KALA I FASE AKTIF PADA IBU BERSALIN DI PUSKESMAS KECAMATAN CILANDAK JAKARTA SELATAN TAHUN 2018

THE EFECT OF LAVENDER AROMATHERAPY MESSAGE TOWARD THE PAIN LEVEL OF DELIVERY PROCESS ACTIVE PHASE I IN PUSKESMAS (PUBLIC HEALTH CENTER) CILANDAK DISTRICTSOUTH JAKARTA 2018

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ABSTRAK

Latar Belakang : Salah satu penyebab angka kematian ibu (AKI) adalah trauma pada ibu dan janin akibat nyeri persalinan. Nyeri persalinan pada kala I fase aktif dapat menyebabkan ibu keletihan, rasa takut, rasa cemas, dan stress sehingga menyebabkan *inersia uteri* dan *hipoksia*pada janin. Pijat aromaterapi lavender merupakan salah satu metode non farmakologi untuk menurunkan nyeri pada persalinan kala I fase aktif.

Tujuan: Penelitian ini bertujuan untuk mengetahui pengaruh pijat aromaterapi lavender terhadap nyeri persalinan kala 1 fase aktif pada ibu bersalin di Puskesmas Kecamatan Cilandak Jakarta Selatan tahun 2018.

Metodologi: Penelitian *quasi-experiment* ini menggunakan rancangan *pre-post test without control group design.*Populasi dalam penelitian ini berjumlah 46 responden. Teknik pengambilan sampel menggunakan *total* sampling. Instrumen penelitian terdiri dari *booklet* pijat aromaterapi lavender dan skala nyeri *Numerical Rating Scales* (NRS). Data diuji menggunakan *dependent t test* untuk mengetahui perbedaan skor nyeri dalam satu kelompok.

Hasil Penelitian : Terdapat perbedaan yang signifikan rata-rata nyeri persalinan pada ibu bersalin kala I fase aktif sebelum dan sesudah diberikan pijat aromaterapi lavender ($p <$ 0,05).

Simpulan dan saran: Pijat Aromaterapi Lavender mampu menurunkan nyeri persalinan kala I fase aktif pada ibu bersalin. Disarankan kepada tenaga kesehatan khususnya Bidan dapat mengaplikasikan metode ini di fasilitas pelayanan kesehatan dan sebagai bahan rujukan untuk penelitian selanjutnya.

Kata kunci **:** Nyeri, Persalinan Kala I, Pijat Aromaterapi Lavender

ABSTRACT

Background:*One of the causes of maternal mortality rate is the trauma on the mother and the fetus because of labor pain. Labor pain on the delivery process active phase I could make the mother feel tired, afraid, afraid of, anxious, and stress, so it could cause uterine inertia and hypoxia on the fetus. Lavender aromatherapy massage is one of non-pharmacological methods to decrease the pain of the delivery process active phase I.*
Objective: *The research aims to determine the effect of lavender aromatherapy massage toward the pain of the delivery process active phase I in Puskesmas (Public Health Center) Cilandak district, South Jakarta 2018*
Methodology: *This is a quasi-experiment research using pre-post test without control group design. The population are 46 respondents. The sampling technique used is total sampling. The instruments of this research consist of the booklet of aromatherapy massage and the pain scale, Numerical Rating Scales (NRS). Data is examined using dependent t test to know the difference of the score of the pain in one group.*
Result: *There are significant differences on the rate of labor pain on the labor mother active phase I before and after the treatment of lavender aromatherapy massage (p<0,05).*
Conclusion and suggestion: *Lavender aromatherapy massage could decrease the lapor pain active phase I. Health workers are suggested especially the midwife to apply the method in health service facilities. The research could function as a reference for further research.*

Keywords: *Pain, Active phase I Labor, Lavender aromatherapy massage*

PENDAHULUAN

Kematian dan kesakitan pada ibu hamil dan bersalin serta bayi baru lahir telah lama menjadi masalah, khususnya di negara-negara berkembang. Sekitar 25-50% kematian perempuan usia subur disebabkan oleh hal yang berkaitan dengan kehamilan. Kematian saat melahirkan menjadi penyebab utama mortalitas perempuan pada masa puncak produktivitasnya. *World Health Organization* (WHO) memperkirakan setiap tahun terjadi 210 juta kehamilan di seluruh dunia. Dari jumlah ini, 20 juta perempuan mengalami kesakitan akibat kehamilan (Prawirohardjo, 2008).

Kematian dan kesakitan ibu masih merupakan masalah kesehatan yang serius di negara berkembang. Indonesia termasuk kedalam salah satu negara berkembang. Berdasarkan hasil Survei Antar Sensus (SUPAS) tahun 2015 bahwa angka kematian ibu (AKI) pada tahun 2015 sebanyak 305 orang per 100.000 kelahiran hidup (Kemenkes RI, 2015).

Jumlah Kematian Ibu di Provinsi DKI Jakarta tahun 2016 yaitu sebanyak 94jiwa. Jumlah kejadian kematian Ibu tertinggi yaitu di Jakarta Barat sebanyak 26 kematian ibu, Jakarta Utara sebanyak 20 kematian ibu, Jakarta Timur sebanyak 20 kematian ibu, Jakarta Pusat sebanyak

14 kematian ibu, Jakarta Selatan sebanyak 11 kematian ibu dan di Kepulauan seribu sebanyak 3 kematian ibu (Dinas Kesehatan Provinsi DKI Jakarta, 2016).

Menurut WHO (2014) bahwa salah satu penyebab tingginya angka kematian ibu (AKI) adalah trauma pada ibu dan janin akibat nyeri persalinan. Dalam fisiologi nyeri persalinan dibagi menjadi dua yaitu nyeri persalinan kala I dan nyeri persalinan kala II dengan rasa dan intensitas nyeri yang berbeda-beda (Andarmoyo & Suharti, 2013).Rasa nyeri pada persalinan kala I disebabkan oleh munculnya kontraksi otot-otot uterus, hipoksia dari otot-otot yang mengalami kontraksi, peregangan serviks, iskemia korpus uteri, dan peregangan segmen bawah rahim (Cuningham, 2013).

Menurut Danuatmaja dan Meiliasari (2004), Kala I fase aktif merupakan saat yang sangat melelahkan dan berat. Kebanyakan ibu merasakan sakit yang hebat karena kegiatan rahim mulai lebih aktif. Kontraksi rahim semakin lama semakin kuat dan semakin sering.

Nyeri persalinan yang berat dan lama dapat mempengaruhi ventilasi pada ibu bersalin, dimana nyeri yang menyertai kontraksi uterus menyebabkan hiperventilasi yang dapat menyebabkan penurunan kadar $PaCO_2$. Salah satu bahaya kadar $PaCO_2$, menyebabkan deselerasi lambat denyut jantung janin (Mander, 2004). Nyeri juga dapat mempengaruhi respon psikologis pada ibu berupa keletihan, rasa takut, rasa cemas, dan stress (Maryunani, 2010). Stress yang disebabkan oleh nyeri persalinan dapat mengakibatkan peningkatan pelepasan hormon*katekolamin* dan *adrenalin* (Mander, 2004). Peningkatan hormon *adrenalin* dapat menyebabkan penurunan aktivitas uterus (*inersia* uteri) sehingga akan mengakibatkan persalinan menjadi lama (Subekti, 2004). Sedangkan peningkatan *katekolamin*akan menyebabkan aliran darah dan oksigen ke dalam otot uterus menurun yang mengakibatkan *vasokontriksi* pembuluh darah sehingga aliran darah ibu yang mengandung oksigen ke janin pun akan ikut menurun dan janin dapat mengalami *hipoksia* dan berpotensi terjadi gawat janin. Selain itu, perubahan endokrin dan metabolik yang diinduksi oleh nyeri persalinan dapat membahayakan kesehatan ibu dan janin (Mander, 2004).

Perlu dilakukan manajemen pengurangan nyeri agar seluruh rangkaian proses persalinan berlangsung aman dan nyaman baik bagi ibu maupun bagi janin yang akan dilahirkan (Rohani *et al.*, 2011). Terdapat banyak cara yang

digunakan untuk menurunkan sakit selama proses persalinan kala I fase aktif. Cara tersebut yaitu dengan cara farmakologis dan non farmakologis. Metode farmakologis yang digunakan antara lain penggunaan analgetik, suntikan epidural, dan *Intracthecal Labor Analgetik* (ILA) (Hidayat, 2006). Metode non farmakologis (non medis), yaitu dengan menggunakan teknik relaksasi dan pernafasan, *effleurage* dan tekanan sacrum, hidroterapi, *TranscutaneousElectrical Nerve Stimulation* (TENS), dan teknik lain seperti hipnoterapi, masase, *acupressure*, aromaterapi, yoga dan sentuhan terapeutik (Bobak, 2005).

Cara untuk menghilangkan nyeri persalinan yang tidak tertahankan dengan menggunakan obat penawar nyeri seperti analgetikdan sedatife, dapat memberikan efek samping yang merugikan, yang meliputi hipoksia janin, resiko depresi pernapasan neonatus, penurunan *Heart Rate*/*central nervus system* (CNS) dan peningkatan suhu tubuh ibu yang dapat menyebabkan perubahan pada janin (Mander, 2004). Selain itu, efek lain yang terjadi pada ibu diantarnya adanya perasaan mual dan muntah, sedasi, pusing, *takikardi* atau *bradikardi* (Lowdermilk, 2013).

Metode non farmakologis lebih murah, sederhana, efektif, tanpa efek yang merugikan dan membuat ibu bersalin merasa dapat mengontrol nyerinya (Maryunani, 2010). Penerapan terapi nonfarmakologis untuk mengatasi nyeri pada persalinan merupakan metode yang harus dikembangkan oleh semua bidan atau penolong persalinan. Hal ini secara tidak langsung akan membantu ibu bersalin dalam mengatasi nyeri akibat persalinan yang terjadi dan menekan resiko terjadinya komplikasi akibat persalinan tersebut.

Pijat aromaterapi merupakan salah satu bentuk teknik menghilangkan nyeri persalinan dengan metode non farmakologis. Pijat aromaterapi adalah pijat yang paling banyak dikenal karena minyak esensial dalam larutan aromaterapi mampu menembus kulit dan terserap kedalam tubuh, sehingga memberikan pengaruh penyembuhan dan menguntungkan pada berbagai jaringan dan organ internal (Koensoermardiyah, 2009). Pijat aromaterapi yaitu jenis pengobatan yang populer dan umum di masyarakat bahkan paten-paten dan produk yang berkaitan dengan pijat dan aromaterapi atau gabungan keduanya telah beredar di masyarakat dan terbukti membawa efek positif sesuai tujuan penggunaanya (Sundari, 2011).

Ibu yang di pijat dua puluh menit setiap jam selama persalinan akan lebih terbebas dari rasa sakit. Hal itu karena pijat merangsang tubuh melepaskan senyawa *endorphin*yang dapat menciptakan perasaan nyaman. Pijat secara lembut membantu ibu merasa lebih segar, rileks, dan nyaman dalam persalinan. Sentuhan seseorang yang peduli dan ingin menolong merupakan sumber kekuatan saat ibu sakit, lelah, dan takut (Danuatmaja & Meiliasari, 2004). Disamping mempersiapkan ibu dan kelahiran pada bayi, di beberapa negara seperti India dan Jepang pijat merupakan bagian terpenting dari keterampilan bidan. Banyak wanita merasa bahwa pijatan sangat efektif dalam menghilangkan rasa sakit pada saat melahirkan yang secara umum akan membantu menyeimbangkan energi, merangsang dan mengatur tubuh memperbaiki sirkulasi darah, sehingga oksigen, zat makanan, dan sisa makanan dibawa secara efektif dari jaringan tubuh ibu ke plasenta dengan mengendurkan ketegangan yang membantu menurunkan emosi (Balaskas, 2005).

Hasil penelitian yang dilakukan oleh Emilda *et al*. (2013), dengan judul "Pengaruh Metode *Massage* Terhadap Pengurangan Intensitas Nyeri Pada Persalinan Kala I di Ruang Bersalin RSUD Kota Langsa Tahun 2013" melaporkan bahwa ada perbedaan yang signifikan terhadap pengurangan nyeri pada kala I persalinan setelah dilakukan tindakan *massage* pada ibu partus dengan hasil saat *pre-treatment* menunjukan intensitas nyeri kala I persalinan mayoritas 19 (63,3%) responden mengalami nyeri berat, sedangkan setelah diberikan intervensi *massage* (*post treatment*) menunjukan intesitas nyeri kala I persalinan mayoritas 14 (46,7%) responden mengalami nyeri sedang. Dalam penelitian ini metode pengumpulan data dengan cara wawancara terhadap responden menggunakan kuesioner skala bourbanis untuk mengukur skala nyeri dan hanya menggunakan *message effleurage* belum melakukan modifikasi dalam *massage* untuk mengurangi nyeri persalinan. Berbeda dengan penelitian yang akan dilakukan menggunakan metode pengumpulan data dengan wawancara menggunakan kuesioner skala *Numerical Rating Scale* (NRS) untuk mengukur skala nyeri. Menurut Potter dan Perry (2010), bahwa skala *Numerical Rating Scale* (NRS) adalah skala yang paling efektif digunakan saat mengkaji intensitas nyeri sebelum dan setelah intervensi terapeutik. Dan metode pijat yang digunakan adalah dengan mengkombinasikan *massageeffleurage* dan *counterpressure* dengan mengoleskan

minyak aromaterapi lavender untuk lebih membantu dalam mengendalikan nyeri persalinan yang dirasakan selama proses persalinan kala I fase aktif.

Aromaterapi lavender merupakan salah satu *essensial oil* yang aman digunakan oleh ibu bersalin dan dapat digunakan untuk mengurangi nyeri dan memberikan efek menenangkan (Hobbs, 2013). Selain sebagai analgesik dan antidepresan manfaat lain dari aromaterapi lavender sebagai antiseptik, antivirus, hipotensi, meningkatkan ketenangan, keseimbangan, rasa nyaman, rasa keterbukaan, dan keyakinan, serta dapat mengurangi emosi yang tidak seimbang, histeris, rasa frustasi, dan kepanikan (Hutasoit, 2002)

Berdasarkan hasil studi pendahuluan dengan melihat pendokumentasian di Puskesmas Kecamatan Cilandak Jakarta Selatan pada bulan Januari 2018 ibu bersalin normal sebanyak 46 orang.Berdasarkan hasil wawancara dan observasi pada 3 ibu bersalin kala I fase aktif yang akan bersalin di Puskesmas Kecamatan Cilandak Jakarta Selatan mengatakan tidak tahan dengan nyeri yang dirasakan, dengan sebagian besar dalam kategori nyeri hebat dimana rata-rata skala nyeri 7 (0-10). Ibu mengatakan nyeri dibagian perut yang menjalar ke pinggang dan punggung. Adapun intervensi yang dilakukan bidan untuk menurunkan nyeri pada ibu bersalin kala I fase aktif adalah dengan cara analgesia psikologi dan relaksasi dimana bidan melakukan pendekatan emosional (seperti adanya pendamping persalinan dan memberikan motivasi) serta mengajarkan teknik napas dalam dan napas dangkal.

Berdasarkan latar belakang diatas maka peneliti tertarik untuk melakukan penelitian tentang “Pengaruh Pijat Aromaterapi LavenderTerhadap Nyeri Persalinan Kala 1 Fase Aktif pada Ibu Bersalin di Puskesman Kecamatan Cilandak Jakarta Selatan Tahun 2018”.

METODE PENELITIAN

Dalam penelitan yang digunakan adalah *quasi-experiment* dengan rancangan *pre-post test without control group design*. Penelitian dilakukan pada bulan Juni- Juli 2018 dengan populasi dalam penilitian ini adalah semua ibu bersalin yang bersalin di Puskesmas Kecamatan Cilandak Jakarta Selatan tahun 2018, dengan estimasi jumlah persalinan normal bulan Januari adalah 46 orang.Jumlah sampel dalam penelitian ini adalah seluruh jumlah ibu bersalin yang bersalin di Puskesmas Kecamatan Cilandak Jakarta Selatan berjumlah 46

orang (diambil dari jumlah estimasi bulan Januari 2018). Teknik sampling atau teknik pengambilan sampel yang digunakan dalam penelitian iniadalah*total sampling*.

Metode pengumpulan data penelitian ini melalui wawancara terhadap responden dengan menggunakan *booklet* pijat aromaterapi lavender dan kuesioner skala pengukuran nyeri (skala *numerical rating scale*). Teknik analisa data dilakukan melalui analisa univariat dan bivariat.

Dibawah ini diuraikan hasil penelitian tentang pengaruh pijat aromaterap lavender terhadap nyeri persalinan kala I fase aktip pada ibu bersalin di Puskesmas Kecamatan Cilandak Jakarta Selatan dengan jumlah responden 46 sesuai kriterian inklusi dan eksklusi.

Tabel 1. Distribusi Frekuensi Berdasarkan Usia

	Kelompok Eksperimen	
	M	*SD*
Usia	27,98	5,93

M= Mean, SD = Standar Deviation

Berdasarkan tabel 1menjelaskan bahwa rata-rata umur ibu bersalin di Puskesmas Kecamatan Cilandak adalah 28 tahun (SD= 5,93).

Tabel 2. Distribusi Frekuensi Berdasarkan Gravida

Gravida	**F**	**%**
1	15	32,6
2	16	34,8
3	12	26,1
4	3	6,5
Total	**46**	**100,0**

Berdasarkan tabel 2menjelaskan bahwa sebagian besar ibu bersalin di Puskesmas Kecamatan Cilandak merupakan kehamilan yang ke 2 sebanyak 16 responden (34,8%).

Tabel 3. Distribusi Frekuensi Berdasarkan Pendamping Persalinan

Umur	**F**	**%**
Suami	31	67,4
Keluarga	15	32,6
Total	**46**	**100,0**

Berdasarkan tabel 3menjelaskan bahwa sebagian besar pendamping persalinan ibu bersalin merupakan suami sebanyak 31 responden (67.4%).

Tabel 4. Distribusi Frekuensi Nyeri Persalinan Sebelum Diberikan Pijat Aromaterapi Lavender

Sebelum menentukan uji statistik untuk analisis bivariat, terlebih dahulu melakukan uji normalitas data.Data terdistribusi normal maka uji statistik yang akan digunakan adalah *t- test dependent*. Tujuan pengujian ini adalah untuk mengetahui perbedaan rata-ratanyeri sebelum dan sesudah diberikan pijat aromaterapi lavender. Ha diterima jika nilai p < 0,05 dan Ho diterima jika nilai p > 0,05.

HASIL ANALISA

Nyeri	F	%
Nyeri Ringan	0	0
Nyeri Sedang	17	37,0
Nyeri Hebat	29	63,0
Total	**46**	**100,0**

Berdasarkan tabel 4 menjelaskan bahwa sebagian besar ibu mengalami nyeri hebat sebelum diberikan pijat aromaterapi lavender sebanyak 29 responden (63,0%).

Tabel 5. Distribusi Frekuensi Nyeri Persalinan Setelah Diberikan Pijat Aromaterapi Lavender

Nyeri	F	%
Nyeri Ringan	17	37,0
Nyeri Sedang	27	58,7
Nyeri Hebat	2	4,3
Total	**46**	**100,0**

Berdasarkan tabel 5 menjelaskan bahwa sebagian besar ibu mengalami nyeri sedang setelah diberikan pijat aromaterapi lavender sebanyak 27 responden (58,7%).

Tabel 6 Perbedaan Rata-Rata Nyeri antara Sebelum dan Sesudah Diberikan Pijat Aromaterapi Lavender

Kelompok	*Pre Test*		*Post Test*			
	M	***SD***	***M***	***SD***	***t***	***p***
Eksperimen	6,98	1,20	4,22	1,19	23,58	0,000

M= Mean, SD= Standar Deviation

Tabel 4.6 Dapat disimpulkan bahwa rata-rata nyeri persalinan pada ibu bersalin sebelum diberikan pijat aromaterapi lavenderadalah 6,98. Sesudah diberikan pijat aromaterapi lavenderrata-rata nyeri persalinan pada ibu bersalin adalah 4,22. Hasil uji statistik pada nyeri persalinan pada ibu bersalin sebelum dan sesudah diberikan pijat aromaterapi lavenderdidapatkan nilai *p value*=0,000 dengan alpha 5% (0,05) terdapat perbedaan yang signifikan rata-rata nyeri persalinan pada ibu bersalin kala I fase aktif sebelum dan sesudah diberikan pijat aromaterapi lavender.

PEMBAHASAN

Berdasarkan penelitian diperoleh bahwa usia ibu bersalin rata-rata adalah 28 tahun. Hal ini menunjukan bahwa sebagian besar responden dalam usia reproduksi sehat, dan secara fisiologis pada usia tersebut memungkinkan ibu masih kuat menghadapi nyeri. Sesuai dengan teori menurut Andarmoyo dan Suharti (2013) usia dipakai sebagai salah satu faktor dalam menentukan toleransi terhadap nyeri. Toleransi akan meningkat seiring bertambahnya usia dan pemahaman terhadap nyeri. Faktor usia dapat memengaruhi respon nyeri seseorang. Anak memiliki respon nyeri yang lebih tinggi bila dibanding dengan usia remaja, dewasa dan orang tua. Hal ini karena anak dapat mengekspresikan nyeri lebih bebas sedangkan pada remaja respon nyeri lebih rendah karena dapat mengontrol perilakunya dan pada usia dewasa serta orang tua lebih rendah karena menganggap nyeri merupakan proses alamiah (Maslikhanah, 2011).

Hasil penelitian menunjukan bahwalebih banyak ibu bersalin merupakan kehamilan anak kedua dibandingkan dengan anak pertama, anak ketiga dan anak keempat yaitu sebesar 34,8%. Sesuai dengan penelitian Supliyani (2017) bahwa sebagian besar responden (57%) multigravida.

Dapat disimpulkan bahwa ibu bersalin yang telah memiliki pengalaman melahirkan sebelumnya telah memilki pengalaman mengatasi nyeri pada persalinan sebelumnya. Bobak (2005) menyatakan bahwa ibu multigravida sudah pernah melahirkan sehingga sudah punya pengalaman nyeri saat melahirkan. Ibu yang sudah mempunyai pengalaman melahirkan akan mampu merespon rasa nyeri tersebut. Ibu yang melahirkan dalam keadaan rileks, semua lapisan otot dalam rahim akan bekerja sama secara harmonis sehingga persalinan akan berjalan lancar, mudah dan nyaman.

Hasil penelitian menunjukan bahwa pendamping persalinan yang merupakan suami lebih banyak dibandingkan pendamping persalinan dengan keluarga yaitu sebanyak 67,4%. Sejalan dengan hasil penelitian Setyaningsih (2010) bahwa dari 29 responden sebagian besar responden didampingi suami dengan jumlah 22 responden (75,86%).

Dengan adanya suami sebagai pendamping persalinan ibu akan merasa lebih diperhatikan dan diberi dukungan selama proses persalinan dan kelahiran bayinya. Sesuai dengan teori Judha (2012) bahwa faktor lain yang dapat memengaruhi nyeri yaitu dukungan dari keluarga terutama suami. Dukungan dari pasangan, keluarga maupun pendamping persalinan dapat membantu memenuhi kebutuhan ibu bersalin dan membantu mengatasi rasa nyeri. Ibu bersalin yang ditemani atau diperhatikan oleh suami maupun keluarga dari awal proses persalinannya merasa lebih tenang dan tidak cemas akan persalinannya.

Hasil penelitian menunjukan bahwa ibu bersalin kala I fase aktif sebelum diberikan pijat aromaterapi lavender lebih banyak mengalami nyeri hebat dibandingkan dengan yang mengalami nyeri sedang yaitu sebanyak 63,0 %. Sedangkan setelah diberikan pijat aromaterapi lavender ibu bersalin kala I fase aktif lebih banyak mengalami nyeri sedang dibandingan dengan yang mengalami nyeri ringan dan hebat. Sejalan dengan hasil penelitian Emilda *et al* (2013) bahwa dari 30 responden sebelum diberikan perlakuan *massage* mayoritas 19 (63,3%) responden mengalami nyeri berat sedangkan setelah dilakukan intervensi menunjukan intensitas nyeri kala I persalinan mayoritas 14 (46,7%) responden mengalami nyeri sedang.

Berdasarkan hasil penelitian yang dilakukan oleh peneliti dan telah dianalisis menggunakan uji statistik *t test-dependen*. Menunjukkan bahwa ada perbedaan yang signifikan rata-rata nyeri persalinan pada ibu bersalin kala I fase aktif sebelum dan sesudah diberikan pijat aromaterapi lavender (p 0,00). Dapat disimpulkan bahwa ada pengaruh pijat aromaterapi lavender terhadap rata-rata nyeri persalinan kala I fase aktif pada ibu bersalin di Puskesmas Kecamatan Cilandak Jakarta Selatan.

Hasil penelitian sejalan dengan penelitian Wahyuni dan Wahyuningsih (2013) bahwa dari 28 responden yang di uji menggunakan skala nyeri *numerical rating scale* (NRS) didapatkan pada saat *pre-treatment* rata-rata nyeri 5,11.

Sedangkan setelah dilakukan intervensi *massage effleurage* (*post-treatment*) menunjukan rata-rata nyeri 2. Hasil analisa dengan uji *Paired T-test* diperoleh *p* 0,00. Maka dapat disimpulkan ada perbedaan yang signfikan terhadap pengurangan intensitas nyeri pada kala I persalinan setelah dilakukan tindakan *massage* pada ibu. Terdapat perbedaan dalam penelitian ini dengan penelitian yang dilakukan yaitu teknik *message* yang dilakukan peneliti dengan menambahkan teknik *counterpressure* dan memberikan minyak aromaterapi lavender.

Adapun penelitian lain yang mendukung yaitu penelitian Kundarti*et al*. (2014) bahwa ada pengaruh pijat aromaterapi lavender terhadap tingkat nyeri persalinan kala I fase aktif sebelum dan sesudah pemberian pijat aromaterapi lavender dengan hasil uji statistik diperoleh (*p* 0,000). Hasil penelitian Pasongli *et al*.(2014) dengan hasil penelitian*masase counterpressure* efektif untuk menurunkan intensitas nyeri kala I fase aktif persalinan normal di Rumah Sakit Advent Manado.Penelitian Susilarini *et al*. (2017) dengan hasil ada pengaruh pemberian aromaterapi lavender terhadap pengendalian nyeri persalinan kala I pada ibu bersalin.

.Pijat (*Massage*) merupakan salah satu metode yang dapat merangsang analgesik endogen (*endhorpin*) (Fraser *et al*., 2009). Pemberian pijat berguna untuk memperlancar peredaran darah, mengatasi kram otot, menurunkan nyeri dan kecemasan, serta mempercepat persalinan. Pijatan saat kontraksi dapat memberikan ketenangan dan relaksasi pada ibu (Aprilia, 2010). Umumnya, ada dua teknik pemijatan dilakukan dalam persalinan, yaitu *effleurage* dan *counterpressure* (Danuatmadja dan Meiliasari, 2004).

Aromaterapi lavender mengandung *linalyasetat* dan *linalool* ($C_{10}H_{18}O$). *Linalool* adalah kandungan aktif utama pada lavender yang berperan pada efek anti cemas (relaksasi) (Dewi. I. P, 2011). Aromaterapi dari lavender bekerja langsung pada sistem limbik untuk mengontrol sirkulasi dan pelepasan serotonin pada *raphe nucleus* yang berpengaruh pada penurunan aktifitas eksitasi sel keseluruhan terutama di otak dan organ vital. Serotonin bekerja pada jalur *raphenucleus* terutama pada bagian hipotalamus, dan sistem limbik terutama bagian amigdala. Dimana diketahui hipotalamus berfungsi mengatur emosi dasar (*basic behaviour paterns*), sedangkan amigdala adalah bagian dari sistem limbik yang mengontrol perasaan subyektif yang merangkum emosi, mood, kemarahan, ketakutan dan kegembiraan (Primadiati, 2002).

Menurut asumsi peneliti ibu bersalin di Puskesmas Kecamatan Cilandak setelah diberikan pijatan aromaterapi lavender menunjukkan terjadinya penurunan kecemasan dan tingkat nyeri sehingga membuktikan bahwa pemberian pijat aromaterapi sebagai metode non farmakologi mampu menurunkan tingkat nyeri yang dialami oleh ibu bersalin. Hal ini sesuai dengan teori Danuatmadja dan Meliansari (2004) bahwa ibu yang dipijat 20 menit setiap jam selama tahapan persalinan akan lebih bebas dari rasa sakit. Pijat juga membuat ibu merasa lebih dekat dengan orang yang merawatnya. Sentuhan seseorang yang peduli dan ingin menolong merupakan sumber kekuatan saat ibu sakit, lelah, dan takut.

Selain itu adapun faktor-faktor yang mendukung keberhasilan pijat aromaterapi lavender ini seperti usia ibu yang merupakan usia ideal untuk hamil, pengalaman persalinan sebelumnya, dan adanya pendamping persalinan terutama suami.

SIMPULAN

Tedapat perbedaan yang signifikan rata-rata nyeri persalinan pada ibu bersalin kala I fase aktif sebelum dan sesudah diberikan pijat aromaterapi lavender.

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RELATIONSHIP BETWEEN KNOWLEDGE AND COMPLIANCE OF FERRUM TABLETS CONSUMPTION WITH ANEMIA AMONG TRIMESTER III PREGNANT WOMEN IN PASIRLANGU HEALTH CENTER, BANDUNG BARAT DISTRICT IN 2018

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Abstract

Anemia in pregnancy is a national problem because it reflects the value of the socio-economic welfare of the community, and its influence is very large on the quality of human resources. The purpose of this study was to determine the relationship between knowledge and adherence to consume fe tablets with the incidence of anemia in third trimester pregnant women at the Pasirlangu Health Center. The design used is an analytical study with a cross-sectional approach. The sampling technique uses the accidental sampling method with a sample of 50 respondents. Based on the results of the bivariate analysis, 52% of pregnant women TM III were affected by anemia, 56% good knowledge and 54% compliance with fe tablet consumption while the univariate results obtained a variable knowledge (p = 0,000) and compliance with tablet consumption fe p = 0.002. The conclusion is that in the region the incidence of anemia is still quite high and there is a significant relationship between knowledge and adherence to consume fe tablets with the incidence of anemia in trimester III pregnant women

Keywords: Anemia, trimester III pregnancy, knowledge, compliance consume fe tablets

Introduction

Anemia is one of the most frequent complications associated with pregnancy. Anemia in pregnancy is a national problem because it reflects the value of the socio-economic welfare of the community, and

its influence is very large on the quality of human resources. Anemia in pregnant women is also called "potentional danger to mother and child" (potential harm to mother and child), which is why anemia requires serious attention from all parties involved in health services[2]. According to data from Riskesdas in 2013, the prevalence of anemia in Indonesia was 21.7% with anemia patients aged 5-14 years 26.4% and 18.4% of patients aged 15-24 years[3]. The 2012 Household Health Survey data states that the prevalence of anemia in children under five is 40.5%, pregnant women is 50.5%, postpartum women are 45.1%, girls aged 10-18 are 57.1% and the age of 19-45 years is 39.5%. Women have the highest risk of developing anemia, especially in young women[3]. WHO has defined anemia during pregnancy less than 11 g / dl in the first and third trimesters and less than 10.5 g / dl in the second trimester[4].

Anemia in pregnancy can adversely affect especially during pregnancy, labor and childbirth. The high prevalence of anemia results in negativity such as the first disorders and barriers to growth, both body cells and brain cells, while the second lacks Hb in the blood resulting in a lack of oxygen that is carried / transferred to cells of the body and to the brain. Pregnant women who suffer from anemia are likely to experience post partum bleeding[3].

The danger of anemia in pregnancy can be divided into two, namely the danger of pregnancy and the fetus including the danger during pregnancy in the form of a mother can experience abortion, premature labor, obstacle to fetal growth and development in the uterus, easy infection, the risk of cord decompensation in Hb is less than 6 gr% hydatidiform mole, hyperemesis gravidarum, antepartum bleeding and premature rupture of the membranes[5].

The most common anemia is iron deficiency anemia and megaloblastic anemia folate deficiency[2]. Most anemia is

iron deficiency anemia due to lack of Fe consumption from poor food intake so one of the main bases of anemia in pregnancy is poverty (low family income). Families are not able to meet food standards that contain complete nutrients for pregnant women. Still the presence of anemia in pregnant women reflects the family's socio-economic inability. Most pregnant women experience iron deficiency anemia as a result of increased Fe requirements during pregnancy. Fe needs during pregnancy can be calculated as much as 900 mg consisting of 500 mg because of an increase in the mother's blood count, 300 mg due to placental formation and 100 mg due to fetal blood growth. When labor is accompanied by around 300cc bleeding and the birth of the placenta, the mother will lose 200 mg of Fe and this deficiency must get compensation from food for lactation needs.

Based on data from the West Bandung District Office in 2014, the incidence of anemia was 2.82%, in 2015 it was 2.79% and in 2016 it was 5.05%. Based on reports from the pasirlangu health center that the incidence of anemia in pregnant women in 2015 was 4.66% and in 2016 as many as 5.28%. Due to the impact of the incidence of anemia this is very fatal and also an increase in the incidence of anemia in pregnant women, the authors are interested in conducting this research.

Methodology

This study uses analytic study design with a cross-sectional approach. The number of samples in this study were 50 respondents. The sampling technique uses non probability sampling with accidental sampling method. The research instrument used a questionnaire that had previously been tested for validity and reliability. Bivariate analysis using chi-square test.

Research Ethics

This research has been accepted at the National University

Results

1. Univariate Analysis Results

Table 1

Frequency Distribution of anemia events, knowledge and compliance with fe tablet consumption at Pasirlangu Health Center

Variable	Criteria	N	Persentase
The incidence of anemia	Anemia	26	52
	Not Anemia	24	48
Knowledge	Good	28	56
	Not good	22	44
Compliance with consumption of Fe tablets	Obey	27	54
	Not obey	23	46

2. esults of Bivariate Analysis

Table 2

Knowledge Relations and tabet fe compliance with the incidence of anemia in pregnant women TM III at the Pasirlangu Health Center

Variable	The incidence of anemia				Total		*p-value*
	Anemia		Not anemia				
	N	%	N	%	N	%	

Knowledge							
Good	22	78,6	6	21,4	28	100	0.000
Not good	4	18,2	18	81,8	22	100	
Compliance with consumption of Fe tablets							
Obey	20	74,1	7	25,9	27	100	0,002
Not obey	6	26,1	17	73,9	23	100	

Discussion

Based on the results of research on factors related to the incidence of anemia in third trimester pregnant women in the Pasirlangu health center in West Bandung district in 2018 it turned out that 52% of pregnant women had anemia in their pregnancies.

Anemia in pregnancy is the condition of the mother with hemoglobin levels below 11 gr% in the first and third trimesters or levels <10.5 gr% in the second trimester [4]. The incidence of anemia in the fetus, low birth weight, preterm birth, and stillbirth is often associated with anemia in pregnancy[6].

The results of the study at the Puweri Health Center in West Sumba Regency showed that there were 92.5% anemia in pregnant women Trimester III7. Likewise with the results of the 2013 Ministry of Health Republic of Indonesia which stated that the prevalence of anemia in pregnant women in Indonesia reached 27.1%[8].

According to the researchers 'assumptions, the high rate of anemia in the working area of Pasirlangu health center can occur due to a lack of understanding of pregnant women' s awareness of the importance of health, especially for mothers and their babies, because the pregnancy process assumes that women are usually

experienced. Therefore pregnant women are not fulfilled with adequate nutritional needs, knowledge of the importance of health can all be seen from routine prenatal care so that pregnant women are easy and get clear information to get the importance of fe tablet consumption, other vitamins, and recommended maternal nutrition by midwives or other health workers. And can check Hb examination at the beginning of the trimester so that in the second trimester can maintain nutritional improvement and supply of tablet fe so that in the third trimester there is no and reduced pregnant women who experience anemia. Because the occurrence of anemia can be a threat to the mother and baby to experience labor at the risk of the possibility that the most of the resulting anemia will result in her mother's bleeding and her baby will lack a perfect oxygen supply.

Based on the results of the study also showed that there was a significant relationship between knowledge and compliance of fe consumption with the incidence of anemia in third trimester pregnant women at the Pasirlangu Health Center. The results of this study are the same as the research at Bumi Emas Health Center, East Lampung Regency and

oyudan Health Center, Sleman Yogyakarta, which states that there is a relationship between knowledge and incidence of anemia in pregnant women in the third trimester III,[10].

According to the assumption that researchers lack knowledge about anemia has an influence on health behavior, especially when a woman during pregnancy, will result in less optimal health behavior of pregnant women to prevent the occurrence of anemia in pregnancy. Pregnant women who have less knowledge about anemia can result in a lack of consumption of iron-containing foods during pregnancy due to their ignorance. Although in this study many respondents who were well-informed about anemia, were caused by behavioral factors lacking awareness and understanding of the importance of health,

namely anemia. And more referring to customs, culture, so that it still adheres to the ancestral heritage of the health of pregnant women considered normal and does not need contact with health workers which will result in a lack of consumption of fe tablets, other vitamins and the importance of maintaining health anemia.

Pregnant women who adhere to consuming Fe tablets have a lower risk of anemia than pregnant women who are less compliant in consuming Fe tablets, this is because the better the consumption of Fe tablets, the lower the incidence of anemia. Pregnant women really need to consume Fe tablets, because Fe tablets are blood- added tablets to overcome iron deficiency anemia given to pregnant women. In addition to iron not only needed by the mother but also for the fetus in the womb[2].

In consuming Fe tablets better at night before going to bed, make it a habit to also add substances that facilitate absorption of iron such as vitamin C, orange juice. Conversely, iron absorption inhibitors such as tea, coffee and milk should be avoided[11]. The results of this study are in line with other researchers which can be concluded that there is a significant relationship between adherence to consuming fe tablets with the incidence of anemia[12].

According to the researchers' assumption that pregnant women consume all (at least 90) Fe tablets given by midwives, while the criteria are not compliant if pregnant women do not consume all Fe tablets given by midwives either because they sometimes forget or even if mothers do not drink at all blood added tablets given by midwives. Improving the consumption of iron tablets is one of the most important assistance that can be done to improve the quality of nutritional status in pregnant women. Monitoring compliance with consuming Fe by an officer can be done by asking the patient to collect packs of Fe tablets that have been consumed and calculating the number of packs carried by the patient. As

well as asking for the color of maternal feces, this can be called an evaluation system for pregnant women who have been given fe tablets, and is expected to motivate patients to take Fe tablets and officers cannot be deceived by the answers of pregnant women.

From the results of this study, many who adhere to consuming tablet fe are influenced by the time factor of consuming fe tablets, because at that time it can affect the incidence of anemia, namely pregnant women always consume tablet fe in the morning and afternoon so that it can lead to a lack of effective absorption of tablets body. Because in the morning and afternoon many foods are eaten in a variety of ways, one of which can inhibit the absorption of fe tablets. So that it is said to be obedient is still there that causes anemia.

Conclusion

The Results of research conducted in third trimester pregnant women in the pasirlangu health center in West Bandung regency in 2018, it can be concluded that of the 50 respondents of III trimester pregnant women who visited the Pasirlangu puskesmas affected by anemia as much as 52%, good knowledge was 56% and compliance with Fe tablets 54% and there was a significant relationship between knowledge and adherence to consuming Fe tablets with the incidence of anemia in third trimester pregnant women at Pasirlangu Health Center, West Bandung Regency in 2018.

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THE CORELATION OF FAMILY SUPPORT WITH SELF CARE PATIENTS WITH NON HEMORAGIC STROKE INPATIENT AT CEMPAKA PUTIH ISLAMIC HOSPITAL JAKARTA : QUANTITAVE STUDY

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ABSTRACT

Introduction : Strokes occur when the blood supply to parts of the brain is severed or greatly reduced.Non-Hemorrhagic Stroke is a disease caused by a blockage in the blood flow in the brain. The prevalence of stroke in Indonesia had take first place in the world as the most death causes and dissabilty after stroke. In the Jakarta Islamic Hospital occur prevalence of stroke as much 263 patient in the past year. Dissability after stroke had impact to self care dependency, needed family support to help patient self care. Family support consist of emotional support, real support and informational support. Family support related with self care dependency level stroke's patient.The objective of the study was knowing correlation family support with self care stroke's patient in hospitalization Jakarta Islamic Hospital.
Method :This is analictic survei using *cross sectional* design. The sampel of study amount 14 patient with stroke non haemoragic. The *total sampling* was used in this study. The instrument of the study consisted of family support questionnaire and Barthel's Indeks. The questionnare had validated, yeilding Cronbach's alpha coefficient of 0,93. The data were analysed using *descriptive statistic* was *chi-square* to knowing correlation between two variable.
Result : The result of the study showed that there was correlation between variable and significantly family support with self care 0,008 ($p<0,05$).
Conclusion : Expected nurses can more increase family support role to increase self care of non haemoragic stroke's patient.

Keywords : Non Haemoragic Stroke, Family Support, Self Care Patients

INTRODUCTION

Stroke or CVD (Cerebro Vascular Disease) is a sudden neurological deficit in the central nervous system caused by ischemic or hemorrhagic events that have multi-complex etiology and pathogenesis and place stroke as a serious problem in the world[1].

Th American Stroke Association (ASA) in 2014 describe that every year in the United States (US)> 690,000 adults experience a stroke that increases with age. It is estimated that the number of stroke patients is a complication due to neurological, psychological and social damage resulting in a decrease in health and the risk of recurrence[2].

Indonesia has been ranked number 1 in the world for the highest number of deaths caused by strokes with the number of deaths reaching 21.2% of the total deaths that occurred in the period 2000-2012[3].

Pravelancy data for non-hemorrhagic stroke in brackets from July 2017 - June 2018 in the inpatient room of the Jakarta Islamic Hospital Cempaka Putih, showed non hemorrhagic strokes having pravelancy of 263 people.

Post-stroke will make a person's level of dependence increase, so people cannot afford to be independent, especially in self-care. This condition will cause patients to be depressed[4].

Families play an important role in influencing patients not to be depressed[4]. The family plays a supportive role during the recovery and recovery of patients. Family support plays a very important role in maintaining and maximizing physical and cognitive recovery[5].

Families play an important role in influencing patients not to be depressed[6].The family plays a supportive role during the recovery and recovery of patients. Family support plays a very important role in maintaining and maximizing physical and cognitive recovery[5,6].

Dorothea Orem's theory in 1921 focuses on independent self-care actions in an effort to preserve life and health, cure illnesses or injuries and overcome the harm they cause [5,6].

METHODOLOGY

This type of research is *quantitative* using descriptive analytic with *cross sectional design*. The study was carried out in the inpatient room of the Jakarta Islamic Hospital CempakaPutih in May - August 2018. The sampling method was *total sampling,* with a total sample of 14 people.

The variables measured are family support and self-care, as well as the trigger variables for age, sex, employment and education. Analysis using *Chi-Square* statistical tests using the SPSS program. Subjects were measured using a family support questionnaire and the Barthel index[7].

ETHICAL CONSIDERATION

The study was approved by the university

RESULTS

The measurement tool for data collection used in this study is a questionnaire modified by researchers and adopted from several libraries consisted of several statements that must be chosen by respondents according to their conditions. To obtain information from respondents, researchers used a questionnaire sheet consisting of 3 types of questionnaires :

1. Demographic data questionnaire is a questionnaire that contains questions about the identity or demographic data of respondents, such as age, gender, education and occupation of the respondent.
2. The family support assessment questionnaire is a questionnaire to measure family support for the condition of the respondents. Questionnaires are measured through respondents assessments. This questionnaire contains 20 statements using a *Likert scale.* In this questionnaire there are 3 domains, namely statement number 1-6 is the domain of emotional support and hope, revelation number 7-15 is a real domain of support and revelation number 16-20 is an information support domain.
3. Barthell's index checklist is a tool to measure the level of ability of respondents in self-care independently. This checklist consists of 4 domains, namely the domain of mobilization which includes moving from chair to bed, walking and climbing stairs; the domain of elimination includes toileting, Urination and defacate control; the hygiene domain includes dressing, showering and personal hygiene; and the nutritional domain of eat. Measuring the level of respondents' self care ability was measured using the Scoring scale.

Table 1 Frequency Distribution of Support Respondent's family

Family support	N	Percentage (%)
Low family support	8	57.1
High family support	6	42.9
Total	14	100

Based on table 1 about the distribution of frequency family support respondents indicated that the frequency of low family support has the highest number of 8 respondents (57.1%), compared to the number of high family support only 6 respondents (42.9%).

Table 2 Frequency Distribution Self CareRespondents

Self care	**N**	**Persentage (%)**

Heavy dependence	8	57.1
Mild dependence	6	42.9
Total	14	100

Based on table 2 about the frequency distribution of respondents self care showed that the frequency of heavy dependence has the highest number, namely 8 respondents (57.1%), compared to the number of mild dependencies only 6 respondents (42.9%).

Table 3 Frequency of Respondents Distribution by age

Age	N	Persentage (%)
Early elderly (46 - 55 years old)	7	50
Early elderly (46 - 55 years old)	7	50
Total	14	100

Based on table 3 about the frequency distribution of respondents based on age, it showed that the frequency of the age of 46-55 years has 7 people (50%), where this value is the same as the age of> 55 years which has 7 people (50%).

Table 4 Frequency Distribution of Respondents Based on Gender

Gender	N	Persentage(%)
Man	9	64.3
Woman	5	35.7
Total	14	100

Based on table 4 about the frequency distribution of respondents based on sex, it showed that the frequency of men has the highest number of 9 people (64.3%), compared to the number of women.

Table 5 Frequency Distribution of Respondents Based on work

Kind of Work	N	Persentage (%)
Not Worked (Housewives and retirees)	10	71.4
Work (Civil servants, Private employees, entrepreneurs)	4	28.6
Total	14	100

Based on table 5 about the frequency distribution of respondents based on work, shows that the frequency of respondents who do not work has the highest number, namely 10 people (71.4%), compared to the number of respondents who work.

Table 6 Frequency of Respondents Distribution Based on education

Stages of education	N	Persentage (%)
Low Education (Middle school, high school)	3	21.4
High education (Higher education)	11	78.6
Total	14	100

Based on table 6 about the frequency distribution of respondents based on education, it shows that the frequency of higher education has the highest number of 11 people (64.3%), compared to the number of low education.

Table 7 Relationship Characteristics of Respondents with Self Care Respondents

Variable		*Self care*				Total		p	OR
		Heavy dependence		Mild dependence					
		N	%	N	%	N	%		
Age	Early elderly (46-55 years)	2	14.3	5	42.8	7	50	0.031	0.067
	Late elderly (>55 years)	6	35.7	1	7.2	7	50		
Total		8	57.1	6	42.9	14	100		
Gender	Man	3	21.4	6	42.9	9	64.3	0.016	
	Woman	5	35.7	0	0	5	35.7		
Total		8	57.1	6	42.9	14	100		
Kind of Work	Not Worked (Housewives, retired)	7	50	3	21.4	10	71.4	0.124	7
	Worked (civil servants, Employee, entrepreneurs)	1	7.2	3	21.4	4	28.6		
Total		8	57.1	6	42.9	14	100		
Stage of education	Low Education (Middle school, high school)	1	7.2	2	21.4	3	21.4	0.347	0.286
	High education (Higher education)	7	50	4	78.6	11	78.6		
Total		8	57.1	6	42.9	14	100		

Based on table 7, it is known that there is a relationship between age and sex variables with respondents self care. The age variable with self care has a *p* value of 0.031 and the sex variable with self care has a *p* value of 0.016. It is known that there is an OR value of 0.067 on the variable age of the respondent, and 7 on the work variable and the value of OR 0.286.

Table 8 Relationship between Respondents Family and Self Care Support

Family Support	*Self care*				Total		p	OR
	High dependence		Mild dependence					
	N	%	N	%	N	%		
Low family support	7	50	1	7.2	8	57.2	0.008	35
High family support	1	7.2	5	35.6	6	42.8		
Total	8	57.2	6	42.8	14	100		

Based on table 8 showed that there are 8 respondents (57.2%) with low family support experiencing dependency. While there are 6 respondents (42.8%) with high family support experiencing dependence in doing self care. Based on table 8, it can be seen that the p value of 0.008 indicates that there is a relationship between family support and self care of respondents in doing self care. It is known that there is an OR value of 35, which means the opportunity for the relationship between family support and self care is 35 times.

DISCUSSION

Characteristics of respondents studied were age, gender, occupation and education. The number of respondents was 14 people which were divided into two groups of early age (46 – 55 years)and final elderly age (> 55 years). The two age groups in the study had the same number of frequencies, namely 7 respondents. Where this means that not a certain age limit, a person can suffer a stroke.

The incidence of stroke increases with age, after entering the age of 55 years and over, the risk of stroke has doubled every 10 years. But does not mean strokes only occur in the elderly but strokes can also affect various age group[8].

This is related to the change in lifestyle, especially the modern urban population. A number of behaviors that consume fast food (fast food) that contain high fat content, smoking, alcoholic beverages, excessive work, lack of exercise, and stress, had become lifestyle even though these behaviors are risk factors to stroke[9].

The total respondents are 14 people have 9 male respondents and 5 female respondents. The male sex group has the most frequency in this study. Where this can mean that men suffer more strokes than women.

Epidemiology of SNH often occurs in men rather than women regardless of ethnicity and national origin[10].Women usually got the lower attacks in adulthood than men. This pattern of attack is related to the protection of female sexual female hormones[11].

The highestgender of men who suffer from stroke is in line with the research conducted by Fitria Handayani, where the frequency of men is higher than that of women by comparison (2.1: 1). Malmo Sweden also stated in his research that found that men had a higher risk (1.2: 1) for the incidence of stroke than women. This study was confirmed by a study conducted by Framingham which stated that the incidence in men was 42% and women were 24% by comparison (1.7: 1)[12].

The results of research that has been conducted, it is known that the frequency of respondents who do not work has a higher frequency of 71.4% compared to respondents who work only 28.6%.

Where respondents who do not work consist of housewives and pensions. While respondents who work are civil servants, employees and entrepreneurs. Based on the frequency above, it is known that work can affect stroke.

CONCLUSION

The results of the research that has been done, conclusions can be drawn in this study as follows:

The description of the family support of non-hemorhagic stroke patients in the inpatient room of the Jakarta Islamic Hospital Cempaka Putih there are 57, 1% of respondents with low family support.

The self-care picture of non-hemorrhagic stroke patients in the inpatient room at the Jakarta Islamic Hospital in Cempaka Putih, there were 57.2% of respondents with heavy dependence.

Characteristics of non-hemorrhagic stroke patients in the inpatient room at the Jakarta Islamic Hospital in Cempaka Putih, there were respondents aged 46-> 55 years with equal numbers, respondents with male sex 64.3%, respondents who did not work 71.4% and respondents with higher education 78.6%.

The relationship of family support with self care in non-hemorrhagic stroke patients in the inpatient room at the Jakarta Islamic Hospital in Cempaka Putih, there is a significant relationship with p value (0.008).

The relationship between the characteristics of self-care (self care), in non-hemorrhagic stroke patients in the inpatient room of the Jakarta Islamic Hospital Cempaka Putih, there is a significant relationship between the characteristics of age and sex with (self care) with p value (0.031 and 0.016).

After analysis, the study suggests providing nursing information about Orem's nursing theory, which is expected to be developed as a nursing intervention that refers to Orem's nursing theory.

Towards RSIJCP the results of the study are suggested to be able to become information for the RSIJCP agency in developing the role of family support for the self-care of SNH patients. And could be used as family nursing based nursing intervention.

For the next researcher, it is suggested to develop further research related to Orem's theory which can give influence from the existence of Orem nursing theory.

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THE EFFECT OF LAUGHTER THERAPY ON DECREASING ELDERLY BLOOD PRESSURE IN PANGKALAN JATI URBAN VILLAGE, CINERE DEPOK CITY, WEST JAVA PROVINCE

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ABSTRACT
Preliminary: Hypertension is a type of non-communicable disease with a high incidence in Indonesia. Anti-hypertensive pharmacological therapy, can cause some side effects. So that people with hypertension are encouraged to use non-pharmacological therapies such as Laughter Therapy. Laughter is a healthy behavior and provides additional oxygen for cells and tissues
Method : The study design used the quasi experimental One Group method with Pre-test post-test design with a total sample of 30 people. The sample inclusion criteria were elderly who had hypertension for more than one year. Laughter Therapy is given to the elderly who suffer from hypertension 1 time each week for 4 consecutive weeks
Result : There was a significant reduction in blood pressure in the elderly after being given the intervention of Laughter Therapy for 4 consecutive weeks with an average value of pressure drop in systolic of 14 mmHg and diastolic of 17mmHg.
Conclusion : Laughter Therapy can be an intervention or non-pharmacological therapy in reducing blood pressure. Nurses need to develop good skills and knowledge in order to provide comprehensive nursing care.

Keywords : Laughter Therapy; elderly; Blood Pressure

INTRODUCTION

Elderly (indonesia : *lansia*) is a natural process that cannot be avoided. Along with increasing age, the occurrence of physiological changes in the elderly accompanied by various health problems that cause high degenerative diseases. Degenerative diseases have consequences for changes and disorders in the cardiovascular system, including hypertension [1].

Hypertension is a condition when blood pressure in blood vessels increases chronically. This can happen because the heart works harder pumping blood to meet the body's oxygen and nutritional needs [2]. *Indonesian Society of Hypertension*/Perhimpunan Hipertensi Indonesia (PERHI) confirms that the term of hypertension is a condition where systolic blood pressure is above 140

mmHg and diastolic blood pressure is above 85mmHg [3].

Report and ACCF/AHA *Expert Consensus Document on Hypertension in the Elderly* revealed that the number of hypertensive patients aged 60-69 years as much as 65% and those aged over 70 years were more than 90% [4]. In 2010, hypertension was the number 3 cause of death after stroke and tuberculosis which reached 6.7% of the death population at all ages in Indonesia [5].

METHODOLOGY

This research is quantitative research, the research design used by researchers is the quasi experimental One Group method with Pre-test post-test design which aims to find out the effect of laughter therapy on decreasing blood pressure in Pangkalan Jati urban village, Depok city, West Java province according to the specified variable. The Quasi Experimental Design aims to examine the causal relationship to treatment [6]. One Group Design approach was only one intervention group without a control group [7]. The research design can be seen as follows

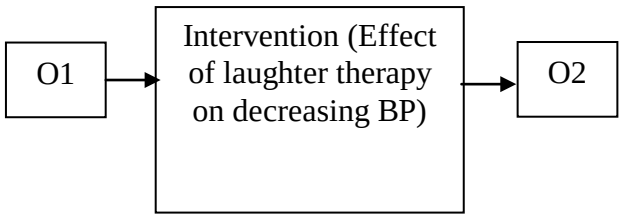

Figure 3.1 Research Design

Explanation

O1 : the first blood pressure of the elderly before the intervention at early stage (*pre test)*

O2 : final blood pressure or after intervention at the final stage (*post test)*

In this study, the intervention of Laughter Therapy was given 4 times in a row for 4 weeks. Before and after doing Laughter Therapy, The researcher will first take measurements and record the respondent's blood pressure. The meeting is held every Friday, and being held for 30 - 45 minutes . At each meeting, before conducting blood measurements both pre-test and post-test, respondents were allowed to rest for 15 minutes to avoid confusion from the results of blood pressure measurements.

ETHICAL CONSIDERATION

This study obtained consent based *Nasional University Rector's Decree by No.* ……. Respondents will first be given informed consent by giving an explanation of the basic information and procedures that will be carried out during the study. Respondents have the right to resign without any sanctions given.

RESULT

Univariate analysis of each variable is shown in the mean, median, minimum-maximum and standard deviation with *convidence interval* 95% form. The results of the univariate analysis obtained are as follows:

Table 4.1 The average description of blood pressure before given of Laughter Therapy intervention in Pangkalan Jati region (n=30)

Week	Blood pressure value	Mean	Median	SD	Min-Max
I	Pre-Test Sistole	162,60	160,00	12,780	150-190
	Pre-Test diastole	108,00	110,00	10,306	90-130
IV	Pre-Test Sistole	158,33	157,50	11,547	140-180
	Pre-Test diastole	104,00	100,00	9,322	90-130

Based on table 4.1, it is known that the average value of systolic blood pressure in weeks I and weeks IV before intervention is (162 mmHg , 161 mmHg

and 158 mmHg) with the lowest score of 140 mmHg and the highest score is 190mmHg. And the average value of diastolic blood pressure in weeks I and weeks IV before intervention is (108 mmHg , 105 mmHg dan 104 mmHg) with the lowest score is 90 mmHg and the highest score is 130 mmHg.

Table 4.2 The average description of blood pressure after given of Laughter Therapy intervention in Pangkalan Jati region (n=30)

Week	Blood pressure value	Mean	Median	SD	Min-Max
I	Post-test Sistole	152,67	150,00	13,502	130-180
	Post-test diastole	91,67	90,00	9,586	80-120
IV	Post-test Sistole	144,50	140,00	12,202	130-170
	Post-test diastole	89,67	90,00	8,298	80-110

Based on table 4.2 it is known that the average value of systolic blood pressure weeks I and weeks IV after intervention is (152 mmHg and 144 mmHg) with the lowest score of 130 mmHg and the highest score is 180 mmHg. And the average value of diastolic blood pressure in weeks I and weeks IV after the intervention is (91 mmHg and 89 mmHg) with the lowest score is 80 mmHg and the highest score is 120 mmHg.

Table 4.3 Value of systolic and diastolic blood pressure after given of Laughter Therapy intervention on Weeks 1 and IV in Pangkalan Jati region 2019 (n=30)

Week	Blood Pressure	N		Mean Ranks		*P Value*
		Negativ	Positiv	Negativ	Positiv	

		e	e	e	e	
I-IV	Sistole Post-Post	25	1	13,50	13,50	0,000
	Diastole Post-Post	27	1	14,39	17,50	0,000

Based on Table 4.3 above according to the results of the Wilcoxon show that negative ranks value or difference (negative) Post-Post systolic blood pressure test in the first and fourth weeks is N negative 25 with Mean rank 13 mmHg. Positive ranks value or difference (positive) Post-Post systolic blood pressure test in the first and fourth weeks is the value of N positive 1 with the value of Mean rank 13. From this study, P value is obtained 0,000.

Furthermore, according to the Wilcoxon results show that negative ranks value or difference (negative) Post-Post diastole blood pressure test in the first and fourth weeks it was said that the N value was negative 27 with the value of Mean rank 14 mmHg. Positive ranks value or difference (positive) Post-Post diastolic blood pressure test in the first and fourth weeks is said to be the value of N positive 1 with the value of Mean rank 17 mmHg. From this study P value is obtained 0,000.

DISCUSSION

Based on systolic blood pressure 30 respondents before being given therapy are known that the highest pressure is 190 mmHg and the lowest blood pressure is 140mmHg while who have been given therapy the highest pressure is 180 mmHg and the lowest is 130 mmHg. For diastolic blood pressure from 30 respondents before being given therapy are known that the highest pressure is 130 mmHg and the lowest blood pressure is 90 mmHg while who have been given therapy the highest pressure is 120 mmHg and the lowest is 80 mmHg. Based on the results of statistical tests with *P Value < 0,05 significant results of the Wilcoxon test show that the*

level of significance is 0.000 meaning that there is an effect of giving laughter therapy to the decreasing of blood pressure in the elderly with hypertension.

Laughter Therapy is one way to achieve a relaxed condition. Laughter is a guide to the improvement of the sympathetic nervous system and also a decrease in work in the sympathetic nervous system. The increase serves to energize movements in the body, but this is then followed by a decrease in the sympathetic nervous system, one of which is also caused by changes in muscle conditions that become more relaxed, and reduce the breakage to nitric oxide which leads to dilation of blood vessels by 20%, while stress causes a decrease in blood flow around 30% [8].

Based on the results of this study, it was found that there was a decrease in blood pressure in both systolic and diastolic pressures in patients with hypertension between before being given laugh therapy with after being given Laughter Therapy. The tendency of this decline is not drastic but rather a gradual or gradual decline.

In bivariate analysis, the results of the respondents' research found that there were differences in the values of blood pressure in systole and diastole in elderly with hypertension before and after intervention every week yaitu the provision of Laughter Therapy with the value of P Value obtained for pre-post systole and diastole week I and IV is *P value* 0,000 where <0.05 which can be concluded according to the Wilcoxon test that there are significant results.

Furthermore, the researcher also obtained the results of statistical tests for post-test week I and post-test week IV, according to the Wilcoxon results show that negative ranks value or difference (negative) Post-Post sistole blood pressure test in the first and third weeks it was said that the N value was negative N value 25 with an average rating of 13 mmHg showed a decrease (change) in blood

pressure values between post-post test in systole after being given Laughter Therapy for 3 weeks. In accordance with the results of the Wilcoxon show that the Positive ranks value or the difference (positive) Post-Post systolic blood pressure test in the first and third weeks It is said that there is 1 positive N value, which means that 1 respondent has a higher systolic value in week IV compared to week I. With the value of Mean rank or an increase of 13 mmHg. From this study, P value is 0,000. Because the value is smaller than <0,05 it can be concluded that there is an effect of the provision of Laughter Therapy on the decrease in systolic blood pressure in the first week.

Statistical test results obtained in accordance with the results of Wilcoxon indicate that the negative ranks value or difference (negative) Post-Post diastole blood pressure test in the first and third weeks it was said that the value of N was negative 27 with the value of Mean rank 14 mmHg showed a decrease (change) in blood pressure values between post-post test on diastole after being given Laughter Therapy for 3 weeks. Furthermore, according to the Wilcoxon results indicate that Positive ranks value or difference (positive) Post-Post blood pressure test diastole in the first and third weeks it is said that there is 1 positive N value, which means that 1 respondent has a higher diastolic value in week IV compared to week I. With a Mean rank value of 17.50. From this study P value is obtained 0,000. Because the value is smaller than <0.05, it can be concluded that there is an effect of giving Laughter Therapy to the decrease in diastolic blood pressure in the first and third weeks.

Laughter therapy or humor is a natural way to deal with mental illness and feeling depressed, although this method is not guaranteed to work for all cases because the success depends on how long the disorder has been experienced, but at least by smiling will make the sufferer feel lighter and free from problems for a while

[9]. Laughter Therapy which can relax the body which aims to release endorphins into the blood vessels so that if there is relaxation the blood vessels can experience vasodilation so that blood pressure can go down [10]. Laughter Therapy is a good form of stress, which means laughter is positive stress and improving quality of life. Laughter has a innate mechanism that encourages two steps of stimulation and relaxation due to the release of substances from adrenaline and nonadrenaline [11]. This creates a feeling of well-being by eliminating stress and small tension in everyday life.

This is appropriate and compatible with the research conducted by Backman, Regier and Young [12]; Tage [13]; Kristina [14] said that laughter therapy has psychological and physiological effects, stress related, self efficacy, and blood pressure. The research hypothesis is that there is a decrease in stress, systolic blood pressure and diastole in hypertensive patients after taking laugh therapy. The activity of moving facial muscles to help expressions related to joy can produce positive effects that have an impact on the nervous system, the principal researcher named Paul Ekman believes that the mechanical movement of facial muscles is closely related to the autonomic system, which regulates heart rate, breathing, and functions that cannot be consciously controlled [9].

The analysis of the researchers showed that the implementation of Laughter Therapy in Pangkalan Jati region for 30-40 minutes every Friday for 4 weeks gives good results to reduce blood pressure in elderly people with hypertension, where every week the respondents experience a decrease in blood that is not too much but quite significant. This is evident from the statistical tests that have been done to produce a p value of 0,000 which is said to be <0.05 has a significant result.

This is in accordance with the research conducted by Pangestu [15] where

the results of the study were given yoga Laughter Therapy effective in reducing blood pressure in elderly people with hypertension with a decrease in average systole of 10-20 mmHg and the average diastolic decrease is 4-5 mmHg. Other research conducted by Sumartyawati [16] also said that after Laughter Therapy for 15-30 minutes, the blood pressure of elderly people with hypertension with a presentation of 71.42% of respondents experienced a decrease in systole and diastole.

CONCLUSION

Based on the results of the study it can be concluded that there are significant changes between systolic and diastolic blood pressure in week I and Week IV after intervention. So it can be concluded that there is "The effect of laughter therapy on decreasing blood pressure in Pangkalan Jati region, Depok city, West Java province". Based on the conclusions above, it should be emphasized that its importance blood pressure control and prevention of the consequences of hypertension which is not only done medically through the consumption of drugs it can also be done through one type of alternative therapy such as complementary therapy, which is Laughter Therapy.

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RELATIONSHIP OF ADOLESCENT GIRLS KNOWLEDGE ABOUT REPRODUCTIVE HEALTH WITH MENSTRUAL HYGIENE BEHAVIOR AMONG STUDENTS OF JUNIOR HIGH SCHOOL NO 2 BOGOR REGENCY WEST JAVA PROVINCE

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Abstract

Introduction: Menstrual hygiene is a component of hygiene in the form of measures to maintain the health and cleanliness of reproductive organs during menstruation. Good knowledge is a determining factor in maintaining reproductive health.

Method: The study design used descriptive analytical method with cross sectional design. The sampling technique uses a population box with a number of 80.

Results: Most of them were 54 respondents (66.2%) with negative menstrual hygiene behavior categories and 44 respondents (55.0%) with a lack of knowledge. There is a significant relationship between the knowledge of young women about reproductive health and menstrual hygiene behavior in female students of SMP N 2 Bojong Gede, West Java Province.

Conclusion: The importance of adolescent knowledge related to behavior that will be displayed in daily activities, especially those related to health behavior.

Keywords: Adolescence, Knowledge, Behavior, Menstrual Hygiene

Introduction

Maintaining cleanliness of the genitals (genitals), especially the outside is part of personal hygiene. Women's genitals are easily affected by the disease because they tend to be moist, the surface is very smooth and easily injured. But it is not difficult to take care of it,

which is like using soft and non-scented pads, not having free sex, and not using excessive vaginal cleansing.

The main causes of ISR (Reproductive Tract Infection) are: weak immunity (10%), lack of hygiene during menstruation (30%), and unclean environment and use of sanitary napkins that are less healthy during menstruation (50%) [1]. A person's behavior is influenced by his level of education and knowledge. A person's knowledge of something can cause changes in behavior[2]. Insufficient knowledge about menstruation is also caused by adolescence, maternal education, and information exposure. Teenagers need to be given good and positive information through parents, peers, school teachers. But the public considers reproductive health is still taboo discussed by teenagers. As a result, adolescents lack understanding, lack of understanding and sometimes make wrong decisions regarding reproductive health[3].

Methodology

This study was an analytical descriptive study with a cross sectional method which aimed to determine the relationship between adolescent knowledge about reproductive health and menstrual hygiene behavior in female students in SMP N 2 Bojong Gede, West Java. In this study, the data used are primary data, researchers will ask permission to research the school of Bojong Gede 2 Public High School, then researchers will approach the prospective respondents to provide explanations and make an agreement that the prospective respondents are willing to

become respondents. Respondents who are willing to be interviewed will be given a questionnaire by the researcher and filled in according to the format of the question.

Ethical Consideration

This research obtained permission based on the Decree of the Chancellor of the

National University. Respondents will first be given informed consent by giving an explanation of the basic information and procedures that will be carried out during the study. Respondents have the right to resign without any sanctions given.

Results

Univariate analysis of each variable is displayed in the form of a frequency distribution table. The results of the univariate analysis obtained are as follows:

Tabel 1.1

Menstrual Hygiene Behavior

Behavior	F	(%)
Negative	54	67,5
Positive	26	32,5
Total	80	100

Based on table 1.2 it can be concluded that there were 54 respondents (67.5%) with negative menstrual hygiene behavior categories and 26 respondents (32.5%) with positive menstrual hygiene behavior categories.

Table 1.2

Knowledge about reproductive health

Knowledge	F	(%)
Low	44	55,0
Middle	27	33,8
High	9	11,2
Total	80	100,0

Based on table 2.2 it can be concluded that there are 44 respondents (55.0%) with a level of knowledge that is low, 27 respondents (33.8%) with a middle level of knowledge, and 9 respondents (11.2%) with a high level of knowledge.

Tabel 1.3

The relationship between knowledge and behavior of menstrual hygiene

Knowle ge	Behavior				Total		*P.Value*
	Negative		Positive				
	N	%	N	%	n	%	
Low	38	86,4	6	13,6	44	100	
Middle	13	48,1	14	59,1	27	100	0.000
High	3	33,3	6	66,7	9	100	
Total	54	67,5	26	32,5	80	100	

Based on table 1.3, it can be concluded that of the 44 respondents who had a lack of knowledge as much as 38 respondents (86.4%), with a negative menstrual hygiene behavior category, from 27 respondents who had sufficient knowledge level as many as 13 respondents (48.1%) with categories negative menstrual hygiene behavior, and from 9 respondents who had a good level of knowledge as many as 6 respondents (66.7%) with positive menstrual hygiene behavior categories.

The statistical test results obtained p-value = 0,000 so that p <α 0.05, then Ho is rejected, which means there is a relationship between the level of knowledge of young women about reproductive health with menstrual hygiene behavior in students of Bojong Gede Middle School 2 2017.

Based on the results of research from 80 respondents there were 54 respondents (66.2%) with negative menstrual hygiene behavior categories and 26 respondents (33.8%) with positive menstrual hygiene behavior categories. In a previous study conducted by Rizqi (2012), 59.2% of respondents obtained negative category menstrual hygiene behavior. Based on the existing theoretical results regarding menstrual hygiene behavior right, previous research, as well as research that has been done, the researchers concluded that there are still many students of SMP N 2 Bojong Gede having menstrual hygiene behavior with a negative category. Therefore the cleanliness of genitals must be maintained because germs are easily entered and can cause Reproductive Tract Infection (ISR), because the purpose of treatment during menstruation is to maintain the cleanliness and health of individuals carried out during the menstrual period so that they get physical and psychological well-being and can improve one's health status.

Based on the results of the study, it was also found that from 80 respondents there were 44 respondents (55.0%) with a lack of knowledge, 27 respondents (33.8%) with sufficient level of knowledge, and 9 respondents (11.2%) with a good level of knowledge. In previous research Windurenny4 obtained results of 52.3% with a lack of knowledge.

Based on the results of existing theories, previous research, as well as research that has been done, the researchers concluded that there are still many students of Bojong Gede 2 Public High School who have a lack of knowledge. Therefore, students can actually get knowledge about menstruation from the closest people such as their mothers and sisters. It can also be through formal education at the level of formal education, while knowledge from informal education such as experience and information from sources such as mass media, electronic media, and from counseling.

The statistical test results obtained p-value = 0,000 so that $p < \alpha$ 0,05, then Ho was rejected, which means there is a relationship between the level of knowledge of young

women about reproductive health with menstrual hygiene behavior in class X students of SMPN 2 Bojong Gede in 2017. This is in accordance with the theory that a person who does not have sufficient knowledge of reproductive health will tend to ignore his reproductive health and in the end he will take actions that endanger himself. Knowledge about reproductive health is an important factor in determining women's hygiene behavior during menstruation5. The low level of knowledge about reproductive health will allow women not to behave hygienically during menstruation.

Menstrual hygiene is a component of individual hygiene that plays an important role in the status of a person's health behavior, including avoiding a disturbance in reproductive function. During menstruation the blood vessels in the uterus are very easily infected. Therefore the

cleanliness of the genitals must be maintained because germs are easily entered and can cause Reproductive Tract Infection (ISR). The purpose of treatment during menstruation is to maintain the cleanliness and health of individuals carried out during the menstrual period so that they get physical and psychological well-being and can improve one's health status6.

The results of this study are in line with Dewi7's research, in Benai 1 Public High School stated that there was a significant relationship between knowledge and hygiene behavior during menstruation. Based on the existing theoretical results, previous research, as well as the research that has been done, the researcher concludes that the increasingly lack of knowledge level of more female students has menstrual hygiene behavior which tends to be negative, due to lack of information and knowledge received by female students regarding reproductive health.

Efforts are made to be able to get knowledge about menstruation from the closest people such as mother and sister. It can also be through formal education at the level of formal education, while knowledge from informal education such as experience and information from sources such as mass media, electronic media, and counseling.

Conclussion

Based on the results of research and discussion, it can be concluded that most respondents have menstrual hygiene behavior with a negative category of 54 respondents (67.5%), have a level of lack of knowledge as much as 44 respondents (55.0%) and there is a relationship between the level of knowledge with menstrual hygiene behavior with p-value = 0,000. Based on the above conclusions, it needs to be stressed that the importance of knowledge about reproductive health for adolescents in influencing their behavior is behavior related to their

health through the provision of health education or the involvement of health workers in periodic checks related to their reproductive health.

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ASSOCIATION BETWEEN SLEEP QUALITY AND HYPERTENSION IN PREGNANT WOMEN IN CISAUK HEALTH CENTER TANGERANG DISTRICT 2018

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ABSTRACT

The World Health Organization (WHO) reports that the prevalence of hypertension in pregnant women is around 35-55%. WHO also states that 20% of maternal deaths in developing countries are related to hypertension in pregnancy, which is also associated with the sleep quality. There are many factors that associated with hypertension in pregnancy, one of which is mother's sleep quality during pregnancy. The purpose of this study was to find out the relationship between sleep quality in pregnant women with hypertension. The method used in this research was quantitative descriptive correlational study with a cross sectional study. The population in this research were all pregnant woman who met the inclusion criteria at Cisauk Health Center which amounted to 52 respondents. The sampling technique used total sampling. The data was collected using questionnare and observation. From the total of 52 respondents, 9 respondents experienced hypertension (17,3%) and those who did not have hypertension were 43 (82,7%). Respondents who had good sleep quality were 44 (84,6%) and those who had poor sleep quality were 8 (15,4%). From the result of the hypothetical sleep quality test on pregnant women with hypertension, a p value of 0,000 ($p<0,05$) was obtained. Sleep quality in pregnant women can affect hypertension. Researchers who will conduct similar research in the future are expected to further develop this research with better research methods and using other varieables.

Keywords: Hypertension, Sleep quality in pregnant woman

Introduction

Pregnancy is a continuous cycle consisting of ovulation (maturation of cells) and the contact between the ovum (egg cell) and spermatozoa (sperm), followed with fertilization and cell growth, nidation (implantation) of zygotes in the uterus, placental formation, ended with the growth and development of conception products to term as the final stage (Manuaba, 2010).

Sleep is one of the basic human needs that must be fulfilled every day. The sleep quality of each individual is different, depending on the number of sleep duration (quantity of sleep), body condition, daily activities, lifestyle, and age of the person. Both quantity of sleep and the quality of sleep are the most

important things in fulfilling one's sleep needs, so that everyone can sleep in a short amount of time but with sufficient sleep quality, and vice versa. If someone's sleep needs can be fulfilled properly, then the person will feel healthier, excited, and recovered (Tiran, 2007).

According to research at University of Medicine and Dentistry of New jersey New Brunswick, sleep disorder increases the risk of increasing blood pressure during pregnancy four fold. Worse yet, the risk of developing diabetes during pregnancy can also increase the two fold in emotional conditions, including anxiety, fear and depression (Rafknowledge, 2004).

The World Health Organization (WHO) reports that the prevalence of hypertension in pregnant women is around 35-55%, and increases further with increasing gestational age. WHO also states that 20% of maternal deaths in developing countries are associated with hypertension in pregnancy, which is also associated with lack of sleep duration (Shotang, Rahmayanti, Tebisi, & Bantulu, 2016).

Maternal mortality in Indonesia is around 60-80%, caused by bleeding during childbirth, obstructed labour, sepsis, high blood pressure in pregnancy and complications from abortion (Shotang, Rahmayanti, Tebisi, & Bantulu, 2016).

One health problem that often arises during pregnancy and can cause complications in 23% of pregnancies is hypertension. The incidence of hypertension in pregnancy is around 5-15% and is one of the 3 causes of maternal mortality and morbidity in addition to infection and bleeding (Prawirohardjo, 2010).

According to the research of the Pesta S Corry Party in 2016, only 25 out of 41 people were found that had enough rest. There were 6 people (14.63%) experiencing hypertension and there were 19 people (46.34%) who were not hypertensive. Furthermore, from 16 people who had poor sleep quality , 9 people (21.95%) had hypertension and 7 people (17.07%) were not hypertensive (Shotang, Rahmayanti, Tebisi, & Bantulu, 2016).

According to the profile of data from the Tangerang District Health Office in 2014 it was known that the Maternal Mortality Rate (MMR) was 47 people. Causes of death included 22% bleeding, 38% severe preeclampisa / hypertension in pregnancy, and 30% were other causes.

Data obtained from Cisauk Health Center in 2017 showed that 63 from 657 pregnant women who did antenatal care (ANC) were suffering from hypertension with blood pressure above 140/90 mmHg. When researchers conducted a survey at the Cisauk Health Center on 20 pregnant

women who visited antenatal care (ANC), 2 pregnant women were found suffered from hypertension. Three of 20 pregnant women had disturbed sleep quality.

METHODS

The type of research used was quantitative descriptive correlation research with a cross sectional approach. Descriptive correlative research was conducted to see the relationship between two symptoms or variables (Notoatmodjo, 2005). In this study, the researchers studied and looked at the effect of the problem, so that researchers can describe the association between sleep quality and hypertension in pregnant women in Cisauk Health Center, Tangerang Banten Regency in 2018. The population was the entire data source needed in a study (Sumantri, 2011).

No.	Sleep Quality	Number	Percentage(%)
1.	Good	44	84,6
2.	Poor	8	15,4
Total		52	

In this study the population included all pregnant women who had their pregnancies examined and recorded as patients at the Cisauk Health Center in July as many as 52 pregnant women. The sampling technique in this study used total sampling, which was a sampling technique where the number of samples was the same as the total population or each population had opportunity to be sampled (Sugiyono, 2011). The instrument in this study was the KIA book to determine the respondent's blood pressure and Pittsburg Sleep Quality Index (PSQI) to measure sleep quality, which had been developed by Contreras et al in 2014. The Pittsburg Sleep Quality Index (PSQI) questionnaire consisted of 9 questions.

RESULTS AND DISCUSSIONS

Results

Table 4.1 Frequency Distribution of Sleep Quality in Pregnant Women in Cisauk Health Center, Tangerang Regency Banten in 2018

From table 4.1, it could be seen that from 52 pregnant women, 44 people (84.6%) had good sleep quality, while those who had a poor sleep quality were 8 people (15.4%).

Table 4.2 Frequency Distribution of Hypertension in Cisauk Health Center, Tangerang Regency Banten in 2018

No.	Blood Pressure	Number	Percentage (%)
1.	No Hypertension	43	82,7
2.	Hypertension	9	17,3
Total		52	100,0

From table 4.2 it could be seen that from 52 pregnant women, 43 people (82.7%) did not have hypertension, while those with hypertension were 9 people (17.3%).

Table 4.3 Associaton between sleep quality and the incidence of hypertension at the Cisauk Health Center Tangerang Regency Banten in 2018

Sleep Quality	Blood Preassure						
	No Hypertension		Hypertension		Total	P Value	OR
	N	%	N	%			
Good	41	93,2	3	6,8	44	0,000	41.000
Poor	2	25,0	6	75,0	8		
Total	43	6,5	9	93,5	52		

Based on table 4.3, it could be seen that there were 41 (93.2%) respondents who had good sleep quality and did not experience hypertension, while 6 respondents had both poor sleep quality and hypertension (75.0%).

Analysis of chi-Square test statistics (P Value ≤ 0.05) showed a significant p value of 0,000. So that it could be concluded that there was an association between the sleep quality and the incidence of hypertension. Odd Ratio (OR) of 41,000 meant that respondents with poor sleep quality had 41 times more chance of experiencing hypertension.

DISCUSSION

The results of the study showed that 44 of 52 pregnant women had good sleep quality (84.6%) while Pesta Corry (2016) found that 25 of 41 respondents (60.98%) had good sleep quality and there were 16 (39.02%) respondents whose poor sleep quality.

According to the Karger (2009) in France, 75% of pregnant women experience sleep disorders. Based on Widiyani's opinion in Kompas (2013) it is estimated that 78% of women experience sleeping difficulty during pregnancy.

Sleep disorders wera complained by 25% pregnant women in the first trimester and continue to increase to 75% in the third trimester (Okun, Schetter, and Glynn, 2011). Sleep disorders in pregnant women include excessive daytime sleepiness, snoring or sleep obstructive apnea, restless legs syndrome, insomnia, and reduced sleep duration. This sleep disorder will worsen the sleep quality in pregnant women (Khazaie et al., 2013).

Sleep disorders is associated with increasing morbidity and mortality. Poor sleep quality is associated with risk of depression, lack of sleep, and the

incidence of diabetes mellitus and obesity. In addition, sleep disorders can affect the cardiovascular system, neuroendocrine, metabolism, and immunity (Buysse, 2014).

Sleep disorders such as impaired sleep duration and quality can influence the body's inflammatory response which is characterized by an increase in proinflammatory cytokines, interleukin (IL) -6 and tumor necrosis factor (TNF) -α, and an increase in the acute phase protein, C-reactive protein (Okun and Coussons-Read, 2007).

According to the researchers, the quality of sleep is poorly affected by discomfort during pregnancy, such as experiencing anxiety when facing labor in nullipara, which affects the quality of sleep in pregnant women.

Based on the results of the study it could be seen that 43 of 52 pregnant women did not have hypertension (82.7%), while the rest (9 people) had hypertension (17.3%).

The results of research conducted by Pesta Corry (2016) in pregnant women showed that 16 respondents (63.41%) did not experience hypertension and there were 15 who experienced hypertension (36.59%).

One health problem that often arises during pregnancy causing 23% of complications in pregnancies is hypertension. The incidence of hypertension in pregnancy is around 5-15% and is one of the 3 causes of maternal mortality and morbidity in addition to infection and bleeding (Prawirohardjo, 2010).

Hypertension in pregnancy plays a major role in maternal and perinatal morbidity and mortality. Hypertension is estimated to be a complication of 7-10% of all pregnancies. Of all mothers who experience hypertension during pregnancy half to two thirds are diagnosed as having preeclampsia or eclampsia (Bobak, 2005).

In Indonesia, the mortality and morbidity of hypertension in pregnancy is still quite high. This is caused by unclear etiology, and also care in lack of medical staff in handling labor, and imperfect referral systems. Hypertension in pregnancy can be understood by all medical personnel both at the center and in the region (Prawihardjo, 2013).

In addition, the frequency of complications in pregnancy and childbirth also increases in pregnant women who have hypertension (Rukiyah et al., 2010).

According to the researchers, hypertension in pregnancy turns out to be not only due to maternal age, primigravida, family history, history of hypertension, but also due to sleep disorders.

4.2.3 Relationship of Sleep Quality with Hypertension Events

Based on the results of the study, it could be seen that there were 41 (93.2%) respondents who had good sleep quality and did not experience hypertension, while 6 (75.0%) respondents had both poor sleep quality and hypertension. Analysis of Chi-Square statistic tests (P Value ≤ 0.05) showed a significant value (p) 0,000 which meant there was a relationship between the quality of sleep and the incidence of hypertension.

The results of this study was also supported by Pesta Corry (2016), which also said that there was a relationship between the quality of sleep and hypertension with the results of statistical tests showed the p value = 0.036, so it could be concluded that Ho was rejected.

This research was in line with the research conducted by Annisa (2013) which stated that there was a relationship between the quality of sleep and hypertension with the statistical test showing the p value = 0.003.

Good sleep quality can prevent the occurrence of hypertension. According to J. Gengwich's research, if there was a lack of sleep, the blood pressure will acutely increase activating the sympathetic nervous system, which will trigger hypertension in the long run (James E Gengwich, 2006).

Poor sleep quality can affect various systems of the body in pregnant women, including the cardiovascular, neuroendocrine, metabolism, and immune system. Based on research by Zaky (2015), poor sleep quality that occured during pregnancy had an impact on the incidence of preterm birth, intra-uterine growth retention, fetal distress, asphyxia, meconium aspiration, and more susceptible to gestational hypertension, preeclampsia, diabetes mellitus and longer labor duration compared to pregnant women whose good sleep quality.

According to P Bansil's research, et al. in 2011 entitled Association Between Sleep Disorders and Hypertension, based on conclusions from NHANES 2005-2008 stated that sleep was important contributing to the optimization of health and vital signs. They reported that the prevalence of hypertension wer 30.2% in people experiencing sleep disorders, 7.5% and 33.0% experiencing short sleep duration and 52.1% reporting poor sleep quality.

According to the researchers, too little or too much sleep during pregnancy will trigger an increase in blood pressure. This is because the hemostasis process plays a role in regulating the blood pressure in pregnant women. Getting enough rest may prevent stressful conditions from pregnant women, because the adrenaline increases in state of stress, causing the narrowing of the arteries. This condition can certainly

increase the blood pressure of pregnant women.

CONCLUSION

It can be seen that more than half pregnant women (44 of 52) have good sleep quality (84.6%). Less than half (9) pregnant women have hypertension (17.3%).

It can be concluded that there was a relationship between sleep patterns in pregnant women with hypertension with a p value of 0,000 ($p < 0.05$), so if the sleep quality is good, then having hypertension is unlikely.

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THE RELATION BETWEEN THE USE OF SMARTPHONE TOWARD KNOWLEDGE, ATTITUDE, AND SEXUAL BEHAVIOR AMONG ADOLESCENTS: A LITERATURE REVIEW

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ABSTRACT

Introduction :The existence of *smartphone* has become one of human beings needs especially adolescents as a social creature. Various kinds of application can be installed into this gadget, he smart phone.The benefit of *smartphone* is not only used as a communication technology but also as other services. One of them is about sexual behavior among teenagers.
Method:This research used descriptive analysis design with *crossectional approach.* The population is all 10th grade students, 103 respondents. The sampling technique used was *random sampling.* The research instrument consisted of questionnaire about the use of smart phone, knowledge, attitude, and sexual behavior. The validity and reliability of the questionnaire had been tested and approved with coefficient value *cronbach's alpha* 0,881.
Result : There was a significant relation between the use of smart phone with knowledge p = 0,006 (p<0,05), the use of*smartphone*with attitude p = 0,008 (p <0,05), and the use of *smartphone*sexual behavior p = 0,008 (p<0,05). The highest OR value was 7.895.
Conclusion:The use of *smartphone* which is not that positive affect teenagers to have risky sexual behavior. Use the *smartphone* no more than 60 minutes, avoid accessing porn site, notice the positive and negative effect if they have done a risky sexual behavior, do a beneficial activity such as extracurricular in the school.
Keywords: The use of *smartphone*,knowledge, attitude, sexual behavior

INTRODUCTION

Smartphone is a new technology which is almost similar with *Personal Digital Assistant* (PDA) that has so many functions and eases to access the internet. The use of *smartphone* applications makes the user easier to access internet or website, and the users of it consist of adult, children including teenagers[1 2]

Based on *Pew Research Center*survey in the United State of America, it showed that 73%of teenagers aged 13-17 had a smart phone and the other 30% had at least a cellular phone. 77,7% of teenagers used *smartphone* to access internet, [3 4.]51,9%of them were*netbook*or laptop users. It was the second position after *smartphone*.

The most frequently used social media among teenagers is Facebook, Twitter, Path, Youtube, Instagram, Kalkus, Line, Whatsapp, Blacberry Mesenger [5.] The features presented by social media are the ability to chat, upload photos and videos, play games favored by teenagers[6]. In 2010 in Indonesia, smartphone users were

16,981,132, in 2011 were 18,000,000, in 2012 were 21,960,000, and in 2013 were 26,791,200. The increase in 2011 was 1,018,868, in 2012 was 3,960,000, and in 2013 was 4,831,200.[7.] The average *smartphone* usagewas 150 times a day. If it was accumulated, in one week a person can use his *smartphone* more than 1,050 times.[8]. Sites that can be accessed through *smartphone* were often displayed without any censorship in which the teenagers will be free to watch any kind of scene such as violent scene and porn scene that have bad effect on the development of the teenagers[9.] Adolescence is a phase or a period to try something new in accordance with his or her identity. Half of children and adolescents (52%) saidthat they have found pornographic content through advertisements or sites that are not suspicious, but only 14% admit to having voluntarily accessed pornographic.[10]

The ease in accessing sites and social media through *smartphones* makes teenagers become the biggest consumers in the internet world. Not a few adolescents at this time have risky sexual relations that result in pregnancy outside marriage, sexually transmitted diseases, even HIV-AIDS. Sexual behavior carried out by adolescents will cause frustration and feelings of sexual inability. The impact of risky sexual relations will also have an impact on the expenditure of adolescents from school or drop out[11.] Children and adolescents surveyed had been using online media for more than a year, and nearly half of them claimed to have first learned about the internet from friends. Data obtained that 69% of respondents used computers to access the internet. About one third of 34% used laptops, and a small portion only 2% of them were connected via video games. More than half of respondents (52%) used cell-phones to access the internet, but less than a quarter (21%) for *smartphones* and only 4% for tablets.[12]

The number of adolescents in Indonesia in 2015 was around 67 million. This number has exceeded half of Indonesia's total population.[13]

The biggest challenges for Indonesia are pre-marital sex, early marriage, pregnancy, HIV / AIDS and drugs in adolescents.Risky sexual behavior among adolescents are 48.9% and non riskysexual behavior are 51.1%.[14]

METHODOLOGY

This research aims to determine the relationship between *smartphone* use toward knowledge, attitudes and sexual behavior of adolescents.

This research used descriptive analytical design using a cross-sectional approach, to find out the correlation between *smartphone* use with knowledge, attitudes and sexual behavior of teenagers, by approaching, observing or collecting data at the same time.[15]

The conceptual framework of this study is that the independent variable is the use of *smartphones* while the dependent variable is knowledge, attitudes, and sexual behavior among adolescents.

The population of this study was all students of grade X aged between 16-19 years with a sample of 103 respondents. The sampling technique used

wasrandom sampling, which is a lottery technique to divide equally among each class, so as to get representatives from each grade level.

The research location is at Pelita 3 High School, East Jakarta in January 2018.

The instrument of this study was a structured questionnaire consisting of four parts: i) questionnaire about *smartphone* use measured from intersection, duration and frequency, with high measurement results (≥ 75%) and low (<75%). ii) measurement of knowledge of good and unfavorable results, iii) attitude measurement with positive and negative measurement results. iv) measurement of sexual behavior with measured results at risk and not at risk. The questionnaire distributed consisted of 30 questions about *smartphone* usage and 10 questions about adolescent sexual knowledge, 11 questions about adolescent sexual attitudes, and 10 questions about sexual behavior in adolescents. Questionnaires had been tested for validity and reliability using the product moment person correlation test with the provision that if r count ≥ r which means the instrument is valid, meaning that the instrument is accepted, and vice versa if r count <r table then the instrument is invalid or unacceptable. Cronbach's alpha coefficientwas r count 0.881, knowledge (r count 0.757), attitude (r count 0.654), sexual behavior (r count 0.710)[15]

Data collection wasconducted sequentially. After getting permission from the headmaster and teachers at Pelita 3 High School in East Jakarta, researchers distributed questionnaires to respondents face-to-face, after the data was collected, then the data was processed with the stages of editing, coding, tabulating, and cleaning.[16]

The following are steps to analyze the data, data were obtained and entered, recoded, cross-checked, and analyzed using SPSS for Windows (v. 20.0, IBM Corporation, Armonk, NY, USA). To analyze the three variables that allegedly related or correlated used the chi-square test. [17]

ETHICAL CONSIDERATION

The dean of the health sciences faculty gave permission to this research through by tNo 1201 / D / FIKES / XII / 2017 to access adolescents as respondents in Pelita 3 High School, East Jakarta. Informed consent was obtained from each participant with standard informed consent procedures and the principles of respect for participants' autonomy, anonymity, confidentiality and privacy were practiced. Participants were treated with respect and informed about their right to freely decide whether to participate in research, with the right to withdraw at any time without penalty.[15]

RESULT

The Relation between the Uses of Smartphone with Sexual Knowledge among adolescents

Adolscents with high *smartphone* use hada good sexual knowledge 96.2%. Those with low *smartphone* use had good sexual knowledge as much as 76.0%. With the value of p-value = 0.006 (p <0.05), it can be interpreted that there is a significant relationship between *smartphone* use and knowledge in adolescents and it had an OR value of 7.895 which means that respondents who use *smartphones*in a high frequency have the opportunity to have good knowledge about sexsual compared to adolescents who use *smartphones* in a low frequency (table 1).

Tabel 1.The Relation between the Uses of Smartphone with Sexual Knowledge among adolescents

Smartphone Usage	Sexual Knowledgel						P value	OR
	Good		Less		Total			
	n	%	n	%n	%			
High	75	96,2	3	3,8	78	100	0,006	7,895
Low	19	76,0	6	24,0	25	100		
Total	94	91,3	9	8,7	103	100		

The Relation between the Uses of Smartphone with Attitude among Adolescents

Respondents whose use of *smartphone* is high had positive attitudes toward sex with 96.3% and negative sexual attitudes towards sex as much as 6.4%. While those with low use of *smartphone* had positive sexual attitudes as much as 73.0% and negative sexual attitudes as much as 28.0% with p-value = 0.008 (p <0.05), indicating that there is a significant relationship between *smartphone* use and sexual attitudes in adolescents with an OR value of 5,678 which means that teens who use high *smartphones* have a 5,678 chance of having a positive sexual attitude compared to respondents with low *smartphone* use. (Table 2)

Table 2.The Relation between the Uses of Smartphone with Attitude among Adolescents

Smartphone Use	Sexual Attitudes				Total		P value	OR
	Positive		Negative					
	n	%	n	%	n	%		
High	73	93,6	5	6,4	78	100	0,008	5,678
Low	18	73,0	7	28,0	25	100		
Total	91	88,3	12	11,7	103	100		

The Relation between the Uses of Smartphone with Sexual Behavior among Adolescents

Respondents with high *smartphone* use had risky sexual behavior of 71.8% and hadnon-risk sexual behavior as much as 28.2% while adolescents who had low *smartphones* use had risky sexual behavior 40.0% and had non-risky sexual behavior as much as 60.0% with p-value = 0.008 (p <0.005), indicating that there is a significant relationship between *smartphone* use and sexual behavior and has an OR value of 3.818 which means that teenagers with high *smartphone* use have an opportunity of 3.818 to have risky sexual behavior compared to teenagers whose *smartphone* use is low. (table 3)

Table3. The Relation between the Uses of *Smartphone* with Sexual Behavior among Adolescents

Smartphone Use	Sexual Behavior				Total		P value	OR
	Risky		Non-risky					
	n	%	n	%	n	%		
High	56	71,8	22	28,2	78	100	0,008	3,818
Low	10	40,0	15	60,0	25	100		
Total	66	64,1	37	35,9	103	100		

DISCUSSION

The Relation between Smartphone Use with Sexual Knowledge

Adolescent sexual knowledge is important to be delivered to adolescents, both through formal and informal education. This effort needs to be done to prevent undesirable things. It is because so far they receive sexual knowledge just from their peers, reading pornographic books, watching porn. Therefore, it is necessary to strive for providing information about sexual knowledge among adolescents.[16.]

The research conducted by Anas which states that the higher the use of smartphones, the better the sexual knowledge, states that there is a relationship between the use of smartphones with knowledge, namely the statistical test results p = 0,000 <0,05.[17]

In line with Lestari, She said that the more intensity of the smartphone will further increase adolescent knowledge about sexuality.[18]

A person's knowledge can be supported by a lot of information and experience. Someone who gets more information will add more knowledge and something that has been done by someone will increase knowledge to be broader.[19]

Smartphones are new technologies that resemble Personal Digital Assistants (PDAs) that have various functions and ease of accessing the internet[1.] The increasingly rapid development of technology has affected people's lifestyles and mindsets, mainly among adolescent. Adolescents are the ones who are closer and interact more with technology. The positive impact of smartphone use, which is one of the gadgets, is to increase visual acuity, stimulate the development of the latest technology, support academic aspects, improve language skills, improve typing skills, reduce stress levels, and improve mathematical skills. The negative impact of smartphone use is being closed, the health of the brain, eyes and hands disturbed, sleep disturbances, violent behavior, fading creativity. Exposure to radiation, and cyberbullying threats .[20]

Sexual knowledge among adolescents is knowledge that can help young people to deal with life problems originating from sexual urges. In this case, sexual knowledge especially before marriage is ideally given first by parents at home, considering that the person who knows the situation best is his own parents. But unfortunately in Indonesia not all parents want to be open to children in discussing sexual issues. In addition, the heterogeneous socio-economic level and level of education in Indonesia causes parents to be willing and able to provide information about sex, but more are unable and do not understand the problem. In this case, the actual role of the world of education is very large.[16]

In accordance with the theory of knowledge stated by Notoatmojo, knowledge is the result of "Know" and this occurs after people have sensed something specific object, sensing occurs through the five human senses, namely the senses of sight, hearing, smell and touch. Most human knowledge is obtained through the eyes and ears. So that it can be concluded that knowledge is everything that is known through the process of sensing certain objects through education or experience. Many factors that influence a person's knowledge include: personality attitudes, innate talents, age and age intelligence, environment, religious education.[21]

According to the assumption of researchers, high smartphone use has an effect on sexual knowledge because adolescence is more "curious" and the easiest is to use a smartphone to answer

the "curiosity" rather than discussion with parents because sexual knowledge is still considered "taboo" to be discussed. so that teenagers are expected to use smartphones wisely to create a young generation that is free from the negative impact of smartphone use which is not good at accessing news from their smartphones.

The Relation between *Smartphone* Use toward Sexual Attitudes

Attitudes can be positive and can also be negative. A positive attitude toward action is to approach, like, expect certain objects. Negative attitudes have a tendency to stay away from, avoid, hate, and dislike certain objects.[22]

` This research is in line with what was done by Fino at SMK Negeri 5 Samarinda, respondents who had a negative attitude were 25.3%.[22]

Attitude is an internal symptom that has affective dimensions in the form of a tendency to respond in a relatively fixed way to objects (people or goods), services, etc., both positively and negatively.[23]

Theory of Planned Behavior by Ajzen and Fishbein. Attitude is determined by two things, namely, beliefabout the consequences of behavior, and evaluation of these consequences for the subject itself, perceived social pressure (subjective norm) to conduct behavior. Subjective norms are determined by two things, namely the opinions of leaders or other people who are considered important (significant others) and how far the subject will follow the opinions of others.[22]

In determining the behavior that will appear to someone, it can be seen that there will be other things that will also be involved in the formation of these behaviors in addition to attitudes. First, the aspect of the situation, this factor can influence the relationship between attitudes and behavior in other ways that can be discussed. In general, individuals will prefer situations that allow us to express attitudes and behavior. In other words individuals often choose situations where they can behave according to their attitudes, attitudes themselves can be reinforced by visible expressions and become better predictors of behavior referenced in social psychology books.[24]

So it can be concluded that the use of smartphones will be responded both positively and negatively by respondents because attitudes are internal symptoms that have affective dimensions in the form of a tendency to respond in a relatively fixed way to objects (people or goods), services and so on, both positively and negatively. In this case, it is illustrated that those who use their smartphones are positive about sex in adolescence. They

know about sexuality by using their smartphone and begin to influence their attitude towards their future sexual behavior. The use of his smartphone to access his sexuality is what must be monitored, directed and limited access to pornography.

The Relation between *Smartphone* Use toward Sexual Behavior

Behavior is an action or an activity of a human who has a very broad expanse, both which can be observed directly, and which cannot be observed. While adolescent sexual behavior is an act carried out by adolescents associated with sexual urges that come both in themselves and outside themselves.[20]

The results of this study are in line with those conducted by Fino (2015) in SMK Negeri 5 Samarinda, respondents with 25.3% non-risky behavior.[22]

The results of the above study are also similar with those of Anas (2011); the results of statistical test analysis showed the value of p = 0,000 <0,05, meaning that there was a significant relationship between smartphone use and teenage sexual behavior. [16]

One of the factors that influence sexual behavior in adolescents is contact with sources of information. Information about local and global can be easily accessed by individuals with the internet network. This has a positive and negative impact. The negative impact of the use of the internet network is the tendency of adolescents to engage in increased sexual behavior due to the spread of information and sexual stimulation through mass media which is very easily accessible to teenagers. Media that is often used by teenagers such as porn sites (internet), pornographic magazines, videos, pornographic films, and smartphones.[25]

Research from the University of Southern California at Los Angels in the United States in 2011 in Candra (2012) shows that one third of students use smartphones or smart phones that are directly connected to cyberspace and about half of children claim to be sexually active. Those who approach or seek sex partners online are significantly more likely to have sex with a partner they know on the internet.[26]

The social relations that are formed at this time can be easily accessed through sophisticated technology, namely smart phones. Where most smartphone users are teenagers, around 80% use this smartphone to communicate or chat with peers online (89%), families (56%) and teachers (35%). 10 According to the Pew Research Center survey in the United States nearly 92% of teens are online without pausing via smartphone.[3]

Behavior is an action or an activity of the person himself who has a very broad range such as walking, talking, crying, laughing, working, studying, writing, reading, and so on. Human behavior is all human activities or activities, both directly observed and which cannot be observed by outsiders[20]

Adolescent as a period of transition from children to adults experience many changes in themselves. Growth and development undertaken by adolescents requires adolescents to be able to adapt. Finding the right identity is a developmental task that a teenager must pass. 27 Adolescents will feel heterosexual creature by interacting with their peers.[11]

So it can be assumed that high *smartphone* use affects adolescents in risky sexual behavior because they (teenagers) use *smartphones* as a means to get to know friends (opposite sex) and tend to make ongoing relationships that can cause undesirable things. Especially in adolescents now the use of *smartphones* can be said to be high even without pause. Adolescent as a transition period from children to adults experience many changes in themselves, especially regarding changes in their sexuality, high use of *smartphones* in establishing social relationships that are wrong, for example accessing pornography will affect teenagers in sexual behavior who are at risk too.

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CONCLUSION

It can be concluded that it is necessary to appeal to adolescents to use *smartphones* with less than 60 minutes, need to avoid access to pornography, do more useful activities or increase additional hours in school by taking extracurricular activities such as scouts, PMR (adolescent red cross), sports or others and do learning, health education, discussions about sexual behavior well which will be useful for adolescent reproductive health.

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THE EFFECTS OF ACUPRESSURE IN INSOMNIA HEALING IN ELDERLY IN BAJA PUBLIC HEALTH CENTER, TANGERANG CITY, 2017

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ABSTRACT

One of the common effects of physical changes in the elderly is the occurrence of sleep disorders (insomnia). In this case, a kind of a complementary therapy that can be applied to cure the insomnia is acupressure. Healing touch method in acupressure is believed as a caring behaviour providing relaxation, comfort, and sense of being love and cared for clients so that the therapeutic relationship of nurses and clients become closer. The aim of this research is to discover the effects of acupressure as an alternative medicine treatment to the insomnia healing in the elderly in Baja public health center, Tangerang city, in 2017. This research uses a quasi experimental design with pre and post test control group approach. Here, the sample of the research uses non probability sampling technique covering purposive sampling by the usage of Independent Simple T Test. Based on the data, it is found that the average age of treatment group respondent is 60.67 years with the deviation standard in 7,276 years, then the lowest age is 50 years and the highest age is 72 years. Moreover, the average age of control group respondent is 61,94 years with deviation standard in 6,245 years, then the lowest age is 50 years and the highest age is 70 years. As the conclusion, it is proved that there is an effect of acupressure therapy for insomnia healing in elderly (p-value = 0,00). Therefore, it is suggested that public health center need to distribute a kind of leaflet to the society informing how the acupressure therapy help the insomnia healing.

Keywords : Acupressure, Insomnia, Elderly

INTRORODUCTION

Life expectancy is one of indicators of success in development especially, in the field of health. A healthy nation is indicated by the longer life expectancy of its inhabitants. The success of development of countries in the world covering all the area including the health will improve the quality of life and public health which affects the increasing of the life expectancy and the number of elderly yearly.(Ministry of Health, 2014).

WHO said that the elderly is a group of people around 60 years old or more than that. In 2013, the

number of elderly people in the world was 11,7 % , and there was a prediction that the percentage would increase along with increasing of life expectancy. *World Population Prospects: the* 2015 *Revision* mentioned that there were 901.000.000 elderly people, as representation of 12% of global inhabitants. In 2015 and 2030, there is a prediction that the number of people around 30 years old will increase from 901 million into 1,4 billion or it arise around 56 %. Moreover, in 2050 the number of elderly people will be more than twice as 2015, it will be around 2,1 billion. In this case, Asia will be the largest elderly population in the world covering 508 million in 2015, accounting for 56% of the total elderly population in the world (United Nations, 2015).

Elderly population growth globally is predicted to increase. Then, after 2010 the elderly population growth in Indonesia will be higher than the elderly population in the world. Here, in 2015 the number of elderly population in Indonesia became 8,5%. (Center for Data and Information, Ministry of Health of RI, 2016).

According to Nandy, (as cited in Banten Provincial Social Service) the number of elderly people in Banten in 2015 was 26.873 people. Meanwhile in 2014 there was 1.200 elderly people. It shows that there is enhancement in elderly population growth in Banten. (Banten Provincial Sosial Service, 2015). Based on the data found in Tangerang city, a city in the province of Banten, the number of elderly people is 1.839 covering 456 men and 1380 women, as second largest number in the province of Banten. (Ganet, 2014. *Dinsos Banten Berupaya Tingkatkan Kesejahteraan Lansia. antarbanten*.com retrieved at March 23, 2017).

The enhancement of elderly population growth came along with occurrences of health problems. The degenerative process of elderly people reduced the physical, psychological, and social condition. An impact of degradation of physical condition commonly happened in elderly is insomnia or sleep disorder. Insomnia is inability to achieve the

quality and quantity of sleep effectively (Kozier, 2011).

Degradation of sleep quality in elderly is caused by increasing sleep latency, decreasing sleep efficiency, awakening, and having difficulty to returning to sleep. these are associated with the degenerative system and function of organs of elderly. Decreasing of function of neurotransmitter reduces the melatonin hormone production which affect the changes of circadian rhythm and reduce the quality of the 3rd and 4th stage of NREM sleep cycles, even it can be worse, elderly people will lost the 4th stage of sleep (Stanley, 2006; Stockslager, 2003).

Moreover, degradation of sleep quality will give bad impacts to the health of elderly people because it causes susceptibility for diseases such as; stress, confusion, disorientation, mood disorder, lack of freshness, lack of concentration, and indecisiveness (Potter & Perry, 2009). Furthermore, it reduces the ability to manage daily activities which elderly people usually do. (Lo & Le, 2012). At the end, they will lost the quality of life which they really need in their old ages.

Many health efforts can be done to help the insomnia healing in the elderly by pharmacological or non-pharmacological therapy. Based on pharmacological treatment, insomnia healing is treated by giving medicines covering sedative hypnotic drugs such as *benzodiazepin (ativan, valium,* and *diazepam)* (Widya, 2010). pharmacological therapy is used to to calm insomnia patients quickly, but the long term use of this drug leads to serious health risk for elderly people. Consumption of sleeping pills over the long term period for elderly people can create toxicity effect because they have poor blood circulation, digestive motility disorder, decreasing of kidney function, and another side effects such as; drug habituation, physical and psychological addiction, cognitive disorder, psycho-motoric disorder, drowsiness and anxiety during the day, and iatrogenic sleep disturbance (Sykes, 2003). It is similar with the treatment associated with sedative which helps incontinence occurring mainly at

night (Amir, 2007). Those side effects make the sleep disturbance in elderly getting worse (Watson, 2003).

Non-pharmacological therapy in insomnia healing covering progressive muscle relaxation exercises (Sulidah, 2013), *murottal Al Qur'an* (Oktora, Purnawan, Achiriyati, 2013) and music therapy (Sutrisno, 2007). Another complementary therapy which can be applied to help sleep disturbance is acupressure (Hung & Chen, 2011).

Acupressure is a kind of simple treatment which is easily to do and has no risky side effect because there is no invasive procedures (Fengge, 2012). Healing touch method of acupressure shows caring behaviour providing relaxation, comfort, and sense of being love and cared for clients so that the therapeutic relationship of the nurses and patients become closer (Metha, 2007). Acupressure points are located throughout the body, some of them are closely at surface of the skin, and they are connected each other through meridian system. At the acupressure points, there are more than a thousand small nerves with a diameter of about one centimeter, with various depth between a quarter to a few inches from the surface of skin. Each acupressure point has special effect to the certain organs and body system (Sukanta, 2008; Fengge 2012; Hartono, 2012).

Based on Yudi's research related to the effects of acupressure of the quality of sleep in elderly in Social Protection Center for Tresna Werdha Ciparay, Bandung Regency in 2014, it is found that acupressure treatment gives a good impact to the quality of sleep in elderly (Yudi, 2015).

As a preliminary research, an observation was conducted in Baja public health center, Tangerang city, on March 2017 and it shows that there are 20 elderly people, then 7 of 10 interviewed explains that they have sleep disturbance at night; have difficulties to returning to sleep after awakened at night; and have no good quality of sleep. Moreover, their average sleep cycles takes about 4-5 hours.

Based on that phenomena, it

will be interesting in conducting a research related to the effects of acupressure as an alternative medicine treatment of insomnia healing in elderly in Baja public health center, Tangerang city, in 2017.

This research is aimed to find out the effects of acupressure as an alternative medicine treatment of insomnia healing in elderly in Baja public health center, Tangerang city, in 2017.

METHOD OF THE RESEARCH

This research applies the quasi- experimental designs with pre and post test control group approaches. As the pre-intervention test, the researcher conducts a test to the respondents to know their quality of sleep. Then, intervention of acupressure are given to treatment group at several selected acupressure points, they are LV3 or liver 3 (*Taichung*); H7 or heart 7 (*shen men*); PC7 or pericardium 7 (*da ling*); PC6 or pericardium 6 (*nei guan*) and EX-HN3 or extra point (*yin tang*).

Then, as the post-intervention test, the researcher conducts the test again to the both groups (treatment and control group) to know their quality of sleep so that the researcher can get a kind of information about the condition of quality of sleep in pre and post test in elderly.

This research is conducted in Baja public health center, Tangerang city in 2017. Here, the population of the research is 120 elderly people which they are the regular patients of Baja public health center at that time and their ages are about 50-80 years old.

This research applies the non probability sampling technique covering purposive sampling. Purposive Sampling is a kind of technique allowing the researcher to have sampling based on characteristics of objective of the research (Sugiyono, 2016).

The element of sampling of this research is chosen based on judgment of the researcher Then, the samplings are elderly people with some criterion as mentioned below;

Inclusion criteria:

a. Suffering from sleep disorder

(insomnia)

b. Being ready to be respondents
c. Being able to cooperate in this research.

Exclusion criteria:

a. Sleeping pills users
b. Patients suffering dementia
c. Patients suffering insomnia after traumatic injury (fractures, falls, or injuries).

The number of samplings used in this research is determined by the following Frederer formulaic.

$$n\text{-}1.\ t\text{-}\ 1 \geq 15$$

Explanation :

n = the number of sample in each group

t = the number of treatment groups

hence, the sample size found:

$n - 1 \,.\, t - 1 \geq 15$

$n - 1 \,.\, (2 - \ 1) \geq 15$

$n - 1 \,.\ \ (1) \geq 15$

$n - 1 \geq 15$

$n \geq 15+1$

$n \geq 16$

So, there should be at least 16 sample in each group or 32 sample per two groups. Then to avoid drop out, the researcher adds 10% from 32 sample or about 4 sample so that the total number of sample are 36 people.

Method of Treatment

Acupressure is applied to the treatment group at several acupressure points, they are they are LV3 or liver 3 (*Taichung*); H7 or heart 7 (*shen men*); PC7 or pericardium 7 (*da ling*); PC6 or pericardium 6 (*nei guan*) and EX-HN3 or extra point (*yin tang*).

In Medical Science of Chinese Medicine, there is an energy flow (called *qi)* created along the pathways connecting the points on the whole body. The pathways between points are called meridians. Therefore, the practitioners need to consider the all reactions of acupressure treatment such as, (*yin*) weakening reaction and (*yang*) strengthening reaction as the mutual life balance energy. In insomnia healing, the acupressure points should be treated by the weakening technique (*yin*). In this case, some procedures of the acupressure treatment are; first, gently press the acupressure points on the body's

meridians; even apply enough oil or cream to the area massaged if it is needed. Then, apply a warm-up massage by giving a light massage in the selected meridian pathways. Next, as the primary treatment, give a massage in the selected meridian pathways and acupressure points by using finger around 40 times or 1 minutes per acupressure points with counterclockwise rotations. Then, the last step, give a relaxation acupressure on which a light massage given in the acupressure point treated (Ministry of Health of Indonesia, 2012). If the pressure at the acupressure points cause any pain or discomfort, then the points will be the source of disease.

Ethics of the Research

Hidayat (2007) explains that ethics of research is an important part of a research, hence it must be well considered. There are some ethics of the research conducted to protect the confidentiality of respondents. They are;

1. ***Informed consent***

   Informed consent is a form of agreement between researcher and respondents by giving approval form. It is given before the research conducted.

2. ***Anonimity***

   The researcher gives guarantee in the use of subject of the research by protecting the confidentiality of respondents on which the name of respondents are not presented in measuring data sheet. In this case, the researcher only writes the code as the sample identity in the collecting and presenting of data.

3. ***Confidentiality***

   All the information collected should be protected by the researcher, here there are only certain data could be reported.

RESULT OF RESEARCH

Result of Univariate Analysis

Frequency Distribution

Table 1 Frequency Distribution by Age of Respondents

Variable		n	mean	median	SD	Min	max	value P
Age	Treatment	18	60.67	58.50	7.276	50	72	0.576
	Control	18	61.94	64.50	6.245	50	70	

Based on table 5.1, it is known that the average age of treatment group is 60.67 years. Here the deviation standard takes around 7,276 years, the lowest age is 50 years, and the highest age is 72 years. Meanwhile, the average age of control group is 61,94 years with deviation standard taking around 6,245. In this control group, the lowest age is 50 years and the highest age is 70 years.

Result of Bivariate Analysis

Difference Scores of KSPBJ-IRS in Pretest and Posttest of Acupressure Intervention among Treatment Group

Table 2 Difference Scores of KSPBJ-IRS in Pretest and Posttest of Acupressure Intervention among Treatment Group in Baja Public Health Center, Tangerang City, in 2017

Insomnia	Intervention				Value p
	Pre test		Post test		
	mean	SD	mean	SD	
Scores of KSPBJ-IRS	12.06	2,043	8.61	2.062	0,000

Based on table 2, it is seen that the result of statistical test using Independent Simple T Test gets the value of p = 0,00 (p < 0,05), quality of sleep among elderly then Ha is accepted. It can be concluded that

there are significantly difference scores of acupressure pretest-posttest of people in treatment group.

Difference Scores of KSPBJ-IRS in Pretest and Posttest of Acupressure Intervention among Control Group

Table 3 Difference Scores of KSPBJ-IRS in Pretest and Posttest of Acupressure Intervention among Control Group in Baja Public Health Center, Tangerang City, in 2017

Insomnia	Control				Value p
	Pre test		Post test		
	mean	SD	mean	SD	
Score of KSPBJ-IRS	12.39	2,747	12.33	2,544	0,950

Based on table 3, it is known that the result of statistical test using Independent Simple T Test gets the value of p= 0,950 (p ≥ 0,05), then Ha is rejected. It can be concluded that there is no significantly difference score of acupressure pretest- posttest of quality of sleep among elderly people in control group

Difference Scores of KSPBJ-IRS in Acupressure Intervention Pretest among Treatment and Control Group

Table 4 Difference Scores of KSPBJ-IRS in Acupressure Intervention Pretest among Treatment and Control Group in Baja Public Health Center, Tangerang City, in 2017

Insomnia	Pre test				Value p
	Intervensi		Control		
	mean	SD	mean	SD	
Score of KSPBJ-IRS	12.25	2,179	12.39	2,747	0,966

Based on table 4, it is seen that the result of statistical test using Independent Simple T Test and Mann Whitney Test gets the value of

p= 0,966 (p ≥ 0,05), then Ha is rejected. According to that value, it can be said that there is no significantly difference score of acupressure intervention pretest of quality of sleep among elderly people in treatment and control group.

Difference Scores of KSPBJ-IRS in Acupressure Intervention Posttest among Treatment and Control Group

Table 5 Difference Scores of KSPBJ-IRS in Acupressure Intervention Posttest among Treatment and Control Group in Baja Public Health Center, Tangerang City, in 2017

Insomnia	Post test				Value p
	Intervensi		Control		
	mean	SD	mean	SD	
Score of KSPBJ-IRS	8.61	2,062	12.33	2,544	0,000

Based on table 5, it is seen that the result of statistical test using Independent Simple T Test gets the value of p= 0,00 (p < 0,05), then Ha is accepted. According to that value, it can be said that there are significantly difference scores of acupressure intervention posttest of quality of sleep among elderly people in treatment and control group.

DISCUSSION

A. Acupressure as an Alternative Medicine Treatment in Insomnia Healing

Acupressure basically is similar in principle with acupuncture which use same basic philosophy, procedures, diagnosis, and treatment as acupuncture. Acupressure practitioners, however, use their fingers or special device, and not to use needles to give stimulation to meridian on the body. Therefore Ministry of Health of Indonesia (2012) said that acupressure is obviously non-invasive and safe alternative medicine treatment. Because of the fact that this treatment uses fingers

to give sensorial stimulation at points on the body with massage and gently pressure.

Acupressure can cause any pain or itching in points area itself. Then, there is a segmental reaction in segmental area (*medulla spinalis*) on which releases peptides at spinal cord (*tachykinin, substance P, neurikinin A, somatostatin, etc)* arranging nociceptive transmissions to the central nervous system. Next, as the third reaction, there is a brain level reaction on which activates the central mechanism of the brain in internal homeostasis causing the chemical balance in the nervous system which is activated through acupressure points (Saputra, 2009).

Ministry of Health of Indonesia (2012) said that the mechanism of acupressure tends to play a role in *hypothalamus*.

B. Effects of Acupressure of Quality of Sleep in Elderly

Based on the data, it is found that there are differences of average score of quality of sleep of treatment group between acupressure intervention pretest and acupressure intervention post-test, from 12,06 become 8,51. However, it have no changes in the control group. The difference score of control group tend to be stagnant. It only reduces 0,03 which is at12,39 and fall down into 12,33. Based on the pretest score, actually both of control and treatment group have bad qualities of sleep. Then, treatment group shows that acupressure improves the quality of sleep better, meanwhile control group demonstrates that there is no significant changes in its score of KSPBJ-IRS. In fact, if we take a look at the difference scores of KSPBJ-IRS of pretest between treatment and control group, control group has higher average scores than treatment group. So, related to the pretest score, it describes that the quality of sleep of control group is worse than treatment group. Therefore, researcher believes that a well improvement of quality of sleep in treatment group is affected by the acupressure treatment.

Silvanasari (2013) explains that some common factors reducing the quality of sleep in the elderly are stress, anxiety, and worry. Those

are able to connect to the other diseases, environments, and life styles.

According to Vitiello (2009) degradations of quality of sleep in the elderly are closely associated with degenerative found in the elderly. It involves the nervous system changes such as reduction number and size of neurons in the nervous system in the elderly causing loss optimality of neurotransmitter which is associated with signal transmission to the brainstem, specifically at pineal gland, and causing the reduction of melatonin hormone production.

Decreased production of melatonin hormone in the body affects changes in circadian rhythms and causes a decrease in stages 3 and 4 of NREM sleep cycles, even to the condition where almost no stage 4 in sleep (Stanley, 2006)

Acupressure is a therapy dealing with the healing touch which shows more caring behaviors to the respondent and provides relaxation, comfort, and sense of being love and cared for clients so that the therapeutic relationship of researcher and respondent become closer. (Metha, 2007). Based on psychological aspects, acupressure can also help improve the quality of sleep of respondents. Most of the respondents said that acupressure therapy makes them feel more cared for, calm, comfortable and relaxed.

The occurrence of comfort, calm, and relax in the elderly are believed as the effects of acupressure therapy. The stimulation of sensory nerve cells around the acupressure point will be continued by the spinal cord, then to mesencephalon and the hypothalamic-pituitary complex, all of which are activated for endorphin release which can give a sense oof calm (Saputara & Sudirman, 2009). As stated above, Tsay, Cho, Chen (2004) also mentioned that acupressure is an effective alternative treatment to create a feeling of calm, reduce the tired, and improve the quality of sleep.

Another effects of acupressure are to stimulate the serotonin release functioning as neurotransmitter of signal transmission to the brainstem which can activate the pineal gland for melatonin hormone production.

(Chen, Lin, Wu & Lin (1999). The melatonin hormone can affect *suprachiasmatic nucleus* (SCN) at anterior hypothalamus to arrange the circadian rhythm causing reduction of sleep latency, nocturnal awakening, dan improvement of total sleep time and quality of sleep (Iswari danWahyuni, 2013).

According to all discussions above, it is known that acupressure therapy physically and psychologically gives positive effect to the respondents. Moreover, based on the analysis data, the improvement of quality of sleep or reduction of insomnia scores (score of KSPBJ-IRS) in this research are the effects of acupressure therapy. On the contrary, the control group which is not given any kind of acupressure therapy have no significant changes in their quality of sleep. It proves that acupressure therapy give impact to help improve the quality of sleep in the elderly or to decrease the insomnia score. It is indicated by reduction of score of KSPBJ-IRS. This result of this research is quite similar with Yudi's research (2014) explaining that there are effects of acupressure to the quality of sleep in the elderly knowingly by decreasing of insomnia.

C. Score Comparison of KSPBJ-IRS Between Treatment Group and Control Group

Based on the result of unpaired test (*Mann Whitney Test),* it is found that significance value around 0,000 (< 0,05) which means that there are significantly differences between treatment and control group after acupressure implemented. Acupressure applied in treatment group proves that there is an positive effect to help improve the quality of sleep in the elderly that reduces the insomnia cases knowingly by degradation of KSPBJ-IRS scores after acupressure applied. On the contrary, the control group has no significant changes in the score of KSPBJ-IRS. Although, there are changes in average scores in control group knowingly by pretest and post-test score of quality of sleep, but the changes are very meaningless.

Score comparison of KSPBJ-IRS between treatment and

control group can be seen on daily bedtime activities of the elderly. Watching television, listening to the radio, sitting or sleeping in bed while reciting, as their bedtime activities become shorter after acupressure given. On the contrary, the elderly in the control group have no changes in their bedtime activities and still have difficulties to sleep.

By comparing the score changes of KSPBJ-IRS between treatment and control group, it is proved that the acupressure effectively shortens the bedtime activities or the sleep latency, extends the sleep durations, improves the habitual sleep efficiency, reduces the sleep disturbance at night, and decreases daytime disfunction.

Some researches prove that acupressure can help to improve the quality of sleep or to reduce insomnia cases. As a research of Tsay, Rong, Lin (2003), Tsay dan Chen (2003), Tsay, Cho, Chen (2004) in patients suffering from chronic kidney disorder, a research of Cerrone, et al. (2008) in patients suffering from cancer, and then a research of Chen, Chao, Lu, Shiung dan Chao (2012) in ICU patients. According to the all research, it shows that there are significant differences in quality of sleep among treatment group respondents given acupressure therapy than control group respondents. Based on previous research which is supported by the result of this research, acupressure is believed as an effective alternative medicine treatment to help improve the quality of sleep for patients suffering from insomnia in the elderly or the other patients suffering from other diseases.

CONCLUSION

Based on the result of analysis data and statistical test mentioned in the previous chapters, the researcher can take some conclusions, they are :

It is found that the average age of treatment group respondents is 60.67 years with deviation standard 7,276 years, here the lowest age is 50 years, and the highest age is 72 years. Furthermore, the average age of control group respondents is

61,94 years with deviation standard 6,245 years. In this group, the lowest age is 50 years, while the highest age is 70 years.

The significant differences scores of quality of sleep in the elderly people are found by reduction of the scores of KSPBJ-IRS so that insomnia symptom will be reduced in treatment and control group after acupressure given. So, it can be concluded that there are effects of acupressure therapy in insomnia healing in the elderly. The result of statistical test using Independent Simpel T Test gets P value = 0,00 (p < 0,05).

SUGGESTION

It is suggested to the public health center to develop and implement the acupressure therapy for the elderly to help sleep disturbance providing distributing a kind of leaflet related to the acupressure to the society, involving medical assistant to apply the acupressure therapy for patients suffering from all complaints. Moreover, making monitoring sheet to evaluate the implementation of acupressure therapy and evaluate the development of healing process for the elderly suffering sleep disturbances. Hopefully the respondents suffering from insomnia can utilize the acupressure therapy as alternative medicine treatment. Moreover, it is hope that this research can increase the reader's knowledge related to the acupressure therapy.

It is hope that the following researcher can develop this research further to help expand the utilization of acupressure therapy.

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MENTAL HEALTH PROBLEM AND ASSOCIATED RISK FACTORS AMONG ADOLESCENTS SCHOOL STUDENT IN LOW AND MIDDLE INCOME COUNTRIES

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ABSTRAK

The majority of adults suffering from mental disorders indicate that their symptoms began in childhood and adolescence. The symptoms of mental health disorders can lead to poor academic performance, lack of communication with friends and family members, substance abuse, feeling of abandonment, homicidal ideation, and suicidal tendency. This study aims to establish the extent to mental health problem and associated risk faktor of adolescent school student in multination county. Methodology of this studi is Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Three electronic databases were searched using combinations of terms in multi-field search. Titles and abstracts of reviewed publications were screened, and full-texted publications were screened against the eligibility criteria. Data on methodology design and key findings were extracted, collated and analyzed. Ten publications met the inclusion criteria. Findings from the included studies found many risk factors. There are related to age, gender, parents' condition, social relations, place of residence and family income. Researches regarding mental health problem of adolescent student arenstill limited, implicating a need for future research.

Keyword : Mental Health, Risk Factors, Mental Disorder, School Student

INTRODUCTION

Adolescence is considered a stressful period due to physical, psychological, sexual changes and is also influenced by maturity[1].It is a crucial phase in life courseof a human, and the presence of psychiatric disorders such as depression, anxiety, and stress at this stage of life is a matter of concern. The symptoms of mental health disorders can lead to poor academic performance, lack of communication with friends and family members, substance abuse, feeling of abandonment, homicidal ideation, and suicidal tendency[10]

The burden is however the highest in low- and middle-income countries (LMICs) with prevalence rates in adolescents being reported to be as high as 28%[7].Research show that the majority of adults suffering from mental disorders indicate that their symptoms began in childhood and adolescence[.2-4]

Studies have estimated thatdepression

affects up to 8.3% of older adolescents in the United States.In addition, it is noted that onany single day, about 2% of school-aged children and about 8% of adolescents meet the criteria for major depression.In the long run, the numbers are evenhigher, for example, one in five adolescents have experienced depression at some point.In primarycare settings, the rates of depression are as

high as 28% for adolescents[12].

Depression in adolescents negatively affects daily functions at school, home and in the community, and relationships with family and peers; it can have serious consequences, includ ing suicide[8]. The problems that adolescents and young people encounter interfere with the way they think, feel, and act. Such problems cause distress and limit their academic achieve- ments and ability to be economically productive. They can also lead to family conflicts, substance abuse, violence, eating disorders and sometimes suicide[4,]

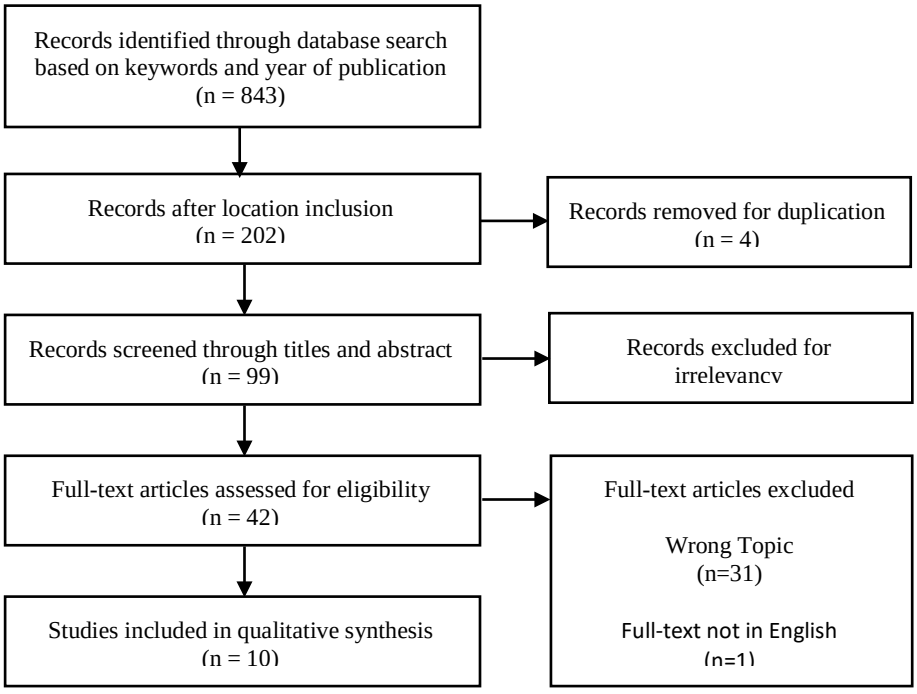
In addition to the efforts we make to keep our children in good health, and the arrangements we make for their education, we need to better understand factors that can harm their mental and psychological wellbeing so that appropriate solutions can be found to prevent and relieve mental disorders and problems. Knowing the prevalence of these disorders and psychopathologies in adolescentsis a first step to tackling them[6].Early detection of mental disorders,especially in school settings, can provide an opportunity to identify students at risk and facilitate their referral for treatment[9-10].

METHODOLOGY

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement is an evidence-based approach for conducting systematic reviews and meta-analyses that was used to guide the conduct of this systematic review.(Moher, Liberati, Tetzlaff, Altman, & and the, 2009) .Relevant English language articles were sourced using Proquest, Springerlink, Sciencedirect, and Google Scholar database. Combination of terms

The eligibility criteria for inclusion were research journal articles that included the prevalence of mental health problem and factor associated to mental health problem among adolescent school student (aged 10-19) .Eligible studies were restricted to articles with full-texted access published within the years 2014 – 2019. Research that were eligible were those that were undertaken in low and middle income countries.

Figure 1. Prisma Flow Chart



RESULTS AND DISCUSSION

After removing duplications 202 records were identified. Title and abstract screening identified 42 references that potentially fulfilled the inclusion criteria and copies of the full publications were sought. A total of 10 publications fulfilled the eligibility criteria and were included in the reviews.

All publications used data from low and middle income countries, relevant publications predominantly originated from low income countries (Uganda, Kenya, Manipur, Nigeria) and middle income countries (China, India, vietnam, iran, jordan).

This review discusses the prevalence and factors associated with mental health problems that occur in adolescent schools in elementary, secondary and upper school. Adolescentrs are prone to health problems including adolescentrs who attend school. Every study obtained, information obtained from all published articles is relevant. A summary of mental health problems and the results are listed in Table 1 bellow.

Of the 10 journal articles that have been studied, mental health problems that occur in adolescents are quite varied related to increased emotional stress, depression, difficulty and stress. Of all the articles, the prevalence of mental disorders in adolescent schools is in the range of 6.2% -81.6%. The biggest prevalence is in studios in the country of Nigeria and the largest in the studio in Manipur. The use of large sample sizes specifically for research in China, Jordan, Kenya, Vietnam and India. That researches can present the existing population well in Low and middle income countries.

Four studies from Manipur, Nigeria, Iran and Jordan found a significantly show higher prevalence of mental disorders in adolescents with female sex for men who were greater for stress, anxiety and depression[11-14]. Other studies do not implement the prevalence of mental health problem based on variable sex. Only one study from Kenya found that adolescent boys who have more mental problems[15].

In Manipur, Iran and China, the risk for anxiety, stress, depression increases in students who are dependent on grade 12 [11,12,16]. Research in Jordan found that older students had higher mental problems. In Vietnam, the main risk factors associated with anxiety and depression are family physical or emotional abuse, and high educational stress[14].

Other factors that improve the mental health problem: families lost, divorce parents, working mothers, not living with parents, housewives mother, living with other people having mental disorders, overcoming physical or emotional abuse, consuming alcohol/drugs, relationships are not good with teachers/staff, educated parents, poor relationships between parents , poor children's relationships to parents , family relationships, relationships with peers are not good.

Based on research from Northtern India and Kenya found students living in rural had a tendency to increase depression and other mental disorders. But one study in India found that living in the city would increase emotional stress[15,18] . Many recent studies have found the fact that living in rural area have a significant relationship with health events and problems because of poor facilities and access to problems that occur.

In the two articles found that the type of student school is also an increased risk factor. In Uganda, students who attend single sex students increase the risk of symptoms of depression due to the homogeneity of their friends to interact.

Table 1.Summary of Included Studies

No	TITLE AND AUTHOR	YEAR	COUNTRY	SAMPLE SIZE	FINDINGS
1	Prevalence and factors associated with depression symptoms among school-going adolescents in Central Uganda Joyce Nalugya-Sserunjogi, Godfrey Zari Rukundo, Emilio Ovuga4, Steven M. Kiwuwa, Seggane Musisi1 and Etheldreda Nakimuli-Mpungu1	2016	Uganda	519 There were 301 (58 %) boys and 218 (42 %) girls with age range 14–16 years and a mean age of 16 years	Of 519 participants screened with the CDI, 109 (21 %) had significant depression symptoms. Of the 109 partici- pants with significant depression symptoms, only 74 were evaluated with the MINI-KID and of these, 8 (11 %) met criteria for major depression and 6 (8 %) met criteria for dysthymia. Therefore, among participants that were assessed (3.1 %) reported current suicidal ideation. In the logistic regression analyses, significant depression symptoms were with both the CDI and the MINI-KID (n = 484), the prevalence of depressive disorders was 2.9 %. In this sample, 15 associated with single-sex schools, loss of parents and alcohol consumption. Limitations:
2	Depression among adolescents attending secondary schools in South East Nigeria Josephat M. Chinawa,Pius C. Manyike, Herbert A. Obu , A. Ebele AronuOdetunde Odutola, Awoere Chinawa T.	2015	Nigeria	Total 453, 255(56,3%) female, 198 male (43,7%) Age range 9-18 years	Depression is non-existent before the age of 10 years according to this study. The prevalence of moderate depression was lowest (2.3%) at the age of 10 and highest at (6.2%) the age of 13. The prevalence of severe depression was lowest (1.9%) at the age of 11 and highest (7.4%) at the age of 12. Female gender is a risk factor for depression. Children whose parents are separated showed higher incidences of depression in all the spectra studied
3	Depression, Anxiety and Stress Among Higher Secondary School Students of Imphal, Manipur K Sathish Kumar, Brogen Singh Akoijam	2017	Manipur	Total 830, Age range 16-19 years	The prevalences of depression, anxiety, and stress among valid respondents were 19.5%, 24.4%, and 21.1%, respectively. In total, 81.6% of the respondents had at least one of the studied disorders and 34.7% of the respondents had all the three negative states. The prevalences of depression, anxiety, and stress were high among females and were significant for anxiety (P = 0.00) and stress (P = 0.04). The prevalences of depression and stress were significantly higher among 12^{th}.
4	The prevalence of mental disorders among upper primary school children in Kenya David Musyimi Ndetei, Victoria Mutiso, Christine Musyimi	2016	Kenya	2267 school studens in grades five through seven from 23 randomly selected schools. Aged 10-13	The prevalence of any mental disorder among Kenyan school children was 37.7 % .Somatic complaints were the most prevalent (29.6 %) followed by affective disorders (14.1 %) and conduct disorder (12.5 %). Thepresence of one or more comorbid mental disorder was seen among 18.2 % of children. Male sex, living in a peri-urban vs. rural area, being held back in school, having divorced or separated parents, and having an employed mother were associated with an increased likelihood of having most of the mental disorders examined, whereas increasing age was associated with a reduced likelihood
5	Prevalence and correlates of psychological distress in adolescent students from India TS Jaisoorya, D Geetha, KV Beena, M Beena, K Ellangovan, K Thennarasu	2017	India	7560 students from 73 schools, aged 12 to 19 years	Mild psychological distress was reported by 10.5%, moderate distress by 5.4%, and severe distress by 4.9% of students. Older age, not living with both parents, and urban residence were significantly associated with psychological distress ($p < 0.05$).
6	Factors associated with mental health of high-school students in the Islamic Republic of Iran	2017	Iran	569 (47,3%) male 633 (52,7%) female The mean age of the students was	The mean age of the students was 16.1 (SD 0.9) years and 52.7% were girls. Overall, 481 (40%) students (34% of males, 46% of females) had symptoms of mental disorders.

				16.1 years Aged 14-18 years	Most had mild symptoms; 5% had severe symptoms. Symptoms of anxiety, depression and social impairment were seen in 40%, 33% and 32% of the students respectively; significantly more girls had these symptoms ($P < 0.05$). Female students, those in higher school grades, and those whose fathers were unemployed and mothers were housewives were significantly more likely to have symptoms of mental disorders ($P < 0.05$).
7	Mood and anxiety disorders among adolescent students in Jordan Eman T. Alslman, Nesrin Abu Baker and Heyam Dalky	2017	Jordan	1103 participants ages 13 to 18 years	The prevalence of any mental disorders was 28.6%. The prevalence of mood and anxiety disorders was 22.4% and 16.3%, respectively. Significant Females were more likely to have mental disorders than males. Being an older adolescent, living with both parents and parental mental disorders were significantly as- sociated with mental disorders among adolescents. Significant associations were found between mental disorders and gender, age, living status with parents, or mental health status of parents
8	Depression, anxiety, and suicidal ideation among Vietnamese secondary school students and proposed solutions: a cross-sectional study Dat Tan Nguyen, Christine Dedding, Tam Thi Pham, Pamela Wright and Joske Bunders	2014	Vietnam	1161 secondary students including 424 (36.5%) boys and 737 (63.5%) girls, ranging in age from 15 to19 years old	The prevalence estimates of symptoms reaching a threshold comparable to a diagnosis of anxiety and depression were 22.8% and 41.1%, respectively. Suicide had been seriously considered by 26.3% of the students, while 12.9% had made a suicide plan and 3.8% had attempted suicide. Major risk factors related to anxiety and depression were physical or emotional abuse by the family, and high educational stress.Students were likely to show higher depressive symptoms when they were not living with both biological parents, living with alcohol or drug abusers, living with a mentally ill person, being physically or emotionally abused, and often having serious quarrels with teachers or other school staff members.
9	Factors Associated with Depression among School-going Adolescent Girls in a District of Northern India: A Cross-sectional Study Mukesh Shukla, Siraj Ahmad, Jai Vir Singh, Nirpal Kaur Shukla, Ram Shukla	2017	Northern India	2187 school-going adolescent girls (10–19 years)	The prevalence of depression was found to be 39.7%. Multiple logistic regression revealed that depression was significantly higher among those residing in rural areas [odds ratio (OR) 3.32; $P < 0.001$], those in early and mid-adolescent age group (OR 2.51; $P < 0.001$), those studying in private schools (OR 3.22; $P < 0.001$), and those with Hindi as the medium of instruction (OR12.50; $P < 0.001$). Depression was also found to be significantly higher among those whose mothers were educated up to primary (OR 3.19; $P < 0.01$) or up to intercollege (OR 1.59; $P < 0.001$) when compared with illiterate mothers. Similarly, depression was found to be more common among those girls whose fathers were educated up to intercollege (OR 1.29; $P < 0.05$) or were graduate and above (OR 1.58; $P < 0.001$).
10	Depressive symptoms and associated factors among left-behind children in China: a cross-sectional study Meijuan Meijuan Tan, Mengshi Chen, Jing Li, Xinyun He, Zhiyong Jiang, Hongzhuan Tan and Xin Huang	2018	China	1076 junior and senior secondary school Aged 11-18	The total prevalence of depressive symptoms was 54.74% for LBC in junior and senior secondary schools, with 73.08% for grade 12 students. The multivariate logistic regression analysis showed grade 12 may be at particularly high risk of developing depressive symp- toms. LBC who are female, with low family income, poor parental relationship, middle parent-child relationship, poor teacher-student relationship and middle peer rela- tionship are considered at higher risk for depressive symptoms

In Northtern India students who take private school tend to experience depression[18,20].

This systematic review reports evidence of mental health problems and risk factors related to school students from studies of full or abstract texts published in English over the past five years. Although, much research has been done in the Western world, research in the field is limited to low and middle income groups, and notes for further implications of research because results in different settings may be different. It must also be recognized that high-quality studies published before 2014 may have been missed by the limits of the date of publication set.

Research arrangements are not homogeneous, which can cause confounding bias. Differences in measurement methods also add to the heterogeneity of studies. Some studios use a small number of samples so that studio results can lead to wrong conclusions and need to be interpreted carefully.

CONCLUTION

Our paper provides multi-national evidence of mental health problem. Many mental health problems occur among teenagers in low-income groups and middle-income countries with a high percentage of occurrence. Many of the identified factors bought about underlying themes and relationships and one can infer what risk factors were affected that may have contributed to mental health problem of school student.Most of the risk factors found in all of these articles are related to parents of students Following future longitudinal studies, these findings could offer important new targets and strategies for decrease mental health problem at its very early stages.Researches regarding mental health problem of adolescent student arenstill limited, implicating a need for future research.

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