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PROCEEDING BOOK

THE 4th INTERNATIONAL CONFERENCE ON HEALTH SCIENCE 2017

"The Optimalization of Adolescent Health in The Era of SDGs"

INNA GARUDA HOTEL YOGYAKARTA,
INDONESIA
November 5th, 2017

HEALTH POLYTECHNIC OF HEALTH MINISTRY YOGYAKARTA Jl. Tata Bumi No.3, Banyuraden, Gamping, Sleman, Yogyakarta, Indonesia 55293 Phone/Fax.62-274-617601, Email : ichs@poltekkesjogja.ac.id

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Address from the Chairman of the Conference

Dear honorary guests and participants,

It is our great pleasure to invite you in The International Conference on Health Science Named “The Optimalization of Adolescent Health in The Era of SDGs”. This event is held annually to improve the quality of Yogyakarta Health Polytechnic as a referral institution.

The third aim from SDGs is to ensure our healthy lives and promote well-being to all people in all ages, including adolescents.Various problems that occur in adolescence are HIV-AIDS,abortion, unwanted pregnancy, alcohol, drug abuse, etc. Indirectly, adolescent’s health problems are also hindering the pace of human development in Indonesia, as well as the achievement of millennium development goals. One of the target to reach that aim is strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol. We hope this conference can give contribution to develop the role of institution supporting Sustainable Development Goals (SDGs).

In this meeting, we present great qualification scientists to share knowledge and experiences in health sciences such as midwifery, nursing, dental health, environmental health, health analyst, nutrition, and health of community. Health practitioners, students and lecturer are also welcome to the conference.They can share and improve their knowledge in harmonic science atmosphere to get another view of healthscience.

We hope this conference can be one of tools to communicate and interact between those who related to health science. We hope you all enjoy this conference and we would like welcome you in Yogyakarta.

Sincerely,

Sari Hastuti, S.SiT, MPH
Chairman of the
Conference

Address from the Director of Health Polytechnic of Health Ministry Yogyakarta

Dear honorary guests and participants,

Welcome to the International Conference which is held annually in our institution Yogyakarta Health Polytechnic. This is our fourth event of International Conference and of course there will be the fifth, the sixth and so on. We hope this event can be our place to share knowledge from many field studiesrelated to healthscience.

In accordance with our vision as a referral institution, it is a great pleasure to invite you in The International Conference on Health Sciences Named "The Optimalization of Adolescent Health in The Era of SDGs*".* We have missions to improve education, research and community service. This conference is one of the way to achieve our vision and mission. Yogyakarta Health Polytechnic should play significant role in thedevelopment of healthscience.

We have a great expectation that this conference can be our good environment to develop knowledge, to share experience, to have interaction between us and of course to give contribution for our health world. We do hope the success of the conference and we hope you all enjoy it.

Sincerely,

JokoSusilo, SKM.,M.Kes

The Director of Health Polytechnic of Health Ministry Yogyakarta

The 4th International Conference on Health Science 2017 Committee

A. Steering Committee

Advisory Committee :
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2. *The Head of Committee on Development and Empowerment of Health Human Resources of Health Ministry of Indonesia*
3. *Dr. Robert Priharjo, M.Sc, BSN PGCE RN Lecturer Anglia Ruskin University, United Kingdom*

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9. Documentation	:	1. Heri Purwanto, SE 2. Harsono, AMd. 3. Abdul Hadi Kadarusno, SKM.,MPH
10. Transportation	:	1. Tri Widodo, AMd 2 Agus Pamuji 3. Giyanto

TIME TABLE

THE 4TH INTERNATIONAL CONFERENCE ON HEALTH SCIENCE 2017 *"The Optimalization of Adolescent Health in The Era of SDGs" Inna Garuda Hotel, November 5, 2017*

No	Time	Event	People in
1	06.45 - 07.15 a.m	Registration	Committee
2	07.15 – 07.45 a.m	Opening Ceremony 1. Dance performance 2. Performing : Indonesia Raya, The Hymn of Poltekkes Kemenkes Yogyakarta, The march of Poltekkes Kemenkes Yogyakarta 3. Opening speech : a. The Chairman of The Conference b. The Director of Health Polytechnic of Ministry of Health in Yogyakarta	Event Coordinator + MC
3	07.45 – 08.45 a.m	*"Role of Regional Head in Order to Successful Community Movement Health Living on Adolescent"* by Dra. Hj. Sri Muslimatun, M.Kes (*Vice Head of Sleman Regency*)	Scientific committee
4	08.45 – 09.15 a.m	*"Health Ministry's Policy to Improve Adolescent Health in The Era of SDGs"* by drg. Usman Sumantri, M.Sc *(Board for Development and Empowerment Human Resources of Health, Ministry of Health)*	Scientific committee
5	09.15 – 09.30 a.m	Coffee Break	Logistics
6	09.30 – 11.00 a.m	*1. "Climate Change and The Health Consequences in The Population"* by Prof. Dr. Tengku Mohammad Ariff R. Husein (Universiti Sultan Zainal Abidin Malaysia) *2. "Overview for The Policy and Support of Government of Thailand"* by Assoc. Prof. Patcharee Jearanaikoon, PhD (Dean of The Associated Medical Sciences, Khon Kaen University, Thailand) *3. "HIV Testing in Laboratory and Community to Detect Carrier Among Adolescence Immediately" by Assist. Prof. Amonrat Jumnainsong, PhD (*Associated Medical Sciences, Khon Kaen University, Thailand)	Scientific committee
7	11.00 – 11.10 a.m	Student Performance	

No	Time	*Event*	People in charge
8	11.10 – 00.00 p.m	1. *"Mental Health Detection in Teenagers" by Ns. Sutejo, M.Kep,Sp.Kep.J (*Health Polytechnic of Health Ministry Yogyakarta, Indonesia) 2. *"Youth Marriage on Reproductive Health"* by Dr. Yuni Kusmiyati, SST.,MPH (Health Polytechnic of Health Ministry Yogyakarta, Indonesia)	Scientific committee
9	00.00 – 01.00 p.m	1. *"The Influence of Hormonal Changes in Puberty on Health Perodontal"* by Dr. drg. Dahlia Herawati, SU.,Sp.Perio (K) (Gadjah Mada University, Indonesia) 2. *"Improving Child Nutrition Literacy For Teenage Pregnant Women And Its Implication To The First 1000 Days Of Child Life: Arguments For Developing Social Media Based Adolescent Support Group In Indonesia"* by Dr. Mubasysyir Hasan Basri, MA (Gadjah Mada University, Indonesia)	Scientific committee
10	01.00 – 01.30 p.m	*Lunch break*	
11	01.30 – 05.00 p.m	Oral Presentation Room 1 : Sambisari Room 2 : Prambanan Room 3 : Kalasan	
12	05.00 p.m	Closing	Event Coordinator + MC

ORAL PRESENTATION SCHEDULE ON THE 4th INTERNATIONAL CONFERENCE ON HEALTH SCIENCE 2017 November, 5th 2017

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	AUTHOR	***TITLE***
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	2. Indah Rahmadaniah	The Influence of Early Breastfeeding Initiation on Postpartum Mother's Breast Milk Production in Lismarini Independent Midwifery Pratice Palembang
	3. Tri Budi Winarsih	Maternal Characteristics and Low Birth Weight
	4. Della Eprilian Sari	Relationship of Obesity Early Pregnancy with Incident of Preeclampsia in RSUD Sleman 2016
	5. Isroni Astuti	The Effectiveness of Nipple Stimulation by Providing Supplementary Food to Succesfull Breastfeeding Back (Relactation) to The Breastfeeding Mothers In Southern Tangerang 2016
	6. Tia Arsittasari	Factors Related to Breast Cancer Cases in Yogyakarta City Public Hospital in 2016
	7. Puspa Sari	The Effectiveness of Health Education Through Smartphone and Booklet on Knowledge and Attitude of Adolesence About Reproductive Health
	8. Yani Widyastuti	Information Through The Flipbook To The Level Of Knowledge About Domestic Violence In Fertile Couples In Sleman In 2017
	9. Sri Yunita	Factors Associated with Exclusive Breastfeeding among Working Mothers inYogyakarta City, Indonesia
TIME	**ROOM II : PRAMBANAN** **Main Moderator : Almira Sitasari, S.Gz, MPH, RD**	
	AUTHOR	***TITLE***
01.30 – 03.00 pm	1. Mellia Silvy Irdianty	Physical Activities And Snack Consumptions Of Obese Adolescents In Bantul, Yogyakarta
	2. Kusbaryanto	The Correlation Education about Health Reproductive and Knowledge and Attitude of Health Reproductive of the Adolescent
	3. Sinta Mukti Permatasari	The Relationship Between Knowledge, Attitudes, Actions Related to the Clean and Healthy Behavior and Nutritional Status with Diarrhea Events in Islamic Boarding School
	4. Atika Karunia Zulfa	The Characteristics Of Sexually Transmitted Infections In Polyclinic Dermato Venerology Dr.Sardjito General Hospital Yogyakarta
	5. Cicilia Windiyaningsi	Factors That Influences Of People Living With Hiv / Aids (Plwha) In Vct Division Of General Hospital Waluyo Jati Kraksaan District Probolinggo

	6. Cornelia D.Y Nekada	Identifying the Role of Hemoglobin in Intradialytic Nausea and Vomiting in Panembahan Senopati General Hospital in Bantul
TIME	**ROOM III :KALASAN** **Main Moderator : Dr. Iswanto, S.Pd, M.Kes**	
	AUTHOR	***TITLE***
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	2. Agus Prasetyo	The Meaning and Role of Spirituality in HIV/ AIDS Patients
	3. Intan Mirantia	Therapeutic Communications Reduce the Patient's Anxiety of Pre Operation Patients
	4. Arif Jauhari	Analysis of Related Factors With a Subjective Complaint of Musculo Skeletal Diseases (Part II): Characteristics and Relationship Characteristics Individual Factors on Workers Insurance Office
	5. Livana	The Relationship Between Family Burden With Frequency Of Recurrence Patient With Paranoid Schizophrenia

Model : Panel discussion
PPT : English
Time : Oral presentation 10 mnt/presenter (English)

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I-2	drg. Usman Sumantri, M.Sc (Board for Development and Empowerment Human Resources *of Health, Ministry of Health)*	*Health Ministry's Policy to Improve Adolescent Health in The Era of SDGs*
I-3	Prof. Dr. Tengku Mohammad Ariff R. Husein *(Universiti Sultan Zainal Abidin, Terengganu, Malaysia*)	*Climate Change and The Health Consequences in The Population*
I-4	Assoc. Prof. Patcharee Jearanaikoon, PhD *(Dean of The Associated Medical Sciences, Khon Kaen University, Thailand)*	*Overview for The Policy and Support of Government of Thailand*
I-5	Assist.Prof.Amonrat Jumnainsong, PhD *(Associated Medical Sciences, Khon Kaen University, Thailand)*	*HIV Testing in Laboratory and Community to Detect Carrier Among Adolescence Immediately*
I-6	Ns. Sutejo, M.Kep,Sp.Kep.J *(Health Polytechnic of Health Ministry Yogyakarta, Indonesia)*	Mental Health Detection in Teenagers
I-7	Dr. Yuni Kusmiyati, SST.,MPH *(Health Polytechnic of Health Ministry Yogyakarta, Indonesia)*	*Youth Marriage on Reproductive Health*
I-8	Dr. drg. Dahlia Herawati, SU.,Sp.Perio (K) *(Gadjah Mada University, Indonesia)*	*The Influence of Hormonal Changes in Puberty on Health Perodontal*
I-9	Dr. Mubasysyir Hasan Basri, MA *(Gadjah Mada University, Indonesia)*	*Improving Child Nutrition Literacy For Teenage Pregnant Women And Its Implication To The First 1000 Days Of Child Life: Arguments For Developing Social Media Based Adolescent Support Group In*

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O-07	Puspa Sari	The Effectiveness of Health Education Through Smartphone and Booklet on Knowledge and Attitude of Adolesence About Reproductive Health
O-08	Mellia Silvy Irdianty	Comparison of Physical Activity and Snack Consumption of Obese Adolescents in Urban and Rural Area in Bantul, Yogyakarta
O-09	Kusbaryanto	The Correlation Education about Health Reproductive and Knowledge and Attitude of Health Reproductive of the Adolescent
O-10	Sinta Mukti Permatasari	The Relationship Between Knowledge, Attitudes, Actions Related to the Clean and Healthy Behavior and Nutritional Status with Diarrhea Events in Islamic Boarding School
O-11	Sri Yunita	Factors Associated with Exclusive Breastfeeding on Working Mothers in Umbulharjo Sudistrict, Yogyakarta City
O-12	Atika Karunia Zulfa	The Characteristics Of Sexually Transmitted Infections In Polyclinic Dermato Venerology Dr.Sardjito General Hospital Yogyakarta
O-13	Cicilia Windiyaningsi	Factors That Influences Of People Living With Hiv / Aids (Plwha) In Vct Division Of General Hospital Waluyo Jati Kraksaan District Probolinggo
O-14	Agus Suprijono	Advanted of Sarang Semut Infusion (Myrmecodia Pendens Merr &Amp; Perry) as Decreased Blood's Uric Acid in Male Rats of Wistar Strain
O-15	Agus Prasetyo	The Meaning and Role of Spirituality in HIV/ AIDS Patients
O-16	Intan Mirantia	Therapeutic Communications Reduce the Patient's Anxiety of Pre Operation Patients

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P-03	Rr Dewi Ngaisyah	The Risk of Obesity and Developmental Delay in 2-5 Year Old Stunted Children in Kanigoro, Saptosari, Gunung Kidul, Yogyakarta
P-04	Fery Lusviana Widiany	Giving of Catfish Abon to the Creatinine Level of Haemodialysis Patients
P-05	Devillya Puspita Dewi	Effect of Moringa Oleifera Cookies in Anemia Adolescent
P-06	Sri Hendarsih	Experiences of Drug Users In IIA Class Jail Yogyakarta
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Abstract of Keynote Speakers

I-01

ROLE OF REGIONAL HEAD IN ORDER TO SUCCESSFUL COMMUNITY MOVEMENT HEALTH LIVING ON ADOLESCENT

Dra. Hj. Sri Muslimatun, M.Kes
(*Vice Head of Sleman Regency*)

ABSTRACT

The Movement of Health Living Community (GERMAS) is a systematic and planned action undertaken jointly by all components of the nation with awareness, willingness and ability to behave healthy to improve the quality of life. The implementation of GERMAS should start from family, because family is the smallest part of society that makes up the personality. Sleman Regency has just received an award of migrant worker. Teenagers are expected to always take part in GERMAS. Sleman has declared GERMAS with: (1)Utilization of green environment and environment to support active life; (2)Utilization of yard to plant fruits and vegetables; (3) Non-smoking area; (4) Anemia Prevention in adolescent (counseling and education of anemia in schools, iron tablet, healthy diet, Hb examination after iron tablet program, PKPR-Peduli Remaja-with psychologists as well, reproductive health, health screening, HIV education, smoking education, drug counseling, etc). Sleman is a 40% food buffer from Yogyakarta. Development of environments that support physical activity are: (1) Prepare a safe sidewalk; (2)Prepare the field for physical activity; (3) Preparing paved road facilities to remote areas; (4)Healthy Regency; (5)Seven orders that support Germas; (6)Utilization of yard (Family Medical Plant);(7) Non-smoking regency (with regent regulation); (8)GERMAS intervention (with 3 main points: exercise, physical activity, eat vegetables and fruit, health check every month).

I-02

HEALTH MINISTRY'S POLICY TO IMPROVE ADOLESCENT HEALTH IN THE ERA OF SDGs

Dr. Achmad Soebagjo Tancarino, MARS
(The Head of Training Centre for Health Human Resources)

ABSTRACT

Currently health development is directed to realize Healthy Indonesia as a framework set forth in the Ministry of Health Strategic Plan 2015 - 2019. Healthy Indonesia Program consists of the following efforts: (1)Healthy paradigm, which includes programs: Priority health in development, Promotive - Preventive as the main pillar of health effort and community empowerment; (2) Strengthening of Health Services, which includes programs:Increased Access mainly on FKTP, Optimization of Referral System,Quality Improvement, also implemented the Implementation of a continuum of care approach and health risk based interventions (health risk); National Health Insurance, which includes programs: benefit, system of financing: insurance - the principle of mutual cooperation,cqality Control and Cost Control, Target: donors and non donors. Medium-term development plan starting from phase I to phase IV which will be end in 2024, health development in Indonesia will be directed to prioritize disease prevention or promotive services and health promotion or promotion without forgetting curative efforts, all these efforts are aimed to achieve healthy, independent and just society. Strengthening the health system is also an important agenda in health development aimed at improving access to health services, improving the quality of services, building a regional referral system, empowering local governments in health efforts and encouraging the involvement of other sectors in health development.

I-03

CLIMATE CHANGE AND THE HEALTH CONSEQUENCES IN THE POPULATION

Prof. Dr. Tengku Mohammad Ariff R. Husein
(Universiti Sultan Zainal Abidin, Terengganu, Malaysia)

ABSTRACT

Over the last 50 years, human activities – particularly the burning of fossil fuels – have released sufficient quantities of carbon dioxide and other greenhouse gases to trap additional heat in the lower atmosphere and affect the global climate. In the last 130 years, the world has warmed by approximately 0.85^{o}C. All populations will be affected by climate change, but some are more vulnerable than others. People living in small island developing states and other coastal regions, megacities, and mountainous and polar regions are particularly vulnerable. Sea levels are rising, glaciers are melting and precipitation patterns are changing. Extreme weather events are becoming more intense and frequent. Although global warming may bring some localized benefits, such as fewer winter deaths in temperate climates and increased food production in certain areas, the overall health effects of a changing climate are likely to be overwhelmingly negative. Climate change affects social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter. Extreme high air temperatures contribute directly to deaths from cardiovascular and respiratory disease, particularly among elderly people. High temperatures also raise the levels of ozone and other pollutants in the air that exacerbate cardiovascular and respiratory disease.

Rising sea levels and increasingly extreme weather events will destroy homes, medical facilities and other essential services. Increasingly variable rainfall patterns are likely to affect the supply of fresh water. A lack of safe water can compromise hygiene and increase the risk of diarrhoeal disease, which kills over 500 000 children aged under 5 years, every year. Rising temperatures and variable precipitation are likely to decrease the production of staple foods in many of the poorest regions. This will increase the prevalence of malnutrition and undernutrition.

Climatic conditions strongly affect water-borne diseases and diseases transmitted through insects, snails or other cold blooded animals. Changes in climate are likely to lengthen the transmission seasons of important vector-borne diseases and to alter their geographic range.

I-04

OVERVIEW FOR THE POLICY AND SUPPORT OF GOVERNMENT OF THAILAND

Assoc. Prof. Patcharee Jearanaikoon, PhD
(Dean of The Associated Medical Sciences, Khon Kaen University, Thailand)

ABSTRACT

Fiveteen Years Strategic Plans of Thailand are divided into3 “5 Years Operation Plan”. Thailand encourage local society to lower AIDS number. Some problems still remains problem that Thailand face in ending HIV AIDS. Method to End HIV : Reach – Reach the high risk population, Recruit – Recruit the high risk, Test – testing that who are high risk, Treat, Retain. The highest number of HIV sufferers are among people with injected drugs (2014), 2015-2019 Fisherman is new risk to get HIV, 2015-2019 the target service coverage are all 90%. Urgent treatment of HIV in Thailand is ART (Anti Retroviral Treatment). Problem that is faced by Thailand : gap between national programme and community setting, It needs real time monitoring to succeed the programe. All mother are free to have HIV assessment (for free).

How to succeed to end HIV : 1. Early diagnosis, 2. HIV testing shuld be accurate and sensitive – adolescence-friendly. Important characteristic of HIV service unit for teenage is one stop service; HIV testing, consulting, Treatment; Minimal charge or free, Youth friendly staff (respect the sexual orientation), Not specific for HIV testing only, Match with the lifestyle of teenage, Easy access and convenient location. Period HIV testing : 1. Eclipse : HIV in cells, 2. Acute infection : HIV markers found in blood circulation, 3. Seroconversion : too late to detect HIV. We shoud use 3 combination of tests to minimize false positive numbers, If the test is inconclusive we should test again within next 1 months, We cannot detect HIV in children under 24 months. Laboratory testing to follow the treatment : 1. CD4 cell count is tested every 6 months and flow cytometry or POCT, 2. Viral load.

I-05

HIV TESTING IN LABORATORY AND COMMUNITY TO DETECT CARRIER AMONG ADOLESCENCE IMMEDIATELY

Assist. Prof. Amonrat Jumnainsong, PhD *(Department of Immunology and Blood Transfusion Medicine Faculty of Associated Medical Sciences, KhonKaenUniversity,, Thailand)*

ABSTRACT

The third goal of SDGs is to ensure a healthy life and promote well-being for all people of all ages, including teenagers. Various problems that occur in adolescence, including HIV-AIDs, abortion, unwanted pregnancy and drug abuse.Adolescents and young adults are at increased risk for HIV due to the many developmental, psychological, social, and structural transitions that converge in this period of the lifespan. In addition, adolescent deaths resulting from HIV continue to rise despite declines in other age groups. Between 2005 – 2015 the number of adolescents living with HIV has risen by 28%. In Thailand the prevalence HIV in adults is 1% and in a childrenliving with HIV is 22.000. This papers focus in how to detect HIV among adolescence immediately so that early prevention transmission can be done.

In Thailand HIV diagnsosis test must be done with 3 test, it can increase PPV for 99,999%. The first test only 73,35% and then the second test increase to 99,81%. Diagnosis for child under 24 month years is very difficult because they haven't produced antibodies only PCR technique maybe can detect the virus. If the PCR results is positive the baby must doing confirmatory test by antibody determination after the baby is over 24 month years old. The quicker for HIV status determination is needed for a better treatment and prognosis.

Keywords : *HIV Testing, Adolescence*

I-06

MENTAL HEALTH DETECTION IN TEENAGERS

Ns. Sutejo, M.Kep,Sp.Kep.J
(Health Polytechnic of Health Ministry Yogyakarta, Indonesia)

ABSTRACT

Teenagersis a unique individuals with all the developmental process has to be gone through both physically and psychologically. Teenagers is a transitional period and difficult conditions for them so that is likely happen to change the behavior associatied with the development of the case. Psychosocial development task in teens, according to Erickson (identity vs role difussion) as to the identity of the group and develop a sense of personal identity and personal intimate relationships. The prevalence of mental health disorders in children and teenagers tend to increase in line with the problems of an increasingly complex society. Increased efforts in doing detection of mental health is the way to maintain mental health teenagersdevelopment stages correspond to psychosocial. The research found that the problem behaviors in early teenagers is associated with high risk pathological immature at the time. The existence of barriersin teenagersstages of development can lead to mental health problems if not resolved properly. According to the Diagnostic and Statistical Manual of Mental Disorder (DSM 5) that teenagerswere diagnosed with various mental disorders including depression, bipolar disorder, suicide, self-injury, behavioral disorders, bullying, violence, the use of addictive substances. Strategies of treatment for teennagers based on the result of the scientific findings identifying that it is important to take account the issue of development as well as its uniqueness to build therapeutic relationshipsas well as teach stress management skills.

***Keywords**: Detection of Mental Health, Stress Management, Teenagers Psychosocial Development*

I-07

YOUTH MARRIAGE ON REPRODUCTIVE HEALTH

Dr. Yuni Kusmiyati, SST.,MPH
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Youth marriage in reproductive health is defined as marriage before the age of 20 years. All countries in the Asia Pacific region have laws against child marriages, but in many countries nearly 50 percent of women marry before the age of 18. Data on the number of young births in Yogyakarta in 2014 amounted to 930 and increased to 1,078 in 2015. Youth marriage in Indonesia is one of the causes of high birth and death rates. Some research results indicate a strong correlation between young marriage with high maternal mortality. Women who are immature, have reproductive organs that are not strong enough to have sex and childbirth, so have a 4-times risk to serious injury and death due to childbirth. From a social point of view, the transition to parenthood will be difficult as developmental tasks have not been met. Difficulty in accepting change and adjusting new roles. Marriage and early pregnancy are the main causes of school drop-outs. Dropouts are associated with unemployment and poverty due to little opportunity to work and improve careers, and potentially have limited income. In terms of reproductive health young marriage is at risk of cervical cancer, while young pregnancies are at risk for abortion, preterm labor, infection, toxemia gravidarum and maternal death. Problems also occur because emotional stability generally occurs between the ages of 24 years because that is when people begin to enter adulthood, so if the marriage done under the age of 20 (twenty) years emotionally still not stable. Youth marriage is influenced by several factors including social and customs, education and social environment. The norms prevailing in society often encourage a person's motivation to determine the number of children. Education can affect a woman to delay the age of her marriage. The longer a woman attends her education, theoretically the higher her first married age. Efforts to mature the current age of marriage have been done by promoting the risks and impacts of marriage and young pregnancy and advocacy on the government to revise marriage for married age from 16 to 20 years, but the effort has not shown significant results.

I-08

THE INFLUENCE OF HORMONAL CHANGES IN PUBERTY ON HEALTH PERODONTAL

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ABSTRACT

The human life cycle is characterized by hormonal changes. Hormonal changes occur in puberty, menstruation, pregnancy, contraceptive use, and menopause. The focus now is to study hormonal changes in puberty, because at this age becomes the starting point of maintenance of the teeth and mouth in the future. The hormone associated with changes in the human body is estrogen, the effect of changes not only on the body but also on the periodontal tissues, a tissue that supports the teeth.

Estrogen hormones has a role on the human body sistematically, it also plays a role in the formation of bone, including alveolar bone in the periodontal tissue. The local role of estrogen is to maintain bone mass in healthy conditions and participate in regenerating bone in the healing periodontitis, both in men and women. In the condition of hormonal changes in puberty, there will be an excessive response from the presence of a small plaque. Clinical features of gingivitis appear severe not in proportion to the plaque present.

Knowing hormonal changes to periodontal health in puberty is important because prevention of periodontal disease is the best to be done at an early age from the human cycle. Prevention of periodontal disease works optimally, if it involves the patient itself, so not only rely on the health workers.

I-09

IMPROVING CHILD NUTRITION LITERACY FOR TEENAGE PREGNANT WOMEN AND ITS IMPLICATION TO THE FIRST 1000 DAYS OF CHILD LIFE: ARGUMENTS FOR DEVELOPING SOCIAL MEDIA BASED ADOLESCENT SUPPORT GROUP IN INDONESIA

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Every child born has the rights to access to good food to be able to reach maximum stage of their growth and development. Government should take responsibility to reach teenage pregnant women who are traditionally marginalized in our society. We argue that nutrition literacy is critical to protect women in their reproductive roles throughout their life course. Women with better nutritional status will be more likely to have children with improved health status. While effective strategies to make food accessible to all children in their first 1000 day life is the essential part of government responsibility, it is also important to create programs that targeting pregnant women and adolescent risk groups to improve health nutrition literacy.

This paper provides two basic explanations as to why we consider group support for life course nutrition literacy is crucial among adolescent population. First, nutrition literacy among adolescent will influenced their food behaviour throughout their life course and offsprings. Therefore the first 1000 day life of any children will positive impact from their literate mothers. Second, teenage pregnancy create crisis momentum that may attract attention from their counterpart. Joining support group may serve as an entertaining learning experience because of the social media use that widely available among adolescents. Such a group help teenager to share their concern, curiosity, and problem solving creativity.

The paper highlight the need for society to change the attitude toward stigmatized group of teenage reproductive problems. The whole society should be able to reduce stereotyping attitude toward teenage pregnancy and childbearing also to secure the first 1000 days of their children. We also consider the importance of adolescent literacy group as inspiration for other stakeholders who want to develop similar adolescent support groups for vulnerable teenage population.

Oral Presentation

O-01

IDENTIFYING THE ROLE OF HEMOGLOBIN IN INTRADIALYTIC NAUSEA AND VOMITING IN PANEMBAHAN SENOPATI GENERAL HOSPITAL IN BANTUL

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ABSTRACT

Chronic renal failure (CRF) is a progressive deterioration in kidney function that is also signified by a decrease in Glomerulus Filtration Rate (GFR) <60 mL/min which generally ends in irreversible renal failure[14]. The hemoglobin levels of the patients experiencing CRF tend to decrease and can thus may undergo complications, one of them is anemia. The low hemoglobin levels may cause lassitude, fatigue and decreasing energy, including in the digestive system. This study purposed to determine the relationship between hemoglobin levels and the occurrence of intradialytic nausea and vomiting in Panembahan Senopati General Hospital Bantul. This is a quantitative research using observational analytic design and *cross sectional design.* This study refers to the whole accessible population *(total sampling)* on the entire shift as many as 142 respondents, with regard to sampling criteria. Most of the low hemoglobin levels found in male gender is of 96.6% and most of the low hemoglobin levels in female gender is 84.9%. Most of them experience intradialytic nausea and vomiting, which is of 79.6% It can be concluded that there is a relationship between hemoglobin levels and the occurrence of intradialytic nausea and vomiting in Panembahan Senopati General Hospital Bantul with *p-value* of 0.011 for the male gender. There is a relationship between hemoglobin levels and the occurrence of intradialytic nausea and vomiting in Panembahan Senopati General Hospital Bantul with *p-value* of 0.015 for the female gender.

Keywords: *Hemoglobin, Intradialytic Nausea and Vomiting, Hemodialysis*

INTRODUCTION

Chronic renal failure (CRF) is a progressive deterioration in kidney function that is also signified by a decrease in Glomerulus Filtration Rate (GFR) <60 mL / min and an increase of creatinine levels in the blood, which generally ends in *irreversible* renal failure[10.] CRF is an abnormality in the structure and function of kidney in which the kidney is unable to maintain the balance of electrolytes in the body[15]. The prevalence of CRF over the world has increased significantly and as many as 2.622.000 people have undergone CRF treatment by the end of 2010. In the United States, 90% of 142.448 people have undergone hemodialysis[7.] The prevalence of CRF or ESRD in Indonesia has reached approximately 13.758 people in 2014. In Yogyakarta, the number of patients with CRF has reached 567 people[19.] The number of the patients undergoing hemodialysis has increased in some countries. In every year, its prevalence is increasing, especially in developing countries, including Indonesia, in which it is estimated that there are approximately 40-60 cases per million populations per year[10.].

The function of kidney is to control the secretion of metabolic waste in the body,retain the useful substances, and control the balance of the fluids and electrolytes in the body. In addition, kidney also functions in producing erythropoietin (EPO) in the adrenal glands that is produced by endothelial cells of the peritubular capillaries in the

cortex and outer medulla. Erythropoietin is a protein that controls erythropoiesis process that serves to stimulate the formation of red blood cells by the bone marrow6. If the kidney has malfunctions then the formation of red blood cells in the bone marrow will decrease and the hemoglobin levels in the blood will decrease and eventually will stimulate the increase of EPO production.

For the patients who have undergone hemodialysis for a while, the metabolic wastes will build up. The metabolic wastes are the high levels of urea and creatinine in the blood. High urea will disrupt the production of the erythropoietin hormone. As a result, the number of red blood cell production decreases, or mostly known as anemia, so that the patient will experience Dialysis Disequilibrium Syndrome (DDS) or complications during the hemodialysis process. DDS occurs due to the process of rapid removal of fluid and urea from the blood during the hemodialysis process. The symptoms of DDS are sudden headaches, blurry vision, dizziness, nausea, vomiting and seizures. If DDS is not recognized, then it will lead to coma that eventually will lead to death16.

Patients who undergo hemodialysis therapy, they will experience anemia since during ultrafiltration, diffusion, and osmosis process, there are a lot of red blood cells that are filtered in the semipermeable membrane so that the red blood cells are broken, or hemolysis. The impact is that the oxyhemoglobin that has the role to carry oxygen to the blood flows will decrease and the oxygenation to the peripheral tissues will decrease as well, and thus the patients undergoing hemodialysis process will experience perfusion disruption that will lead to intradialytic nausea and vomiting complaints.

PURPOSE

Based on preliminary study conducted by researchers at hemodialysis unit of Panembahan Senopati General Hospital in Bantul on October 8, 2016, there are 22 hemodialysis beds that are scheduled in 3 groups with visit schedule of two times a week, so that the total population of the patients is 198. Based on the observation and interview on October, 8 in 2016, in the morning shift the total patients were 10 persons. There were 7 patients out of 10 who were suffering from CRF and experiencing intradialytic nausea and vomiting. Meanwhile, the other 3 patients did not experience intradialytic nausea and vomiting. Therefore, the researcher aims at identifying the relationship between hemoglobin levels and the occurrence of intradialytic nausea and vomiting in Panembahan Senopati General Hospital.

METHOD

This is a quantitative research using observational analytic design and *cross sectional design.* This study refers to the whole accessible population *(total sampling)* on the entire shift as many as 142 respondents, with regard to sampling criteria.

RESULTS

1. Characteristics of Respondents

   The age of the patients with chronic renal failure in Hemodialysis Unit in Panembahan Senopati Bantul Hospital is divided based on the classification of age consisting of the late teens (17-25tahun), Early adulthood (26-35tahun), late adulthood (36 - 45tahun), early elderly (46-55tahun), late elderly (56-65tahun) and the elderly (> 65tahun)[4.]

Table 1. Distribution of Respondents by Age, Gender, and Hemodialysis Period in Hemodialysis Unit of Panembahan Senopati General Hospital in Bantul on April 2017 (n = 142)

Characteristics of Respondents	Frequency (f)	Percentage (%)
Age (years)		
Teenager (17-25)	3	2.1
Early adulthood (26-35)	14	9.9
Late adulthood (36-45)	25	17.6
Early elderly (46-55)	46	32.4
Late Elderly (56-65)	36	25.4
Elderly (> 65)	18	12.7
Gender		
Male	89	62.7
Female	53	37.3
Hemodialysis Period		
<6 months	19	13.4
> 6 months	123	86.6

Based on Table 1, it can be seen that first, based on the characteristics of the age, most of the respondents are at the early elderly stage (46-55 years old), which is of 32,4%, and second, based on the characteristics of the gender, most of them are male, as many as 62,7%, and the last, based on the characteristics of the duration or the time of the hemodialysis, most of them have undergone the hemodialysis for more than 6 months, which is as many as 86,6%.

2. Frequency Distribution of the Hemoglobin Levels

Hemoglobin Levels of the Patients with CRF who are Conducting Hemodialysis Process in Panembahan Senopati General Hospital Bantul. The data of the hemoglobin levels in this research are categorized into normal and abnormal categories. The frequency distribution of the hemoglobin levels can be seen in Table 2.

Table 2. Frequency Distribution of Hemoglobin Levels during Intradialytic Process in Hemodialysis Unit in Panembahan Senopati General Hospital on April 2017, (n=142)

Male Hemoglobin Levels	Frequency (f)	Percentage (%)
Normal	3	3,4
Abnormal	86	96,6
Female Hemoglobin Levels	**Frequency (f)**	**Percentage (%)**
Normal	8	15,1
Abnormal	45	84,9

Based on Table 2, it can be seen that the hemoglobin levels in most of the male respondents are in the low hemoglobin levels (96,6%), and most of the female respondents are also in the low levels of hemoglobin (84,9%).

3. Frequency Distribution of Intradialytic Nausea and Vomiting

Intradialytic Nausea and Vomiting of the Patients who are Undergoing Hemodialysis in Hemodialysis Unit in Panembahan Senopati General Hospital Bantul. In this research, the data of intradialytic nausea and vomiting are categorized into “Yes” (nausea and vomiting) and “No” (no nausea and vomiting). Based on Table 3, it can be seen that most of the respondents experience intradialytic nausea and vomiting as many as 79, 6%.

Table 3. Frequency Distribution of Intradialytic Nausea and Vomiting of the Patients during Intradialytic Process in Hemodialysis Unit in Panembahan Senopati General Hospital Bantul on April 2017, (n=142)

Intradyalisis Nausea and Vomiting	Frequency (f)	Percentage (%)
Yes	113	79,6
No	29	20,4

Table 4. The Relationship between Hemoglobin Levels and Intradialytic Nausea and Vomiting in Panembahan Senopati General Hospital Bantul on April, (n=142).

Men's HB level	Nausea and Vomiting				*p-value*
	Yes		No		
	f	%	f	%	
Normal	1	1,1	2	2,2	*0,011*
Abnormal	82	92,1	4	4,5	
Women's HB level	**Nausea and Vomiting**				***p-value***
	Yes		No		
	f	**%**	**f**	**%**	
Normal	1	1,9	7	13,2	*0,015*
Abnormal	29	54,7	16	30,2	

Based on Table 4, the bivariate analysis tested using Fisher's Exact Test shows that for male respondents, the *p-value* is 0,011 the bivariate analysis tested using Fisher's Exact Test shows that for female respondents, the *p-value* is 0,015.

DISCUSSION

1. Characteristics of the Respondents

Based on the research result taken from 142 respondents in Hemodialysis Unit in Panembahan Senopati General Hospital in Bantul, the frequency of the majority of the age shows that most of the patients are at elderly stage, in which most respondents are at the age of 40-55 years old or early elderly of 46 respondents (32,4%) and those within the range of 56-65 years old are of 36 respondents (25,4%). At the late teens, there are 3 respondents (2,1%), those at early adulthood are of 14 respondents (9,9%), those at late adulthood are of 25 respondents (17,6%) and those at elderly stage are of 14 respondents (12,7%).

This research is similar to the previous research[5] that characteristics of the age of the patients are mostly found at the age of 40-55 years old (35,2%). Based on the previous research [2], it shows that the physiological changes will decrease as people are aging, and the organs with the deteriorated function is the kidney, including the decrease of the glomerulus filtration rate, blood flows to the kidney, tubular secretion and kidney's mass. Therefore, if people do not have healthy life style, or they have already had comorbidity, then they will suffer from kidney failure. To improve the life quality, hemodialysis therapy can serve to help the work of the kidney. At early elderly, people may still have high motivation to improve their life quality.

Based on Table 1, the frequency distribution of the genders in Hemodialysis Unit in Panembahan Senopati General Hospital shows that most of the patients are male, as many as 89 respondents (62,7%), while females are of 53 respondents

(37,9%). This research is similar to the research by Hadi (2015) that suggests that based on the respondents' characteristics, most of the patients are males, as many as 29 respondents (53,7%).

According to previous research[2], it shows that most respondents are male. The factors causing the males to experience CRF are life style, diet or eating habit. In addition, men tend to smoke, stay up late, and drink coffee. From those habits, men are prone to kidney failure, so that the percentage is higher than that of women. This research is similar to the previous research[5] that suggests that the number of male patients is more than the number of female patients.

Based on Table 1, the frequency distribution of the hemodialysis time in Hemodialysis Unit in Panembahan Senopati General Hospital, it is found out that most of the patients (123 respondents) have undergone hemodialysis for more than 6 months (86,6%), and those with less than 6 months are of 19 respondents (13,4%). These data signify that patients experiencing CRF really depends on the hemodialysis therapy to help the work of the kidney to maintain their life quality.

Based on the previous research[5], the frequency distribution of the hemodialysis period or duration of the patients suffering from CRF in PKU Muhammadiyah Unit II Hospital shows that in the "long duration" category, there are 38 respondents (70,4%). Patients with CRF will depend on the hemodialysis therapy to help the work of the kidney in filtering the substances that are no longer needed in the body, and remove them along with the urine, or reabsorb those that can still be reused. This hemodialysis therapy aims at maintaining the life quality of the patients.

2. Intradialytic Hemoglobin Levels

The research result shows that based on Table 2, it is found out that the respondents with low hemoglobin levels in Hemodialysis Unit in Panembahan Senopati General Hospital in Bantul are 96,6% for male gender, and 84,9% for female gender. This research is similar to the previous research [10] that the average value of hemoglobin level is 9,76 gr/dl, in which it signifies that the patients with hemodialysis therapy have low hemoglobin level.

Based on the previous research[7], the average of the hemoglobin level is 8,18 gr/dl, and prone to complications. Before the hemodialysis (pre hemodialysis), all respondents have low hemoglobin and after hemodialysis (post hemodialysis), most of the patients will have lower hemoglobin level than before. Patients with CRF tend to have decreased hemoglobin level, and thus they may have complications, such as anemia, due to the decreased hemoglobin level in the blood. Automatically, there will be less oxygen that is bound by the hemoglobin, and eventually there will be less oxyhemoglobin that will be used in metabolism[11]. Patients with low hemoglobin level will get blood transfusion to increase the hemoglobin level in the blood[11].

Based on the analysis result about the intradialytic hemoglobin levels in Hemodialysis Unit in Panembahan Senopati General Hospital Bantul, the researcher assumes that patients who undergone hemodialysis therapy will experience a decrease of the hemoglobin levels in his or her blood. During the ultrafiltration and diffusion process, the red blood cells will lyse or will be broken and the hemoglobin levels in the blood will decrease due to the process. In the ultrafiltration and diffusion process, there are different concentrations pressures from high concentration to low concentration in the body and from the dialyzer tool, the blood will lyse. In addition, the reducing erythropoietin production also causes the lower hemoglobin level. Erythropoietin is produced in the kidney. In this research, the patients undergo hemodialysis because their kidney cannot work properly, so that the kidney cannot do its function well, and therefore the production of erythropoietin decreases as well. Erythropoietin has the function to stimulate the formation of red blood cells in bone marrow, if the production of erythropoietin decreases, then automatically the

production of red blood cells will decrease as well, and it worsens as the patients who have kidney malfunction undergoes the hemodialysis therapy. Hemoglobin is found in red blood cells, so if the red blood cells break down, or lysis, then the hemoglobin levels in the blood will decrease as well.

3. Intradialytic Nausea and Vomiting

Based on Table 3, it can be seen that the patients with CRF who are conducting hemodialysis in Hemodialysis Unit in Panembahan Senopati General Hospital Bantul who are experiencing intradialytic nausea and vomiting complications are 113 respondents (79,6%), and those who are not experiencing intradialytic nausea and vomiting are of 29 respondents (20,4%). From this research result, it can be concluded that most of the patients with CRF who are conducting hemodialysis in Hemodialysis Unit in Panembahan Senopati General Hospital Bantul are experiencing intradialytic nausea and vomiting complications with the percentage of 79,6%.

This research is similar to the research conducted by previous researcher[1] suggesting that most of the patients with CRF who are conducting hemodialysis are experiencing intradialytic nausea and vomiting complications. Even though the hemodialysis therapy is very recommended for patients with CRF, this therapy has its own impacts, such as the intradialytic nausea and vomiting complications. The nausea and vomiting complications are of 40%. The complications stated here occur approximately 1 hour after the insertion7. Most of the patients undergo hemodialysis to survive. Even though hemodialysis equipment has reached a great advance, but complications still occur. Nausea and vomiting are common complications during hemodialysis that cause the uncomfortable feeling for the patients.

Intradialytic complications are complications that are often found in the patients with CRF who are undergoing hemodialysis therapy, and these complications reach 20-30%. Intradialytic complications are still crucial clinical problems since the symptoms like nausea and vomiting, muscle cramps, hypotension or hypertension, and headache influence the continuity of the patients' life quality3.

The prior research7 supports this research and it researched about the duration of hemodialysis and the decreasing appetite of the patients with CRF in Hemodialysis Unit in Ulin General Hospital in Banjarmasin. The result was that 31 patients who underwent hemodialysis for a while experienced mild decreasing appetite (79,5%), and 79 patients who underwent hemodialysis for long enough experienced considerable decreasing appetite (82,3%), and 35 patients who underwent the hemodialysis for the longest period experienced considerable decreasing appetite (89,7%).

It can be concluded that patients with hemodialysis therapy within short and long period of time experience decreasing appetite so that it will trigger the production of gastric acid and reflux and eventually will cause nausea and even vomiting. Analysis result using chi-square shows that $p = 0,000 < \alpha = 0,05$, meaning that there is a relationship between the duration of hemodialysis and the decreasing appetite.

Patients who undergo hemodialysis therapy are prone to malnutrition since the patients who have undergone hemodialysis for long time will have high urea and creatinine levels in their blood. The increasing urea and creatinine levels will stimulate the production of gastric acid, so that it may cause gastrointestinal problems, like nausea and vomiting[13].

4. The Relationship between Hemoglobin Levels and Intradialytic Nausea and Vomiting

The research results show significant result about the relationship between hemoglobin levels and the intradialytic nausea and vomiting in Hemodialysis Unit in Panembahan Senopati General Hospital Bantul. Using Fisher's Exact Test, the cross tabulations are differentiated into two, which are the hemoglobin levels for male and hemoglobin levels for female. Then they are cross tabulated with the intradialytic nausea and vomiting. The result of the cross tabulation of the hemoglobin levels of the male and the intradialytic nausea and vomiting is p-value of 0,011 < α (0,05) the cross tabulation of the hemoglobin levels of the male and the intradialytic nausea and vomiting is p-value of 0,015 < α (0,05).

Hemodialysis aims at helping the work of the kidney, however, it may cause various physical, psychological, and social complications. Nausea and vomiting are the most common physical complications during hemodialysis process. Even though the nausea and vomiting complications do not threaten patient's life, but they can decrease the life quality of the patients, and some of the respondents also mention that they feel uncomfortable with such condition[1].

Based on prior research[17], the anemia levels are divided into three, which are mild anemia of 2 respondents (5,1%), moderate anemia of 26 respondents (66,7%), and severe anemia of 11 respondents (28,2%). Therefore, it can be concluded that all patients who are doing hemodialysis suffer from anemia. In the previous research[18] patients with hemodialysis also suffer from anemia. This research also proves that most of the patients who are conducting hemodialysis have low levels of hemoglobin with the average of 10,2 gr/dl and the patients who experience nausea and vomiting are 79,6%.

A prior research[8] also states that 96% of the patients with hemodialysis therapy experience intradialytic complications. The complications are nausea and vomiting. The impact of hemodialysis is hemolysis, in which the hemoglobin levels will decrease that lead to lassitude, fatigue, and decreasing energy, including in the digestive system. The intradialytic nausea and vomiting are caused by an imbalance of plasma volume that stimulates mucosa in the gastrointestinal organ to produce hormone like serotonin through enterocromaffin cell so that it stimulates the work of chemoreceptor trigger zone (CTZ) as a center for nausea and vomiting.

CONCLUSION

1. Most of the patients are at early elderly age (46-55 years old) of 32,4% and at late elderly age (56-65 years old) of 25,4%. The male respondents are more than the female of 62,7%. Most of the patients have been conducting hemodialysis for more than 6 months (86,6%).
2. Most of the low hemoglobin levels in male respondents are of 96,6% and most of the low hemoglobin levels in female respondents are of 84,9%.
3. Most of the patients experience intradialytic nausea and vomiting as many as 79,6%.
4. There is a relationship between hemoglobin levels and the intradialytic nausea and vomiting in Panembahan Senopati General Hospital Bantul with the p-valueo of 0,011 (p-value < 0,05) for males.
5. There is a relationship between hemoglobin levels and the intradialytic nausea and vomiting in Panembahan Senopati General Hospital Bantul with the *p-value* of 0,015 (*p-value* < 0,05) for females.

RECOMMENDATION

Nurse should pay attention to the patients' condition during hemodialysis by assessing the hemoglobin levels and nausea and vomiting complaints.

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O-02

THE INFLUENCE OF EARLY BREASTFEEDING INITIATION ON POSTPARTUM MOTHERS' BREAST MILK PRODUCTION IN LISMARINI INDEPENDENT MIDWIFERY PRACTICE PALEMBANG

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ABSTRACT

Early initiation or early breastfeeding is the process of allowing the infant with his own instinct to suckle immediately within the first hour after birth, along with the skin contact between the baby and the mother's skin. The baby is left for at least an hour in the mother's chest until he does breastfeeding alone. This study purposed to analyze the influence of early breastfeeding initiation on breast milk production in post partum mothers at Independent Midwifery Practice Lismarini Palembang. This study was a posttest only control group design. The sample withdrawal is conducted by using "purpose sampling" technique with 30 respondents. The measurement scale in this study used nominal scale, data in this study using chi square statistical test with 95% confidence level. The results of this study showed that the sufficient milk production on the first day was (16.7%), third day milk production was (46.7%), and the tenth day of sufficient milk day was (73.3%). Chi Square statistic showed that there was significant influence of early breastfeeding initiation on breast milk production in post partum mother between the group who initiated early breastfeeding and group who did not initiate early breastfeeding with (ρ value = 0,035 <α 0,05).

Keywords *: Early Breastfeeding Initiation, Breast Milk Production*

INTRODUCTION

UNICEF (United Nations Children's Emergency Fund) had estimated that breastfeeding had to be given exclusively until age below 5 years old. A study in Ghana published in the pediatrics journal showed that 16% of infant deaths could be prevented by breastfeeding starting within the first hour of birth. This rate was up 22% if breastfeeding began within the first hour after delivery[1].

World Health Organization (WHO) and UNICEF recommended to mothers, if possible,have exclusive breastfeeding for up to 6 months by applying early initiation of breastfeeding for approximately 1 hour immediately after childbirth.Exclusive breastfeeding provided for babies every day for 24 hours, breast milk should be given not using bottles, cups, or pacifier[2].

The Government of Indonesia itself supports the WHO and UNICEF policies which recommend that early breastfeeding initiation could save 22% of babies who died before a month, so it is expected that all health workers at all levels of health services can socialize the program[3].

Based on the results of Basic Health Research (RISKESDAS) 2013, the percentage of exclusive breastfeeding in infants aged 0-6 months in Indonesia in 2012 was 63.2% and it decreased in 2013 to 54.34%. Meanwhile, the percentage of the process began to get the breast milk less than an hour of early breastfeeding initiation in children aged 0-23 months in Indonesia in 2013 was 34.5%, the percentage of the process began to get breast milk between 1-6 hours was 35.2%; the percentage of the process began to

get breast milk between 7-23 hr was 3.7%. While the process presetase began to get milk between 24-47 hours was 13.0%, and the percentage of the process began to get milk more than 47 hours was 13.7% [4].

Data of South Sumatera Provincial Health Office in 2015 showed that the percentage of infants 0-6 months who get exclusive breastfeeding increased to 63.9%, while non-exclusive breastfed infants was 36.1%.It indicated that the implementation of exclusive breastfeeding in Sumatra South has not reached the target of exclusive breastfeeding in Indonesia that was equal to 80%[6].

While data from the Health Office of Palembang showed the coverage of exclusive breastfeeding in 2015 was 72.91%. This coverage was still below the target achievement of exclusive breastfeeding in Indonesia which was 80%. This showed that the implementation of exclusive breastfeeding in infants aged 0-6 months in Palembang was still very low, so it needed a lot of efforts to improve the implementation of exclusive breastfeeding to babies[7].

Early initiation of early breastfeeding at first hour will build a sucking reflex in infants that stimulate the nerve endings around the breast to the front pituitary gland located at the base of the brain to produce prolactin hormone. Prolactin will stimulate the breast to produce the breast milk[8].

METHOD

The research uses the posttest only control group design. This research is the research draft by grouping/classifying the groups between the postpartum mothers with their early initiation of breastfeeding and the postpartum mothers without early initiation of breastfeeding with breast milk production. The Population in this research is all the postpartum mothers at the lismarini independent midwifery practice palembang in 2017.

The Sample is part of the objects to be researched and considered representing the whole population. The Samples in the research are the postpartum mothers. The number of samples being taken is 30 respondents who are divided into 2 groups (treatment group and control group). The sample withdrawal is conducted by using “purpose sampling” technique. The Instrument in this research using observation sheet and check list with criteria of infant sleep duration assessment, infant's urination frequency, infant feeding frequency, observed on days 1, 3 and 10. The measurement scale in this study used nominal scale, data in this study using chi square statistical test with 95% confidence level.

RESULT

Table 1. Breast Milk Production Frequecy Distribution at Lismarini Independent Midwifery Practice Palembang in 2017

Breast Milk Production			Total
1st day	Enough	5	30
	Not Enough	25	
3rd day	Enough	14	30
	Not Enough	16	
10th day	Enough	22	30
	Not enough	8	

Based on table 1 above, we could see that from 30 respondents who have been observed, there were 5 respondents (16.7%) had enough production of milk on the first while there were 25 respondents (83.3%) did not have enough production of it. There were14 respondents (46.7%) had enough production of breast milk on the third day while

16 respondents (53.3%) did not. Then, there were 22 respondents (73.3%) had enough breast milk production on the tenth day while there were 8 respondents (26.7%) did not have.

Table 2. The Distribution on Early Breastfeeding Initiation Influence on the Breast Milk Production at Lismarini Independent Midwifery Practice Palembang in 2017

BM Prod.	EBI				Sum		P Va
	Yes		No				
	n	%	n	%	N	%	
Enough	14	46,7	8	26,7	22	73,3	0.035
Not Enough	1	3,3	7	23,3	8	26,7	
Total	15	50	15	50	30	100	

Based on table 2 above, we could see that from 22 respondents who had enough milk production, there were 14 respondents (46.7%) who didEBI and 8 respondents (26.7%) did not do EBI. While from 8 respondents whose milk production is not enough , there was 1 respondent (3.3%) who didEBI and 7 respondents (23.3%) who did not do EBI.

DISCUSSION

The results showed that from 15 respondents who initiated early breastfeeding with enough milk production, there were 14 respondents (46.7%) had enough breast milk production and only 1 respondent (3.3%) who did not have enough production. The presence of 1 respondent on the tenth day whose breastmilk production was not sufficient after initiation of early breastfeeding because the nipple was not prominent, so the baby was difficult to get the mother's nipple.

In addition, from the results of the study of 15 respondents who did not initiate early breastfeeding, there were 8 respondents (26.7%) had enough breast milk production and there were 7 respondents (23.3%) who did not have enough production. The presence of 8 respondents in the tenth day of breastfeeding had enoughproduction, although did not do early initiation of breastfeeding, it was due to mother diligently feeding the baby as often as possible, good maternal nutrition, and mother got husband support so that breastfeeding could fullfil the needs of the babies. While there were 7 respondents whose milk production were not enough and not do early breastfeeding initiation since the mothersdid not have prominent nipples. Therefore, the mothers were always worried about fullfiling the baby's need.

This was in accordance with the theory that stated that the concerns arising from the release of breast milk was causing a lack of confidence in the mother in breastfeeding her baby. Mother felt unable to meet her baby's needs later on[9].

Respondents who did initiate early breastfeeding would get stimulation on the mother's nipple by the baby's sucking. The faster there was stimulation of suction from the mother's nipple, then the process of expelling milk would be faster, too. This was certainly in harmony with the EBI program that utilized the reflexes of newborns that were sucking reflexes and swallowing reflexes.

Early breastfeeding initiation is highly recommended, since early breastfeeding initiation has two benefits, namely the active suction aspect of the infant as a stimulus to the hormone oxytocin in the psychological sense of the bond between mother and infant (bounding attachment). Two things make early breastfeeding initiation is very influential on milk production and first breastmilk spending time. Mothers in groups who initiate early breastfeeding certainly got active and psychological suction stimulation more quickly to release lactation hormones (oxytocin and prolactin) than mothers who did not initiate breastfeeding early.

This was consistent with the theory that the factors that influence breastfeeding were stimulation of effective suction on the mother's nipple, in addition to the psychological condition of the mother also greatly affected the expenditure and production of breast milk. Husband and family support could create confidence so that mothers were able to breastfeed their babies. Psychic conditions could stimulate the anterior hypophysis to release the hormone prolactin as the hormone that produces of breast milk[10].

Based on the results of research conducted at Lismarini Independent Midwifer Practice in TalangKelapa District on May to June 2017, this study resultedthrough Chi Squarestatistical analysis. It obtained ρ value = 0.035 <α 0.05. This suggested that there is a significant difference in the production of breast milk in postpartum mothers between mothers who initiated early breastfeeding and those who did not initiate early breastfeeding. This also suggested that there was an influence of early breastfeeding initiation on breast milk production in post partum mothers.

The results of this study were in line with a study entitled Influence Early Breastfeeding Initiation to Breastfeeding Production on Post Partum Mother with the results ρ value = 0,000 <α 0.05. So it meant there was influence of early breastfeeding initiation on milk production in post partum mother at Maternity Hospital Semarang[5].

The results of this study were also not much different from the research entitled Early Breastfeeding Initiation to Breast Milk Production inPost Partum Mother stating that Initiation of Early Breastfeeding Effective on Breast Milk Production in Post Partum[8].

From some of the above results, it could be concluded that although no initiation of early breastfeeding, mothers could still breastfed due to several factors such as mother's nipple form, mother's nutrition, mother's resting pattern, husband support in breast feeding, infant feeding without schedule, and maternal psychological .

CONCLUSION

There was a significant difference in the production of breast milk in post-partum mothers between women who initiated early breastfeeding and those who did not initiate early breastfeeding. This also indicated that there was influence of initiation of early breastfeeding on milk production in post partum mother in Lismarini Independent Midwifery Practice Palembang with ρ value = 0,035 <α 0,05.

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O-03

MATERNAL CHARACTERISTICS AND LOW BIRTH WEIGHT

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ABSTRACT

Low Birth Weight (LBW) was a condition when a baby was born less than 2500 grams. LBW was one of the causes of neonatal death. The percentage of LBW in Yogyakarta City started from 2013 to 2015 increased from 5.2% to 6.45%. LBW was caused by multi factors. One of the factors was the maternal factor. To investigate the relationship between maternal characteristics which included maternal age, parity, spacing, disease, maternal education, and third trimester Hemoglobin (Hb) concentration with the incident of LBW. This research was an analytical survey and used cross sectional design. Purposive sampling was used as the sampling technique and the subjects of this research were 155 delivering mothers at Yogyakarta City Public Hospital in 2016. The data were collected from medical record in 2016 which had been adjusted with inclusion and exclusion criteria. The data were analyzed using Logistic Regression. There was a significant correlation between maternal age (p = 0,022), parity (p = 0,015), and third trimester Hb (p = 0,008) with incident of LBW. There was no statistically significant relationship between birth spacing (p = 0.328), maternal disease (p = 0.801), and maternal education (p = 0.802) with LBW incidence. The conclusion of this research was mother's age <20 or >35, parity 1 or ≥4, and third trimester Hemoglobin (Hb) concentration <11 gr/dL was correlated with LBW. There was a significant correlation between maternal age, parity, and third trimester Hb and LBW. Hb levels in the third trimester are the factors that most influence the occurrence of LBW.

Keywords: *Low Birth Weight, Maternal Characteristics.*

INTRODUCTION

The infant mortality rate (IMR) is a health indicator that falls within one of the targets Millennium Development Goals (MDGs). The highest infant mortality is on the neonatal period of the first 28th days of life. Report by the World Health Organization (WHO) 80% of neonatal deaths are caused by low birth weight (LBW)[1]. LBW is the baby's weight at birth of less than 2500 grams. MDGs targeted to reduce ⅔ infant mortality from year conditions 1999 which is 23 per 1,000 live births by the year 2015. IMR in Yogyakarta was ranked the top five nationally but still unable to meet the MDGs targets[2]. Common causes of infant mortality in Yogyakarta are LBW and sepsis[3].

There are many risk factors for LBW are maternal factors (lack of nutrition during pregnancy, mother's age <20 years or > 35 years, the distance pregnant and maternity too close, disease chronic), labor factor is too heavy, pregnancy factor (pregnant with hydramnion, multiple pregnancy, antepartum bleeding, pregnancy complications), factors the fetus (congenital defect, infection in the womb), and the factors that still are not known[4] . Some studies show that LBW is caused by maternal factors such as mothers with ≥3 parity, mothers with a history of preterm delivery, women giving birth to infant girls, and inadequate ANC, maternal education, age less than 20 years or more than 35 years, and history miscarriage or complications of pregnancy such as Gestational Diabetes Mellitus (GDM), hypertensive disorders during pregnancy, anemia, and oligohydramnios. premature birth, the presence of chronic disease (hypertension, DM, congestive heart

failure, and HIV)[5,6,7].

Among many these factors, maternal factors thought to be one of the strongest risk factors causes LBW. Percentage of LBW in Yogyakarta from 2013 to 2015 increased from 5.2% to 6.45%.[8] The purpose of this study to determine the relationship of maternal characteristics (maternal age, parity, birth spacing, maternal disease, maternal education, and Haemoglobin (Hb) in the third trimester) and LBW.

METHOD

This study is an analytic survey with cross sectional design. The sampling with purposive sampling and got 155 women in hospitals Yogyakarta in 2016. Data were collected from medical records of women giving birth in 2016 were already adjusted the inclusion and exclusion criteria. The inclusion criteria are mothers who deliver their babies with a complete medical record includes: maternal age, parity, spacing, disease, maternal education, and maternal Hb in the third trimester. Exclusion criteria mother who gave birth twins, and babies born with congenital defects. Data were analyzed using logistic regression and prevalence ratio 0.05 confidence level and confidence interval of 95%, using a computer program.

RESULTS AND DISCUSSION

Based on data from medical records, there are 1,113 mothers who delivered in the period January 1st to December 31st,2016, researchers took a sample of 155 women. The results were analyzed using univariate, bivariate, and multivariate. Research Subject Characteristics

1. Characteristics of research subjects

   Characteristics of research subjects in Table 1 which includes maternal age, parity, birth spacing, maternal disease, maternal education, Hb third trimester and birth weight are as follows:

Table 1. Frequency Distribution of Characteristics

No.	Category	Frequency	Percentage N%
1	**Maternal age**		
	<20 years or> 35 years	48	31
	20-35 years	107	69
2	**Parity**		
	1 or ≥4	78	50.3
	2-3	77	49.7
3	**Spacing**		
	< 2 years	12	14
	≥2 years	74	86
4	**Maternal disease**		
	There's hypertension or heart disease or kidney disease	17	11
	No hypertension or heart or kidney	138	89
5	**Maternal education**		
	≤Junior High School	44	28.4
	≥Senior High School	111	71.6
6	**Hb in the third trimester**		
	< 11 g / dL	48	31
	≥11 g / dL	107	69
7	**LBW incidence**		
	LBW	68	43.9
	Normal weight	87	56.1

Based on the analysis presented in table 1, 155 mothers who gave birth low birth weight babyare 43.9%. Mothers who gave birth at <20 or > 35 years old are 31%. Mother with parity 1 or ≥4 are 50.3%. Mothers who gave birth to a second child or more for 86 of the 155 maternal and 14% of maternal with spacing <2 years of the birth of a previous child. Mothers who give birth with diseases such as hypertension or heart or kidney disease are 11%. Maternal education ≤Junior High School (JHS) are 28.4%. There are 31% mothers who give birth with hemoglobin levels in the third trimester of <11 g/dL. Mothers who give birth low birth weight baby are 43.9%.

Table 2. Relationship of Maternal Characteristics and LBW In Yogyakarta City Public Hospital 2016

No.	Characteristics of	Incidence				X^2	p value	PR	95% CI		C
		LBW		Normal Weight					Lower	Upper	
			N%		N%						
1	**Maternal age**										
	<20 years or >35 years	28	58,3	20	41,7	5,9	0,022	2,345	1,171	4,697	0,192
	20-35 years	40	37,4	66	62,6						
2	**Spacing**										
	<2 year	6	50	6	50	1,403	0,328	2,083	0,608	7,141	0,127
	≥2 year	24	32,4	50	67,6						
3	**Parity**										
	1 or ≥4	42	54,8	36	46,2	6,345	0,015	2,288	1,196	4,379	0,198
	2-3	36	33,8	51	43,2						
4	**Maternal dissease**										
	there's hypertension or heart disease or kidney disease	8	47,1	9	52,9	0,079	0,801	1,156	0,421	3,173	0,023
	no hypertension or heart disease or kidney disease	60	43,5	78	56,5						
5	**Maternal education**										
	≤JHS	20	45,5	24	54,5	0,063	0,802	1,094	0,542	2,207	0,020
	≥SHS	48	43,2	63	56,8						
6	**Hb in the third trimester**										
	<11 gr/dL	29	60,4	19	39,6	7,73	0,008	2,661	1,322	5,358	0,218
	≥11 gr/dL	39	36,4	68	69						

Table 2 showed the relationship between maternal characteristics and LBW. Analysis was continued to multivariate analyze, as shown at table 3.

Table 3. Multivariate Analysis using Logistic Regression

No	Chatacteristics	B	Df	Sig.	Exp(B)	95% C.I.for EXP(B)	
						Lower	Upper
1	**Hb in the third trimester**	.958	1	.010	2.606	1.254	5.415
2	**Maternal age**	.938	1	.013	2.555	1.224	5.336
3	**Parity**	.864	1	.013	2.372	1.197	4.699

All variables related to bivariate analysis were multivariate analyzed. The result of multivariate analysis in table 3 shows that Hb in third trimester is the most related to the occurrence of LBW, that is p-value = 0,010 and PR equal to 2,606. This means that mothers with Hb levels in the third trimester <11 g/dL increase the incidence of LBW by 2,606 times greater than that of women with Hb in the third trimester ≥11 g/dL.

2. Maternal age relationship and LBW

The results showed no significant correlation between maternal age with LBW p-value 0.022 and mothers by <20 or >35 years old had a 2.3 times greater risk for experiencing LBW compared to mothers aged 20-35 years (95% CI 1.171-4.697). The results of research indicate that maternal <20 years old 3 times risk giving birth

LBW[9]. There are differences Odds Ratio (OR) with PR this study due to its location on a research study Demelash H et al performed in four second referral hospital whereas in this study in the first referral hospital.

The results of this study are also consistent with studies stating that the mother who gave birth to the >35 years old 1.55 times the risk of having a low birth weight[10]. Differences RR and PR with this research because sampling in research Veloso et al were taken from 1996 to 2010, while in this study sample within a period of one year 2016.

The results of this study in accordance with the theory at the age of less than 20 years of reproductive organs has not functioned perfectly and there is also competition for nutritional competition for mothers who are still in development stage with the fetus. This will result in the higher premature birth, low birth weight and birth defects, while at the age of 35 years, although mentally and socially more stable economy, but physical and reproductive already finding it a setback[4].

3. Parity relationship with LBW

The results of this study showed a significant relationship between parity with LBW p-value of 0.015. Mother with parity 1 or ≥4 had a 2.3 times greater risk for experiencing LBW compared with mothers with parity 2-3 (95% CI 1.196 to 4.379).

This is consistent with studies that claim parity with LBW 2.6 times more at risk of low birth weight (95% CI 1.62 to 4.10)[9]. There is a big difference risk of LBW in this study due to its location on a research study conducted in the second referral hospital whereas in this study in the first referral hospital. The results also support the research that states that primiparous 1.74 times the risk of having low birth weight (95% CI 1.19 to 2.48)10. Differences RR and PR with this research because sampling in research Veloso et al were taken from 1996 to 2010, while in this study sample within a period of one year 2016.

The results are consistent with the theory that women with parity 1 and ≥4 at risk of having low birth weight, in primiparous associated with the immature organ function in maintaining pregnancy and accept the presence of a fetus[11]. Women who have given birth four times or more children because parity is too high will lead to disruption of the uterus, especially in the case of blood vessel function. Repeated pregnancy will cause damage to the blood vessel wall of the uterus, it will affect the nutrients to the fetus in subsequent pregnancies[12].

4. Hb in the third trimester relationship with LBW

The results showed that Hb in the third trimester have a meaningful relationship with a p-value of 0.008 and 2.7 times Hb third trimester increased the risk of LBW (95% CI 1.322 to 5.358). These results are consistent with studies stating that women with Hb third trimester <11gr/dL had a 2.9 times greater risk for experiencing LBW (95% CI 1.09 to 8.2)[13]. The big difference is a risk because of the research conducted within the scope of the first-level health facilities, while in this study within the scope of the referral primary health facilities.

This research is consistent with the theory that states in the last trimester of pregnancy increased need for iron increases with respect to their loss of the normal basal gastrointestinal tract, skin, urinary tract, the needs of the placenta, umbilical cord and fetal growth. The last trimester of pregnancy is also a period when most fetal growth takes place and also to accumulation of fatty deposits, iron and calcium for postnatal needs. If there is not enough iron to meet the needs of the mother, fetus and placenta, maternal iron stores will be used and the mass of red blood cells drop resulting mother IUGR because it can cause decreased oxygen to the fetus[14].

5. Characteristics of mothers who are not associated with LBW include:

   a. Birth spacing relationship with LBW.
      Birth spacing is a subject to be analyzed in this study are mothers who gave birth to a second child or more. In this study proved to have a significant relationship between birth spacing with LBW p-value of 0.328. However clinically mother who giving birth with spacing <2 years had a 2.1 times greater risk for experiencing LBW (95% CI 0.608 to 7.141).
      The results of this study support the research that states that there is no significant relationship between birth spacing with LBW with a p-value of 0.55. Appropriate research, clinical research also showed that women with birth spacing <2 years 2.9 times greater LBW (95% CI 1.055 to 8.258).15 The big difference for LBW risk because the scope of the research conducted in the first-level health facilities, while in this study conducted at referral health facilities I.
      These results are not in accordance with the studies that the spacing of <2 years 5.11 times the risk of having low birth weight with a p-value = 0.03 (95% CI 1.6 to 16.18) 13. Meaningless spacing births with LBW This happens because the number of samples that have maternal birth spacing in this study only 86 (55.48%) of the total sample.

   b. Relationship of maternal disease with LBW.
      The results of this study showed no significant association between maternal diseases with LBW with a p-value of 0.801. However, clinical mothers with hypertension or heart disease or kidney 1,2 times more likely to have LBW (95% CI 0.421 to 3.173).
      The results of this study are not in accordance with the studies that the mothers with hypertension 5 times the risk of having low birth weight (95% CI 4325-5853) 6. And studies that women with chronic diseases have a significant relationship with the occurrence of low birth weight p-value <0.005, mothers with chronic disease 5.3 times the risk of having low birth weight (95% CI 1.12-25.45) 7. Meaningless spacing births with LBW This occurs because the sample size of mothers with the disease found only 11% of the total sample.
      In theory hypertension will cause vasoconstriction thus decreasing blood flow to the uterus and placenta abruption occurred. This will cause a decrease in the amount of oxygen to the fetal circulation within the placenta. As a result, the placenta becomes ischemic and fetal growth restriction occurs[16]. Heart disease will give bad influence to the pregnancy and the fetus in the womb. This disease will cause a decrease in fetal oxygenation that will cause fetal growth disorders that can ultimately lead to low birth weight[16]. Impaired fetal growth is also associated with loss of proteins associated with the process. Kidney disease is relatively rare in pregnant women, but when kidney disease during pregnancy would be associated with the occurrence of birth complications[4].

   c. Relationships mothers with LBW education.
      The results of this study showed no significant association between maternal education with LBW with a p-value of 0.802. However, clinical mothers with maternal education ≤JHS have a 1.1 times greater risk for experiencing LBW (95% CI 0.542 to 2.207).
      The results are consistent with research that states that low maternal education do not have a meaningful relationship with LBW p-value 0487 by RR of 0.6 (95% CI 0.1-2.6)[17]. In line with research that states that mothers with primary education last (<9 years) had no significant relationship with LBW p-value 0523, but clinically mother who gave birth to primary education is 6 times more at risk of having low birth weight (95% CI 0.38- 6.68)[18]. The big difference because of the risk it represents a meta-analysis study.

In theory, the formal education that a person will give insight to the person against environmental phenomena that occurs, the higher the level of education will be more extensive insight into thinking that the decisions to be taken more realistic and rational. In the context of a person's health if good enough education, early symptoms of the disease will be identified and encourage that person to seek preventive efforts[19]. Meaningless relationship between maternal education with LBW can be caused by factors causing LBW complementary to each other, so that even if the mother's education ≤JHS but give birth to babies with normal weight, and this is because of the tendency of mothers with ≤JHS education is supported by a good nutritional status, age is still in the reproductive age (20-35 years) who did not have anemia.

CONCLUSION

Based on the results of research and discussion, it can be concluded that there is a relationship between maternal age, maternal parity, and Hb in the third trimester with LBW. Hb levels in the third trimester are the factors that most influence the occurrence of LBW.

RECOMMENDATION

Recommendation for Midwives Implementing and Related Health Workers in Yogyakarta City Public Hospital for prenatal screening on pregnant mothers which include maternal age, maternal chants, and hemoglobin level as well as educate the importance of Fe consumption for pregnant women so that mothers can prepare for the pregnancy and reduce the incidence of low birth weight. For mothers who are planning a pregnancy and/or pregnant women, the results of this study add insight and knowledge and it is recommended for pregnant in the reproductive age (20-35 years), parity 2-3, and maintain levels of maternal Hb ≥11 g/dL in the third trimester, for reducing the risk of LBW. For the researchers, if possible to do further research with cohort design s to ensure that exposure to precede the effect.

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O-04

RELATIONSHIP OF OBESITY EARLY PREGNANCY WITH PREECLAMPSIA IN RSUD SLEMAN 2016

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ABSTRACT

Preeclampsia is one of the causes of maternal and fetal mortality and morbidity. Obesity is included in the top five causes of global death and is thought to be a risk factor for preeclampsia and for the last 2 years, Sleman has been the highest contributor to maternal mortality due to Preeclampsia. This study aims to determine the relationship of obesity early pregnancy with preeclampsia in RSUD Sleman 2016. The methods of this research is analytic observational with case control design, using consecutive random sampling technique that the subjects used in the case 89 mothers with preeclampsia who performed ANC in RSUD Sleman and control 89 maternity women not preeclampsia who performed ANC in RSUD Sleman. This data is obtained from maternity registers, univariate and bivariate analyzed using chi-square. In the results of the study, there is a significant association of obesity early pregnancy with preeclampsia, p-value 0.002 <0.05 and OR 2.8 (95% CI 1.440 - 5.470). This study can be concluded that there is a relationship of obesity early pregnancy with preeclampsia.

Keywords: *Obesity Early Pregnancy, Preeclampsia*

INTRODUCTION

Maternal Mortality Rate (MMR) is one of the indicators in describing the welfare of people in a country. The mortality rate maternal in Indonesia recorded a significant increase of about 359/ 100,000 live births[1]. MDG's targets in 2015 for the national maternal mortality rate is 102/ 100,000 live births. Maternal mortality in Indonesia is still dominated by the three main causes, namely, hemorrhage, hypertension (preeclampsia/eclampsia), and infection. But this time the proportion has changed, as bleeding and infection tended to decrease while hypertension (preeclampsia/eclampsia) the proportion is increasing. More than 25% of maternal deaths in Indonesia in 2013 caused by hypertension (preeclampsia/eclampsia)[2,3,18].

Preeclampsia increasing every year, has been influenced by various factors, including the age group, the effect of the period (a history of preeclampsia), changes in diagnostic criteria, and early identification of symptoms during pregnany [4]. There are many risk factors for preeclampsia are primigravidae, distansion uterus excess, hiperplasentosis (molar pregnancy, hidramnion, pregnancy multiple, large babies), a disease that accompany pregnancy (diabetes mellitus), maternal age >35 years, family history never pre-eclampsia or eclampsia, and Obesitas5.

Among many of these factors, the increase in obesity among women age of reproductiveis thought to be one of the strongest risk factors underlying increased the prevalence of preeclampsia. The data obtained from the Department of Health DIY states that in 2013 and 2014 Sleman become the highest contributor to deaths due to preeclampsia6. In 2013, the prevalence of obese women (>18 years) of 32.9%, up 18.1% from 2007 (13.9%) and 17.5% from 2010 (15.5%)7.

In addition, obesity is a serious concern because of the number of sufferers is increasing including the women in reproductive age and the number of obese people in

pregnant women also increased by approximately 18.5% to 38.3%[8]. The purpose of this study to determine the relationship of obesity early in pregnancy with preeclampsia.

METHOD

This study uses observational with case.control design. The population in this study were women giving birth in hospitals Sleman 2016. The sampling technique is consecutive random sampling. Sample cases in this study is the maternal preeclampsia totaling 89 subjects and a control sample that is on mothers who did not develop preeclampsia totaling 89 subjects. This study used univariate analysis that generates a frequency distribution and percentage of each variable and bivariate analyzes were conducted on two variables that were related the use of Chi-square analysis at 95% confidence interval (α <0.05).

RESULTS

Table 1 shows that the average age of the subjects who experienced preeclampsia is 31.4 years and who did not develop preeclampsia is 29.0 years. Based on these results indicate that the average age of the significant difference with p-value 0.000 <0.05. For parity characteristics, subjects who develop preeclampsia there were 70 (78.6%) had a second parity, the sum is greater than the subjects who had parity 3 16 subject (18%) and parity 4 3 subjects (3.4%). Where as in subjects who did not develop preeclampsia by 74 (83.1%) had parity 2, 15 subjects (16.9%) had parity 3 and 0 subjects (0%) had parity 4. The analysis showed that the difference was not significant with a p-value 0.208> 0.05. Based on Table 1 it can be concluded that both groups are homogeneous in parity, but are not homogeneous in age.

Table 1. Distribution and frequency homogeneity of subjects in Sleman District Hospital in 2016

Characteristic of Subject	Preeclampsia				*p*
	Yes		No		
		%		%	
Age (20-35 tahun)	31,4	-	29,0	-	0,000
Parity					
- 2	70	78,6	74	83,1	
- 3	16	18,0	15	16,9	0,208
- 4	3	3,4	0	0	

Table 2 shows that 89 subjects who develop preeclampsia, a total of 71 subjects (79.8%) are obese early pregnancy, and the rest were not obese early pregnancy, Meanwhile, the 89 subjects who did not develop preeclampsia, a total of 52 subjects (58.4%) are obese early pregnancy, and the rest were not obese early pregnancy. The results of chi-square test and p-value 9.547 0.002 <0.05, which means there is a relationship of obesity early in pregnancy with preeclampsia.

Table 2. Relationship of Obesity Early Pregnancy with Preeclampsia in Hospital Sleman 2016

Obesity Early Pregnancy	Preeclampsia				X^2	*p*	OR	CI 95%
	Yes		No					
	n	%	n	%				
- Obesity (IMT ≥25,0 kg/m^2)	71	79,8	52	58,4	9,547	0,002	2,8	1,440 - 5,470
- Not Obesity (IMT <25,0 kg/m2)	18	20,2	37	41,6				
Total	89	100	89	100				

DISCUSSION

The results of this study indicate that there is a relationship between obesity and early pregnancy by preeclampsia with a p-value of 0.002. The results of thetable analysis crosstable that 79.8% of women with early in pregnancy preeclampsia obesity.

Obesity early in pregnancy in this study is to calculate the body mass index (BMI) of mothers ≥25,0 said to be obese if BMI kg/m2.15,16 This is consistent with research Anneke Dwi (2015) which states that the obesity that BMI is calculated from the beginning of pregnancy are factors that significantly influence the incidence preeclampsia9.

The results of this study are also consistent with studies M. Wahba (2007) which states that the main cause of hypertension to preeclampsia in women with obesity due to the increase into Vascular and renal salt and water. The underlying mechanism including hiperleptinemia, increased acids free fatty (FFA), hyperinsulinemia, and insulin resistance, this will cause the stimulation of the sympathetic nerve, increased vascular tone, endothelial dysfunction, and retention of sodium renal10. Pregnant women with obesity showed a significant increase in levels of interleukin-6 and C-reactive protein in serum as well as signs offunction endothelial disorder. Pregnant women with obesity showed a significant increase in triglycerides, very low density lipoprotein cholesterol ensitas, insulin, and leptin as compared with pregnant women of normal weight.

Resistance and hypertriglyceridemia is a risk factor for preeclampsia and also an important factor in the development of endothelial dysfunction. Chronic hypertension, insulin resistance and hypertriglyceridemia that may be present or prior to conception in women with obesity[17]. Resistance and hypertriglyceridemia is a risk factor for preeclampsia and also an important factor in the development of endothelial dysfunction. Since endothelial dysfunction is hypothesized to play a central role in the pathogenesis of preeclampsia, it makes sense that the presence of dysfunction endothelial before pregnancy by insulin resistance and or hypertriglyceridemia may be associated with a high incidence of preeclampsia in pregnant women with obesity. Endothelial cell dysfunction caused by circumstances hyperactivasion leukocytes in circulation. The maternal, cytokines in endothelial function as tumor necrosis factor-α (TNF-α) and interleukin (IL) may play a role in the onset of oxidative stress associated with preeclampsia[19].

Another consequence of oxidative stress include production of macrophage foam cells full of lipids appears on atherosis. Microvascular coagulation activation manifesting as thrombocytopenia and increased capillary permeability, which is characterized by edema and proteinuria[11,12]. There is a 58.4% obese women with early pregnancy does not develop preeclampsia. It can be caused due to obesity early pregnancy not absolute cause of preeclampsia, according to the theory, which states that the factors risk are factors or circumstances affecting the development of a particular disease or health status. These risk factors may be a new level of expectations, estimates or the fact is already proven13.

Mothers who are not obese early pregnancy preeclampsia was 20.2%. It can be caused due to several factors not examined to allow the influential factors such as genetic or history family of preeclampsia. Risk factors for preeclampsia are primigravidae, excessive uterine distansion, hiperplasentosis (molar pregnancy, hidramnion, multiple pregnancy, big baby), diseases that accompany pregnancy (diabetes mellitus), maternal age >35 years, never a family history of preeclampsia, and Obesitas5.

The results of this study showed that obesity early in pregnancy associated with preeclampsia. In this study, the odds ratio (OR) is 2.8, which means women with early pregnancy obesity 2.8 times more likely to develop preeclampsia than women who are not obese. This means also supports research conducted Chintya (2014) which states that pregnant women who are obese are at increased riskwas 2.6 times of preeclampsia to occur compared with a pregnant woman who did not experience obesitas[14].

CONCLUSION

The proportion of obese women with early pregnancy preeclampsia 79.8%. The proportion of obese women with early pregnancy preeclampsia amounted to 58.4%. There was a significant association between obesity early in pregnancy with preeclampsia. Odd Ratio (OR) early pregnancy obesity on the incidence of preeclampsia was 2.8, which means women with early obesity pregnancy 2.8 times more likely to develop preeclampsia than women who are not obese.

SUGGESTIONS

Researchers then expected to further investigate other factors such as maternal age (>30 years), genetic factors or a family history of preeclampsia and its relationship with preeclampsia and midwives are expected to increase vigilance against mothers with obesity to the monitor increase in weight and midwives also expected to always give motivation to the mother in order to control weight gain during pregnancy.

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O-05

THE EFFECTIVENESS OF NIPPLE STIMULATION BY PROVIDING SUPPLEMENTARY FOOD TO SUCCESFULL BREASTFEEDING BACK (RELACTATION) TO THE BREASTFEEDING MOTHERS IN SOUTHERN TANGERANG 2016

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ABSTRACT

Relactation is an attempt to restart breastfeeding which was stopped after a few days, weeks and even months. Relactation is performed on women who changed his mind to breastfeed her baby with breast milk. The study to Knowing the effectiveness of nipple stimulation by providing supplementary food to successful breastfeeding back (relactation). Specific Objectives: show the frequency distribution and correlation maternal motivation, giving complementary food/formula milk, breastfeeding gap, family support and the support of health professionals towards successful breastfeeding back (relactation). Methods: Experimental design of this study is to provide supplementary food in the intervention group and the health education of breastfeeding positions in the control group. Samples were mothers of infants aged 0-4 months who want to breastfeed again. The intervention group was 15 mothers were three health centers and will be taken proportionately. The control group was taken in the same place with a ratio of 1: 1. Older interventions for 15 days. The study shows that there is a correlation maternal motivation, Giving Complementary, breastfeeding gap and family support for successful to relactation. Multivariate analysis showed that there was the influence of nipple stimulation by food, supplementary to the success rate is controlled by the variable relactationafter controlled by food or drink formula milk (p = 0.008). The analysis also obtained value OR = 51.448, meaning that the group of mothers who do nipple stimulation with supplementary food 51.5 times higher rate of success in relactation compared with groups of women who were given health education about breastfeeding positions.

Keywords ***:*** *Nipple Stimulation, Supplementary Food and Breastfeeding Back (Relactation)*

INTRODUCTION

Breastfeeding for the mother is the one activity that can give satisfaction physically and mentally mother, but when she is nursing her child a lot of obstacles that will be encountered such a lack of knowledge of mothers and fathers regarding lactation, pressure from family and others that result in reduced milk production, thus failing breastfeeding mothers. If the mother decides to return to breastfeed her child after stopping breastfeeding, regardless of how long the lactation stops, this is called relactation or re-feeding. The emergence of the desire to relactation mothers often also based because formula milk is not suitable, the baby sick even to undergo treatment in hospital or the desire of seeing a friend who managed to breastfeed exclusively.[1] Even in situations disaster struck, relactation is one thing to have the support of all agencies involved in disaster management.[2]

According to dr. UtamiRoesli SPA, of the 100 mothers who have difficulty breastfeeding mothers only two really trouble breastfeeding two mothers really difficult

because of anatomical abnormalities of the breast and one person whose babies have abnormalities anatomy of the mouth. The remaining 97 mothers actually just less information and less confident. This is because breastfeeding is learning.3

Relactation is restart breastfeeding was stopped after a few days, weeks and even months. Relactation can be done in women who had never breastfed their babies and can also be done on the mother changed her mind to breastfeed her baby with breast milk. Relactation success is influenced by several factors and the mother and baby. The factors that influence the success of lactation of the baby are: the desire to breastfeed the baby, the baby's age, duration of infant feeding experience during stopping of lactation and already get food companion. The factors that affect the success of relactation are: motivation mother, duration of stop lactation, the mother's breast conditions, the ability to interact with the baby's mother, family support and health workers and experience of previous lactation.[1]

The time required to start producing breast milk varies greatly among women, milk production generally appear after 1-6 weeks, average in 4 weeks. Some women have never been able to produce milk in sufficient amount to produce milk in sufficient amounts to maintain lactation or maintain exclusive breastfeeding, but some women were able in a few days. Breast milk in women who do relactation or induced lactation is not different compared to women who breast-feed since the birth of her baby.[1]

Research in Korea showed from 84 people who do relactation 63 people have to breastfeed again. This study show the success relactation influenced by motivational factors maternal, infant stimulation, family support and health workers. Giving supplementer can help confusednipples and stimulate the release of prolactin.[4]

METHOD

This is an experimental to provide supplementary food in the intervention and health education on breast feeding positions in the control group. Supplementary Food Nipple stimulation using NGT (Naso Gatric Tube) 5 FR/CH Length 40 cm connected to the bottle is hung. The independent variable is the stimulation of the nipples by Food Suplementer. The dependent variable relactation. Confounding; mother’s motivation, Provision of complementary feeding, breast-feeding gap, Family Support, health professional support.Sample are mothers of infants aged 0-4 months who want to breastfeed again. This research was conducted in September to October 2016 with a study on the Primary Health Center Kampung Sawah, Pondok Benda and Jombang. Samples this study for the intervention group was 15 and 15 the control group at 3 health center and will be taken proportionately, with a ratio of 1: 1. The data were are analyzed using univariate.bivariate using chi square test and multivariate using logistic regression.

RESULTS

Table 1. Nipple Stimulation With Food Supplementer and Relactation

Variable	N	Nipple Stimulation				Value P
		Food Supplementary		Breastfeeding Positions		
		N	%	N	%	
Relactation						
Successfully	10	9	60.0	1	6.7	0,007
Not managed	20	6	40.0	14	93.3	
Mother's Motivation						
Good	15	9	60.0	6	40.0	0.465
Less	15	6	40.0	9	60.0	
Complementary Feeding						
Formula	16	9	60.0	7	46.7	0.714
Food / drinks Escort	14	6	40.0	8	53.3	
Breastfeeding Gap						
<7 weeks	15	7	46.7	8	53.3	1.000
> 7 weeks	15	8	53.3	7	46.7	
Family Support						
Good	15	9	60.0	6	40.0	0.465
Less	15	6	40.0	9	60.0	
Health Profesional Support						
Good	10	6	40.0	4	26.7	0.699
Less	20	9	60.0	11	73.3	

Form table 1 we can see the majority (60%) of mothers who do nipple stimulation with food supplementary successful in relactation and only 6.7% of women were given health education nursing positions also succeeded in relactation. Statistical test results obtained value of p = 0.007, meaning that there is a difference between the proportion of successes relactation mothers do nipple stimulation with food supplementary and mother were given health education about breastfeeding position.

The analysis are the result of homogeneity test analysis the success relactation obtained is the intervention given that nipple stimulation with supplementary food, and there is no influence of other variables. In this variable studied showed no difference in the proportion among mothers who do nipple stimulation with food supplementary or group whose mothers had received health education about breastfeeding position.

Table 2 Bivariate Analysis Nipple Stimulation with Supplementary Food and Relactation

Variable	N	Relactation				Value P	OR (95% CI)
		Successful		Unsuccessful			
		N%		n%			
Nipple stimulation							
Food Supplementary	15	9	60.0	6	40.0	0.007	21.00
Breastfeeding Positions	15	1	6.7	14	93.3		(2.2 - 204.6)
Mothers'sMotivation							
Good	15	8	53.3	7	46, 7	0.053	7.43
Less	15	2	13.3	13	86.7		(1.2 - 45.0)
Complementary Fedding							
Formula Milk	16	9	56.3	7	43.8	0.007	16.71
Food / Beverage	14	1	7.1	13	92.9		(1.7 -160.3)
Breastfeeding Gap							
<7 weeks	15	8	53.3	7	46.7	0.053	7.43
> 7 weeks	15	2	13.3	13	86.7		(1.2 - 45.0)
Family Support							
Good	15	8	53.3	7	46.7	0.053	7.43
Less	15	2	13.3	13	86.7		(1, 2 - 45.0)
Health ProfesionalSupport							
Good	10	5	50.0	5	50.0	0.231	3.00
Less	20	5	25.0	15	75.0		(0.6 - 14.9)

Form table 2, we can see the bivariate analysis showed that all the variables studied had a p-value less than 0.25, so that all of the variables can be further analyzed using multiple logistic regression.

Table 3 Bivariate Analysis Nipple Stimulation with Supplementary Food and Relactation

Variable	N	Relactation				Value P	OR (95% CI)
		Successful		Unsuccessful			
			N%		n%		
Nipple stimulation							
Food Supplementary	15	9	60.0	6	40.0	0.007	21.00
Breastfeeding **Positions**	15	1	6.7	14	93.3		(2.2 to 204.6)
Mothers Motivation							
Good	15	8	53.3	7	46, 7	0.053	7.43
Less	15	2	13.3	13	86.7		(1.2 to 45.0)
Complementary Feeding							
Formula	16	9	56.3	7	43.8	0.007	16.71
Food / Beverage	14	1	7.1	13	92.9		(1.7 to 160.3)
Breastfeeding Gap							
<7 weeks	15	8	53.3	7	46.7	0.053	7.43
> 7 weeks	15	2	13.3	13	86.7		(1.2 to 45.0)
Family Support							
Good	15	8	53.3	7	46.7	0.053	7.43
Less	15	2	13.3	13	86.7		(1, 2 to 45.0)
Health Profesional Support							
Good	10	5	50.0	5	50.0	0.231	3.00
Less	20	5	25.0	15	75.0		(0.6 to 14.9)

Table 4 Final Model Multivariat Analysis

Variabel	B	SE	Wald	P value	OR	95% C.I. OR
Nipple Stimulation						
Food Suplementary	3,941	1,484	7,048	0,008	51,448	2,8 - 943,6
Breasfeeding positions					1	
Complementary Feeding						
Formula Milk	3,759	1,494	6,332	0,012	42,916	2,3 - 802,2
Food/Bavarage					1	
Constanta	-5,873	2,348	6,255	0,012	0,003	

The final results of multivariate analysis showed that there is influence nipple stimulation with supplementary food, the success rate is controlled by a variable relactation after food or drink of ASI (p = 0.008). The analysis also obtained value OR = 51.448, meaning that the group of mothers who do nipple stimulation with supplementary food 51.5 times higher rate of success in relactation compared with groups of women who were given health education about breastfeeding position.

DISCUSSION

1. Food Supplementer

From the Chi-Square Tests can be seen that score the Sig. (p-value) 0.007> 0.05. This means that there is a relationship / influence of Stimulation Putting the food supplementer with relactactation. Furthermore, from the Risk Estimate table above can be seen the value Odds Ratio (OR) of 21:00. This means that the respondents were given food supplementer have a 21 times higher propensity to succeed in relactation compared to respondents who were given health education.

Breast stimulation is important, if the baby suckle. Breastfeeding releases prolactin, which stimulates the growth of alveoli in the breast and milk production. Supplementary food needed for infants who do not want to suckle at the breast that is not producing milk. Breastfeeding aids consist of a small hose which one end of input into the cup containing milk and the other end of the hose in the paste in the breast, then follow the nipple and into the mouth of the baby. The baby will suckle and stimulates the breast, and at the same time brought additional milk through a tube, and then the baby eating and satiety.5

The provision of lactation breastfeeding supplementation as *lact-Aid Nursing supplementer*is in need for mothers who want to breastfeed again. 57% of mothers were given this supplementation will be successful within 4 weeks of intervension in relactation and only 24% were not successfully. Breastfeeding aids such as *"lact-Aid"* that is used in the United States can help overcome Putting confused and can stimulate the production of prolactin. When breast milk production in mothers breastfeeding decreases the tools will provide a quick inventory of the breast.[6]

2. Motivation Mother's

From the Chi-Square Tests can be seen that the Sig. (p-value) amounted to 0.053> 0.05. This means that there is a relationship / influence between motivation to successful breastfeeding mothers back. Furthermore, from the Risk Estimate table above can be seen the value Odds Ratio (OR) of 7:43. This means that the respondents were given good motivation has a higher tendency to 7:43 times succeeded in relactation compared with respondents who have poor motivation.

Mothers have a strong motivation for knowing lactation is critical in supporting the health of infants. In Papua, the mother is motivated to do relactation when knowing the dangers of the use of formula.[1]

3. Complementary Feeding

From the Chi-Square Tests can be seen that the Sig. (p-value) amounted to 0.007> 0.05. This means that there is a relationship / influence between a facilitator foods breast milk / formula to successful breastfeeding back. Furthermore, from the Risk Estimate table above can be seen the value Odds Ratio (OR) of 16.71. This means that the respondents were given infant formula has had 16.71 times higher propensity to succeed in relactation compared with respondents given complementary feeding.

Relactation and induced lactation will be difficult in infants who had received supplementary food. It is advisable to not introduce complementary foods before 6 months old baby, but when the baby is aged 4-5 months are not likely to gain weight according to age and gender of the baby.[1] The formula feeding with bottle at the hospital will increase post-partum depression.[7]

4. Breastfeeding Gap

From the Chi-Square Tests can be seen that the Sig. (p-value) amounted to 0.007> 0.05. This means that there is a relationship / influence between the length stop feeding with breastfeeding success back. Furthermore, from the Risk Estimate table above can be seen the value Odds Ratio (OR) of 7.43. This means that respondents who stopped breastfeeding have had a 7.43 times higher propensity to succeed in relactation compared with respondents given complementary feeding.

Gap is the last stop breastfeeding the baby sucking the breast. The shorter the time to stop breastfeeding willrelactation faster, while the stop long time takes longer to successfully breastfeed. Although .relaktasi can be done at any age.[5]

Generally, the shorter the time of breastfeeding gap of lactation, the easier it is mother to do relactation, but Agarwal and Jain reported success despite relactation within 2 weeks of lactation has been stalled for 14 weeks.[1]

5. Families Support

The Chi-Square Tests can be seen that the Sig. (p-value) of 0.231> 0.053. This means that there is a relationship / influence between family support with breastfeeding success back.

Counseling on family is very important to support maternal environment. Failure in breastfeeding cause the mother to be sensitive.Family support increases confidence and reduce anxiety that often occurs in subjects during practice relactation progress. Family fully supports by giving advice, attention, security protection at a much-needed mother's mother.[8]

6. Health Profesional Support

From the Chi-Square Tests can be seen that the Sig. (p-value) of 0.231> 0.05. This means that there is no relationship / influence between the role of the officer with the success of breastfeeding back.

Breast feeding counselor requires talking with the woman several times before relactation at the start, women need continued support through the process. Health workers provide support knowledge and is always available when a mother in need. 2 The health workers should advise the mother that relactation is a strategy that could be done to regain the benefits of breast milk for her baby. That required a mother who wanted to breastfeed not only professional health workers and other support action, but also the knowledge and support of the importance of breastfeeding until the age of 6 months.[9]

Counseling communication skills owned by the counselor will affect the quality of the relationship between counselor and client and will also impact on the achievement of counseling goals. The counselor should be able to establish rapport to gain trust from the client and minimize the gap that may occur between counselor and client [10]

CONCLUSION

The method to improve the success relactation, and in this study we concluded that nipple stimulation by providing supplementary food can improve breastfeeding success back *(relactation)* in breastfeeding mother.

RECOMMENDATION

1. Primary Health Center

   Primary Health Center front line health services should be socialized administration nipple stimulation with food supplementary.

2. Health Worker

   Nipple stimulation with supplementary food is very effective in women who want to breastfeed, it should be improving the knowledge and skills for personnel in order to help simulate the nipple with supplementary food.

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O-06

FACTORS RELATED TO BREAST CANCER AMONG WOMEN IN YOGYAKARTA CITY PUBLIC HOSPITAL, INDONESIA

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ABSTRACT

Breast cancer is a dangerous tumor which attacks the breast tissue and also the second largest cause cancer related deaths among women. In 2013, Yogyakarta became the province which had the highest prevalence about 2,4%. The data from the Health Minister of Yogyakarta showed that many cases of breast cancer happened to women and keep increasing from year to year in Yogyakarta Province. The purpose of this study was to find out the factors related to breast cancer among women in Yogyakarta City Public Hospital, Indonesia. This study was an analytical observational research with cross sectional design. The samples were collected by using purposive sampling with 94 respondents. The data were collected by using primer and secondary data with data collection technique. The data analysis was carried out by using Chi-Square Test. The result of the study showed that the factors which were related to breast cancer cases were age (p-value = 0,005), menarche age (p-value = 0,019), history of breastfeeding (p-value = 0,008), history of using hormonal birth control (p-value = 0,019) and genetical factor (p-value = 0,014). The conclusion of the study was that the factors which were related to breast cancer cases were age, menarche age, history of breastfeeding, history of using hormonal birth control and genetical factor.

Keywords : *Breast Cancer, Age*

INTRODUCTION

Cancer is one of the major causes of morbidity and mortality worldwide. According to the World Health Organization (WHO), in 2012 estimates there were 14 million new cancer cases and 8.2 million (58.57%) deaths from cancer.[1] According to data from the Global Cancer Burden in the International Agency for Research on Cancer (IARC) in 2012 breast cancer was a disease with the highest percentage of new cases of cancer (after controlled by age), amounting to 43.3%, and the percentage of deaths (after controlled by age) from breast cancer by 12.9%. Breast cancer was one of the cancers with the highest prevalence in Indonesia in 2013, amounting to 0.5%. Yogyakarta province was a province that has the highest prevalence of breast cancer, which amounted to 2.4%.[2]

Breast cancer is currently the second leading cause of death from cancer in women, after cervical cancer and is the most common cancer among them. Breast cancer could spread significantly and often do not cause symptoms.[3] Breast cancer was a malignant tumor that attacks the breast tissue. Breast cancer prognosis depended on the growth rate. From the observation, most breast cancer patients already could not be helped because of late unrecognized and untreated.[4]

According to Yogyakarta health office, in January 2017, the data obtained on Breast Cancer Cases between 2013 and 2016 in the province, there was yearly increase in cases. Based on gender, 99% more common in women. Based on the age group, many breast cancer cases occur in the age group 45-64 years.5 According to the City Health Office Yogyakarta in January 2017, the data obtained Communicable Diseases

Surveillance Integrated Health Center Year 2013-2016 in the city of Yogyakarta saw an annual increase in cases of breast cancer.[6]

Risk factors for breast cancer include age, reproductive factors (menarche age, early first pregnancy at an advanced age, low parity, lactation), endocrine factors (oral contraceptives, hormone replacement therapy, age > 75 years, with the density of the breast 75%, atypical hyperplasia), diet (consumption of alcohol, obesity) and genetic / family history (family members with breast cancer, family history of ovarian cancer).[3]

The results showed factors associated with the incidence of breast cancer are obesity, age of first birth, history of breastfeeding, and menarche age.[7] The risk factors that influence breast cancer incidence are menarche age, age of first birth, parity, history of breastfeeding, history of using hormonal birth control and family history of disease.[8] The highest proportion of breast cancer patients are aged> 40 years, female, married and stage III.[9] Of the 92 respondents who have breast cancer have breast cancer 92.4%> 30 years, 90.2% of respondents the number of children who have breast cancer 1-3 children, 67% menarche age <10 years and 44,% suffer from breast cancer III.[10]

Based on the results of preliminary studies conducted in Yogyakarta City Public Hospital in February 2017, the data obtained Number of Cases Inpatient and Outpatient Case Breast Cancer Year 2013-2016 for the years of 2013 there were 223 cases, in 2014 there were 287 cases, in 2015 there were 190 cases and in 2016 there were 248 cases. Based on these data, the study was conducted to factors related to breast cancer among women in Yogyakarta City Public Hospital, Indonesia.

METHOD

This study was conducted in Yogyakarta City Public Hospital in May 2017. This research is an observational analytic research using a cross-sectional design. The study population was all married women patients diagnosed with breast cancer at the Yogyakarta City Public Hospital in 2016 totaling 248. The sample was a married woman with breast cancer who meet the criteria in Yogyakarta City Public Hospital in 2016 who meet the inclusion and exclusion criteria. The sample size in this study were 94 respondents. Sampling of the population that is done by purposive sampling. The independent variables in this study were age, age of menarche, parity, history of breastfeeding, history of using hormonal birth control and family history. The dependent variable in this study were breast cancer. The data were collected by using primer and secondary data with data collection technique. The data analysis was carried out by using Chi-Square Test.

RESULTS

This study used secondary and primary data to the 94 respondents, using technique purposive sampling. Results of research conducted as follows:

1. Univariate Analysis

Table 1. Characteristics of Respondents

No.	Factors	Frequency	%
1	**Breast Cancer**		
	Stage IV	5	5.3
	Stage III	50	53.2
	Stage II	27	28.7
	Stage I	12	12.8
	Total	94	100
2	**Age**		
	Risk	76	80.9
	No Risk	18	19.1
	Total	94	100
3	**Menarche Age**		
	Risk	49	52.1
	No Risk	45	47.9
	Total	94	100
4	**Parity**		
	Risk	13	13.8
	No Risk	81	86.2
	Total	94	100
5	**History of Breastfeeding**		
	Risk	52	55.3
	No Risk	42	44.7
	Total	94	100
6	**History of Using Hormonal Birth Control**		
	Risk	60	63.8
	No Risk	34	36.2
	Total	94	100
7	**Family History**		
	Risk	28	29.8
	No Risk	66	70.2
	Total	94	100

Source: Secondary Data Yogyakarta City Public Hospital in 2016 and Primary

Based on table 1 data showed that the majority of respondents breast cancer patients with stage III of 50 respondents (53.2%), age risk (≥ 40 years) by 76 respondents (80 , 9%), menarche age risk (<12 years) with 49 respondents (52.1%), Parity no risk (P≥1) of 81 respondents (86.2%), history of breastfeeding risk (P0, P≥1 never breastfeeding) of 52 respondents (55.3%), history of using hormonal birth control risk (using hormonal birth control ≥ 5 years in a row) 60 respondents (63.8%) and family history no risk (no history of cancer) were 66 respondents (70.2%).

2. Bivariate analysis

Table 2. Bivariate Analysis

No.	Factors	Breast Cancer								Total		*p-value*
		IV		III		II		I				
		f	%	f	%	f	%	f	%	f	%	
1	**Age**											
	Risk	5	6,6	42	40,2	24	31,6	5	6,6	76	100	
	No-Risk	0	0	8	44,4	3	16,7	7	38,9	18	100	0,005
	Total	5	5,3	50	53,2	27	28,7	12	12,8	94	100	
2	**Menarche Age**											
	Risk	1	2	30	61,3	15	30,6	3	6,1	49	100	
	No-Risk	4	8,9	20	44,4	12	26,7	9	20	45	100	0,019
	Total	5	5,3	50	53,2	27	28,7	12	12,8	94	100	
3	**Parity**											
	Risk	1	7,7	4	30,8	6	46,2	2	15,4	13	100	
	No Risk	4	4,9	46	56,8	21	25,9	10	12,3	81	100	0,354
	Total	5	5,3	50	53,2	27	28,7	12	12,8	94	100	
4	**History of Breastfeeding**											
	Risk	5	9,6	24	46,2	13	25	10	19,2	52	100	
	No Risk	0	0	26	61,9	14	33,3	2	4,8	42	100	0,008
	Total	5	5,3	50	53,2	27	28,7	12	12,8	94	100	
5	**History of Using Hormonal Birth Control**											
	Risk	2	3,3	39	65	14	23,3	5	8,3	60	100	
	No-Risk	3	8,8	11	32,4	13	38,2	7	20,6	34	100	0,019
	Total	5	5,3	50	53,2	27	28,7	12	12,8	94	100	
6	**Family History**											
	Risk	4	14,3	18	64,3	4	14,3	2	7,1	28	100	
	Tid ak Risk	1	1,5	32	48,5	23	34,8	10	15,2	66	100	0,014
	Total	5	5,3	50	53,2	27	28,7	12	12,8	94	100	

Based on table 2 data showed that the results of Chi-square test breast cancer by the age variable obtained p-value = 0.005 (p <0.05), we can infer that there is a relationship between age and breast cancer. In the variables of menarche age obtained p-value = 0.019 (p <0.05), meaning that there is a relationship between the menarche age with breast cancer. Meanwhile, in the variables of parity obtained p-value = 0.354 (p> 0.05), it means that there is no relationship between parity with breast cancer. The variables of history of breastfeeding obtained p-value = 0.008 (p <0.05), proves that there is a relationship between breastfeeding and breast cancer history. While in the variables of history of using hormonal birth control obtained p-value = 0.019 (p <0.05), we can conclude that there is a relationship between a history of using hormonal birth control and breast cancer. In the variables of family history variables obtained p-value = 0.014 (p <0.05), meaning that there is a relationship between a family history of breast cancer.

DISCUSSION

1. Breast Cancer

The results showed that the highest proportion of breast cancer in any related factors are at stage III. This is consistent with previous studies that show that the highest proportion of breast cancer patients are stage III (49.0%).[9] Other previous study showed that patients with stage III occupy a percentage of 68.8% of the total

cases.[11] Other previous studies showed that most who have stage III breast cancer by as many as 41 respondents (44.0%).[10]

The majority of breast cancer patients come to the hospital for a check-up in stage III.[10] This is because in the early stages of breast cancer, usually the patient does not feel pain or no signs at all. In the event of disruption of the breast, a woman initially paid little attention until the situation becomes serious.[9] The highest proportion of stage III shows that a lack of information and awareness of the respondents for breast cancer early detection and treatment of the first symptoms is still very low.[12]

2. Age

The results showed that the majority of respondents with age risk of breast cancer patients (≥ 40 years) by 76 respondents (80.9%). There is a relationship between age and the incidence of breast cancer (p-value = 0.005). This is consistent with results of previous studies that showed an increased risk of breast cancer at the age of 35-44 years (OR = 3.370; 95% CI = 1.390 to 8.170) and 45-54 years (OR = 3.690; 95% CI = 1.558 to 8.739).[13] There are differences in the proportion of aged patients with breast cancer based on clinical stage (p = 0.015).[9]

Breast cancer incidence increases rapidly at reproductive age and thereafter increased at a lower rate.[3] Increasingly aged woman, the greater the likelihood of developing breast cancer. Age women are more often affected by breast cancer are over the age of 40 years. However, it does not mean women under 40 years of age may not be affected by breast cancer, only it happened more frequently.[14] The average age of 40 (± 5) years, the ovaries of women is less receptive to the effects of FSH and LH. The effect of estrogen secretion decreases and fluctuates, so that became more frequent anovulatory menstrual disorders that cause some women in the years before menopause.[15]

3. Menarche Age

The results showed that the majority of respondents with menarche age risk of breast cancer patients (<12 years) with 49 respondents (52.1%). There is a relationship between the menarche age with the incidence of breast cancer (p-value = 0.019). This is consistent with results of previous studies that showed that the menarche age <12 years (p = 0.031; OR = 3.492) had a significant relationship to the incidence of breast cancer in women.[16] Age menarche early(<12 years) (OR = 2.638, 95% CI = 0.735 to 9.466) heightens the risk of breast cancer incidence.[8] Menarche age <12 years associated with the incidence of breast cancer (p = 0.001; OR = 4.41; 95% CI: 1.33 to 14.63).[17]

Menarche early or first menstruation at a relatively young age (<12 years) was associated with an increased risk of breast cancer.age menarche Earlylead to exposure to the hormone estrogen becomes faster so that it can trigger the growth of cells in certain body parts are not normal.[3] menstrual early age associated with the duration of exposure to the hormones estrogen and progesterone in women that affects the tissues including breast tissue proliferation.[14]

4. Parity

The results showed that the majority of respondents with parity no risk of breast cancer patients (P≥1) of 81 respondents (86.2%). There was no relationship between parity with the incidence of breast cancer (p-value = 0.354). This is not in accordance with the results of previous studies showing that parity nulliparous (OR = 4.353, 95% CI = 0.463 to 40.898) heightens the risk of breast cancer incidence.[8]

Nulliparitas can increase the risk of developing breast cancer because of longer exposure to the hormone estrogen. High levels of the hormone estrogen during reproductive years of a woman, especially if it is not interrupted by hormonal

changes in pregnancy, increasing the chances of growth of cells that are genetically damaged and cause cancer.[15] nulliparous woman had 4.0 times greater risk than multiparous women for breast cancer (RR = 4.0).[14] The difference in the results is due to differing criteria taken responder affected and not affected by breast cancer; and for respondents with fewer parity nulliparous (13.8%) of the multiparous (86.2%), so that the incidence of breast cancer in this study may be caused by factors other than parity.

5. History of Breastfeeding

The results showed that the majority of respondents with history of breastfeeding risk of breast cancer patients (P0, P≥1 never breastfeeding) of 52 respondents (55.3%). There is a relationship between History of breastfeeding with the incidence of breast cancer (p-value = 0.008). This is consistent with results of previous studies that showed that a history of breastfeeding <4 months (p = 0.00; OR = 5.49; CI = 2.05 to 14.74) can increase the risk of breast cancer.[7] History is not breastfeeding (OR = 2.11; 95% CI = 0.364 to 12.320) heightens the risk of breast cancer incidence.[8] Mothers who do not breastfeed associated with the incidence of breast cancer (the p = 0.002; OR = 4.24; 95% CI: 1.22 to 14.76).[17]

Women who are breastfeeding lowers cancer compared to women who did not breastfeed. The longer the period of breastfeeding, the greater the protective effect against cancer exists. This is due to a decrease in estrogen levels and secretion of carcinogenic substances during breastfeeding.[3] Time breastfeed longer have a more positive effect in lowering the risk of breast cancer in which there is a decrease in estrogen and materials expenditure trigger cancer during breast feeding.[8] Breastfeeding does not protect women from breast cancer but affects levels of estrogen in a woman's body.[7]

6. History of Using Hormonal Birth Control

The results showed that the majority of respondents with history of using hormonal birth control risk of breast cancer patients (using hormonal birth control ≥ 5 years in a row) 60 respondents (63.8%). There is a relationship between a history of using hormonal birth control with the incidence of breast cancer (p-value = 0.019). This is consistent with results of previous studies showing that the use of hormonal contraception ≥ 5 years (p = 0.028; OR = 3.266) had a significant relationship to the incidence of breast cancer in women.[16] The use of hormonal contraceptives is a risk factor for breast cancer (OR = 1.146).[18]

Oral contraceptives role in increasing the risk of breast cancer in premenopausal women.[3] Women who use oral contraceptives at high risk for breast cancer. The content of estrogen and progesterone in oral contraceptives would give the effect of excessive proliferation in the mammary gland.[14] The use of oral contraceptives in the long term (> 5 years) cause the risk of developing breast cancer is on the rise.[4] The use of hormonal contraceptives may cause increased exposure to estrogen in the body that can trigger abnormal cell growth in certain parts, such as the breast.[16]

7. Family History

The results showed that the majority of respondents with family history no risk of breast cancer patients (no history of cancer) were 66 respondents (70.2%). There is a relationship between a family history of breast cancer (p-value = 0.014). This is consistent with results of previous studies indicating that family history (OR = 6.938, 95% CI = 0.793 to 60.714) heightens the risk of breast cancer incidence.[8] A family history of breast cancer increases the risk of breast cancer with OR = 8 (95% CI: 1.839 to 34.794).[19]

History of cancer in the family is one of the risk factors of breast cancer.[3] The most common risk factor is a history of breast cancer experienced by first-degree relatives of the mother.[15] One of the main reasons for this risk is an inherited mutation in one of two genes, namely BRCA1 and BRCA2.[14] Family history is an important component in the history of the patient to be implemented screening for breast cancer. There is an increased risk of malignancy in women whose families have breast cancer, the presence of mutations in several genes (BRCA1 and BRCA2).[8]

CONCLUSIONS

Patients with breast cancer in Yogyakarta City Public Hospital in 2016 the majority of respondents breast cancer patients with stage III, age risk, menarche age risk, parity no risk, history of breastfeeding risk, history of using hormonal birth control risk and family history no risk. There is a relationship between the age, menarche age, history of breastfeeding, history of using hormonal birth control and family history of breast cancer occurrence. There was no association between parity with the incidence of breast cancer.

RECOMMENDATION

This study may provide information to health workers, especially midwives about the factors associated with the incidence of breast cancer such as age, menarche age, history of breastfeeding, history of using birth control hormonal and family history so that it can seek to improve health promotion and implementation of the BSE as early detection breast cancer in women and extension factors associated with the incidence of breast cancer, such as breast-feeding her baby at least 6 months and hormonal contraceptive use with the incidence of breast cancer. For further research this study may make reference, should use the study design case-control and by taking samples in larger quantities.

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O-07

THE EFFECTIVENESS OF HEALTH EDUCATION THROUGH SMARTPHONE AND BOOKLET ON KNOWLEDGE AND ATTITUDE OF ADOLESENCE REPRODUCTIVE HEALTH

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ABSTRACT

Adolescent related to reproductive health problems. The problem occurs because of adolescent had a lack of knowledge and attitudes about reproductive health. Smartphones was effective tools of education and it can improve knowledge and attitudes of teenagers, so the problem on adolescent reproductive health can be solved. This research analyze the differences and effect of health education through a smartphone and a booklet on the knowledge and attitudes of adolescents about reproductive health, also to analyze the factors that change knowledge and attitudes of adolescent after receiving health education from smartphone. This research was a mix method research that combines quantitative and qualitative research with concurent embedded design. Quantitative research used quasi-experiment design, conducted on 84 adolescent, divided in to two groups. Qualitative research conducted in 8 adolescents who received health education through the smartphone as an informant. Differences in knowledge and attitudes before and after health education through smartphones and booklets were analyzed with the Wilcoxon test. There was the differences between health education through smartphone and booklet on changed knowledge and attitudes of adolescents about reproductive health. The infleunces of health education through smartphone on knowledge and attitudes of adolescents about reproductive health is better than booklet ($p < 0.05$). The factors that cause the adolescent knowledge and attitude changed after getting health education through smartphones are good content, simple language, the content is interesting, easy to understand, being a trend, easy to read, effective, easy to carry, easy to store, more privacy, easily stored, simple, easily accessible and the content was complete. Smartphone as effective tools of health education, it can improve knowledge and attitudes of adolescents about reproductive health.

Keywords: *Health Education, Smartphones, Booklets, Adolescent Reproductive Health*

INTRODUCTION

Adolescent is a gold generation, therefore adolescents need to be provided with reproductive health education to improve their knowledge.[1] Reproductive health education is basically an effort to provide knowledge.[1] The fact is teenagers get less information and access to reproduction health service, because the parents in Indonesia still consider taboo to discuss everything related to the organ and the reproduction process, beside that in schools, adolescent only get general information about the reproductive organs, without learning how to maintain reproductive health and how to avoid risk behaviors related to reproductive health.

The issue is reinforced by the Indonesian Demographic Health Survey which results in data that adolescent knowledge about reproductive health is lacking.[2] Reproductive health problems are associated with risk behavior. The risk behavior of teenagers can lead to unwanted pregnancies and sexually transmitted diseases. Various

risk behaviors such as premarital sexual intercourse, early marriage, unwanted pregnancies, abortion, Sexually Transmitted Diseases (STDs), Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS), and other risk of sexual behaviors.[3,4,5]

Health promotion increasing positive behavior, is influenced by various factors such as health education tools.[6] Booklet is a book that provides complete information, consisting of several pages, in the form of text and images to convey health messages.[7] The advantages of the booklet are long-lasting, usable, low cost, unnecessary electrical energy, easy to carry, and easy to understand.[8] The weakness of the booklet is it can not stimulate sound effects, it is easily damaged, otherwise the information on the booklet can not be updated quickly, it takes time and cost to print again.[9]

To overcome the weakness of booklets is electronic tools. Today, Mobile phones can be used as a tools of health education and healthcare services.[10,11,12] Mobile phones are one of the keys in WHO's global strategy to achieve Millennium Development Goals (MDG's).[13] Mobile phones (as mobile health) are expected to increase knowledge communities to reduce maternal mortality rate (MMR) and infant mortality (IMR), help prevent STDs, and unwanted pregnancies.[14,15,16,17] Based on data compiled by the Indonesian Cellular Telecommunication Association (ATSI), as of the end of 2011 cellular phone usage in Indonesia is so large that the possibility of using mobile phone technology as a health education strategy is expected to improve public health status.[18]

This research analyze the differences and effect of health education through a smartphone and a booklet on the knowledge and attitudes of adolescents about reproductive health, also to analyze the factors that change knowledge and attitudes of adolescent after receiving health education from smartphone.

METHOD

This study takes the subject of high school students, between 14 to 16 years (middle adolescent), with the consideration that middle adolescents are experiencing the peak of physical and emotional changes. Due to limited time, cost and effort, only 2 of 136 high schools in 30 districts in Bandung are taken. In quantitative research, sample selected 42 people for the smartphone group and 42 people for the booklet group, the total sample is 84 people.

Sampling in qualitative research using non probability sampling technique, that is sampling technique that does not give equal opportunity or opportunity for every element or member of population, by purposive sampling that is sample determination technique with certain consideration, where the sample is believed to represent sample of adolescent under study. Samples were adolescnet who received information from smartphone, amounting to 8 people with sampling criteria based on the highest value of questionnaires in quantitative research.

This research was a mix method research that combines quantitative and qualitative research with concurent embedded design. Quantitative research used quasi-experiment design, conducted on 84 adolescent, divided into two groups. Qualitative research conducted in 8 adolescents who received health education through the smartphone as an informant. Differences in knowledge and attitudes before and after the health education through smartphones and booklets were analyzed with the Wilcoxon test. The influences of health education was analyzed through a simple regression linearity test.

The research method of combining the sequential explanatory model is done by collecting and analyzing quantitative data in the first stage and followed by the collection and analysis of qualitative data in the second stage to obtain an explanation of quantitative data in the early stages. Quantitative methods in this study have higher weight than qualitative methods.

Quantitative research in this research used quasi-experimental design with non randomized control group technique pre test posttest design. The design of this study used 2 groups, the first group got treatment of reproductive health adolescent based on smartphone while the second group as control group was given promotion of adolescent reproductive health with a booklet. In both groups, measurements were made before and after health promotion to identify changes in adolescent knowledge and attitudes about adolescent reproductive health.

RESULT

1. The characteristic of adolescent, explained in this table.

Table 1 Adolesence Characteristic

Adolesence Characteristic	Group				*p Value*
	Smartphone		Booklet		
	n=42	%	n=42	%	
1. Gender					
– Male	14	33,3	17	40,5	0,498
– Female	28	66,7	25	59,5	
2. Residence					
– With only Mother or Father	2	4,8	3	7,1	0,645
– With Parents	40	95,2	39	92,9	
2. Information Source					
– Newspaper/ Magazinne	7	16,7	5	11,9	0,648
– Electronic	25	59,5	21	28,6	
– Friends	1	2,4	1	2,4	
– Parents	8	19,0	12	50,0	
– Health Workers	1	2,4	3	7,1	

Table 1 Illustrated the distribution of respondent characteristics. The gender of the respondents was mostly female, with most living residing with parents, and obtaining a source of information on adolescent reproductive health mostly from electronic. Based on statistical test of respondent's characteristic, showing gender, residence, and source of information with p> 0,05, so it is worth to be compared.

Table 2 The Difference of Knowledge and Attitude of High School Students About Adolescent Reproduction Health

Variable	Smartphone Group (n=42)		Z_w	*p Value*	*Booklet Group* (n=42)		Z_w	*p Value*
	Pre	***Post***			***Pre***	***Post***		
1. Knowledge								
– Mean	85,7	89,0	-	0,001	82,0	82,1	-1,000	0,323
– Median	84,0	88,0	3,224		84,0	84,0		
– SD	5,9	6,1			7,1	7,1		
2. Attitude								
– Mean	68,0	71,0	-	0,000	63,7	69,1	-7,410	0,000
– Median	68,0	70,0	5,620		64,0	68,0		
– SD	2,3	4,0			2,4	4,2		

Table 2 shows the difference of knowledge and attitude of high school students about adolescent reproduction health before and after health promotion through smartphone and booklet. There was an increasing of knowledge with p value <0,05 in adolescence group before and after getting health promotion by smartphone. Whereas in adolescent group that get health promotion through booklet there is no difference of knowledge level about adolescent reproductive health before and after health promotion with p-value > 0,05 but there is difference of attitude with p-value <0,05.

Table 3. The Difference of Knowledge and Difference of Attitude of High School Student about Adolescent Reproduction Health Between Health Promotion Group Through Smartphone And Booklet

Variable	Group		t or Z_{Mw}	p Value
	Smartphone	***Booklet***		
1 **Knowledge**				
- X (SD)	3,33(5,79)	0,10(0,62)	-3,789	0,000
- Median	4	0		
2 **Attitude**				
- X (SD)	2,95(2,00)	5,40(4,73)	-1,869	0,062
- Median	2	5,50		

Table 3 shows that there is a difference of knowledge and difference of attitude of high school student about adolescent reproduction health between health promotion group through smartphone and booklet. The knowledge variable between smartphone group and booklet has Z_{Mw} value of -3.789 and p-value value <0,05, hence can be concluded there is difference of knowledge between smartphone group and booklet. Attitude variable between smartphone group and booklet has ZMw value equal to -1,869 and p-value value> 0,05, hence can be concluded there is no difference Attitude between smart phone group and booklet.

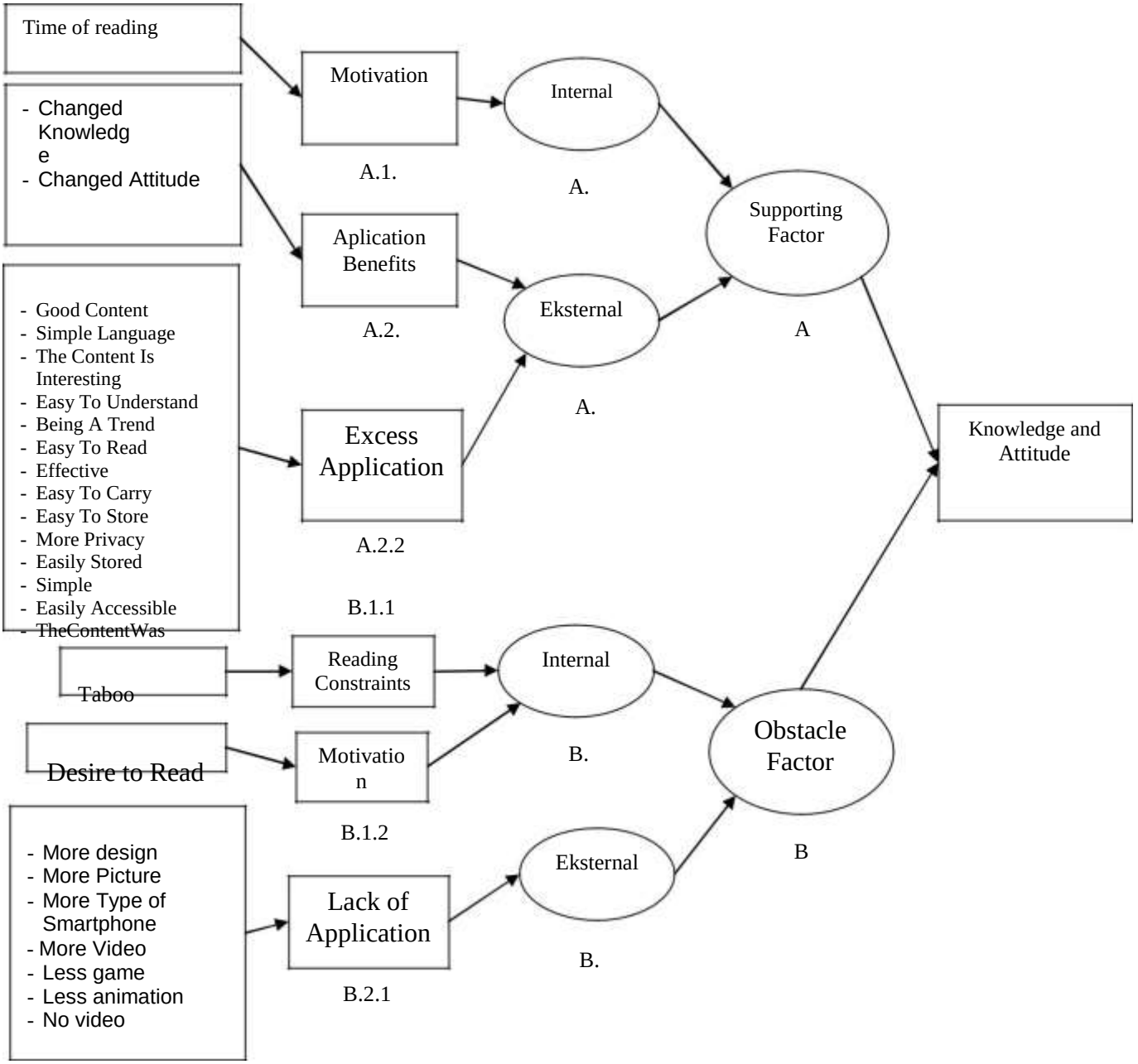
This suggests that to improve adolescent knowledge about reproductive health can be done through health education. Adolescents have the right to obtain health education to improve knowledge and attitude in maintaining reproductive health to avoid adolescent reproductive health problem. Health education will increase positive knowledge. Health education increasing knowledge as well as to change health behavior. The use of

smartphone in health education, can improve the knowledge and attitude of adolescents about reproductive health.[19]

Booklets as a tools for health education which can also improve knowledge, attitudes and skills.[20] Afwani in her research, mentioned that the smartphone can replace the booklet.[21] Smartphones, effective in health care because of their wide reach, portability, and can present information on a probabilistic basis. Intelligent calling is already commonly used as an effective health education in providing information on reproductive and sexual health as it changes people's behavior.[22,23,24,25]

Smartphone as, electronic media has advantages that are not easily damaged, easy to carry, without time constraints, much in demand by teenagers. the smart phone is also effective because the required information already exists and the data can be updated periodically.[26,27] The smartphone is a new concept in health care.[12,28] Its shape is small and portable, making it a useful tool in health care activities.[28] In this study was seen that the influence of the smartphone is greater than the booklet.

2. Qualitative Result



Form qualitative resulr, the factors that cause the adolescent knowledge and attitude changed after getting health education through smartphones are time to read, good content, simple language, the content interesting, easy to understand, being a trend, easy to read, effective, easy to carry, easy to store, more privacy, easily stored, simple, easily accessible and the content was complete.

DISCUSSION

Reproductive health issues are associated with risk behavior. Risk behavior deals with knowledge and attitude. Knowledge can be improved through health education. Health education is the process of improving knowledge about health and facilitating changes in attitudes and behaviors. Health education is influenced by a tools of health education. Tools of health education is a means to display messages or information to be conveyed by communicators, both print and electronic media. Booklet is a tools which is often used as health promotion media. The disadvantages of the booklet are easily damaged and the content of the material can not be updated quickly. To overcome the weakness of booklet used smartphone media. Smartphones are already widely used in developing countries as promotive and preventive efforts in health services. Smartphones are commonly used as effective health promotion media in providing information on reproductive and sexual health education because they can change people's behavior. Another advantage of smartphones is that they are not easily damaged, portable, usable everywhere, without time constraints, much in demand by teenagers with renewable materials quickly. Gabaron said that cellular phones are useful in changing behavior in preventing sexually transmitted diseases in adolescents. Currently, the use of smartphones in health education is very effective in improving knowledge and attitude of adolescent about reproductive health.[12,28,29]

CONCLUSION

Smartphoneas as effective tools of health education, it can improve knowledge and attitudes of adolescents about reproductive health. To address the issue of adolescent reproductive health needs further research in a larger population with applications that have been perfected.

RECOMMENDATION

Smartphones was effective tools of education and it can improve knowledge and attitudes of teenagers, so the problem on adolescent reproductive health can be solved.

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O-08

PHYSICAL ACTIVITIES AND SNACK CONSUMPTIONS OF OBESE ADOLESCENTS IN BANTUL, YOGYAKARTA

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ABSTRACT

Obesity in adolescents has important implications for the health and well-being of individuals and society. It is a negative impact in increasing susceptibility to some diseases, chronic health problems, psychological disorders, increased maintenance costs each year up to early death. 2.8 million people die each year due to obesity. The increasing prevalence of obesity in adolescents allegedly associated with lifestyle changes include the decline in physical activity and increased consumption of snacks. The objective of the research is to determine the difference of physical activity and snack consumption in adolescent obesity in urban and rural areas in the district of Bantul. This study used a case control study design, with a population of high school teenagers both public and private. Cases are obese adolescents who were diagnosed at screening, while the control is not obese adolescents. Data analysis included univariable consist of frequency distribution, bivariable consist of chi-square and t-test and also logistic regression test for mulitivariabel analysis. The result shows that **t**he bivariate analysis showed significant association between physical activity and obesity with a value (P <0.05; OR 4.26 (95% CI: 1.61 to 12.06). Weight snack, (p = 0.001 and the value of OR 1 , 8 (95% CI: 1.32 to 2.48), the type of snacks (p = 0.001; OR = 2.21; CI: 1.26 to 3.85), as well as the amount of intake of snacks with p = 0.001 by OR value of 4.30 (95% CI: 2.55 to 7.25). The results of logistic regression showed physical activity, frequency of snack, snack weight, kind of snack and snack intake) and dependent variable (obesity) is accompanied by variable gender and history of obesity contributes to obesity by 47%. It can be concluded that the low physical activity, high snack frequency, type of fried snacks, fried severe (> = 60 grams), and snack intake (> = 53%) are most likely to increase the incidence of obesity

Keywords*: Physical Activity, Consumption Of Snacks, Obesity, Teen*

INTRODUCTION

The proportion of obesity in children and adolescents increased drastically over the last decade. Obesity in children and adolescents in the United States is more common in the age group 12-19 years. Meanwhile, in Indonesia, the prevalence of obese are more common in adolescents aged 16-18 years is, as much as 7.3%, consisting of 5.7% fat and 1.6% obese. The prevalence increased from 1.4% (2007) to 7.3% (2013). Yogyakarta is one of the provinces in Indonesia with a prevalence of obesity over the national rate of youth aged (16-18 years). The highest prevalence of obesity in the city of Yogyakarta that is equal to 6%[1].

Obesity is caused by an imbalance between the amount of energy in with energy expended every day. Excess accumulation of fat in adipose tissue resulting from the excessive consumption of food and beverages. This is what causes the accumulation of fat to occur obesity. In addition, lifestyle changes into sedentarian behavior contributing to obesity. This can be seen from the amount of time watching TV, the increasing number of cars per family, causing a decrease in physical activity. Transition occurs is a change in

lifestyle, which at first all the activities carried out require physical exertion humans now all facilitated by technology. Similarly, according to Hartono and Huriyati[2], that factor inactivity enormous influence on the development of obesity than overeating.

National Youth Physical Activity and Nutrition Study (NYPANS) stated that students have access to food and drinks that are less healthy school environment (Brener et al., 2013), Lack of physical activity is accompanied by the consumption of snack today become an important issue in public health because it has a negative effect on health. Moreover, these two things have a major contribution in causing obesity in rural and urban areas.

Riskesdas Yogyakarta province in 2013 showed that the highest prevalence of obesity in the province of Yogyakarta is located in Yogyakarta, namely, 12.9% fat and 6% obesity while Bantul 7.9% and 1% fat obesity. Meanwhile, in the province of Yogyakarta almost half the population of productive age less physical activity is 42.1%. Less physical activity in rural and urban areas is now not much different, less physical activity in Bantul 79.9%[3].

Research on physical activity and snack consumption among adolescents in Yogyakarta province still have not been studied, therefore the author felt the need to do research on physical activity and snack consumption in adolescent obesity in urban and rural areas in the district of Bantul.

METHODS

This is a type of observational study using case control design. Case-control design is the design of epidemiological studies that study the relationship between exposure to certain securities. Population of this research were, all of the student in senior high school in Bantul Regency. Respondent was divided by two groups, such as obese as case group and non obese as control group which choosen by class matching process. In this group of cases is high school adolescent obesity with a value of Body Mass Index (BMI) ≥ 27 kg / m2. While the control group was high school teens who are not obese.

The study was conducted in four public high school in Bantul. Total sample of 124 people. Data analysis and statistical tests to be conducted in this study included the analysis of desctriptive presented in the form of frequency distribution, percentages, and narrative and inferential analysis covering bivariable analysis by using statistical test of chi-square and t-test, and 95% confidence intervals (CI) and a significance p value of <0.05 multivariate analysis using logistic regression.

Instrument which used in this reseach such as, microtoise and weight scale for screening obese. GPAQ (Global *physical activity questionaire)* and recall *for* measuring physical activity, and quantitative food frequency for masuring snack consumption.

RESULT

1. Respondent Characteristics

Tabel 1.Respondent Ditrubution Frequencies

No	Variable	n	%
1.	**Age**		
	16 years	25	20.16
	17 years	40	32.16
	18 years	59	47.58
2.	**Sex**		
	Man	50	40.3
	Woman	74	59.7
3.	**Sedentary Behaviour**		
	High	117	94.3
	Low	7	5.7
4.	**Genetics (obese)**		
	Obese	61	49.2
	Non obese	63	50.8
5.	**Daily money**		
	>=10.000	99	79.8
	<10.000	25	20.2
6.	**Economic social**		
	Rich	123	99.2
	Poor	1	0.8

Based on Table 1, in general the majority of respondents aged 18 years, was in class XII and female (59.7%). Additionally, nearly all respondents have a high sedentary behavior (94.3%) and had a history proportion of overweight parents are almost the same between parents obese and non obese. Rich socio-economic co-dominated most of the respondents, it is in line with the percentage of allowance of the respondents have an allowance is almost entirely (> = 10,000 rupiah) is as much as 79.8%.

a. Relationship between physical Activities, snack frequency, snack weight, kind of snack and snack calories with obesity

Tabel 2. *Chi Square* analysis

Variable	Obese				χ^2	*P*	OR	95% CI
	obese		Non obese					
	n	%	N	%				
Physical activities								
light	24	38.7	8	12.9	10.78	0.001	4.26	1.61-12.06
Medium (R)	38	61.3	54	87.1				
Snack Frequency								
often	33	53.2	25	40.3	9.10	0.509	1.28	0.57-2.84
Sometime (R)	29	46.8	37	46.8			-	-
Kind of snack								
Fried	52	83.9	35	56.4	11.13	0.001	2.21	1.26-3.85
Non fried (R)	10	16.1	27	43.6				

Based on the analysis in the table above we can conclude the existence of a significant relationship, both practically and statistically between physical activity and obesity. Obesity is more encountered 4 times greater in students with mild physical activity in comparison with students with moderate physical activity with a p-value of <0.05 with OR 4.26 (95% CI: 1.61 to 12.06). The relationship between the type of snacks and obesity also has a significant relationship both statistically and practically, namely obesity, are found as many as 2 times greater for students with fried snack consumption in comparison with students who consume non-fried snacks.

Tabel 3. Multivariate analysis

	Obesitas			
	Model1 OR 95% CI	**Model2 OR 95% CI**	**Model3 OR 95% CI**	**Model4 OR 95% CI**
Physical Activities				
Light	3.38	3.32	2.94	2.93
	0.91-12.49	0.86-12.80	0.78-11.07	0.74-11.55
Medium(R)				
Snack frequency				
often	0.67	0.63	0.65	0.65
	0.22- 2.01	0.22- 2.01	0.21-1.96	0.20-1.84
sometime(R)				
Snack weight				
121±54	16.36*	16.22*	19.22*	19.17*
	3.23-82.79	3.17-82.89	3.58-103.57	3.54- 103.71
63.97±29.40 (R)				
Kind of snack				
fried	3.56*	3.53*	3.06*	3.05
	1.14-11.12	1.12-11.16	0.95-9.84	0.93-9.97
Non fried R)				
Snack calories				
0.74±0.21	8.06*	8.21*	7.47*	7.54*
	2.80-23.14	2.69-25.05	2.57-21.83	2.44-23.26
0.42±0.17 (R)				
Sex				
men		1.05		1.01
Woman (R)		0.33-3.38		0.31-3.34
Genetic				
obese			0.40	0.40
			0.13-1.18	0.13-1.18
Non obese (R)				
R^2	0.45	0.45	0.47	0.47
Deviance	92.99	92.98	90.24	90.24
n	124	124	124	124

Model 4 shows how much the relationship between the independent variables (physical activity, frequency of snack, snack weight, kind of snack and snack intake) and dependent variable (obesity) is accompanied by variable gender and obesity history together. Based on the analysis showed that there was no change OR - crude significantly in physical activity variables, frequency of snack, snack weight, kind of snack and snack intake. This indicates that the variable history of overweight parents and gender are included together did not alter the effects of the risk variables of physical activity, type of snack, heavy snack and snack intake. Rated $R^2 = 0.47$ describe the independent variables (physical activity, frequency of snack, snack weight, kind of snack and snack intake) with variable

gender and history of overweight parents contribute to the incidence of obesity by 47%.

DISCUSSION

Obesity is mostly caused by many factors, both biological and environmental. Some studies suggest that the major contributing factors to the onset of obesity is the consumption pattern of the wrong foods and a change in physical activity. In 1977 to 1996 the percentage of teenagers who consume a snack in the National Survey increased from 76% to 88%, it also causes the average - average number of snacks consumed increased from 21% to 25%. In addition, a decline in physical activity between 1969 to 2001, the percentage of students who are cycling and walking to school declined from 41.6% to 26.4%. This is caused due to changes in lifestyle towards sedentary life.

Generally based on univariate analysis showed that study subjects had a characteristic age of 16 years to 18 years. Most obesity experienced by students aged 18 years old and sitting in class XII. Researchers assign study subjects with these criteria because at the age of 16 to 18 years, teenagers are in mid-adolescence. Where, in the mid-teens, teens tend to groups vulnerable to nutritional needs, especially nutrition excess.

Age is one factor that contributes to obesity. The increasing age of a person, would increase the risk of an increase in body fat mass. This is in line with research conducted by Ryan K. Masters consistent with previous research indicating that the effect of high BMI on mortality risk grows significantlystronger with increasing age. Although the bulk of existing public health literature has suggested that the association between obesity status and mortality risk is either age-invariable or substantially weakens with increasing age, it has not accounted for some important factors that likely distort the estimates. After we accounted for one prominent factor, namely, age-related survey selection bias, by BMI level we found that the effects of overweight, grade 1 obesity, and grade 2/3 obesity on mortality risk for US men and women grow substantially stronger with age[4].

Along with age, the class becomes a factor that contributes to obesity. The higher a person's education classes are taken to increase the risk of obesity. Results of bivariate analysis showed a significant relationship ($p < 0.05$) between physical activity and obesity. Teens with mild physical activity will likely four times greater than the obese adolescents with moderate physical activity. In this study, the majority of students have moderate physical activity patterns.

Teens ages 16-18 is more preoccupied with school activities and play with peers. Physical activity was being routinely performed by most of the respondents are routine after school activities ranging clean up, clean room, helping elderly sweeping, mopping, and sometimes cook at home after school. Forms of moderate physical activity can be found in extracurricular activities such as scouts, choirs, and other activities conducted in schools. Most respondents to sit in class XII, most students in the class had not followed the extracurricular activities and other school activities, so it is that triggers the reduction in physical activity in students in this study.

Less physical activity in adolescents contribute greatly to obesity. Teenagers who have limited activity will experience a positive direction to the energy imbalance that leads to energy storage and weight gain. This research is in line with research conducted by Thasanasuwan said that all physical activity behavior variables except for activity score were associated with obesity in Thai children. Activity during school recess time was the most sensitive factor to predict obesity. Children who reported to be inactive during break times had 2 to 3 times higher risk of obesity than children who were often or always active during recess time[5].

Analysis of the results showed that most of the study subjects had a frequency of snack consumption of more than 4 times a week both adolescents in rural and urban areas. This shows that the overall teen liked the snack consumption habits. The habit of

eating snacks with frequency often has a major contribution in the increase in body fat mass. This condition becomes progressively worse with the type of snacks consumed adolescents usually snack with high content of sugar and fat. The high frequency of snack consumption is often supported by a habit that is watching television or using a gadget in spare time. This is according to research of Pearson dkk that television viewing has a significant role to play in adolescent unhealthy eating behaviours[6].

Selection of types of unhealthy snacks can lead to obesity in adolescents. Teens who like to consume snacks high in sugar and fat have a higher risk obese. Some studies suggest that snacks as unhealthy foods. Snack foods in question are high in sugar, high in fat but low in fiber. These foods contribute significantly to the intake of calories and cholesterol a day (Ezmaillzadeh and Azadbakht, 2008). The results are consistent with research conducted by Ezmaillzadeh and Azadbakht (2008), that there is a relationship between the subjects who consumed foods high in sugar with obesity. Teenagers who consume foods high in sugar and fat have 5.74 times the risk of obesity.

Habit of eating snacks outside is a habit that can increase the body's energy consumption. An increase in the body's energy will also increase the incidence of obesity. The high incidence of obesity seen in line with the increase in frequency of eating out in large numbers. This is in line with research conducted by K. Murakami and M. B. E. Livingstone, there is a completely positive associations between Eeating frequency and overweight (children only) and abdominal obesity[7]. This is made clear by a study conducted Yusuf et al.[8] mentions that frying foods containing 4% - 14% of the total weight. This means that the greater the weight of fried foods are consumed, the more fat it contains.

Both statistically significant correlation was also found between the practical and the type of snacks and obesity, where obesity is found 2 times greater for students with fried snack consumption in comparison with students who consume non-fried snacks. In addition, obesity is also more is found 4 times greater on students by the number of snack intake (> = 53%) of the AKG compared students who consume less than (53%). Type of fried snacks fried in oil containing saturated fatty acids. If the snack is consumed in large quantities every day will be metabolized by the body and will ultimately increase the fat in the body. Besides snacks that contain saturated fats will raise blood cholesterol levels as much as 15-25% [7].

CONCLUSION

1. Physical activity less, are found in obese adolescents compared with non-obese adolescents. Teens with mild physical activity four times more likely to be obese compared with adolescents with strenuous physical activity.
2. Consumption of fried snack types cause teenagers 2 times greater chance obese compared with non-fried snack consumption.
3. There are significant differences between heavy snack and snack intake of obese and non-obese adolescents.
4. The relationship between the independent variables (physical activity, frequency of snack, snack weight, kind of snack and snack intake) and dependent variable (obesity) is accompanied by variable sex and history of obesity contributes to obesity by 47%.

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O-09

THE CORRELATION EDUCATION ABOUT HEALTH REPRODUCTIVE AND KNOWLEDGE AND ATTITUDE OF HEALTH REPRODUCTIVE OF THE ADOLESCENT

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ABSTRACT

Adolescent pregnancy remains a major contributor to maternal and child mortality and to the cycle of ill-health and poverty. Adolescent pregnancies are more likely in poor, uneducated and rural communities. The aim of this study was to analyze correlation education about health reproductive and knowledge and attitude of health reproductive of the adolescent. This study was a quasy experiments with *pretest-posttest control group design.*The population is the student of high school in Yogyakarta regency. The sample of this study uses purposive sampling with 25 respondents in experiment group and 27 respondents in control group. The data was analyzed by Wilcoxon and Mann Whitney. Collecting data through a questionnaire. The result in this study showed that in controle group, the value of knowledge was p = 0,075 (p>0,05), while value of attitude was p = 0,080 (p>0,05). In experiment group the value of knowledge was p = 0,001 (p<0,05), while value of attitude was p = 0,088 (p>0,05). The result showed that in experiment group of knowledge there was a significant difference, but the experiment group of attitude was no significant defferent, while in control group there wasn't a significant difference. The conclusion of this study is there is correlation between health reproductive education toward knowledge, but there is no correlation attitude of health reproductive on adolescent.

Keywords: *Education of health reproductive, knowledge, attitude, adolescent.*

INTRODUCTION

Teen issues always happen around us, especially issues that related with the health of reproduction. Indonesian teenager who have considered as sexual active embarrassed or did not want to consult about their reproductive health with the medical personnel and the lack of communication between parents and children about the health of reproduction become the cause of the minimum information of the health of reproduction in the right way[1].

Most of the Indonesian society misjudge that sexuality only matter of the sexual relation between men and women, which only can be done after marriage. Another sexuality issues on adolescence such as menstruation, wet dreams, genitals, reproductive organ and its function that should be taught in school are sometimes not given because of the sexuality or reproductive health still taboo to talk about. If the adolescence reproductive health cannot be treat as an urgent issues that must be addressed seriously and continuously, it is not impossible that sexuality victim in teenager will[2].

In other countries, reproductive health and sexuality are the important topics that must be delivered to the adolescence. Tunisia for example, as a Muslim country Tunisia become the first country that introduce the reproduction and family planning in their school curriculum in early 1960s. Turkish also one of the country that include the reproductive health and sexuality in their school curriculum, "Puberty Project" is a program in

elementary school that given to students in the last three years during eight years education. In Puberty Project every school will provide *textbook* and bring experts of reproductive health to answer the questions from student and discuss the reproductive health issues[3]. In Malaysia as the neighborhood country, start on December 1994 include the element *"Family Health Education"* in their elementary school. Muslim students were also introduced to reproductive health and sexuality in Islamic religious education program[4] .

World Health Organization (WHO) has recommended to improve the quality of antenatal care for the sake to reduce infant mortality and complications of labor and provide a positive pregnancy experience for pregnant women. Approximatelysixteenmillion womenat the age fifteen until nineteenand around one million under fifteen has delivered every year especially in development country. Complications during pregnancy and infant mortality is the second cause of death in women aged fifteen to nineteen years old. Every year three million abortions occur in women aged fifteen to nineteen years old[5].

In this twenty first century women health increase, but still there are lot of women who died because of the complications during pregnancy every year. Most of the complication that happen in America because of the hypertension, diabetes and heart disease. Although there is tendency to decrease, the death rate in America because of pregnancy increase after the aged twenty years. One of four deaths related with pregnancy is because of the heart condition, bleeding and blood pressure[6] .

Education is expected to elevate the knowledge about reproduction health. Knowledge is the result of human's sensing or the result of knowing an object through the senses owned by someone. During the time of sensing an object into knowledge, the intensity of attention and perception toward the object is influential. Most of someone's knowledge is acquired through hearing and sight[7].Likewise, the knowledge about reproduction health is also acquired in such a way.

The knowledge encompassed in the cognitive domain has 6 levels, which are: (1) know i.e., the act of recollecting some material that has been previously studied, (2) comprehension i.e., the ability to explain correctly about the known object and to interpret the material of the object broadly, (3) application i.e., the ability to implement the studied material in the real situation or condition, (4) analysis i.e., the ability to explicate the material or object into the components under the structure of its organization, (5) synthesis i.e., the ability to lay or interconnect inner parts of a recent and overall thing, and (6) evaluation i.e., the ability to do a research on material or an object[8].

Education is also expected to elevate the attitude toward reproduction health. Attitude is a form of evaluation or feeling reaction. The attitude of someone toward an object can be favorable and unfavorable feelings in the object. Attitude consists of three mutually supportive components, which are cognitive, affective, and conative. The cognitive component is the representation of what is believed an individual who owns the attitude; the affective component is the emotional feelings; and the conative component is the tendency to behave in a particular way in line with the attitude owned by someone[9].

Attitude is the tendency to act. Attitude is not always manifested in actions because in order to manifest attitude in action, the other factors which are facility and infrastructure are needed. For instance, a pregnant mother knows that pregnancy check is important to her health and the health of her fetus so that there has been an intention to check for her pregnancy. In order to manifest the attitude in an action, midwife, integrated service post, and community health center near her home are needed so that they as a set of facilities is reachable[7].

Attitude can be formed or changed through 4 methods, which are (1) adoption i.e., a repetitive and perpetual event slowly absorbed by an individual and then influencing the formation of attitude, (2) differentiation i.e., along with the development of intelligence, the more gain of experiences and age, an object which previously looks the same becomes different right now with which the attitudeformation can be made, (3) integration i.e., the

attitude formation starts gradually from various experiences to the formation of attitude itself, (4) trauma i.e., the moment where there is a sudden and shocking experience causing a deep reminiscence. A traumatic experience can develop a specific attitude[10].

Knowledge, attitude, and action are the components of behavior. It can be altered through 3 methods, which are (1) sincerity, (2) the nearest environment, (3) the existence of education. The behavior alteration comprises 6 phases, which are (1) the unfreezing phase in which an individual starts to consider the acceptance toward the alteration, (2) problem diagnosis phase in which the individual begins to identify the things for and against the alteration, (3) goal setting phase, (4) new behavior phase, (5) the refreezing phase in which there is an individual's permanent behavior[8].

The purpose of this research is to determine the relation between the education of productive health knowledge and the adolescents' attitudes on reproductive health.

METHODS

This research is a *quasy experimental*with *pre test post testcontrol group design*(Polit dan Hungler,1999)[11].The population was the student of high school in Yogyakarta regency. The sampling technique used*purposive sampling*withtwenty fiverespondentson experiment group andtwenty seven respondents on control group. Data analysis that used is *Wilcoxon* and for different test used*Mann Whitney.*Collecting data technique in this study using a questionnaire.

RESULT

Table1. Result Of The Normality Test Between Experiment And Control Group

Age of experiment group	Age of Control Group			
	Frequency	Percent (%)	Frequency	Percent (%)
14 Years	3	12	0	0
15 Years	16	64	18	66.7
16 Years	5	20	5	18.5
17 Years	1	4	4	14.8
Total	25	100	27	100
P = 0.328				

The result of normality test using *Saphiro Wilk* test on all of the data shows that p < 0,05 which is mean that data distribution is not normal. Hypothesis test that used when the data not normally distributed is non-parametric test. Non-parametric test that used in this research is *Mann-Whitney* test. To evaluate homogeneity there is non-parametric test with *Mann-Whitney* test, the result of ages from this test p = 0,328 (p > 0,05), this is shows the homogeneity of the subject between the groups (control group with experiment group).

Table 2. Different Knowledge about reproductive health on Control Group and Treatment Group

Variable	Control Group			Treatment Group		
	N	Mean	SD	n	Mean	SD
Knowledge Pre-Test	27	11.7	2.25	25	10.92	1.55
Knowledge Post-Test	27	11.07	1.83	25	12.44	1.56
		0.075**			0.001*	

**Significant (p < 0.05), **Non Significant (p > 0.05)*

The result of the knowledge measurement about reproductive health before and after treatment on control group with *Saphiro Wilk* test, concluded that the data is not normal. Using *Wilcoxon* to measure the previous data, acquired p = 0.075 (p > 0.05), concluded that data on the control group did not have any different between the pre-test and post-test.

The result of knowledge measurement about reproductive health before and after treatment on the treatment group using *Saphiro Wilk* test, concluded that the data is not normal. Using *Wilcoxon* test on the previous result, acquired p = 0.001 (p < 0.05), concluded that on the treatment group there is different between pre-test and post-test.

Table 3.Different Attitude about reproductive health on Control Group and Treatment Group

Variable	Control Group			Treatment Group		
	N	Mean	SD	n	Mean	SD
Attitude Pre-Test	27	55.63	10.88	25	62.72	7.12
Attitude Post-Test	27	54.19	10.08	25	65.20	8.12
		0.080**			0.080*	

**Significant (p < 0.05), **Non Significant (p > 0.05)*

The result of attitude measurement about productive health before and after treatment on control group using *Saphiro Wilk* test, concluded that data is not normal. Using *Wilcoxon* test on the previous result, acquired p = 0.080 (p > 0.05), concluded that on control group there is no different between pre-test and post-test.

The result of attitude measurement about reproductive health before and after treatment on treatment group using *Saphiro Wilk* test, concluded that data is not normal. Using *Wilcoxon* test on the previous result, acquired p = 0.088 (p > 0.05), concluded that on treatment group also have no different between pre-test and post-test.

DISCUSSION

On 2011 World Health Organization (WHO) had been published the attempt to prevent the early pregnancy and complication in reproduction process by giving six recommendations, which are: (1) decrease the number of marriage under eighteen years old, (2) decrease the number of pregnancy under twenty years old, (3) increase the use of contraception on adolescents, (4) decrease free sex on adolescent, (5) decrease the number of abortion on adolescent, and(6) increase pregnancy service and post childbirth on adolescent (WHO, 2016)[12].

After the education process apparently there is an upgrade about the knowledge of reproductive health, the more knowledge about reproductive health expected will give positive attitude about reproductive health. The increase of knowledge is caused by education material, the acceptance about education material have a role as reinforcement positiveand become stimulus to increase the knowledge about reproductive health[13].For the attitude about reproductive health apparently there is no different between pre-test and post-test, it means that education did not have any effect about the attitude toward reproductive health.

The research about knowledge, attitude, and action as well about hand hygiene is conducted in the tertiary referral hospital in Raichur, India. The research aims to compare the knowledge, attitude, and action toward hand hygiene between the medical students and the ones of nursing pursuing education in the hospital. The research employed cross-sectional method as well as used 98 medical students and 46 nursing students as the respondents, which are 144 in total. The questionnaire used in the research is the one

from WHO about hand hygiene. The research results show that 79% respondents(114 of 144 respondents) have received official training about hand hygiene of which there are 74,2% medical students and 95,4% nursing students. For the knowledge about hand hygiene, there are only 9% (13 of 144 respondents) from 74% (107 of 144 respondents who have decent knowledge about hand hygiene. Nursing students have better and more meaningful knowledge than nursing students[14] .

A research about behavior problems of hand hygiene aims to know the relationship between knowledge, belief, and action and hand hygiene of health students. The used research method is by questionnaire and 1,485medical and nursing students from 19 universities in Australia, Sweden, and Greeceas the respondents. The research results show that knowledge is influenced by the assessment frequency about hand hygiene and a lot of ways to learn hand hygiene. The belief in the urgency of hand hygiene is also influenced by knowledge [15].

A research is about knowledge, attitude, and action of a mother toward the disease of Cutaneus Leishmaniasis in the Islamic Republic of Iran. It is found that the average score of the attitude is 15% (the maximum score is 20%) consisting of 42.8% poor, 50% medium, and 7.2% excellent. The average score of action is 16.6% consisting of 32.5% poor, 31.3% medium, and 36.1% excellent[16].

CONCLUSION

There is meaningful connection between educations of reproductive health with adolescent knowledge about reproductive health and there is no different between the educations of reproductive knowledge with the adolescent's attitude towards reproductive health.

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O-10

THE RELATIONSHIP BETWEEN KNOWLEDGE,ATTITUDES,ACTIONSRELATED TO THE CLEAN AND HEALTHY BEHAVIOR AND NUTRITIONAL STATUS WITH DIARRHEA EVENTS IN ISLAMIC BOARDING SCHOOL

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ABSTRACT

Diarrhea is often cause extraordinary events with many sufferers in a short time. In a boarding school environment, diarrhea is one of the most common infectious diseases. The Clean and Healthy Behavior and nutritional status are included in the concept of balanced nutrition, applied to address health problems related to nutrition in Indonesia, including diarrhea. This research aims to evaluate the relationship between knowledge, attitudes, actions related to The Clean and Healthy Behavior and nutritional status with diarrhea events in Islamic Boarding School. This research will provide methods for proper management and prevention of diarrhea with improvement of personal health quality. Respondents for this cross sectional study were taken using consecutive sampling system. The sample size consisted of 116 students aged <18 years old and had experienced diarrhea in the last 3 months. Respondents were then measured weight and height, filling out identity data and validated questionnaires. Data were then analyzed using Spearman test. The result shows that the category of knowledge, attitudes and actions are mostly included in good (58,6%), good (91,4%), and poor (94,8%), respectively. The relationship with diarrhea events is significant (p = 0,015; p = 0,006; p = 0,000), respectively. Respondents are mostly included in normal nutritional status (51,7%) with significant relationship (p = 0,029). It can be concluded that there is a significant relationship between knowledge, attitudes, actions related to The Clean and Healthy Behavior and nutritional status with diarrhea events in Islamic Boarding School.

Keywords: *Diarrhea, The Clean And Healthy Behavior, Nutritional Status, Boarding School*

INTRODUCTION

Diarrhea is irritable bowel disorder characterized by defecation for more than 3 times a day with liquid stool consistency, can be accompanied by blood and/or mucus[1]. Diarrhea is the 13th leading cause of death with a proportion of 3,5%. While based on infectious diseases, diarrhea is the 3rd leading cause of death after TB and Pneumonia[2].

The incidence and period prevalence of diarrhea for all age groups in Indonesia were 3,5% and 7,0%, respectively. East Java province is slightly higher than overall population in Indonesia, which is 3,8% and 7,4%, respectively[1].

In a boarding school environment, diarrhea is one of the most common infectious diseases. Based on data from *BalaiKesehatanSantridanMahasiswi* (BKSM), Islamic Boarding School'shealth center of Gontor for Girls 1 in East Java, diarrhea is one of the 5 most diseases, with the incidence of diarrhea from January to April 2016 is 237 students.

Many factors can affect the incidence of diarrhea in Indonesia. Factors from food and hygiene sanitation are among the many causes of diarrhea. The causes of diarrhea include infection (bacteria, viruses, parasites), malabsorption, allergies, poisoning, immunodeficiency, and other causes[4].

The clean and healthy behavior plays an important role in the incidence and management of diarrhea. Lacking (inadequate) of water, sanitation, and hygiene (WASH) will cause some health problems[5]. Infectious germs of Face-Oral that cause diarrhea can be transmitted into the mouth through food, drink or objects contaminated with feces, such as fingers, food or drinking boxes that have been washed by contaminated water[4].

Malnourished children is at risk of infected bacteria associated with diarrheal diseases. The relationship between diarrhea and malnutrition is two directions: diarrheacauses malnutrition while malnutrition worsens the course of diarrheal disease[6]. Prolonged diarrhea causes malnutrition in patients; on the other hand, malnourished children will be at higher risk of diarrheal complications[7].

The aims of this research is to evaluate the relationship between knowledge, attitudes, actions related to The Clean and Healthy Behavior and Nutritional status with diarrhea events in islamic boarding school environment. This research will provide methods for proper management and prevention of diarrhea with improvement of personal health quality.

METHODS

Respondents for this cross sectional study were taken using consecutive sampling system. The sample size consisted of 116 students aged <18 years old and had experienced diarrhea in the last 3 months. Respondents were then measured weight and height to obtain BMI data (nutritional status). The tools used are digital scales that have been calibrated and microtoise. Category of nutritional status usedBMI (for Asia) category[8].

Furthermore, respondents were asked to fill out the identity data and questionnaire about The Clean and Healthy Behavior, which is devided into 3 categories (knowledge, attitudes, and actions). Questions in each of these categories have been tested for validation, so that from 55 initial questions to 36 questions only.

Categorization is said to be poor if the score is <60% of the total questions in each category. Based on this, the knowledge category is stated poor if the score <18 (total score is 30), the attitude category is stated poor if the score <7 (total score is 11), and the category of action is stated poor if the score <9 (total score is 15). All data were then analized using Spearman test.

RESULTS

Table 1. Distribution of Respondents with Diarrhea

Category	n	%
Diarrhea		
Yes	74	63,8
No	42	36,2
Total	116	100

Table 1 shows the distribution of respondents who are included in the category of diarrhea or non diarrhea in accordance with the questionnaire. From 116 respondents, 63,8% included in the diarrhea category, ie defecating more than 3 times a day with liquid consistency stool, may be accompanied by blood and/or mucus.

The respondents of this study were whole girls. This is because the study was conducted in the boarding school for girls. The results showed that most respondents aged 13-15 years old, with pocket money at most less than 500.000 IDRper month. The relationship between age and diarrhea is not significant. There is also no significant relationship between pocket money and diarrhea. Characteristics of respondents can be seen in Table 2.

Table2. Distribution of Characteristics Respondents

Variable	n	%	p-value
Age(years old)			
10 – 12	1	0,9	0,808
13 – 15	76	65,5	
16 – 18	39	33,6	
Pocket money (IDR)			
<500000	70	60,3	0,508
>500000	46	39,7	

(*) = significant (p<0,05)

In Table 3, most of respondents have good scores on knowledge category (58,6%), although the numbers do not vary much with those with poor scores. 91,4% of respondents got good scores for attitudes category. However, most respondents have poor scores for actions category (94,8%). We can see that there are significant relationship between The Clean and Healthy Behavior categories with diarrhea events. Knowledge category is significantly related to diarrhea, as well as the attitudes category and the actions category.

Most of the respondents were include in poor and normal BMI category for nutritional status. The result on the nutritional status of respondents concluded that there is a significant relationship between the value of BMI with diarrhea.

Table3.Distribution of Variables and The Relationship with Diarrhea Events

Variable	n	%	p-value
The Clean and Healthy Behavior			
Knowledge			
Good	68	58.6	0,015*
Poor	48	41.4	
Attitudes			
Good	106	91.4	0,006*
Poor	10	8.6	
Actions			
Good	6	5.2	0,000*
Poor	110	94.8	
Nutritional status			
Underweight	25	21,6	0,029*
Normal	60	51,7	
Overweight	14	12,1	
Obesity	17	14,7	

(*) = significant (p<0,05)

DISCUSSION

Implementation of clean living behavior can create healthy households, significantly[9]. This is because the individual factors have an important role in maintaining personal health and the surrounding environment.

Some studies have revealed that knowledge related to The Clean and Healthy Behavior is closely related to the incidence of infection, including diarrhea. As a study in Pakistan, which stated that children <15 years of age with good knowledge of clean and healthy life have a smaller incidence of diarrhea than children with poor knowledge[10].

Attitudes and actions of person can also determine the high or low risk of someone affected by infectious diseases, including diarrhea. A study conducted on elementary school stated that children who are used to wash hands do not experience diarrhea[11].

In this study, the clean living action observed included washing hands with soap and running water, using clean water, using healthy latrines, and doing daily physical activity. And the results are surprising. Many respondents have good scores for knowledge and attitude related to The Clean and Healthy Behavior, but their actionscores are not so good.

The better the action on healthy living, the lower the risk of diarrhea in students of Islamic boarding school. This statement is supported by Lawrence Green's behavioral theory which stated that behavior can be influenced by predisposing, enabling, and reinforcing factors. Predisposing factors that influence the incidence of diarrhea include knowledge and attitudes related to a clean and healthy life, beliefs, tradition, and social norms. Some of the enabling factors that affect the incidence of diarrhea are hand washing faucet facilities and its affordability[12]. Facilities of hand washing faucets are already located in the Islamic boarding school area, but there are no hand-washing soaps at all, which cause low scores of attitude category (hand washing with soap).

The reinforcing factors that affect diarrhea are the role of *ustadz*or *ustadzah*(teachers) who support the creation of good behavior. Health education has an important role related to all three factors above in improving the behavior of clean and healthy life[12]. Health education that needs to be given to students in preventing diarrhea is washing hands with running water and soap, improving water quality, and enforcing the application of waste disposal in place[13].

Table 3 also shows that nutritional status is significantly related to diarrhea events. Some studies stated that malnutrition is significantly related to diarrhea events[14,15]. Children with poor nutritional status are at risk of exposure to bacteria associated with diarrheal diseases. The relationship between diarrhea and malnutrition is two directions: diarrhea causes malnutrition while malnutrition worsens the course of diarrheal disease[6]. Prolonged diarrhea causes malnutrition in patients; on the other hand, malnourished children will be at increased risk of diarrheal complications[7].

Malnutrition will decrease immune function and will increase the risk of infectious diseases such as diarrhea[16]. Malnutrition predisposes to infection because of its negative effects on mucosal defenses by triggering changes in host immune function. Decreased immune function may include delayed hypersensitivity, decreased lymphocyte response, decreased T-lymphocyte, decreased phagocytic function due to decreased complement and cytokines, and decreased immunoglobulin A (IgA)[17].

People with poor nutritional status are more likely to experience diarrhea, malaria, respiratory infections, and also have a greater likelihood of suffering with longer duration of illness. People who are poorly nourished are more likely to experience symptoms due to a common infection that will weaken the body. It is unclear whether due to certain macronutrient or micronutrient deficiency conditions that cause increased in morbidity[18].

CONCLUSSION

There is a significant relationship between knowledge, attitudes, actions related to The Clean and Healthy Behavior with diarrhea events. The relationship between nutritional status and diarrhea is also significant.

RECOMENDATION

Recommendation for Islamic boarding schools, especially, improvements in The Clean and Healthy Behavior are urgently needed. Supported by the provision of necesary infrastructure. Good knowledge creates a good attitude, and with the support of all parties (teachers, fouders, friends, parents, etc), it can create good daily actions. However, further research is needed regarding other risk factors that may affect the incidence of diarrhea in the boarding school environment.

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O-11

FACTORS ASSOCIATED WITH EXCLUSIVE BREASTFEEDING AMONG WORKING MOTHERS INYOGYAKARTA CITY, INDONESIA

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ABSTRACT

Exclusive breastfeeding is a health behavior that can be influenced by a lot of factors. Being a working mother is one of the factors that limits the practice of exclusive breastfeeding, yetthe number of female workers keep increasing every year. The aim of this study is to determine factors that are associated with exclusive breastfeeding among working mothers in Umbulharjo Subdistrict, Yogyakarta City. The factors studied are knowledge, attitude, facility's availability, duration of work, husband's support, and health provider's support. This is an observational analytic study with cross sectional design involving 84 working mothersselected through purposive sampling technique. Data was collected using a questionnaire. The data were analyzed using univariate analysis, bivariate analysis (chi square), and multivariate analysis (logistic regression). The proportion of working mothers who practiced exclusive breastfeeding was 67,9%. The main factors that were found to be associated with practiced of exclusive breastfeeding among working mothers are duration of work (p= 0,001 PR= 8,6 CI95%= 2,548–28,854) and health provider's support (p= 0,000 PR= 9,2 CI95%= 2,741–30,820). The most significant factor influencing practice exclusive breastfeeding among working mothers was the health provider's support. Thus, health providers can maximize maternity leave to do health promotion, so that when the working mothers returns to work, they are already psychologically prepared to continue exclusive breastfeeding.

Keywords : *Working Mothers, Exclusive Breastfeeding, Health Provider's Support*

INTRODUCTION

World Health Organization(WHO) internationally targeted to increase exclusive breastfeeding rate up to at least 50%.[1] Indonesia has reached the target globally with rate 55,7%.[2] That rate is still low compared to other middle-income countries like Sri Lanka (76%), Cambodia (74%), Mongolia (66%), dan Bangladesh (64%).[3] Inadequate rates of exclusive breastfeeding result from social and cultural, health-system and commercial factors, as well as poor knowledge about breastfeeding.[1]

One study that sough to being a working mother is one of the factors that restrains the exclusive breastfeeding.[4]Working mothers are more likely not to practiceexclusive breastfeeding compared to non-working mothers.[5]This same study[5] showed that 74,7% working mothers not practicing exclusive breastfeeding.Iin a study conducted in Taiwan, it was found that the average number of days a mother practiced exclusive breastfeeding before returning to work is 56 days, and only 10,6% of the mothers did continue to breasfeed after returning to work.[6]

Lawrence Green (1980) said behavior is often determined by 3 main factors, that is predisposing factor, enabling factor, and reinforcing factor.[7]Factors that contribute to the success of exclusive breastfeeding are predisposing factor, that is the knowledge about how to keep the breast milk and breastfeeding management at work, enabling factor that is facility's availability and breast milk facilities, and reinforcing factor, that is supervisor's support and health provider's support.[8]

Exclusive breastfeeding is a health behavior that can be influenced by a lot of factors. Because of this, we sought to establish factors associated with exclusive breastfeeding among working mothers in Umbulharjo Subdistrict, Yogyakarta City. The scope of this study is a health behavior in midwifery, especially exclusive breastfeeding.

The aim of this study was to determine the factors that are associated with exclusive breastfeeding among working mothers in Umbulharjo Subdistrict, Yogyakarta City. The results of this studyare expected to be useful for the development of maternal and child health services, in particular to awareness on promotion of enabling factors of exclusive breastfeeding among working mothers and on the other hand, it will help health workers address negating factors.

METHOD

This is an observational analytic study with cross sectional design. The primary data was collected using selft administered questionnaire at Umbulharjo 1 and 2 Community Health Center working area between April 2017 until May 2017.Our target was breastfeeding working mothers. Our inclusion criteria entailed those working mothers who had infants aged between 6 and 12 months.Single mothers and mothers that working on health institution were excluded from this study. Mothers were required to recall their practice on breastfeeding. The amount of samples are 80 respondents which was calculated using hypothesis test of two different proportion. We apportioned them through proportionate sampling technique to each of the areas. Umbulharo 1 Community Health Center's area takes 70% of the sample size, whereas Umbulharo 2 Community Health Center's area takes 30%.Then, we took the samples using purposive sampling technique. Only the respondents that fulfill our criteria was included in this study. The data were analyzed using univariate analysis, bivariate analysis (chi square), and multivariate analysis (logistic regression) with significance level 5%.We have received recommendation of ethical approval from Health Research Ethics Commission (KEPK) Health Polytechnic of HealthMinistry Yogyakarta with letter number LB.01.01/KE-02/XX/444/2017.

RESULTS

The results on socio-demographic characteristics showed that 59,5% mothers working on private workplace, their mean age was 28 years old; and mean age of their infants at the point of interview was 10 months. In total, we approached 84 respondents met the inclusion criteria, about 67,9% of working mothers reported to have practiced exclusive breastfeeding and 32,1% of them did not. The majority of working mothers had good knowledge on exclusive breastfeeding(53,6%);reported that they had available facilities for exclusive breastfeeding (58,3%);had a working duration of ≤8 hours/day (51,2%);were supported by their husband (53,6%); and 52.4% said they were supported by health providers. Meanwhile those who had a positive attitude towards exclusive breastfeeding were 50% (Table 1).

Table 1. Frequency Distribution of Exclusive Breastfeeding, Knowledge, Attitude, Facility's Availability, Duration of Work, Husband's Support, Health Provider's Support

Variable		n	%
Exclusive Breastfeeding			
Exclusive		57	67,9
Non-exclusive		27	32,1
	Total	84	100
Knowledge			
Good		45	53,6
Enough		19	22,6
Less		20	23,8
	Total	84	100
Attitude			
Supportive		42	50
Less supportive		42	50
	Total	84	100
Facility's Availability			
Available		49	58,3
Not avaialble		35	41,7
	Total	84	100
Duration of Work			
≤8 hours/day		43	51,2
>8 hours/day		41	48,8
	Total	84	100
Husband's Support			
Supportive		45	53,6
Less Supportive		39	47,6
	Total	84	100
Health Provider's Support			
Supportive		44	52,4
Less Supportive		40	47,6
	Total	84	100

Bivariate analysis showed that knowledge (*p*=0,033), attitude (*p*=0,035), facility's availability (*p*=0,006), duration of work (*p*=0,000), husband's support (*p*=0,01), and health provider's support (*p*=0,000) wereassociated with exclusive breastfeeding (Table 2).

Tabel 2. The Association between Knowledge, Attitude, Facility's Availability, Duration of Work, Husband's Support, Health Provider's Support with Exclusive Breastfeeding

Variable	Exclusive Breastfeeding						p-*value*
	Exclusive		Non-exclusive		Total		
	n	%	n	%	n	%	
Knowledge							
Good	36	80	9	20	45	100	
Enough	11	57,9	8	42,1	19	100	0,033
Less	10	50	10	50	20	100	
Total	57	67,9	27	32,1	84	100	
Attitude							
Supportive	33	78,6	9	21,4	42	100	0,035
Less supportive	24	57,1	18	42,9	42	100	
Total	57	67,9	27	32,1	84	100	
Facility's Availability							
Available	39	79,6	10	20,4	49	100	0,006
Not avaialble	18	51,4	17	48,6	35	100	
Total	57	67,9	27	32,1	84	100	
Duration of Work							
≤8 hours/day	37	86	6	14	43	100	
>8 hours/day	20	48,8	21	51,2	41	100	0,000
Total	57	67,9	27	32,1	84	100	
Husband's Support							
Supportive	36	80	9	20	45	100	0,01
Less Supportive	21	53,8	18	46,2	39	100	
Total	57	67,9	27	32,1	84	100	
Health Provider's Support							
Supportive	38	86,4	6	13,6	44	100	0,000
Less Supportive	19	47,5	21	52,5	40	100	
Total						100	

Variables that can be included into multivariate analysis are variables which in bivariate analysis have p value <0.25 such as knowledge, attitude, facility's availability, duration of work, husband's support, and health provider's support. The results showed that respondents who worked ≤8 hours/day were 8.6 times more likely to exclusively breastfeed than those who worked >8 hours/day (p = 0,001). Meanwhile working mothers who supported by health workers are 9.2 times more likely to practice exclusive breastfeeding compared to working mothers who had less support from health providers.

The most dominant variable affecting exclusive breastfeeding is health provider's support with p-*value* 0,000 (Table 3). The probability of a working mother to provide exclusive breastfeeding is 90%. It means that if a working mother has a duration of work ≤8 hours/day and supported by health providers, then a working mother is 90% more likely to give exclusive breastfeeding.

Table 3. The Result of Multivariate Analysis

Variable	B	Wald	df	Sig.	Exp(B)	(CI 95%)
Duration of work	2,149	12,047	1	0,001	8,575	(2,548 – 28,854)
Health provider's support	2,218	12,911	1	0,000	9,191	(2,741 – 30,820)
Constanta	-1,142	5,803	1	0,016	0,319	

DISCUSSION

The percentage of exclusive breastfeeding in this study is still above the national target of exclusive breastfeeding (39%) but the percentage is smaller than the percentage of exclusive breastfeeding in DIY (71.6%).[2] In some previous studies many have mentioned that exclusive breastfeeding percentage on working mothers is low, such as Tan (2011) states that only 25.3% of working mothers practiced exclusive breastfeeding.[5] The study by Astuti (2010) found that only 5.1% of working mothers gave exclusive breastfeeding.[9]

Meanwhile Abdullah's research (2012) found that 62.5% working mothers practiced exclusive breastfeeding.[10] This results are in line with the results of our study which found that the percentage of exclusive breastfeeding on working mothers is higher than those who not providing exclusive breastfeeding. This might be due to the average of working mother's age in this study is 28 years, which the age is still included in reproductive age (20-35 years). A woman at reproductive age can perform multiple roles, such as a wife, mother, and worker because it can be balanced with good physical strength and not easily tired.

The bivariate analysis found that there was a significant relationship between knowledge and exclusive breastfeeding on working mother. Notoatmodjo (2007) stated that knowledge is a guide in composing someone's actions (overt behavior).[7] The acceptance of new behaviors or adoption of behaviors will be more sustainable when based on knowledge. A positive relationship between knowledge and exclusive breastfeeding behavior can be proved in this study that 80% of working mother with good knowledge succeeds in giving exclusive breastfeed.[7]

Although most of working mothers are often expected to be well-informed, there are findings regarding their knowledge that warrants further interventions. For instance when asked about how to breast feed, how to squeeze milk and how to properly store breast milk, 42%, 44%, 74% and 33% respectively could not answer correctly. Perhaps, health care providers should educate mothers more on these aspects so as create awareness regarding lactation management to working mothers as a health promotion strategu which inadvertently may increase rates of exclusive breastfeeding among workinng mothers.

The result of bivariate analysis shows that there is a significant relationship between attitude and exclusive breastfeeding.The results of this study are in line with Abdullah's (2012) study which found that there is a significant relationship between maternal attitude and exclusive breastfeeding.[10] Sarwono (1997) in Maulana's book (2009) states that attitude is not the same as behavior and behavior does not always reflect someone's attitude, but attitudes can cause patterns of specific ways of thinking that can affect the actions and behavior of society.[11]

The attitude of working mothers about exclusive breastfeeding can be interpreted as the attitude of working mother individually in response to exclusive breastfeeding. In this study about 78.6% of working mother with supportive attitude successfully gave exclusive breastfeeding. Health providers can take advantage of this working mother's attitude to increase exclusive breastfeeding rates. Health providers only need to assist and support working mothers in the form of emotional support, providing the right information among others.

Indicator of facility's availability variable in this study consists of facilities at work and personal facilities owned by each working mother. In the test of the relationship between facility's availability and exclusive breastfeeding it was found that there was a significant relationship between the facility's availability and the exclusive breast feeding on working mother. Rizkianti, et al (2014) found that breast milk facility's availability is an enabling factor that plays a role in exclusive breastfeeding.[8]

Although a workplace does not have special breastfeeding facilities or breastfeeding's room, this does not decrease aworking mother's enthusiasm to

squeeze/breastfeed her baby because there are other rooms that are adequate enough to use. According to previous research, the more available private facilities such as breastfeeding plastic and cooling bag are, the greater the chances of working mothers being able to provide exclusive breastfeeding.[10]

In this study, we found that there is a relationship between a husband's support and exclusive breastfeeding. This is similar to findings by Astuti (2013)[4] and Kurniawan (2013)[9]. Astuti (2013) found that there is a significant relationship between the role of the husband and exclusive breastfeeding. The results of research by Kurniawan (2013) at RS Muhammadiyah Lamongan stated that husband's support encourages the success of exclusive breastfeeding.IDAI (2009) states that success in giving exclusive breastfeeding on working mothers is very dependent on the environment, among this being the husband's support. When a mother gets support from her surroundings, she can comfortably feed and take care of her child while working.[14]

In the multivariate analysis, there only two variables related to exclusive breastfeeding are duration of work and health provider's support. Working mothers who spent ≤8 hours/day at work were 8.6 times more likely to exclusively breastfeed compared to working mothers with a duration of work >8 hours/day. The results of this study are in line with Amin, R et al (2011)[12] who found that the flexible time working mothers to breastfeeding was associated with exclusive breastfeeding process, but the results were not in line with Abdullah's (2012) [10] study which stated no significant association between duration of work while leaving the baby with exclusive breastfeeding.

The length of working time may affect exclusive breastfeeding because the longer the mother spends at work, the longer she leaves the baby at home so that the mother can not breastfeed her baby.[13] The mother's limitations to breastfeeding makes the mother feel worried that she is unable to fulfill the needs of the baby so that working mother chooses to give other types of food when she is not home otherwise known as early weaning.

This study found 86.4% of working mothers who weresupported by health providers succeeded in providing exclusive breastfeeding, whereas 52.5% of working mothers who were less supported by health workers did not succeed in providing exclusive breastfeeding. Research at the Serpong Subdistrict Community Health Center found a significant relationship between the role of health providers and exclusive breastfeeding[9]which is in line with our study. Support from professionals in health sector is essential for mothers, and even education about the importance of breastfeeding should be given from the time the mother begins attending the antenatal clinic.[14] Health providershave a duty to accompany a breastfeeding motherto get through the breastfeeding period, including providing support whenever a mother has breastfeeding problems.

Our studyhas some limitations.The recall method that we used was bound by the ability of respondents to memorize their practice on breastfeeding andalso the used of purposive sampling may not warrant the generalization because only respondents that eligible with our criteria was included in this study.

CONCLUSION

Nearly 7 out of 10 working mothers in Umbulharjo subdistrict, Yogyakarta City, Indonesia practiced exclusive breastfeeding. The factors associated with this practice are the time amount of time spent away at work and health provider's support; the latter being the most significant factor.

RECOMMENDATION

Considering that the health provider's support was the most significant determinant of exclusive breastfeeding, we do recommend that midwives and other health providers

should increase their efforts in offering support to working mothers during their maternity leave so as to maximize uptake of exclusive breastfeeding practices. This can be done through health promotion and education, so that by the time the mother returns to work, they are already psychologically prepared to continue with exclusive breastfeeding. Therefore, it is necessary for the midwife and related health providers to have maternal data including the type of work and maternity leave duration.

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O-12

CHARACTERISTICS OF SEXUALLY TRANSMITTED INFECTIONS IN POLYCLINICDR.SARDJITO HOSPITAL YOGYAKARTA

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ABSTRACT

Sexually Transmitted Infections (STIs)is a disease that is transmitted by sexual contact. According to a health department report, Yogyakarta was a city with an incidence STIs highest in 2014, as many as 281 cases. The central of public hospital Dr. Sardjito is a referral hospitals type A which has featured service and have a special room for STIs in Polyclinic DermatoVenerology.The purpose of this research is to knowthe description ofcharacteristic of Sexually Transmitted Infections in Polyclinic Dermato Venereology RSUP Dr. Sardjito Yogyakarta. The type of this research is a descriptive research with a restrospektif. The population of this reaserch is whole of Sexually Transmitted Infections patient in Polyclinic Dermato Venereology RSUP Dr. Sardjito Yogyakarta in 2015 with sample techniques namely the simple random sampling. The data collection instrument used was a observation sheet.From 71 patients showed that the most in the age 17-25 years (53,52%), has an senior high school levels of education 71,83%, were unmarried 43,66%, first sex in 17-25 aged (80,28%), have >5 sex partner 29,57%, choose genital seks 69,01%, not doing multiple partner seks (70,41%), and does not condoms 85,91%.

***Keywords**: Characteristic, Sexually Transmitted Infections*

INTRODUCTION

Sexually Transmitted Infections (STIs)is a disease that is transmitted by sexual contact. Some STIs can also be spread through non-sexual means such as via blood or blood products.Many STIsincluding chlamydia, gonorrhoea, primarily hepatitis B, HIV, and syphiliscan also be transmitted from mother to child during pregnancy and childbirth. More than 1 million STIs are acquired every day[1].

The dominant factor that determining the frequency and distribution sexually transmitted diseases in a society, among others is agent, host, and environment.Sexual behavior able to be seen through factors host. This makes a factor host become the focus research especially in characteristics.[2]

Sexually transmitted infection in the developing country and complication ranked fifth top disease category an adult thatneed health care. Sexually transmitted infection can cause symptoms acute, chronic infections and serious consequences as infertility, ectopic pregnancy, cervical cancer, and of sudden death in infants and adults.[3]

Incidence STIs currently increase in indonesia, For example prevalence of syphilis increased to 10 % in some groups of women sluttish, 35% in trasvestites group, and 2 % in pregnant mothers.[4]

The STIs Case in 2014 for each area at Yogyakarta special region : Yogyakarta city as many as 281 cases, Sleman 10 cases, Bantul 35 cases, Meanwhile not found data STIs in wates regency and wonosari regency. According to a health department, this data obtained from all hospital in the district / city be reported in health department yogyakarta special region.[5]

According to preliminary results in installation medical record Dr .Sardjito General Hospital Yogyakartafor polyclinic dermatovenerology in 2014 there are 173 STIs cases

and 242 cases in 2015. The data describe that there are increasing cases of STIs of visiting doctor in Polyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta with different kinds of the characteristics on every patients.

METHODS

The research is descriptive research with a research design retrospective. The methodology descriptive is research intended to investigate the state, conditions, the situation, events, activities andect. The result of described in the research reports[6].

The population is the whole subjects research or objects study[7].Population in researched process this is all patients sexually transmitted infection in polyclinicdermato venereology Dr.Sardjito General Hospital Yogyakarta in 2015 (January until December 2015) were 242 people. The sample collection using a simple random sampling technique some 71 respondents. Technique the sample give an equal chance for every elements (members) a population to were chosen to be the sample members[8].

Data collection use sheets of observation (a record of a document) structured. Sheets observation shaped checks list of which consisted of six characteristics sufferers sexually transmitted infectionwith his choice in accordance with the criteria on a measuring instrument.

RESULTS

Table 1. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On Age AtPolyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Age	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	N	%
14-16	2	2,81	0	0	0	0	0	0	2	2,8
17-25	23	32,39	10	14,0	2	2,81	3	4,22	38	53,5
26-35	13	18,3	6	8,45	2	2,81	2	2,81	23	32,4
36-45	5	1,04	2	2,81	0	0	1	1,4	8	11,3
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,4**	**71**	**100**

Table 1. Summarizes characteristics of age patients sexually transmitted infection. The result showed that the most at age groups 17-25 years in the diagnosis kondiloma akuminata about 23 respondents (32,39 %)and lowest age group is at age groups 12-16 years in the diagnosis gonorrhea, tricomoniasis, and syphilisand at the age of 36-45 years in the diagnosis tricomoniasis because not found respondents at age of and the diagnosis (0 %). Not found respondents with age >46 years.

Tabel 2. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On Educational Level AtPolyclinic Dermato Venerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Educational Level	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	N	%
Uneducated	0	0	1	1,4	0	0	0	0	1	1,4
Primary School	1	1,4	0	0	0	0	0	0	1	1,4
Junior High School	1	1,4	1	1,4	0	0	2	2,81	4	5,6
High School	30	42,25	15	21,12	3	4,22	3	4,22	51	71,8
College	11	15,49	1	1,4	1	1,4	1	1,4	14	19,7
Total	43	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,4**	**71**	**100**

Table 2. Showing characteristics of education patients sexually transmitted infection. The level of education patients sexually transmitted infection most were educated last senior high school in diagnose kondiloma akuminata that as many as 30 (42,25 %) respondents.

Tabel 3. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based OnOccupation AtPolyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Occupation	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	N	%
Government employees	1	1,4	1	1,4	0	0	0	0	2	2,9
Teacher	0	0	0	0	0	0	0	0	0	0
Entrepreneur	14	19,71	4	5,63	1	1,4	2	2,81	21	30
Farmer	0	0	1	1,4	0	0	0	0	1	1,4
Traders	1	1,4	1	1,4	0	0	0	0	2	2,9
Student	20	28,1	8	11,2	2	2,81	1	1,4	31	44,3
Other	0	0	3	4,22	0	0	0	0	3	4,3
Not Working	7	9,8	0	0	1	1,4	3	4,22	11	15,5
Total	43	60,6	18	25,5	4	5,63	6	8,4	71	100

Table 3. Showing characteristics of occupation sexually transmitted infection patient. More respondents work (84,5%) than does not work (15,4%). A high percentage of the highest is students in the diagnosis kondiloma akuminata with 20 (8,1%) of respondents. not found a Sufferers sexually transmitted infection worked as a teacher.

Tabel 4. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On MaritalityAtPolyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Maritality	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	N	%
Married	13	18,3	4	5,63	2	2,81	1	1,4	20	28,2
Widow	0	0	0	0	0	0	0	0	0	0
Widower	0	0	0	0	0	0	0	0	0	0
Unmarried	30	42,25	14	19,7	2	2,81	7,04	7,04	51	71,8
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,4**	**71**	**100**

Table 4. Showing characteristics marital status patients sexually transmitted infection. More respondents unmarried in the diagnosis kondiloma akuminata as many as 30 (42,25 %). Not found respondents have been widowed and widower.

Tabel 5. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On Age Sexual Intercourse First at Polyclinic Dermato Venerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Age sexual intercourse first	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*F*	%	*F*	%	*f*	%	N	%
12-16	3	4,22	0	0	0	0	1	1,4	4	5,6
17-25	34	47,8	17	23,9	3	4,22	3	4,2	57	80,3
26-35	6	8,45	1	1,4	1	1,4	2	2,8	10	14,1
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,4**	**71**	**100**

Table 5. Show age sexual intercourse first. The percentage of sexual intercourse first is the age range of the highest 17-25 years in the diagnosis kondiloma akuminata that is about 34 (47,8 %) respondents.

Tabel 6. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based OnSexual Partner AtPolyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Total Sexual Partner	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	*N*	%
1	5	7,04	2	2,81	0	0	3	4,22	10	14,1
2	7	9,85	7	9,85	1	1,4	2	2,81	17	23,9
3	12	16,9	4	5,63	0	0	0	0	16	22,5
4	6	8,45	1	1,4	0	0	0	0	7	9,9
>5	13	18,3	4	5,63	3	4,22	1	1,4	21	29,6
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,45**	**71**	**100**

Table 6. Indicating the number of sex partner until now.The percentage of the sexual partners highest sexual were partners more than five (> 5) to diagnose kondiloma akuminata of 13 (18,3 %) respondents.

Tabel 7. Cross Mate Medical Diagnostic Sexually Transmitted InfectionsBased On LastSexual Partner AtPolyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Last Sexual Partner	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	*N*	%
Wife/Husband	10	14,08	2	2,81	3	4,22	0	0	15	21,2
Prostitute	13	18,3	6	22,53	0	0	2	2,81	21	29,6
Other	20	28,1	10	14,08	1	1,4	4	5,63	35	49,3
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,45**	**71**	**100**

Table 7. Showing last sexual partner. Sexual partners most is with another(boyfriend, friend, homoseksual partner) On kondiloma akuminata diagnose as many as 20 (28,1 %) of respondents.

Tabel 8. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On Choice Sexual Intercourse At Polyclinic DermatoVenerology RSUP Dr. Sardjito Yogyakarta In 2015 (N = 71)

Choice sexual intercourse	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*F*	%	*N*	%
Genital sex	31	43,66	9	12,67	4	5,63	5	7,04	49	69
Anal sex	10	14,08	3	4,22	0	0	1	1,4	14	19,7
Oral sex	2	2,81	6	22,53	0	0	0	0	8	11,3
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,45**	**71**	**100**

Table 8.Indicating an option in sexual intercourse a choice in sexual intercourse the most is genital in the diagnosis kondiloma akuminata 31 (43,66 %) of respondents.

Tabel 9. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On Multiple Partner AtPolyclinic Dermato Venerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Multiple partner	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	*N*	%
Yes	11	15,5	8	11,3	0	0	2	2,81	21	29,6
No	32	45,1	10	14,1	4	5,63	4	5,63	50	70,4
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,45**	**71**	**100**

Tabel 9.Showing multiple partner of sexually transmitted infection patient.Respondents were not having sexual multipartner to diagnose kondiloma akuminata about 32 (45,07 %) respondents.

Tabel 10. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On Sexual Orientation At Polyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Sexual Orientation	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	*N*	%
Homoseksual	10	14,08	1	1,4	0	0	1	1,4	12	16,9
Heteroseksual	33	46,4	17	23,94	4	5,63	0	0	54	76,1
Biseksual	0	0	0	0	0	0	5	7,04	5	7
Jumlah	**43**	**60,56**	**18**	**25,35**	**4**	**5,63**	**6**	**8,45**	**71**	**100**

Table 10.Shows a sexual orientation patients sexually transmitted infection. A sexual orientation most is heterosexual to diagnose kondiloma akuminata about 33 (46,4 %) respondents.

Tabel 11. Cross Mate Medical Diagnostic Sexually Transmitted Infections Based On Discharging Condoms At Polyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Discharging Condoms	Medical Diagnostic								Total	
	KA		Gonore		Tricomoniasis		Sifilis			
	f	%	*f*	%	*f*	%	*f*	%	*N*	%
Yes	6	8,6	0	0	3	4,22	1	1,4	10	14,1
No	37	52	18	25,5	1	1,4	5	7,04	61	85,9
Total	**43**	**60,6**	**18**	**25,5**	**4**	**5,63**	**6**	**8,45**	**71**	**100**

Table 11.Shows the use of condoms patients sexually transmitted infection. Patients sexually transmitted infection most does not use condom during a sexual intercourse on the diagnosis kondiloma akuminata about 37 (52,11 %) respondents.

Tabel 12.Frequency Distribution Based On Disease In People With Sexually Transmitted Infections At Polyclinic DermatoVenerology RSUP Dr.Sardjito Yogyakarta In 2015 (N = 71)

Disease	Frequency	Percentage
	F	%
a. Kondiloma Akuminata	43	60,56%
b. Gonore	18	25,35%
c. Tricomoniasis	4	5,63%
d. Sifilis	6	8,45
Total	**71**	**100**

Table 12.Indicates the type of sexually transmitted infection found in polyclinicdermatovenerology RSUP Dr. Sardjito Yogyakarta. Respondents with the diagnosis kondiloma akuminata more than the other with the number of 43 (60,56 %) of respondents.

DISCUSSION

Based on the characteristics of age, age group STIs most patients are 17-25 year. This is consistent with a theory of BKKBNin 2006 that 20-34 years in man and age 16-24 years in women are in a high risk, because at that age intensity sexual intercourse relatively high. This research result according to research conducted by Benedick (2011). In Benedick research the result was obtained on sexually transmitted infection mostly comes from the age range of the 17-25 the year with total 21,4 %[9].

Based on characteristic of education level, most STIs patients educated high school. This research consistent to the theory that the absence of sex education since they early age and the absence of special subjects and provide information for other students in high school, also be the cause of the high STIs among teenagers[10].

Based on occupation characteristics, more patients STIs work as students. The result of this research in line with the theory that obstacles thing is precisely how to deal with the view that everything that smells sex is taboo to mention envy by the unmarried, because teenagers often feel uncomfortable or taboo to discuss the problem of sexuality and reproduction health. But because of a curious they will strive to get this information. Often teenager feel that his parents refuses to talk about sexual problems and so they find an alternative any other source of information like friends or mass media[11].

Based on characteristic of marriage, most patients STIs is unmarried. This is consistent with the theory that respondents married sexual needs met with the couple, While the unmarried sexual needs not been fulfilled because they have not yet have a partner legitimate. There are also some respondents who had been married and suffer the

sexually transmitted infection because this group has larger factor to transmit or contracting a sexually transmitted infection[2].

Based of the activity sexual intercourse , age sexual intercourse patients STIs the most is age group 17-25 years. This is consistent with the theory that said HPV more often attacks the body mucous, while at the age of the teenager reproductive organs tend to undeveloped so with perfect span infected by a virus[4].

Based on the sexual partners most is sexual partners more than five (>5). This is in consistent with the theory according to satria (2009) that sexual partners many/more than 1 increases the risk of affected by sexually transmitted infection[12].

Based on last sexual partner patients STIs the most is other (boyfriend, friends, partner homosexual). The research was based on the theory that sexual intercourse only in pairs could still reduce the risk of sexually transmitted infection, moreover when before laboratory said the couple healthy[13]. According to ministry of finance (2008) the prostitutes a group which is included in the category of risky contracting and develop sexually transmitted infection[14].

Based on choices in sexual intercourse STIs most patients is by means of genital. This is consistent with the theory that oral sex and anal sex safer than sex activities involving genitals with genital (genito-genital). Nevertheless, oral sex and anal sex not always secure as risk contracting diseases persists[15].

Based on multipartner patients STIs the most is not doing multipartner. This is not consistent with theory according to Hernawati (2005) in Hartono (2009) said having sexual partners in average more than 5 couples and without using condoms, very high risk in the spread of sexually transmitted infection[16].

Based on a sexual orientation patients STIs the most is heterosexual orientation. It is not according to the theory presented by Daili (2010) that homosexual characterizes the high risk of transmission of sexually transmitted infection[4]. In addition , homosexual man risk having contracting sexually transmitted infection greater than heterosexual man, especially through sexual behavior risky, namely sex with more than a partner and anal sex[17].

Based on the use of condom, many patients STIs does not use condom when sexual intercourse .This is consistent with the research conducted by Saiffudin (2006) indicating that most of the sexually transmitted infection does not use condom when sexual intercourse that is about 94,1%. This is because condoms make sexual intercourse become less spontaneous and reduce sexual sensation especially in the male and even more on a married couple[18].

Based on types of disease the most is a kind ofKondiloma akuminata. This is not according to the theory Behrman (2009) that gonorrhea is a sexually transmitted infection most often happen all of the 20th century[19].

CONCLUSION

Based on the analysis and discussion of research, So the conclusion is as follows:

1. The age of patients the sexually transmitted infection is the age range of the 17-25 year.
2. Education patients sexually transmitted infection most is respondents educated last high school.
3. Occupation patients sexually transmitted infection the most is students
4. Marital status patients a sexually transmitted infection the most is unmarried.
5. The outcomes sexual intercourse is as follows :
   a. The age of sexual intercourse first among sexually transmitted infection most range of 17-25 age .
   b. Partner sexual until now in people with sexually transmitted infection the most >5
   c. Sexual partners the latest in a sexually transmitted infection most is with another (boyfriend , friends , homosexual partner).

d. A choice in sexual intercourse in people with sexually transmitted infection the most was to genital.
e. Patients sexually transmitted infection many which do not multipartner.

6. Sexually transmitted infections prevalent in respondents were not use a condom when sexual intercourse.
7. The diagnosis / types of disease in people with a sexually transmitted infection the most is kondiloma akuminata

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FACTORS THAT INFLUENCES OF PEOPLE LIVING WITH HIV / AIDS (PLWHA) IN VCT DIVISION OF GENERAL HOSPITAL WALUYO JATI KRAKSAAN DISTRICT PROBOLINGGO

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ABSTRACT

HIV / AIDS have a some symptoms that impair the system immune. HIV / AIDS became an international problem with morbidity and mortality are still high. Based on from the Ditjen PP & PL, Kemenkes RI, 2014 reported 15 534 new HIV cases and 1,700 new AIDS cases. The discovery of ARV (anti-retroviral) encourage a revolution in the care of people living with HIV in the developed world. Although antiretroviral treatment can reduce the risk of death, but the death of people living with HIV still persist. This study aims to analyze and explain the effect of treatment on survival. Quantitative research methods to design a retrospective cohort study, a sample of 209 people living with HIV who received antiretroviral treatment in 2013 and 2015 in hospitals Waluyo Jati, Probolinggo, East Java. Secondary Treatment,Adherence, Stage,Age,Sex, Occupation,Education,Mariage status, Opportunistic Infection,CD4 collection using medical record in poly VCT, univariate analysis using frequency distribution, bivariate with log rank, kamplan meier, multivariate cox regression. The results showed that the variables associated with survival of ODHA treatment, adherence to treatment, clinical stage, opportunistic infection and CD4 cell count, adherence is the dominant factor with HR4,638,95% CI 1.267 to 3.908, p value 0,000, R^2 9.6 %, average days obedient 900 days; disobedient 599 days, treatment combinations and no combination HR2,225,95% CI 1.267 to 3.908, the p value 0,005, R^2 31.2%, the mean survival day combination of 712 days, not 869 days combinations; HR0,463 CD4 count, 95% CI 0.152 to 1.390, the p value 0,170, ² 8.6%, the average CD4> 350 as many as 932 days, CD4 <350 794 days. Conclusion ODHA dutifully taking the drughad a fivefold higher risk for long survival with a contribution of 10%.

Keywords : *Survival Of People Living With HIV, CD4, Aderence, Treatment*

INTRODUCTION

HIV/AIDS cases year to year was increased base on WHO Data year 2014 and the number of death amount 34 millions (Directorate General of DC & EH, Ministry of Health R.I.2014)[1.] In Indonesia the number district affected of HIV/AIDs amount 386 districts. The cumulative number of HIV / AIDS cases in East Java Province in 2014 was 24,932 cases and 49,52% in category AIDS. In 2015 the cumulative number of HIV / AIDS was 23,924 cases and 4,04% died. Year 2015 East Java Province was second position of higher number of HIV/AIDS[1].

Based on data at GENERAL HOSPITAL Waluyo Jati Kraksaan Probolinggo, in year 2012, then people living with HIV / AIDS amounted to 68 people of whom 17.6% died. In the year 2013 amounted to 84 that 12% of them died. Prevalence of HIV / AIDS cases in Probolinggo in 2014 amounted to 21,5% of death, and in year 2015 has increased people with HIV / AIDS died to become 20%. The survival of HIV / AIDS was influenced by several factors such as adherence treatment, age, occupation, opportunistic infectious diseases, work status and others in this Hospital have not data survival people living with HIV/AIDS.

Data from 8 researchs, the result of survival people living with HIV / AIDS

different various as like Octavianus[2] result of research fourth stage of HIV/AID have not longer live; lower education very fast death three times compare high education[3]; divorced high risk of death fourth time compare with not divorced.

METHODS

This research was quantitative approach, study design was a retrospective cohort . The study was conducted retrospectively by following subjects to examine events that have occurred since people with HIV / AIDS were diagnosed with HIV / AIDS. The samples used in this study were all people living with HIV who perform treatment at General Hospital Waluyo Jati Kraksaan that inclusive the criteria of 209 Respondents. The research instrument uses checklist, data editing, coding, data entry and clearing, analysis by univariate, bivariate and multivariate. (Hastono S, and Sabri L.2010[4,5,6].

RESULT

1. Univariate Analysis

Table 1. Distribution of Respondent base on*Failure/event*on People Living With HIV/AIDS (PLWHA) In General Hospital Waluyo Jati ,Probolinggo District, Year 2013-2015.

Surival	Frequency	Presentage	Duration of long Live
Sensor	158	75,6%	980 days
Event	51	24.4%	685 days
Total	209	100	

Table 1, Survived People Living With HIV/AIDS in General Hospital Waluyo Jati, a life (*sensor*) 75,6 %, duration of life 980 days, Death*(event*) 24,4 %. The average of survived 685 days.

2. Bivariate Analysis

Table 2. Variabel That Influence Survived People Living With HIV/AIDS

Variable	Total n	*Failure/event*			Mean (days)	95 % CI	*pvalue*
		Event	*Sensor*				
		n	n	%			
Treatment							
No Combination	154	27	127	82,5	869	0.558 - 907.196	0,000
Combination	55	24	31	56,4	712	1.425 - 792.796	
	209	51	158	75,6			
Adherence							
Adherence	161	20	141	87,6	900	67.868- 933.453	0,000
No adherence	48	31	17	35,4	599	17.552- 680.680	
	209	51	158	75,6			
Stage							
Stage 1	156	29	127	81,4	862	2.668 - 900.779	0,001
Stage 2, 3 dan 4	53	22	31	58,5	727	5.029 - 808.028	
	209	51	158	75,6			
Age							
Young	49	12	37	75,5	824	55.517- 893.382	0,904
Old	160	39	121	75,6	823	79.853-865.577	
	209	51	158	75,6			
Sex							
Female	106	29	77	72,6	807	53.587-861.282	0,315
Male	103	22	81	78,6	847	97.327-896.555	
	209	51	158	75,6			
JOB							
Have Job	100	22	78	78,0	848	98.087- 897.460	0,304
No Job	109	29	80	73,4	808	4.228– 861.386	
	209	51	158	75,6			
Mariage Statue							
No married	52	12	40	76,9	824	55.181-893.461	0,979
married	157	39	118	75,2	823	80.865-866.097	
	209	51	158	75,6			
Education							
High	89	20	69	77,5	837	81.623-892.608	0,599
Lower	120	31	89	74,2	820	70.829-868.703	
	209	51	158	75,6			
IO							
No IO	142	21	121	85,2	886	848.597-923.307	0,000
HAVE IO	67	30	37	55,2	704	629.783-777.345	
	209	51	158	75,6			
CD4							
<350sel/mm3	157	47	110	70,1	794	749,1 – 838,6	0,002
≥350 sel/mm3	52	4	48	92,3	932	885,5 – 978,3	
	209	51	158	75,6			

Based on above analysis result of life table and Kaplan meier seen survival of PLWHA in General Hospital Waluyo Jati Kraksaan that survive (sensor) mostly in patient with not use combination treatment 82,5%. The result of statistic with Log Rank test obtained pvalue = 0,000 by using α = 0,05, meaning there was a significant

difference of proportion so that there was influence between treatment not combination and combination to survival of PLWHA.Based on the results of life table analysis and Kaplan meier seen survival of people living with HIV in General Hospital Waluyo Jati Kraksaan was still alive (sensor) mostly in PLWHA adherent in the treatment 87,6%. The result of statistic with Log Rank test obtained p value = 0,000 by using α = 0,05, meaning there was a significant difference of proportion so there was influence between obedient with disobedient in treatment to survival. Based on the results of life table analysis and Kaplan meier seen survival of people living with HIV in General Hospital Waluyo Jati Kraksaan was still alive (sensor) mostly in PLWHA stage 1 was 81,4%. The result of statistic with Log Rank test got p value = 0,001 by using α = 0,001, meaning there was difference of significant proportion so that there is influence between stage 1 with stage 2, 3 and 4 on survival.

Based on life table analysis and Kaplan meier seen survival of PLWHA in General Hospital Waluyo Jati Kraksaan was still alive (sensor) mostly in old PLWHA (<25 years) 76,6%. The result of statistic with Log Rank test obtained p value = 0,904 by using α = 0,05, meaning there is no difference of significant proportion so there was no influence between young age and old age to survival. Based on the results of life table analysis and Kaplan meier seen survival of people living with HIV in General Hospital Waluyo Jati Kraksaan was still alive (censorship) in the most PLWHA Male 78.6%. The result of statistic with Log Rank test got p value = 0,315 by using α = 0,05, meaning there is no difference of significant proportion so that there is no influence between female gender with male gender to survival.

Based on the results of life table analysis and Kaplan meier seen survival of people living with HIV in General Hospital Waluyo Jati Kraksaan is still alive (sensor) mostly in PLWHA working 78.8%. The result of statistic with Log Rank test got p value = 0,304 by using α = 0,05, meaning there is no difference of significant proportion so there was no influence between working with not work to survival. Based on the results of life table analysis and Kaplan meier seen survival of people living with HIV in General Hospital Waluyo Jati Kraksaan was still alive (censorship) most in unmarried people with 76.9%. The result of statistic with Log Rank test obtained p value = 0,979 by using α = 0,05, meaning there is no difference of significant proportion so that there was no influence between unpaired PLWHA with married PLWHA to survival.

Based on the results of life table analysis and Kaplan meier seen survival of people living with HIV in General Hospital Waluyo Jati Kraksaan was still alive (sensor) mostly on high-educated PLHA that wass 76.7%. The result of statistic with Log Rank test obtained p value = 0,599 by using α = 0,05, meaning there is no difference of significant proportion so that there was no influence between high level of education with low level of education to survival.

Based on the results of life table analysis and Kaplan meier seen survival of PLWHA in General Hospital Waluyo Jati Kraksaan is still alive (sensor) mostly in PLWHA that there was no IO (oppotunistic infection) 85,2%. The result of statistic with Log Rank test obtained p value = 0,000 by using α = 0,05, meaning there was a significant difference of proportion so that there was influence between PLWHA that no IO with PLWHA existing IO to survival.Based on above analysis result of life table and Kaplan meier seen survival of PLWHA in General Hospital Waluyo Jati Kraksaan still live (sensor) mostly in PLWHA CD4≥350 cell / mm 3 that was 92,3%. Number of statistic result with Rank Log test got p value = 0,002 by using α = 0,05, meaning there was difference of significant proportion so that there is influence between CD4 cell count≥ 350 cell / mm 3 with CD4 ≤ 350 cell / mm ^{3} to survival.

3. Multivariate

Table 3 Final Model Regresi Cox Factor That Influence Survived PLWHA in General Hospital Waluyo Jati Kraksaan District Probolinggo

No	Variable	p value	HR	95% CI HR	Survival	R2 (%)	R2 (%) Total
1	Treatment	0,005	2,225	1,267-3,908		9,6	
	NoCombination				869		
	Combination				712		
2	Adherence	0,000	4,638	2,495-8,623		31,2	38,1
	Adherence				900		
	No Adherence				599		
3	CD 4	0,170	0,463	0,154-1,390		8,6	
	<350 sel/mm^3				794		
	≥ 350 sel/ mm^3				932		

The result of the analysis with the last model shows that the dominant factor with the survival of PLWHA wasadherence. PLHWHA who were adherent to treatment have a fivefold risk for longer survival (900 days), the probability was 31.2%. Treatment affects the survival of people living with HIV. Non-combined treatments had more than twice the risk of surviving longer compared to combination treatment with a contribution of 9.6%. CD4 cell counts≥ 350 cells / mm^3 will decrease of death 45%, CD4 cell count contribution to PLWHA survival of 8.6%[7,8,9].

DISCUSSION

Dominant Factors Associated With the survival of People Living with HIV / AIDS (PLWHA) At Waluyo Jati Kraksaan Probolinggo Hospital Year 2013-2015 analysis with the last model shows the dominant factor of survival PLWHA was Adherence of Treatment. PLWHA who adhered to their treatment have a fivefold risk for longer survival (900 days), the probability was 31.2%. Treatment affects the survival of people living with HIV. No Combination treatment was more than twice as likely to survive longer compared to combination treatment with a 9.6% contribution to this study, similar with research by Sri, U. 2015, Octavian 2014 study of treatment had an effect on survival of PLHIV. CD4 cell counts≥ 350 cells / mm^3 will decrease of death 45%, CD4 cell count contribution to PLHIV survival of 8.6%[10,11,12]. One of the main factors that can reduce the mortality rate of HIV / AIDS patients was adherence to ARVs[10,13,14].

Adherence to therapy wasa condition in which patients adhered to treatment on a self-conscious, not just they obey the doctor's orders. This was important because it was expected to further improve the level of treatment adherence. Adherence should always be monitored and evaluated regularly at each visit. The failure of antiretroviral therapy was often caused by non-adherence of patients taking antiretrovirals. Adherence was recognized as an important factor in the success of therapy in HIV / AIDS patients, where there was a significant relationship between treatment adherence to HIV suppression, decreased resistance, increased CD4 cell count, increased survival and improved quality of life. To achieve optimal viral suppression levels, at least 95% of all ARV doses should be taken[9].

Conclusions in this study, Treatment adherence greatly affects the survival of people living with HIV and was supported by the regularity of taking medication, so that opportunistic infections can be suppressed and will increase the CD4 count so that it can prevent to an advanced stage.

CONCLUSION

1. Description of survival of people living with HIV / AIDS (PLWHA), life (sensor) 75.6%, event (death) 24.4%. The mean survival of 827 days of PLWHA, the longest living sensor (980 days).
2. Factors that affect the survival of people with HIV / AIDS (PLWHA) are medication, adherence, Stadium, Opticunistic Infection and CD4 count.
3. The dominant factor in this study is compliance. The value of HR = 4,638, meaning that PLHIV who obedient treatment has a fivefold chance compared to non-adherence for longer survival (900 days), the probability was 31.2%.

SUGGESTION

General Hospital Waluyo Jati Kraksaan : It was expected to pay attention to the documentation system in order to add data on factors that may affect survival, among other types of treatment, medication adherence, stage, age, marital status, occupation, education level, baseline CD4 cell count, transmission risk factors, occupational status, and opportunistic infections. Health workers in the VCT Clinic more attention to the type of treatment given to the patient and it was relationship with survival. It needs to be directed, planned, and continuous extension to PLWHA to raise awareness to always obtain the latest knowledge and information about survival related treatment. Need to improve the effectiveness of drug drinking companion (PMO) because patients who routinely take the drug the chance of death occurrence in people with HIV / AIDS is lower. It was also necessary to monitor CD4 cell counts to be always high.In cooperation with the installation of nutrition in health promotion efforts to people living with HIV, good nutrition will make the human immune system increases[12]. Need to increase the role of VCT counselors, counselors can be done maximally before the patient was diagnosed with HIV. Once a patient has been diagnosed with HIV it is necessary to have a deeper counseling in order to accept his situation and be able to sustain his life. In addition, to achieve the level of cohesion of PLWHA in taking medication of ARVs needed support
from family, friends and VCT officers and internal factors of PLWHA such as self-motivation stay alive and do good living activities[15,16].

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O-14

ADVANTED OF SARANG SEMUT INFUSION *(Myrmecodia pendens Merr & Perry) AS* DECREASED BLOOD'S URIC ACID IN MALE RATS OF WISTAR STRAIN

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ABSTRACT

Hyperuricemia is a condition of high levels of uric acid in the blood. Hyperuricemia can occur on the accumulation of uric acid crystals in the joints, causing pain. To overcome the problem of hyperuricemia can be done by decrease uric acid levels using herbal medicine is sarang semut (Myrmecodia pendens Merr & Perry). The aims of this research was to determine the effect extract of sarang semut on blood uric acid levels in male rats were made hyperuricemia with potassium oxonate and to find the effective dose. This research is experimental in vivo in male rats of Wistar strain. Using 30 rats were divided into 6 treatment groups, normal control group, positive control (allopurinol 12.6 mg), negative control, and sarang semut extract dose 200 ; 400 and 800 mg. Induction of uric acid is done by giving potassium oxonate 250 mg intraperitoneally. Measurement of levels of uric acid perfomed on the firts day (pre-treatment and post-treatment) and seventh day. Results of statistical test of this research showed that the extract of sarang semut in three ranks doses produce blood uric acid levels decreased significantly ($p<0,05$) compared to the negative control. If viewed from the percent dose reduction to 200 ; 400 and 800 mg, respectively 77.73% ; 134.97% and 81.64%. Decrease levels of uric acid in the three doses presumably because it contains flavonoids that act to inhibit xanthine oxidase into uric acid. From these results it can be concluded that the sarang semut extract can decrease blood uric acid levels and obtained effective dose of 200 mg.

Keywords *: Uric Acid, Sarang Semut (Myrmecodia Pendens Merr & Perry), Xanthine Oxidase, Male Rats Of Wistar Strain*

INTRODUCTION

Hyperuricemia is a condition of high levels of uric acid in the blood. that occurs due to excessive accumulation of uric acid, either due to increased uric acid production, the process of removing through the kidney is decreased or due to increased intake of purine rich foods[1] Hyperuricemia is a clinical syndrome with typical features with acute inflammation of the joint. This inflammation is caused by joint tissue reaction to the formation of uric crystals that resemble needles[2]In general, normal levels uric acid in blood for adult men ranged from 3.5 to 7.2 mg / dL and for women between 2.6 - 6.0 mg / dL[3].

Sarang semut is a plant that has been empirically proven to decreased levels of uric acid. Related to its potential in dealing with gout disease, in 2012 Marettasari & Dewanti has proven in vitro that extract and isolate flavonoid isolate from sarang semut (Myrmecodia pendens Merr & Perry) can decrease levels of uric acid[4].

The content of substances in sarang semut has flavonoids, tannins, tocopherol and polysaccharides that has been found useful, such as antioxidants, xanthine oxidase inhibitors,. In addition, in the sarang semut there is also multimineral form of calcium, sodium, potassium, zinc, phosphorus, and magnesium that can react with uric acid[5]. Based on this background, it is necessary to do research about the effect of extract of sarang semut bulbs on blood levels of uric acid of male white rats Wistar hiperurisemia.

EX PERIMENTAL METHODS

The independent variables used were the dosage of extract of sarang semut (Myrmecodia pendens Merr & Perry) ie 200 mg / kg BW rat, 400 mg / kg BW rat, and 800 mg / kg BW rat. The dependent variable used was levels of uric acid in blood of rat after give of extract ethanol of sarang semut (*Myrmecodia pendens* Merr & Perry). The controlled variables used were rats (male sex, 100-200 g weight, Wistar strain, 2-3 months of age), food type, quantity of food, shelter (cage and maintenance time), maintenance process from test animals, and manufacture of potassium oxonate. Tool and material

The tool used in this research is micro pipette, centrifuge, centrifuge tube and spectrophotometer ABX Pentra 400. Test material used extract ethanol of sarang semut (Myrmecodia pendens Merr & Perry) with remaceration method. CMC Na 0.5% suspension, positive control used allopurinol suspension 12,6 mg / kg BW rat. Potassium oxonate 250 mg / kg BW of rat, 0.9% NaCl solution. The ingredients for measuring levels of uric acid are uric acid FS TBHBA from Diagnostics System International Dyasis consisting of reagents I containing phosphate buffer PH 7.08mmol / l, TBHBA (2,4,6-Tribromo 3-hydroxybenzoic acid) 1 mmol / l and reagent II Phosphate buffer PH 7,0 100mmol / l, 4-aminoantipirin 0.3 mmol / l, K4 [Fe (CN) 6] 10µmol / l, Peroxidase (POD) ≥ 2 KU / l, Uricase ≥ 30 U / l.

EXPERIMENTAL

A total of 30 male white rats aged 3-4 months 100-200 g body weight were randomly divided into six groups (each group 5 tails). There was one normal group, control postive (C+), control negative (C-), and three dosage groups (ES200, ES400, ES800. Two control groups and three dosage groups were induced with potassium oxonate 250 mg / kg BW intraperitoneally to increasing levels of uric acid. Before induction, measurements of initial of levels of uric acid in all animal groups. After one hour of induction, the oral treatment was given by each group as follows: the control group (+) was given an allopurinol suspension of 12.6 mg / kg BW once daily, the control group (-) was given a CMC Na 0.5% times a day, ES200 was given extract of sarang semut 200 mg / kg BW once daily, ES400 given extract of sarang semut 400 mg / kg BW, ES800 given extract of sarang semut 800 mg / kg BW once daily and the normal group was given a 0.5% CMCNa suspension once daily. After one hour of treatment, blood sampling for levels of uric acid was measured. Blood collection is done through the vein of the tail. Given the group's treatment for seven days. Measured decreased concenration of uric acid on day 7. This method is quoted from Ahvaz Jondishapur University Ahvaz-Iran University of Medical Sciences, 2009.

RESULTS AND DISCUSSION

In the research used the dose of extract of sarang semut 200, 400, and 800 mg / kg of rat BB. The administration of potassium oxonic aims to condition the rat to have hyperuricemia. Rat hyperuricemia given the dose of extract of sarang semut and comparative solution for 7 days. The result of decreasing uric acid levels during treatment can be seen in table 1.

Table 1. Mean ± SD Levels of Uric Acid Rat Blood During Treatment

Groups	Mean of levels of uric acid (mg/dL)		
	Day-1		Day-7
	Before treatmen	After treatmen	
Group Normal	0,93 ± 0,452	0,99±0,552	1,10±0,751
Group control (+)	1,44 ± 0,571	3,47±0,990	0,67±0,357
Group control (-)	1,25 ± 0,401	2,70±0,548	2,24±0,454
Group dosage 200mg/kgBW	0,69 ± 0,379	2,52±0,964	1,36±0,613
Group dosage 400mg/kgBW	0,41 ± 0,405	2,57±0,558	0,70±0,482
Group dosage 800mg/kgBW	0,88 ± 0,426	3,98±1,572	1,31±0,701

Note :
Day-1 (**Before treatmen**) : initial of levels of uric acid in blood
Day-1 (**After treatmen**) : levels of uric acid after induced and 1 hour given extract of sarang semut
Day-7 : levels of uric acid after given extract of sarang semut

The levels of uric acid before treatment in Table 1 show the initial of levels of uric acid in rat. Whereas after treatment, rats in two control groups and three dosage groups had increased levels of uric acid higher than before treatment. This may occur because it is possible that potassium oxonate still strongly induced and also the test preparation has not reached the maximum therapy so treatment needs to be done until 7th day and it can be seen that on the 7th day showed a decrease in uric acid. The average of uric acid level the positive control group and the three dosage groups experienced decreased uric acid when seen from the 7th day, so it can be conclused that the giving of extract of sarang semut and allopurinol able to decrease levels of uric acid of hyperuricemia rat. Different to the negative control group given only 0.5% CMC Na, it is known that levels of uric acid are still high.

The results of decreased uric acid obtained on day 7 after administration of extract of sarang semut was made in the form of percentage decrease. This is done to find out how much extracts of sarang semut can decreased uric acid from the total or total uric acid in the body. Calculation of percentage decrease levels of uric acid on day 7 of treatment group to normal group and positive control group (allopurinol). Result of calculation of percentage of decrease uric acid level on 7th day can be seen in table 2 and calculated with formula as follows[6]:

$$\% \text{ decreased} = \frac{\text{Concentration of hyperuricemia - concentration of treatment}}{\text{Concentration of hyperuricemia - concentration of normall}} \times 100\%$$

Table 2. % Decreased Concentartion of Uric Acid in Blood of Rat Group of Treatment to Group of Normal At 7th Day

Group of treatments	% Decreased Levels of Uric Acid at 7th Day
Group control (+)	137,59%
Group dosage 200mg/kgBW	77,73%
Group dosage 400mg/kgBW	134,97%
Group dosage 800mg/kgBW	81,64%

Based on table 2 of the calculated percentage that the extract of sarang semut dose 400 mg / kg and dose 800 mg / kg BW has a better ability in decreased levels of uric acid than the dose group 200 mg / kg BW, although not able to match alopurinol as positive controls that have the best effectiveness of 137.59%. The highest decrease of levels of uric acid from dose group 400 mg / kg BW with decrease percentage 134,97% followed by group dose 800 mg / kg BW and dose group 200 mg / kg BW with percentage

decrease respectively 81,64% and 77.73%. The calculation results of effectiveness of uric acid levels decrease can be seen in table 3 and calculated by the formula as follows[6]:

$$\%\text{efektiveness} = \frac{\text{Concentration hyperuricemia - concentration treatment}}{\text{Concent. hyperuricemia - concent. of compare (allopurinol)}} \times 100\%$$

Table 3. Efektivity of Decreased Levels of Uric Acid In Blood Rat Groups Dosage Extract Of Sarang Semut To Control Positive (Allopurinol) At 7th Day

Groups of treatment	% decrease Levels Of Uric Acid At 7th Day
Groups dose 200mg/kgBB	56,16%
Groups dose 400mg/kgBB	98,09%
Groups dose 800mg/kgBB	59,34%

Based on table 3 can be seen the effectiveness of all three doses when compared to allopurinol group as a positive control. Group doses of 200 mg / kg BW, dose 400 mg / kg BW, and dose 800 mg / kg BW had a respective efficacy of 56.16%; 98.09%; and 59.34%.

Statistic test showed that all treatment dosage groups were extract of sarang semut dose 200 mg / kg BW, dose 400 mg / kg BW and dose 800 mg / kg BW can decrease levels of uric acid of hyperuricemia rat ($p < 0.05$) when compared with control (-). Furthermore, the control group (+) compared with the control group (-) has a significant difference result, that is to prove that the method used is valid. At doses of 200 mg / kg BW, 400 mg / kg BW and 800 mg / kg BW when compared with control (+) did not differ significantly, indicating that the three doses of extract sarang semut and control (+) had the ability to decrease levels of uric acid. From statistic test results obtained then it can be drawn conclusion that the extract of sarang semut can decrease levels of uric acid.

In this research extract of sarang semut allegedly can decreased levels of uric acid in blood because of the flavonoids which is an antioxidant compound. The antioxidant power in flavonoids can prevent oxidation of xanthine and hypoxanthine to uric acid by xanthine oxydace. Inhibition of xanthine oxydace may decrease the production of uric acid[7]. Tannin compounds can also inhibit the formation of enzyme xanthine oxydace too[8]. In addition to flavonoid and tannin compounds, mineral content such as sodium, calcium, and potassium in sarang semut can affect the decrease in levels of uric acid. Decreased levels of uric acid are thought to be due to ionization with minerals contained in the extract. The ionysing uric acid binds to the mineral ions to form a water-soluble salt compound[9].

CONCLUSION

From the results of this research can be concluded that the provision of extract of sarang semut (Myrmecodia pendens Merr & Perry) can decrease levels of uric acid in blood of white male rats Wistar hyperuricemia. The effective dosage of extract of sarang semut *(Myrmecodia pendens* Merr & Perry) that can decrease levels of uric acid in blood of rat is 200 mg / kg BW.

SUGGESTION

1. Further research is needed to find out specific compounds from saang semut (*Myrmecodia pendens* Merr & Perry) which can decrease levels uric acid in blood
2. Further research on acute toxicity of sarang semut (*Myrmecodia pendens* Merr & Perry) is required to provide information on the safety of use.

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O-15

THE MEANING AND ROLE OF SPIRITUALITY IN HIV/ AIDS PATIENTS

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ABSTRACT

AIDS (acquired immune deficiency syndrome) arises because of an infection caused by the entry of a virus called HIV (human immunodeficiency virus). The spread of HIV / AIDS in Cilacap is increasing, indicated by HIV / AIDS sufferers spread throughout 24 sub-districts. Data of VCT of Cahaya Pita General Hospital Cilacap stated that the number of HIV / AIDS sufferers almost reaches 700 people in Cilacap, this number makes Cilacap become the third ranks of HIV / AIDS case in Central Java. The purpose of this research is to discover the meaning and role of spirituality in HIV / AIDS patient. The methodology of this research is qualitative phenomenological approach is conducted in order to produce a description of the meaning process in accordance with the original process and the natural occurrence of the patient.. Analysis of data to be performed using qualitative data analysis according to Colaizzi that has the character of involving clarification back to participants related to the analysis or theme found from the results of research. The research finds several themes from all informants including, sincere accepting condition of sickness, repentance, giving thanks to God, obedient worship, gaining the peace of mind and spirit to live and recover. The conclusion of this study is these impacts of spirituality includes reduce the incidence of depression, increase the number of CD4 and improve the quality and health status of patients

***Keywords**: Meaning, Role, Spirituality, HIV/AIDS*

INTRODUCTION

AIDS (acquired immune deficiency syndrome) is a disease that is included in the category of chronic disease, the disease arises because of an infection caused by the entry of a virus called HIV (human immunodeficiency virus). This virus can make the immune system decreases and causes death. Until now there is no vaccine that can cure or kill the virus. This makes people with AIDS experience high stress, which is not given well intervenntion it will impact on the health of patients caused by decreased immune function. The spread of HIV/AIDS in Cilacap District is increasing, indicated by HIV/AIDS sufferers spread throughout 24 sub-districts. This pattern is different from other districts where HIV / AIDS sufferers are only found to be localized in one or two districts only. Data of VCT of Cahaya Pita General Hospital Cilacap stated that the number of HIV/AIDS sufferers almost reaches 700 people in Cilacap, this number makes Cilacap become the third ranks of HIV / AIDS case in Central Java[1]. When HIV/AIDS treatment is initiated by clients in hospitals, that's when it takes support from families and the surrounding community and self-management of HIV/AIDS clients. The discovery of the meaning and role of spirituality in HIV/AIDS patients has a positive impact on the care and management of HIV/AIDS patients. These impacts can, among other things, reduce the incidence of depression, increase the number of CD4 and improve the quality and health status of patients. Spirituality is defined as something complex and multidimensional from human experience. Spirituality is the process of human existence and great power in searching for the meaning and purpose of life. Spirituality does not depend on having a religion or a

desirable belief, but many people find spirituality through religion, through relationship with nature, through music and art, through a set of values and principles or through scientific evidence. The meaning process of spirituality in a person is unique and individual. This is a descriptive phenomenology research used to describe a daily life experience of a person. The main question is what do we know as individuals. This question focuses more on a human experience.

This study aims to reveal in depth about the meaning and role of spirituality in HIV / AIDS patients in Cilacap. It is also illustrate the meaning and role of spirituality in HIV / AIDS patients, to produce a description of the meaning process in accordance with the original process and the natural occurrence of the patient.

METHODS

Qualitative research framework is used in this study with descriptive phenomenological approach to explore the meaning and role of spirituality in HIV/AIDS patients. The goal of phenomenology is to gain a deeper understanding of the every day experiences with its central focus being the lived experience of the world within everyday life[2]. Analysis of data to be performed using qualitative data analysis according to Colaizzi that has the character of involving clarification back to participants related to the analysis or theme found from the results of research. Purposeful sampling was utilised for the recruitment of HIV/AIDS patients for this study. Seven HIV/AIDS patients were approached by the researcher. All seven HIV/AIDS patients approached agreed to join the study. Seven participants allowed a significants generation of data that was sufficient to contrue themes and concepts for this research. Interviews to the informants were conducted by in depth interviews using open ended questions to explore the meaning and role spirituality in HIV/AIDS patients.

RESULTS

During the data analysis from 7 partcipants, 130 formulated meaning were developed from the extracted significants statement leading to the cluster theme. Cluster themes were formed which were further merged in to 6 emergent themes. The sixs themes were 1). sincere accepting condition of sickness, 2). repentance, 3). giving thanks to God, 4). obedient worship, 5). gaining the peace of mind and 6). spirit to live and recover. The following is the breakdown of the patients interviews who formed a process from the start of significants statement until finally processed into a theme.

DISCUSSION

Most of support received by informants by using a religious approach where the approach is often used by the people of Indonesia when affected by the disaster. This situation helps the informant to change the negative things that happen in his life into something positive by starting sincerely accepting the condition of the pain at this time. Man must have a positive thing in himself by seeing that the world and its contents is a mere trick. Every human being is required to have the power to make the negative things that happen in him to be something positive and can turn the sad things into something that is joyous because in this world there is no one that is eternal, only God is the true and eternal.[3]

The informant also conveyed his trust and confidence to the God very helpful the process of acceptance of all the conditions of illness that exist today. By faith the informant can also increase the power to be more submissive and live God-given provisions. The resignation obtained by the informants also raises good expectations on the new life of informants after the diagnosis of HIV/AIDS. Spirituality is a source of inspiration in the form of hope, faith and strength to receive giving and nurturing life,

besides spirituality also helps the search process of the meaning of life embodied with good expectations for new life after the diagnosis of HIV/AIDS. [4]

The informant also conveyed the desire to repent her behavior in the past and always prayed for forgiveness to God Almighty. Research were conducted to know the mechanism and strategy of coping people with HIV / AIDS (ODHA) in the face of stress caused by his illness is one of them with supranatural power such as prayer and ask forgiveness and do worship prayer[5]. The same thing was also states that there are four things that are recognized as spiritual needs: the process of seeking new meaning in life, forgiveness, the need to be loved and hope.[6]

Support of health workers and families to informants in the form of mentoring, motivation and upbringing and management of diseases that are given at any time has made many informants feel that others also receive informants as they are in accordance with their current conditions. The intervention provided by health workers, especially nurses, is to show forgiveness and acceptance by providing careful attention continuously so as to show possible informants that God's forgiveness and acceptance can also be made without discriminating between one's religion and beliefs[7] .

The results show that informants feel having a new life after suffering from HIV / AIDS. The journey of getting illness up to now makes the informant gain a new meaning in his life. Gratitude is still given the opportunity to enjoy life and body condition is relatively healthy compared to other sufferers is one of the most valuable things they feel at this time. Religion and spirituality can help HIV/AIDS patients review their lives, interpret what they discover and apply what they have learned to new lives and can help in finding new meaning in life after diagnosing HIV/AIDS. [8]

All informants said there was an increase in worship activities on their lives, the worship includes praying, reading scripture, praying, dhikr, doing good and following the study of religion. This is in line states that HIV/AIDS clients become more religious by 25% and experience 41% spiritual increase after diagnosis of HIV/AIDS[9]. Research also conducted to know the meaning of spirituality in the client of HIV/AIDS using focus group discussion with one of the theme of research result is spirituality expressed by deed like listening music, going to place of worship, reading scripture, connected with nature and meditation[4] .

The informant stated that the closer they are to the God, the peace of heart in the face of life is increasingly felt. The informant was not too worried anymore and did not think constantly about his current illness condition. Spirituality and religion will eliminate the feelings of fear and suffering experienced by informants and emotional feelings of calm. It can also address informant concerns because HIV / AIDS diagnoses cause a fear of negative stigma that is often attached to HIV / AIDS. The feelings of resignation that the informant felt emotionally can trigger a sense of calm in living by surrendering all their life and death to God. [8] Spirituality is anything that touches on human relationships with the source of life force or the most powerful. This is what makes the informant to make the conclusion that life and death are in the hands of God so as to bring peace of mind.[10]

The informant conveyed that by remembering God, his life felt better. All informants stated that the body condition is getting healthier and always eager to continue ARV therapy. Most informants had a good CD4 value on their last examination. Study was conducted to investigate the relationship between spiritual well being (SWB) with depressive symptoms and CD4 count and its percentage in the positive American women of HIV / AIDS. The results obtained that the higher the SWB, the lower the depression experienced by respondents. Other results show that the higher the SWB the higher the CD4 value in HIV / AIDS patients and then it will make the respondent's immune status will be better.[11]

CONCLUSION

Spirituality is the process of human existence and great power in searching for the meaning and purpose of life. Spirituality will affect the HIV/AIDS patients both physically and psychologically. These conditions will directly or indirectly affect the health condition of HIV/AIDS patients.

RECOMENDATION

This study shows that support from the environment around the patient is important in finding spirituality that ultimately the meaning of life for patients can be found. Nurses, families and other health workers play an important role in the process of spirituality discovery and the meaning of life after the diagnosis of HIV/AIDS.

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O-16

THERAPEUTIC COMMUNICATIONS REDUCE THE PATIENT'S ANXIETY OF PRE OPERATION PATIENTS

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ABSTRACT

Operating or surgery act is a tense complex event, because beside having a physical disorder it will be able to generate psychological problems for the patients. Surgery can cause anxiety when it comes to dealing with it. Therapeutic communication actions involving patients can identify the problems. Interaction between the nurse and the therapeutic patient will produce information for the nurses about the condition of the patient and the nurse can provide information on how to solve the problem (preoperative anxiety) by helping the patient to clarify and reduce the burden of the mind and is expected to eliminate anxiety related to surgery act.To determine the effect of therapeutic communication on anxiety in preoperatingpatients.This study used experimental quasi. The design of the research is group pre test and post test with control. The technique of sampling uses consecutive sampling. The amount of sample of this research is 58 respondents. The data was collected using Independent T-Test.There was a difference anxiety before and after in the intervention group that was giving therapeutic communication through health education. The result of Independent T-Test was obtained p value = 0.000 (<0.05).There is a therapeutic communication reduce anxietypreoperative patient.

Keywords : *Therapeutic communication, preoperative and anxiety.*

INTRODUCTION

Surgery is a complex event that is stressful because in addition to experiencing physical impairment will be able to raise psychological problems for patients. Surgery can arouse anxiety when it comes to dealing with it, making it an uncomfortable feeling, anxiety or fear, fear of fear of physical change, and fear of failure in surgery.

Anxiety leads to unpleasant feelings generally cause physiological symptoms such as trembling, sweating, increased heartbeat and psychological symptoms such as panic, tension, shortness of breath, confusion, unable to concentrate, the emergence of panic, fear and anxiety at the same time or penance change. Physiological symptoms are caused by stimulation of the sympathetic and parasympathetic nerves, the endocrine system and the increase of the catecholamine hormone in response to stress resulting in unstable hypertensive and hemodynamic tachycard[1].

The most common response in preoperative patients is psychological response (anxiety), mentally the patient who will face surgery should be prepared because there is always anxiety and fear of injection, wound pain, anesthesia, there is even possibility of defect or dies[2.]

Preoperative anxiety occurs in patients undergoing elective surgery and surgery. Preoperative anxiety is considered a normal response in most patients. The sources of preoperative anxiety include two things, namely anxiety to anesthesia and anxiety about surgical procedures[3]. An anesthetic nurse should be able to make an effort to reduce the anesthetic pre anxiety level. There are several ways that can be done to reduce anxiety is pharmacological and non-pharmological (psychological) therapy. Pharmacological therapy

includes medications such as anti-anxiety medications that can help reduce anxiety but have dependence effects while non-pharmacological therapy such as psychotherapy, laughter therapy, cognitive therapy, deep breathing relaxation and one of therapeutic communication.

Therapeuticcomunicationis a media for giving and receiving between nurses both verbally and nonverbally. Therapeutic communication actions involving patients can identify problems[4]. Therapeutic nurse and patient interactions will produce information for nurses about the state of the patient and the nurse can provide information on how to solve the problem (preoperative anxiety) by helping the patient to clarify and reduce the burden of the mind and is expected to eliminate anxiety related to the surgery[5]

Initial survey that the researchers did patient population who underwent did patient population who underwent surgery 139 pati, with general anesthesia action as much 87, and spinal anastesi 52 patient. Based on preliminary study 7 out of 10 patients who will undergo surgery on average still experience anxiety.Based onthe interview with one nurse in Hospital to overcome the anxiety of the patient using pharmacology technique that is giving medicine. Based on the above data the authors are interested to conduct research with the title of Anxiety Patient Pregnancy Reduce after the Therapeutic Communication.

METHODS

This research is a research using quasi experimental design with control group study pre test and post test[6].

Tabel 1.Research of Desain

Subjek	Pre	*Treatment*	*Post*
Eksperimen	01	X	02
Kontrol	03	-	04

Research of Desain :

01 : Anxiety is measured beforeTherapeutic communication.
02 : Anxiety is measured afte Therapeutic communication
03 : Anxiety pre test of control group, measured before pre anesthesia visit.
04 : Post-test group control anxiety, measured before patient wastransferred to centre of surgical installation room.
X : Providing therapeutic communication.

The study was carried out in the treatment room, in the pre-anxiety control group performed one day before surgery 10 minutes before the anesthesia visit, and post test was done in the care room before the patient was transferred to the operating room. In the pre-test intervention group performed one day before surgery 10 minutes before therapeutic communication, post test was done in the care room before the patient moved into the operating room.

The study was carried out in the treatment room, in the pre-anxiety control group performed one day before surgery 10 minutes before the anesthesia visit, and post test was done in the care room before the patient was transferred to the operating room. In the pre-test intervention group performed one day before surgery 10 minutes before therapeutic communication, post test was done in the care room before the patient moved into the operating room.

RESULT

Table 2. Frequency Distribution of Respondent Characteristics

Variable	Intervensi		Kontrol	
	f	%	f	%
Age				
a) 17-25 years	3	10,3	5	17,2
b) 26-35 years	8	27,6	6	20,7
c) 36-45 years	12	41,4	9	31,0
d) 46-55 years	4	13,8	5	17,2
e) 56-65 years	2	6,9	4	13,8
Sex				
a) Male	16	55,2	15	51,7
b) Female	13	44,8	14	48,3
Education				
a) ElementarySchool	5	17,2	6	20,7
b) Junior School	5	17,2	6	20,7
c) Senoir School	16	55,2	13	44,8
d) University	3	10,3	4	13,8
Total	29	100	29	100

Based on the Table 2 shows that respondents in the intervention group aged 34-45 years 12 people (41.4%). Most of the men were 16 peoples (55.2%) and Women 13 peoples (44.8%). Based on the level of education most of the senior high school respondents are 16 peoples (55.2%). In the control group the average responder aged 36-45 years is 9 people (31.0%). Most of the male respondents were 15 people (51.7%) and 14 women (48.3%). Furthermore, based on the level of education most of the senior high school respondents are 13 people (44.8%).

Table 3.Test Result Normality Data Score Anxiety Pre Intervention

No	Group	*P value*
1	Intervention	0,055*
2	Control	0,078*

Based on the table 3. The result of normality test of data using shaphiro-wilk showed significant value (> 0,05). Thus it can be concluded that the data are normally distributed in both groups, so the Paired t-test is used to determine the difference between anxiety before and after

1. Uji Paired t-test

Table 4. Scoremean of Anxiety on Intervention and Control Group

Group		Std.	Mean	*P Value*
Intervention	Before	2,307	20,66	0,000
	After	2,213	15,31	
Control	Before	2,979	20,41	0,003
	After	2,661	19,55	

Based on the table 4 shows the results of t-test statistical results obtained p-value results in the intervention group 0.000 (<0.05). And in the control group from the statistical test obtained the results of p-value value 0.003 so it can be concluded both in the intervention group and the control group are both reduced.

2. Differences ReduceMean Scores Anxiety

Both the Intervention group and the control group were both experiencing reduced anxiety, to determine the effect of therapeutic communication on anxiety significantly by the previous investigator should know the difference in anxiety reduction before and after the therapeutic communication between the intervention group and the control group, to determine the difference reduce anxiety score between intervention group and control group hence researcher do normality data test first. Normality test using Shapiro-Wilk test.

The results of normality data test showed that for the pre and post anxiety score showed p value in intervention group 0,142 and in control group 0,099 significant value (> 0,05). It can be concluded that the data is normally distributed. Furthermore, because the data is normally distributed, then the data analysis using parametric test is using Independent t-test statistic test.

3. Uji Independent t-test

Table 5 Differences Test of Mean Impairment of Anxiety Score on Intervention and Control Group

Kelompok	Mean	Std. Deviation	*P value*
Intervensi	5,72	2,840	0,000
Kontrol	1,24	2,294	

Based on the Table 5 shows the result of statistical test of simple independent T-test obtained the result of p-value 0,000 in Independent T-Test (<0,05), it can be concluded that there is significant influence between therapeutic communication communication to preoperative patient anxiety.

DISCUSSION

1. Characteristics of Respondents

The results of the data analysis show that the most frequent intervention and age control groups are 36-45 years of age. Anxiety is a feeling of discomfort or a vague worry accompanied by an autonomous response (the source is often non-specific or unknown to the individual), the fear surgical / surgical procedure) caused by anticipation of hazards[8]. Age 36-45 years including middle adulthood, the period is a determination in the achievement of socio-economic stability and obtain a better life, so it requires a more optimal energy that often cause stress.

Characteristics of each person is different so the understanding of each individual is different. To be able to solve the problem also everyone has their way each. Education is generally useful in changing the mindset, behavior patterns and decision-making patterns. It is in accordance with the characteristics of respondents that at age, gender, and education showed an almost the same anxiety response. The stimulation of the sympathetic and parasympathetic nerves, the endocrine system and the increase of the catecholamine hormone in response to stress resulting in unstable hypertensive and hemodynamic tachycardia are caused by anxiety can occur in all humans under any circumstances[5].

2. Anxiety scores of intervention groups and control groups.

Based on the table 4 shows the results of t-test statistics obtained the results of p-value 0.000 in the intervention group, in the control group p-value value of 0.003 so that there is a significant influence between the intervention group and the control group. This is because both groups were done during the pre-anesthesia visit. Pre-anesthetic visits include providing informed consent.

Both the intervention group and the control group performed during anesthesia pre anesthesia visit were both decreased. Patients do not experience a decrease in anxiety, if they do not get intervention about the disease and the procedure of action to be performed and the preoperative patient's anxiety will decrease after given adequate information and explanation by health personnel

Excessive anxiety will cause the patient to be uneasy in the face of action, so as to increase the dosage of some types of anesthetic drugs used, this will lead to an increase in patient costs, as for some factors that affect anxiety levels of patients to be performed surgery and anesthesia: genetic, demographic, psychological, trigger, perentan, and symptom-forming factors[7]. Mental preparation is not less important in the process of preparation of surgery because the mental patients are not ready to affect his physical condition. The usual mental problem in preoperative patients is anxiety. Then a good pre-anesthetic step is needed to reduce anxiety.

3. Defferencesof the meanreduce in anxiety scores

The result of p value 0.000. The p-value (<0.05). It can be concluded that there is a significant reduce in anxiety in preoperative patients after therapeutic communication through health education by using a flipchart on preoperative patient anxiety.

One of the factors that can reduce patient's anxiety level is by giving therapeutic communication to patient pre-operation.Therapeutic communication has a purpose in fostering effective and interdependent interpersonal relationships with others and self-reliant. Help take effective action to change the situation. Through therapeutic communication, clients learn how to accept and receive others. With open, honest, and accepting clients as they are, nurses will be able to improve the client's ability to build trusting relationships. Techniques used in therapeutic communication are able to explore the feelings of patients and can assist clients in solving problems and able to change the way the view of the client so that clients do not see something or problems from the negative aspect alone[8].

Therapeutic communication is a medium for giving and receiving between nurses both verbally and nonverbally. Therapeutic communication actions involving patients can identify problems[3]. Therapeutic nurse and patient interactions will produce information for nurses about the state of the patient and the nurse can provide information on how to solve the problem (preoperative anxiety) by helping the patient to clarify and reduce the burden of the mind and is expected to eliminate anxiety related to the surgery[5].

The use of Therapeutic Communication in education is very influential to reduce anxiety. The use of media in education is very influential in accordance with the theory Factors that affect anxiety is the experience and information. The patient's initial experience in medicine is a great experience valuable that happens to the individual especially for the foreseeable future. This initial experience as part of an important and even crucial for the mental state of the individual in the future. Information for each person has their own meaning. The lack of information makes the respondent feel anxious about what will happen to him. Information is generally useful in changing mindsets and behavior patterns[5].

CONCLUSIONS

1. Respondents in the intervention group and dominant control at age 34-45. Most respondents in both the intervention group and the control group were male. Furthermore, based on the level of education most of the respondents have high school education.
2. There is an anxiety reduction in both the intervention group and the control group.
3. There was a difference in anxiety reduction in the intervention and control groups.

SUGGESTION

Based on the resultsof research and discussion then the researcher gives advice, as input material for ward nurses and nurse anesthesias as standard operating procedure (SOP) for nursing independent nursing intervention with therapeutic communication reduce anxiety in patient pre operation.

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O-17

ANALYSIS OF RELATED FACTORS WITH A SUBJECTIVE COMPLAINT OF MUSCULO SKELETAL DISEASES (Part II) : CHARACTERISTICS AND RELATIONSHIP CHARACTERISTICS INDIVIDUAL FACTORS ON WORKERS INSURANCE OFFICE

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ABSTRACT

Occupational health is the right of every worker to be guaranteed by the business owner. Workers are free to choose the type of work so as to obtain fair and prosperous working conditions. In the scope of occupational health prosperous has a very broad meaning covers all aspects of life ranging from health, safety, tranquility, feasibility and comfort in work (PP No.50, 2012). One of the hazards of occupational health is the danger of ergonomics. The objective of the paper was to analyze factors related to subjective complaints of musculoskeletal disorder (MSDS) disease in insurance company workers. This research is a quantitative analytic research using cross sectional study design because in this research the data collection of dependent variable and independent variable is observed in the period of time together. The results showed that the description of characteristics of individual factors for the highest complaints at age 36-45 years (43.3%), male sex (66.7%) and have a working period > 3 (68.3%) years. The relationship characteristic of individual factors "correlated significantly" for the variable age and years of service, whereas for the gender variable "there was no significant relationship".

Keywords: *Subjective Complaints, Insurance Company Workers, Ergonomic Risk Factor*

INTRODUCTION

Occupational health is the right of every worker guaranteed by the business owner and the worker is free to choose the type of work to obtain the conditions of fair and prosperous work, in the scope of prosperity health has a very broad meaning covers all aspects of life ranging from health, security, peace, feasibility and comfort in work[1]. Work has risks to health problems caused by work processes, work environment and worker health behavior. Workers are not only at risk of working-related illness or occupational disease. Occupational diseases are diseases caused by work and work environments including occupational illnesses.

Based on data from the International Labor Organization (ILO) in 2013 it is known that every year 2.34 million people are found dead related to the work of both illness and accident and about 2.02 million cases of death related to occupational diseases and every 15 seconds 1 worker died due to work accident and 160 workers suffered from work-related illness. The report on the implementation of occupational health in 26 provinces in Indonesia in 2013 the number of cases of common diseases in workers there are about 2,998,766 cases and the number of cases of occupational diseases amounted to 428,844 cases (Ministry of Health Indonesia, 2014). In Indonesia the current workplace illness illustration, such as the "Peak of the Ice" phenomenon of occupational diseases that is known and reported is still very limited and partial based on the results of the study so that it has not yet described the magnitude of occupational health and safety problems in Indonesia[2].

One element of hazard or occupational health hazard is the danger of ergonomics. Ergonomic hazard poses a health risk to workers who can cause harm to both workers and companies. Losses incurred include worker fatigue, decreased worker productivity, resulting in the loss of working days causing material loss to the company. The emergence of ergonomic risk occurs because of many factors including the factors of work environment, work factors and the factors of the workers themselves. Occupational health problems that can be caused by ergonomic dangers are Musculoskeletal Disorders (MSDs). MSDs complaints are usually felt after working for workers in a relatively long period of time and usually felt when the workers are not working in the company or have entered a period of unproductive age (retirement). MSDs complaints are subjective because each worker has different levels of complaints ranging from the highest level, moderate to low level. However, the high level of complaints perceived by these MSDs disorder workers may impair the ability to work at normal capacity.

Based on the (Khoiriah, 2013) research results on the study of ergonomic risk factors and subjective complaints Work-Related Musculoskeletal Disorders (WMSDS) on workers who use computers at PT. X in 2013 obtained the result of ergonomic risk level of work posture assessed by RULA method obtained high risk range and very high and level of ergonomic computer workstation risk assessed using ROSA method got high risk ergonomic level[3]. Based on the results of Nordic Body Map (NBM) as many as 29 out of 30 respondents (96.7%) had complaints of symptoms of WMSDs with most complaints on the upper neck (58.6%), back (55.2%), lower neck (44, 8%), waist (41.8%), and hip (38%) can be concluded that from the results obtained there is a link between the level of ergonomic risk with subjective complaints WMSDs.

While based on research on the level of risk analysis of ergonomics and complaints cumulative trauma disorders on workers computer users in PT. X 2015 shows a mismatch on some work equipment and the result of an ergonomic risk level assessment using RULA on 18 computer user workers shows high and very high risk with a range of RULA 6-7 values. While from 153 respondents in the observation showed 120 (78,43%) of respondents felt there were complaints of aches, pains, pain, discomfort at the waist (35.29%), upper neck (33.98%), and neck part down (33.33%)[4].

2. Office Ergonomics

Ergonomics is a scientific study that focuses on the appropriateness between human beings and work and other influencing factors. Ergonomic implementation considers the physical and mental abilities and worker boundaries because workers interact with equipment, equipment, working methods, tasks and work environments. In recent years, Office Ergonomics' main focus has been on computer-based work. This is based on the rapid increase in the use of computers in the office and also increased related injury or health problems experienced by workers.

Many aspects in the office that must apply the principles of ergonomic. But some things that get special attention is work posture and workstation design. The two things are interrelated, where the formation of work posture one of them is influenced by the workstation design where the workers perform work activities. Therefore in the workstation designer must consider the characteristics and limitations of workers.

3. Anthropometry

Anthropometry (the size dimension of the human body) comes from the Greek, i.e. Antropos means Man, and Metricos Means Measurement. Simply anthropometry is the study of the measurement of the human body. Anthropometry is a collection of numerical data related to the physical characteristics of the human body size, shape and strength and application of such data to the handling of design problems[5]. Humans basically have a shape of size (height, width, etc.) of weight and others that

are different from one another. Anthropometry will be widely used as an ergonomic consideration in requiring human interaction. Anthropometric data obtained successfully will be applied widely among others in terms of: Working area design (Work station, car interior), Designing equipment such as machinery, equipment, tools (tools) and so on, Consumptive product design such as clothing, chairs or tables etc., and the design of the physical environment.

4. Musculoskeletal Diseases (MSDs)

Is a complaint on the parts of skeletal muscle felt by someone ranging from very mild to very sick complaint. If the muscles receive static loads repeatedly and over a long period of time, they can cause complaints of joints, ligaments and tendons. Complaints to this damage are commonly termed with complaints (MSDs) or injuries to the musculoskeletal system.

Skeletal muscle complaints generally occur due to excessive muscle contraction due to overloading of heavy workloads with long duration of loading. Conversely, muscle complaints are unlikely to occur when muscle contraction is only between 15-20% of maximum muscle strength. But if the muscle contraction exceeds 20%, then the blood circulation to the muscle is reduced according to the level of contraction that is influenced by the amount of power required. Oxygen supplies to the muscle decreases the metabolism process of carbohydrates inhibited and as a result occur accumulation of lactic acid causing muscle pain[6].

METHOD

This research uses REBA (Rapid Entire Body Assessment) method. REBA is an ergonomic measurement method used to evaluate work, workload and posture (neck, back, arms, wrists and feet). In addition, this method is also influenced by coupling factors, external burden is supported by the body and work activities during work. Assessment using the REBA method that has been done by Dr. Sue Hignett and Dr. Lynn McAtamney through the stages dividing into three groups A, B and C) as follows:

1. Taking posture data of workers by using video or photo assistance.
2. Determination of the corners of the worker's body part.

RESULT

1. Characteristics of Individual Factors

Table 1. Distribution 0f Individual Respondent Factors with Subjective Community Compliance Rate of MSDs Diseases on Employees Division HR, Network, Budget Accauting, Banking and Seniors in PT. Insurance Jasindo Year 2017

Variable	Frequency	Percentage (%)
Age (years):		
26-35	17	28,3
36-45	26	43,3
46-55	17	28,3
Total	60	100
Sex:		
Female	20	33,3
Male	40	66,7
Total	60	100
Work (years)		
< 3	19	31,7
>3	41	68,3
Total	60	100

Source: Primary Data 2017

Based on the results of table 1, the highest individual factor distribution results were obtained in the variable age at 36-45 years old (43,3%), gender variable on male gender (66,7%), and time variable working period> 3 years (68,3%).

2. Relationship Characteristics of Individual Factors

Tabel 2. Relationship Characteristics 0f Individual Factors with Treatment Subjective Combustion Completion 0f MSDs In Workers Division HR, Network, Budget Accaunting, Banking and Seniors in PT. Insurance Jasindo Year 2017

	Ignored		Low		Medium		High		Total		P-
Variable	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**	**Value**
Age (years):											**0,000**
26-35	3	17,6	8	47,1	5	29,4	1	5,9	17	100	
36-45	1	3,8	0	0	14	53,8	11	42,3	26	100	
46-55	0	0	0	0	6	35,3	11	64,7	17	100	
Total	4	6,7	8	13,3	26	41,7	23	38,3	60	100	
Gender:											**0,836**
Female	1	5,0	3	15,0	7	35,0	9	45,0	20	100	
Male	3	7,5	5	12,5	18	45,0	14	35,0	40	100	
Total	4	6,7	8	13,3	25	41,7	23	38,3	60	100	
Work (years):											**0,002**
<3	4	21,1	5	26,3	6	31,6	4	21,1	19	100	
>3	0	0	3	7,3	19	46,3	19	46,3	41	100	
Total	4	6,7	8	13,3	25	41,7	23	38,3	60	100	

Source: Primary Data 2017

Based on the results of table 2 obtained statistical test results obtained p-value for the variable age 0.000. While the result of p-value for gender variable 0,836 and result p-value for variable of work time 0,002.

DISCUSSION

1. Characteristics of Individual Factors

Based on the results of the distribution of the highest individual factors on the age, sex and employment variables are at the age of 36-45 years, male and have a working life> 3 years.

This shows that the theory found in Oborne (1995) about skeletal muscle complaints in accordance with the results of research that says that a person at the age of 35 years new feel subjective complaints of MSDs disease and the level of complaints will continue to increase as the age of a person decreases muscle strength[7].

While for physiologically gender variables, women's muscle abilities were lower than men and based on previous studies showed the prevalence of some cases of MSDs higher for women than men[8] and theory of Tarwaka, suggests that the ratio of muscle complaint periods between men and the woman is 1: 3[9]. However, because the number of respondents' proportions between unbalanced men and women made the results in the study for the highest gender variables experienced by men.

This is one of the factors that makes the results of the study at the time of work > 3 years has the highest category in this study because in theory of Tarwaka states that workers have a working period e4 years have a risk of 2.775 times compared to workers with a working period d4 years[9]. Of the several individual factors that can affect subjective complaints of MSDs disease one of them includes the variable age and the length of work that researchers do in this company.

The preventive action that can be done to reduce subjective complaints from individual factors is by changing the habit of sitting the individual into a little lordose on the waist and a little kifose may be on the back, for the company is given at least 15 minutes for all employees to stretch simultaneously to reduce the burden static and for further research is expected to get the number of male and female respondents are balanced to be seen distribution[9].

2. Relationship Characteristics of Individual Factors

Based on statistical test results obtained p-value value for the variable age 0,000, while the value of p-value gender 0.836 and p-value value of work 0.002. So the result for the variable age and working period “no relationship” and for sexes "no relationship". At the age of 30 years degeneration in the form of tissue damage, tissue replacement into scarring, fluid reduction makes the stability of the bone and muscle become reduced, so the older a person the higher the risk of the person experiencing elastic decrease in bone that cause disease MSDs. This is the highest cause of respondents to feel the subjective complaint rate of MSDs disease at the age of 36-45 years because of the beginning of tissue damage and reduction of fluid plus if a respondent during work does not consume mineral water to make the body lack of fluids that can reduce concentration and increase muscle fatigue and contagious symptoms of MSDs disease.

While for physiologically gender variables, women's muscle abilities were lower than men and based on previous studies, the prevalence of some cases of MSDs was higher among women than men[8]. This is different from the results obtained by researchers because in this study there are several factors that affect one of them is

because the distribution of male and female respondents who do not have the same proportion of the spread makes the spread cannot be seen significantly and female respondents in the female the company has no significant complaints as the kind of work balanced between sitting and standing makes low static loads. For the variable of working period one of the factors that make the research result on the working period> 3 years have Medium and High category and is reinforced with the theory of Tarwaka, which states that workers have e4 years of service have a risk of 2.775 times compared to workers with years of service d4 years[8].

The results of this test are the same as the research (Handayani, 2011) which shows there is relationship between ages with MSDs disease complaints with p-value value 0,030. From the results of statistical test data of this study in accordance with the existing theory and content the same statistical test results that "there is a relationship" with previous research on MSDs disease. While for statistical test result for gender variable equal to research (Ridwan, 2011) stating that "no relationship" and for variable of working period of this research result same with result of research done by (Handayani, 2011) with result of p- value 0.004 which indicates that there is a relationship between the duration of the work with MSDs disease and the existing theory of the working relationship with subjective complaints of MSDs disease is similar to the results of research which proves the longer the worker will feel the subjective complaints of MSDs disease.

The preventive action to reduce subjective complaints of MSDs disease in workers of individual factors, especially for the variable age and employment can be done by:

a. For age variables, because the older the age of a person more susceptible to muscle fatigue it is necessary to rest or stretch at least 15-25 minutes to change the position of the body in order to reduce the static movement.
b. At work workers should consume enough mineral water at least 8 glasses per day, because lack of oxygen can make the occurrence of muscle fatigue and decreased concentration power that can cause symptoms of MSDs disease.
c. For the variable of working period, because the longer the work will be increasing subjecti ve complaints MSDs disease it is necessary to do administrative control by rotating workers who work in each division so that workers are not workers with the same work load during work in the company within a period of continuing in a long time[8].

CONCLUSION

Based on the results of research conducted at PT. INSURANCE JASINDO on the division of HR, Network, Budget Accounting, Banking and Agency it can be drawn conclusions, among others:

1. Description of characteristics of individual factors for the highest complaints at age 36-45 years (43.3%), male sex (66.7%) and have a working period > 3 (68.3%) years.
2. The relationship characteristic of individual factors "correlated significantly" for the variable age and years of service, whereas for the gender variable "there was no significant relationship".

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O-18

EFFECTSOF HUSBAND'S SUPPORT IN THE DURATION OF SECOND STAGEOF LABOR AMONG PRIMIGRAVIDA IN INDONESIA

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ABSTRACT

Based on the Demographic Health Survey and Indonesian Health (DSIH) data in 2012 Maternal Mortality Rate experienceda very increasing result from 307/100.000 of life birth. In 2007 Maternal Mortality Rateincreased to be 359/ 100.000 oflife birth. The direct causes are hemorrhage (42%), eclampsia or pre-eclampsia (30%), abortion (12%), infection (10%), prolonged labor or abstructed labor (54%), and ect (15%). The purpose of this study is to determine the Influence of the husband's support on the duration of second stage laboramongprimigravida mothersin the Public Health Center of Alang–Alang Lebar Palembang in 2016. The research method is using the observational analysis with the quasi- experimental study desaign with post-tes only group. The data wasanalyzed using the T-test analysis test not in pair. Based on the T-test statistic test, wet obtainedαthe P value =0,002 <α 0,05 with the average of 53.33 minutes on the duration of the second stage labor of primigravida mothers, while the average duration of the second stage labor on the maternity mothers not being accompanied by their husbands is 92 minutes. It shows that the primigravida mothersbeing accompanied by their husbandsare more quickly than those not being accompanied by their husbands. It means there is a significant influence of husband support in the duartion of second stage of labor.

Keywords : *Husband's Support,Second Stage*

INTRODUCTION

Maternal Mortality Rate (MMR) in Indonesiastill high compared to the Association of Southeast Asian Nations (ASEAN) countries. Based on the Demographic Survey and Indonesian Health data, in 2012 MMR experienced the very increasing rate, from 301/100.000 of life birth. In 2007 MMR increased to be 359/100.000 of life birth, of which the direct causes were hemorrhage (42%), eclampsia or pre-eclampsia (30%), abortion (12%), infection (10%), prolongedlabor or obstructedlabor (54%), and other causes (15%).[1]

MMR in South Sumatera Province in 2013 was 146 of life birth and increased to be 155 of life birth in 2014.[2]The number of MMR in Palembang city in 2013 was 13 persons of 29.911 life birth and in 2014 MMR became 12 persons of 29.235 life birth, of which the cause was hemorrhage (41,7%). The cause of hemorrhage was due to the duration of the second stage caused by contraction of abdominal muscles disturbed significantly so that the infant laborbecame longer.[3]

Labor is the process of opening and depleting cervix and the fetus goes down into the birth passage. Labor and normal birth is the process of expelling fetus that happens on the adequate month gestation (37 – 42 weeks), delivered spontaneously with the back head lasting an average of 18 hours without any complication to either mother or fetus.[4]Senses of security, comfort, spirit and peace which helps reduce to decrease to be less tense, and to improve emotional status so that labour process can be shortened.[5]

When in labor,there are some essential factors in the labor progress, that is, *power*, *passages, passenger, psyche,* labor helper. To know the psycho factors, a

research is done that the existence of support from the trainee will reduce the labor duration, reduce the tendency of consumption of painkillers and decrease the incident of operative vaginal labor without considering whether the person giving support is the mother's choice or not. If the support is given continuously, the value of APGAR neonatal is more than 7 in 5 minutes, and the existence of a supporter decreases the caesarean section labour.[6]

Second stage is the stage that needs high energy in a labor. It is said the labor work stage, that is a mother efforts to release her infant by following the strong contraction so that it may contribute actively and positively. Positive contribution and active participation of a maternity mother make the mental state of the mother become more relaxed, and this really supports the labor smoothness and does not make the infant stressed. This can be facilitated through the husband's support in the labor process.[7]

The objective of this research is to know the influence of husband's support on the duration of second stage of laboramong primigravida mothers in Public Health Center of Alang-Alang Lebar Palembang, Indonesia.

METHOD

The research uses the analytical observational research design with the quasi-experimental study desaign with post-tes only group. This research is the research draft by grouping/classifying the groups between the maternity mothers with their husbands' support and the maternity mothers without their husbands' supportthe duration of their second stage of labor was recorded using a timer. The Population in this research is all the primigravida mothers at the work area of Public Health Center of Alang-Alang Lebar Palembang in 2016.

The Sample ispart of the objectsto be researched and considered representing the whole population. The Samples in the research are the primigravida mothers. The number of samples being taken is 30 respondents who are divided into 2 groups (treatment group and control group). The sample withdrawal is conducted by using *"purpose sampling"* technique. The instrument used in this research is using a timer commenced at the opening 10till the childbirth which is included in the check list sheet.[8]

The data analysis uses the T-Test analysis with the level of significance α 0.05. The data are presented in the table form. The data already measured and collected are analyzed by using *software.* The result of the duration of the second stage labor will be examined its data normality by using the kolmogonor smirnov test.The hypothesis test uses the parametric test that is T-Test.

RESULT

The result of univariate analysis is obtained the research which is the maternity mothers with their husbands' support as follows:

Table1.Frequency Distribution Based on Husband's Support

Husband's Support	Frequency	Percentage(%)
Yes	15	50%
No	15	50%
Total	30	100%

Based on the table 1, it is known that from 30 respondents the maternity mothers with their husbands' support are 15 respondents (50%) and those without their husbands' support are 15 respondents (50%).

Table 2.Frequency Distribution Based on The Duration of the Second Stage

Duration of 2nd Stage	Frequency	Percentage
<1 hour	19	63,3%
>1hour	11	36,7%
Total	30	100%

Based on the table 2, the number of mother whose duration of second stage of labour lasted < 1 hour were 19 respondents (63,3%) and while those whose second stage lasted more than 1 hours were 11 respondents (36,7%).

The bivariate analysiswas conducted to see the relationship between the two variables. In this case, the variable to be analyzed was the variable of husband's support during the second stage by using the T-Test statistic test with the level of significance on α = *p value*< 0,05, which was interpreted as having significant relationship whereas if *p value > 0,05,* it implied there was no significant relationship.

Table 3. Normality Test on Variable Data during the Second Stage

During the 2nd stage	N	Mean	p-value
	30	72.67	0.063

One of the conditions from the T-test is the ration scale data or interval and the data must be normal distribution; therefore, the data during the second stage are examined by means of the statistic test of *one sample of kolmogorov smirnov test* with the result of P value 0.063 > α 0,05, which means that the data are normal distribution.

Table 4. Effect of Husbands'CompanionWith the Duration of the Second Stage Labor on Primigravida

Husbands'Companion	Duration of the 2nd Stage				P value
	<1 hour	%	>1 hour	%	
Yes	13	43,3	2	6,7	
No	6	20	9	30	0.002
Total	19	63,3	11	36,7	

Based on the table 4, it is seen that the primigravida mothers with their husbands' companion< 1 hour are 13 respondents and those > 1 hour are 2 respondents, while the primigravida mothers without their husbands' companion< 1 hour are 6 respondents and those > 1 hour are 9 respondents. After the implementation of the T-test statistic test with the P value 0,002 < α 0,05, it shows that there is the significant influence between the primigravida mothers with their husbands' companion and those without their husbands' companion.

Table5. Average of The Second Stage

No	Companion	Average
1	Accompanied by husbands	53.33 minutes
2	Not accompanied by husbands	92 minutes

Based on the table 5, it can be seen that the duration of second stage of labor for the primigravida mothers with their husbands' companionwas on average53.33 minutescompare to those without thecompanionship husband, who had an average duration of 92 minutes.

DISCUSSION

Labor Companion is someone who can do more to help the mother when delivering a baby. Companion means the existence of someone who accompanies or is involved directly as a labor guide, who can give support during gestation, labor, and postnatalin order that the labor process runs smoothly and it can give comfort to the mother in labor. The existence of a companion is very significant because of being able to do more to help a mother in labor. Thecompanion will give support and faith to the mother during the labor, and help create the comfortable situation in the labor room.

Based on the research on the mothers being accompanied by their husbands, they seem to be calm and comfortable. The husbands accompanying their wives seem to give gentle massages on their wives' backs, give words of motivation that can strengthen the mothers' mental, wife off the mothers' sweat, and give drink to the mothers to add their power when expelling while the mothers who are not accompanied by their husbands partially feel tense and worried. This is seen from the attitude of mothers who tell their complaint of being aching to the health staffs as well as their quick breathing rhythms. This according to the researcher's opinion proves that the role of a labor companion is very significant in keeping the mothers' psychology during the second stage labor. Thus, it is necessary to involve the husbands during the labor process in order to give support so that the mothers become more courageous in facing the labor and the labor may run smoothly.

Based on the table 5, it can be seen that the average duration of the second stage labor on the respondents being accompanied by their husbands is 53.33 minutes, while the average duration of the second stage labor on the respondents not being accompanied by their husbands is 92.00 minutes. The result of statistic test is found p value = 0,002, which means $p < \alpha = 0,05$. The average duration of the second stage labor on the respondents being accompanied by their husbands seems to be faster than the average duration of the second stage labor on the respondents not being accompanied by their husbands. This shows that there is the influence of husbands' companion toward the duration of the second stage labor at BPM Lismarini and BPM Sumiyati. .

From the research result, it is known that from 30 respondents, the mothers with the faster duration of second stage are 19 respondents with the percentage rate 63,33%, and it is fewer that the mothers with the longer duration of second stage are 11 respondents with the percentage rate 36,67%.The nineteen respondents being accompanied by their husbands have the duration of second stage labor on average 53,33 minutes. This according to the researcher's opinion is due to the maternal experience factor, where all the respondents are the primigravida patients or give birth to the first child. The first experience often caused worry and uncertainty to the mothers. The husband companion can a little decrease the mothers' worry, but the factors of mothers' knowledge and skill in practicing the pushing technique which is still not good enough cause the duration of second stage labor on the respondents to be longer. To the 11 respondents not being accompanied by their husbands, the duration of the second stage labor is on average 92.00 minutes. The relationship of husbands' support with the duration of the second stage labor can be assumed with the physiological labor colored with psychological components. By avoiding or reducing stress of mothers' psychology and increasing the mothers' sense of well-being, this can encourage the physiological labor process so that the progress of labor can be obtained.[9]

Physiological factors such as fear and worry become the cause of the duration of labor, his becomes less good, and opening becomes less smoothly. The effect of worry

will increase the activity of sympathetic nervous system and will increase the genital secretion (epinephrine and nonepinephrine). Epinephrine stimulates α and β receptors, and nonepinephrine stimulates α receptor. The stimulation ofα receptor will increase vasoconstriction of increased uterine muscle tone which causes the blood flow to uterus decreasing and increases maternal blood pressure,while the stimulation of β receptor will cause the uterus muscle relaxation and vasodilatation of blood vessels that will cause the decreased placental perfusion.Decreased blood flow to the placenta will disturb the fetal oxygenation, and the effectiveness of disturbed uterine contractions will slow the cervical dilatation and result in prolonged labor.[9]

CONCLUSION

From the result of the computerized T-test, it is obtained the p value 0.002 <α (0,05). This shows that there is a significant influence on the primigravida mothers being accompanied by their husbands on the duration of the second stage labor of 53.33 minutes who are faster than the primigravida mothers not being accompanied by their husbands on average of 92 minutes.

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O-19

THE RELATIONSHIP BETWEEN FAMILY BURDEN WITH FREQUENCY OF RECURRENCE PATIENT WITH PARANOID SCHIZOPHRENIA

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ABSTRACT

The family's ability to treat impaired patients indirectly will be a burden to the family, causing a recurrence in paranoid schizophrenic patients. This study is aimed to relate family burden in treating patients with schizophrenia paranoid frequency of recurrence in Amino Gondohutomo psychiatric hospital of Semarang. This research is a descriptive analysis with cross sectional approach*.* with 84 samples by purposive sampling. The statistical test used *Chi-Square***.** The result shows that there is no relationship between family burden and patient recurrence with paranoid schizophrenia (p-value = 0.001 <0.05). the correlation coefficient of 0.352 indicates that the higher the family burden the higher the recurrence arises. The study recommends that there should be an effort to reduce the burden of the family in caring for mental patients to prevent recurrence.

Keywords *: Family Burden, Recurrence, Paranoid schizophrenia*

INTRODUCTION

The number of schizophrenic patients is increasing every year. World Health Organization released data that about 1.1% or about 51 million people worldwide experience schizophrenia.[1] 50% of the rate comes from new patients and coupled with patients who experience relapse. The recurrence of schizophrenic patients who had been hospitalized showed an average number of 50-80% had recurrence.[2] Recurrence and long-term illness of schizophrenic patients have an impact on family burden in biological, psychological, social and economic aspects.[3]

The prevalence of schizophrenia patients in Indonesia is 0.17%, with a population of 252 million in 2013 estimated that the number of schizophrenic patients is 428,400 souls. Central Java in 2013 has a number of schizophrenic patients including paranoid schizophrenia type 0.23% of the total population of 34,000,000 inhabitants. This figure is higher than the national percentage number with the number 78,200 sufferers.[4] Some districts in Central Java have shown such high numbers; Sragen 0.74%, Wonogiri 0.61%, and Purworejo 0.6%. [5]

In Semarang, according to the Semarang City's 2007 health status profile, it shows that the number of schizophrenic patients is 0.29% of the total population of Semarang city 1.45 million people. The number of schizophrenic patients in Semarang is still below the national rate. Grow 0.29% which means 4096 is not a small number, and the data can still increase because the data obtained from patients who visit or known to the puskesmas. While schizophrenia patients are still many who have not been recorded in the Health Office of Semarang City because families prefer to take care of themselves at home, bring to smart people, and bring patients directly to Mental Hospital. [6]

In 2012 the percentage of paranoid schizophrenia patients showed the greatest number of schizophrenia in Central Java; 37.6% (3,959) paranoid schizophrenia, 35.9% schizophrenia not classified, 17.6% schizophrenia kataton and 8.8% schizophrenia hebefrenik and residual. Aligned also in RSJ Semarang Patient schizophrenia patients

had 37.3% of the greatest number in 2012 followed by schizophrenia not classified as 33.7%, 19.3% catharts and 9.7% hebephrenic.[7]

Paranoid schizophrenia has distinctive signs and symptoms when compared with other types of schizophrenia. The main characteristic that must be met in paranoid schizophrenia is the frequent occurrence of auditory and / or delusional hallucinations. Other characteristics that are not so prominent are dull affects, irregular behavior, kataton and irregular speech.[8] The characteristic of paranoid schizophrenia if not understood in the advanced treatment plan may result in relapse for the patient. Schizophrenic patients in general who experience recurrence show no small data. Research in southern Africa in 2008: Patients with schizophrenia experienced a recurrence of one or more times 50-92%. Patients in the treatment experienced a recurrence of 40% and patients who did not continue treatment within a year had a recurrence of 65%. Patients who did not continue treatment within two years experienced 80% recurrence.[9] While paranoid schizophrenic patients ranked highest in relapse / recurrent patients at Amino gondohutomo Semarang Mental Hospital: average per month of paranoid schizophrenia (43%) / 78 patients, unspecified schizophrenia (32%) / 58 patients, catatonic schizophrenia (15 %) / 28 patients and, schizophrenia hebefrenik (9%) / 17 patients.[7]

Some factors causing recurrence of the results of literature study researchers in patients with schizophrenia can be classified into two things namely; patient factors and environmental factors. Factors originating from schizophrenic patients are; depression mood, medication adherence and drug side effects. Factors sourced from the environment are: family support, family emotional expression, stigma, and family burden.[9]

The value of family burdens on the load scale indicates that families face a medium burden in caring for family members suffering from schizophrenia. The burden is financial, family disruption, family recreation, family interaction, effects on physical health and mental health effects. The highest burden experienced because of disruption of family activities. Sick members do not attend routine activities such as; work, school / college and also help in the household. Caregiver had to spend a lot of time taking care of sick members, expenses, routine uninterrupted work and also ignoring the needs of other family members.[10]

The psychological burden of families with schizophrenic patients also affects the physical aspects of the family.[6] Reported that families with psychiatric patients often experience physical wear due to thinking about the strange behavior of patients. Family worries when patients rampage or get a bad treatment from the community, also become a psychological burden felt by them. It can be said that, the patient as a physical and psychic stressor for family and other family members. Considering the complexity of family burden and the impact of family stressors, there needs to be serious attention to the family so that the family becomes a continuation unit of the patient care process at home and there is no recurrence.

The recurrence of paranoid schizophrenic patients shows a high rate compared with other types. Recurrence provides some negative impacts or burdens on the family such as biological, psychological, social, and spiritual burdens. The burden of the family increases with the inappropriate assessment and attitude of the family and the surrounding community in paranoid schizophrenic patients. Large family burdens need to get the attention of nurses in an effort to optimize family roles and prevention of recurrence. Based on this background, researchers are interested in taking the title: Family burden relation with the frequency of recurrence of patients with paranoid schizophrenia at Amino Gondohutomo Hospital Semarang "

METHOD

This study aims to determine the relationship of family burden to the frequency of recurrence of paranoid schizophrenic patients in RSJ Semarang. This research is descriptive analytic research with cross sectional approach. The sample of the study was

84 patients with purposive sampling technique. The results of the analysis using Chi-Square test.

RESULTS

Characteristics of Respondents a. Family Family of schizophrenic patients majority male (58,3%) with senior high school education level (40,5%) married status (90,4%). While the family age caring for patients with schizophrenia averaged 44.86 years with the lowest age of 21 years and the highest 62 years.

Schizophrenic patients consisted of 50% male and 50% female with education level 41,7% junior, 31% senior high school, 22,6% elementary school and 4.8% not school. 71.4% of patients are unmarried, 15.5% married and 13.1% widow / widower. The average age of 31 years, the youngest age of 16 years and the oldest age is 47 years. The results of Chi-Square test analysis showed a significance value of 0.001 (P value <0.05). These results indicate that Ho is rejected which means there is a relationship between the family burden and the frequency of recurrence of paranoid schizophrenic patients.

Discussion a. Characteristics of the family Family of schizophrenic patients Amino Gondo Hutomo Semarang Hospital consists of 58.3% male and 41.7 female. This result is in accordance with the opinion of Sarafino (2006) that men mostly use logic-centered coping functions when faced with difficult situations compared to women who tend to use emotion-centered coping functions so that the role of sex has a major influence on coping efforts between men and women in solving a problem.[11] Thompson's (2007) opinion also supports the results of this study that lower male sex feel the burden of families in caring for mental disorders than women. Based on the results of the study and some of the literature, researchers argue that gender affects how to treat patients with schizophrenia.[12] The results of the analysis show that the majority of families of paranoid schizophrenic patients have a recent high school education of 34 people (40.5%). The results of this study are in line with the opinion of Notoadmojo (2010) which states that knowledge relates to everything that is known to be gained through the process of learning, education, culture, and other life experiences.[13] Based on the results of the research and the opinion, the researcher believes that the family with the last high school education, at least able to recognize the problem of family members who are sick, so that the sick patients will get the maximum care and get a fast and precise service.

The results showed that the majority of families of schizophrenic patients paranoid married status is 76 people (90%). The results of this study in accordance with research Adams (2008) in the United States which states that families who are married as caregiver significantly higher bear the burden compared with couples who are not as caregiver. The results showed that the average family of paranoid skiofrenia patients was 44.86 years old with the youngest age of 21 years and the oldest age of 62 years.[14] The median age is Depkes (2007) categorized in adult stage.[5] The results of this study are in line with the opinion of Suryabudhi (2003) that age is one of the factors that influence the behavior of one's health, the longer the life the more experience, the wider the knowledge, the deeper the expertise and the better the wisdom in decision making.[15] Likewise the family, the longer the life (old), it will be better also in taking action in caring for patients mental disorders. These results are also supported by Hurlock (2002) that the more age, level of experience, maturity and strength of individuals will be more mature in thinking and working.[16] Even in terms of public confidence, a more mature individual, more trustworthy than a person who has not been high maturity. The results of this study are also in line with the research Sutejo (2009) which states that the stage of adult age to contribute to the task of complex development. In today's stage, individuals have a high degree of independence responsibilities related to socioeconomics, the source of support, and the ability to overcome problems in the face of life stress compared to other stages of life.[17] If associated with family duties in caring for family members of mental disorders, it will

threaten the task of individual development in meeting the achievement of social status.

Patients consist of 50% male and 50% female. The results of this study in accordance with the opinion Kusumawardani (2015) that men tend to be more at risk of symptoms of schizophrenia than women.[18] Women tend to be affected by hormone estrogen that is protective against symptoms of schizophrenia. The results of the analysis of patient education characteristics showed that the majority of paranoid schizophrenic patients had a junior high school education of 35 patients (41.7%), these results were consistent with the results of Suerni, Keliat, and Helena (2013) studies that the majority of schizophrenic students' recent education was junior.[19] The results of this study are similar to the opinion of Notoadmojo (2010) which states that education is one of the learning process to improve knowledge and life experience.[13] These results are in the opinion of Townsend (2007) which states that education is a socio-cultural factor associated with the occurrence of mental disorders.[12]

The results of this study are associated with some opinions, the researchers conclude that the higher the individual education the more knowledge and life experience gained, so that will affect the ability of patients receive information in the process of life. The results of the analysis of patient's marital status characteristics showed that the majority of paranoid schizophrenic patients were unmarried (71.4%). The results of this study are consistent with the results of Suerni, Keliat, and Helena (2013) studies that the majority of schizophrenic patients are not married so that the sense of loneliness and solitude in living can be a stressor for schizophrenic patients.[19]

The results show that the average of paranoid schizophrenic adults is 31 years old which is the productive age. The results of this study are in line with the opinion of Kusumawardhani (2015) that the symptoms of schizophrenia appear in productive ages (18-45 years).[18] The results of this study are also in line with research Suerni, Keliat, and Helena (2013) which states that the majority of patients who have mental disorders are in adulthood.[19] This result is in the opinion of Stuart (2009) who argued that adulthood is the socio-cultural aspects of mental disorders with the highest frequency compared to other ages.[20] In adulthood, individuals are faced with complex developmental tasks with more independence responsibilities than previous stages of age related to socioeconomics, sources of support, and problem-solving skills in the face of life stress.

The results showed that there was a correlation between treating the load and the frequency of recurrence of paranoid schizophrenic patients with p = 0.001. These results indicate that patients who experience recurrence frequency less than 2 times, indicating the burden of the majority family is in the light to moderate load, whereas in patients who experience recurrence frequency more than 2 times, the majority of family burden is in heavy load. . The results of this study are in line with Chandra's (2004) study that family treatment of schizophrenia patients, if not accompanied by knowledge and correct attitude will result in recurrence of schizophrenic patients.[21] The results of this study are in line with Sulistyowati (2012) study entitled "Relation of family health tasks with recurrence of schizophrenia" indicating that there is a correlation between the ability of family caring for schizophrenic patients with recurrence of schizophrenia (p = 0,015).[22] The ability is shown by giving the family of drugs in accordance with the dosage recommended by health workers. Families are aware that schizophrenic patients have dependence on others. the cognitive condition of the schizophrenic patient suffering from the disorder motivates the family to always monitor the treatment the patient should consume, so that the patient does not experience a drug break and does not fall into a recurrence condition.

The results of this study supported the results of Evangeline (2004) research that the subjective burden felt by the family due to schizophrenia patients, among others, is the emergence of problems related to the behavior shown by schizophrenia patients, relationships among family members, the task of caring for schizophrenia patients, financial problems with difficulties and incompatibility in the subject's life with schizophrenic patients. The results of this study are supported by the study of phenomenology conducted by Ngadiran, Hamid, and Helena (2010) that the burden felt by

the family in treating psychiatric patients is not only subjective burden but psychological burden and financial burden as well.[23] Research conducted by Reknoningsih, Helena, and Susanti (2013) on the study of the phenomenology of family experience in caring for post-baby patient showed that the family had emotional burden and physical fatigue in caring for the patient.[24] Based on the results of the study and some of the literature, the researcher believes that the burden the schizophrenic family feels in the form of subjective burden, psychological burden, financial burden, emotional burden, and physical fatigue.

CONCLUSION

The majority of family characteristics of male sex, recent high school education, married status. The average family age is 44.86 years. While the characteristics of male sex patients the same as women, the majority of education last junior, unmarried status. There is a relationship between family burden and the frequency of recurrence of paranoid schizophrenic patients.

SUGGESTION

The study recommends that there should be an effort to reduce the burden of the family in caring for mental patients to prevent recurrence.

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O-20

INFORMATION THROUGH THE FLIPBOOK TO THE LEVEL OF KNOWLEDGE ABOUT DOMESTIC VIOLENCE IN FERTILE COUPLES IN SLEMAN IN 2017

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ABSCTRAC

Domestic violence can have an impact on reproductive health. This study aims to determine the Influence of information through the Flipbook to the level of knowledge about Domestic Violence in fertile couples in Sleman in 2017 ". This research is quasi-experimental research. The population is a fertile-age couple in Sleman in 2017. The sample is obtained by simple random sampling. The sample size was 70 respondents for the experimental group and 70 for the control group. The independent variables are the giving of information through flipbook about domestic violence (KDRT). The dependent variable is Knowledge of Domestic Violence. In the experimental group were given information through the Flipbook on domestic violence, while the control group was given leaflets. Instruments in the form of questionnaires and data collection format. Analysis with T Test analysis with significant level 5% (p = 0,05). The results of this research is in the experimental group given information with the average flipbook knowledge level of pretest domestic violence 62.8, standard deviation 7.2 post test average 78.5 standard deviation 6.6. In the control group with leaflet, pretest average of 60.8, standard deviation of 8.9; average post test 71.5 standard deviation 10.4. Average knowledge increase 15.6, standard deviation 8.5, in leaflet group 10.7, standard deviation 10.4 with p-value 0.003. There is a significant difference in the average increase in knowledge of domestic violence between flipbook and leaflet groups. The conclusion of this study is significant of giving the flipbook to the level of knowledge about domestic violence.

Keywords : *Information, Flipbook, Knowledge, Fertile Couples*

INTRODUCTION

According to domestic violenceregulation No. 23 of 2004, violence in the household is any act against someone, especially women, misery or suffering physical, sexual, psychological, and / or negligence of household including threat to commit acts, coercion, or deprivation of liberty unlawfully within the domestic sphere.[1]

The incidence of domestic violence can not be determined because not all incidents of domestic violence were reported. According to National Commision of Human Rights 2014in Indonesia, as many as 8626 cases in the personal sphere, 59% or 5,102 cases of violence against wives. Cases of physical violence still the highest rank on the type of violence in the realm of personal in 2014, reaching 3,410 (40%), followed by the second position psychic violence of 2444 (28%), sexual violence was 2,274 cases (26%) and economic violence was 496 cases (6%). The above sequence was equal to the data in 2013. The majority of women's age range of victims in the personal sphere is 25-40 years, following afterwards at the age of 13-18 years, then at the age of 19-24 years. This means that the highest violence occurs at the age of marriage (25-40 years).In 2015, there were 16.217 cases from Woman National Commision of Human Rights.violence that

occurred in the realm of domestic/personal violence recorded 69% or 11.207 cases. A total of 11.207 cases in the realm of domestic/personal violence, 60% or 6.725 cases of violence against wives, 24% physical violence was first ranked with a percentage of 38% or 4.304 cases, followed by sexual violence 30% or 3.325 cases, psychological violence 23% or 2.607, and economic violence 9% or 971 cases.[2,3]

Numbers of domestic violence in Yogyakarta in 2015 increased. According to the Women's Crisis Center Rifka Anisa, the number of domestic violence caseslast year as much as 252 cases, and in 2015 jumped to 313 cases. Of the 313 cases, 223 cases occured as woman violence.[4] Integrated Service Center for Women and Children "Rekso Dyah Utami" stated that in 2014 there were 50 wives as victims of woman violence, violence against children as many as 21 victims, there were eight victims of rape, six victims of courtship violence, 31 victims of domestic violence and 10 other cases. Total of woman violence above was 120 cases that spread in 6 areas, they were the city of Yogyakarta as many as 29 victims, 30 victims in Bantul, 42 victims in Sleman, in 6 victims in Gunung Kidul, 7 victims in Kulon Progo, and 6 people from outside of Yogyakarta.[5]

The impact of violence against wives and children that occurred in India showed that mothers who experience psychological abuse and sexual coercion increased the risk of malnutrition in mothers and children. Domestic violence experienced by 34% of mothers in the sample.[6] The impact of violence on work was poor performance, more time spent seeking for help with a Psychologist or Psychiatrist, and afraid of losing a job. The consequences for children were: the possibility of a child's life would be guided by the violence, the possibility of abusive behavior in children would be higher, the child may experience depression, and child had the potential to do violence on their partners if theyhad married therefore children imitate the behavior and treat the otheras was done by their parents.[7] Women who experience emotional violence or controlling behavior had the highest level of emotional distress. There was a relationship between the cumulative number of different forms of domestic violence and female levels of emotionaldistress.[8]

Factors that affecting domestic violence is patriarchal values and traditional, the lack of financial autonomy of women, and lower socioeconomic status is a risk factor for physical domestic violence. In the patriarchal culture, the position of woman is lower than a man. Decision-making for woman is also dependent on man.[9]

Media attention-grabbing message sender or recipient of the message will help to accelerate the understandingin the learning process. The media also serves to clarify the presentation of the message so as not only written or spoken, overcoming the limitations of space, more communicative and productive in learning, the time can be conditioned, eliminating the tedium of students in learning, increase the motivation of students to learn something/excite learning, serving a diverse student learning style, as well asincrease levels of activeness in learning activities.[10]

According to Syarrifudin (2014) thatliteracy of information and communication technology (ICT) community in South Sulawesi was very adequate. Mobile phone was the mostused media by respondents following a computer. The utilization of these two media had led to variations in behavior and cultural life of the community or part of the information society. On the internet, the average literacy of respondents has had a standard mastery and understanding of information and technology required in daily activities. The results of this study also concluded that the dependence of the community in using ICT as a media of information.[11,12]

Flipbook is one media that can be used educators in the learning process by using software. Flipbook is one of type of animation that displays the pages of a book pages move like opening a book. Reading books can be done not only monotonous. Animated display enables the material contained in the book feel more real when added to the video in accordance with instructional materials, so flipbook media were very helpful in improving learning outcomes. Flipbook as one of the media images with variative and attractive presentation are expected to provide alternative learning experiences to attract the attention of students so that they can solve the problems of limited facilities.[12,13]

Preliminary study conducted in Tamanmartani, there was a case of physical abuse on housewifein the last 2 years.Fertile couple ageknowledge about domestic violence needs to be improved because of violence in the household need to be revealed to seek alternatives to empowerment of victims of violence in order to avoid undue happen in order to achieve a healthy reproductive health rights. The purpose of this study was known the effect of the information through the flipbook to knowledge about domestic violence in Sleman 2017.

METHODS

This study was a *quasi-experimental* design used pre post test only control group design. This design need to be evaluated after the intervention. The changes that occurred after the intervention were recorded and compared to two between treatment and control groups. The independent variable was povision of information through the media, while the dependent variable was knowledge of domestic violence.

This study was conducted in February-September 2017. The experimental group located in Tamanmartani Sleman. The control group located in Tirtoadi, Mlati, Sleman. The location of instruments test was inBanyurejo, tempel, Sleman. The study population was all couples of reproductive age (husband and wife) in Tamanmartani and Tirtoadi Mlati Sleman 2017. The determination of the samples used minimal sample size formula from Lemesshow.

Based on the formula above, obtained a sample size estimate of 30.8, toanticipate*Lost to follow-up* as much as 10%, the total were 35 couples of fertile age. Samples of intervention group were 35 couples of fertile age and the control group were 35 couples of fertile age (husband and wife). The total respondent were 70 couples of fertile age (husband and wife) as many as 140 person. The sampling technique used simple randomsampling,with odd numbers of sequence numbers. The sampling method was as follows: Tamanmartani and Sidoadi are taken randomly each 1 hamlet. After that, researchers randomized fertile-age couples in selected hamlets to 35 fertile couples who met the criteria. Data collection tools used questionnaires. In the experimental and control groups, the current approach to couples of reproductive age in their homes, fertile couples were given a questionnaire of knowledge before the intervention given *flipbook* and leaflets about domestic violence. Both couples were asked to sit at a minimum distance of 1 meter. The time given to complete a questionnaire for a maximum of 45 minutes. A month after intervention, the respondent were followed up with same methode. Data were analyzed by dependent *t-test* to determine differences in the increase of knowledge each group and *Independent t-test* to determine differences margin improvement in both groups, with a significance level ($\alpha = 0.05$) and*Confidence Interval* (CI) = 95 %.

RESULTS

This study was conducted in Tamanmartani Kalasan Sleman as experimental group as much as 35 pairs offertile age (70 respondents). While respondents where located in Tirtoadi Mlati Sleman as control group as much as 35 pairs of fertile age (70 respondents).

1. Research Subject Characteristics

Table 1.Characteristics of Couples of Fertile Age Inintervention and Control Group

Characteristics	Category	Group				Total		P Value
		Flipbook		Leaflet		F	n%	
			n%		n%			
Gender	Male	35	25.0	35	25.0	70	50.0	1.00
	Woman	35	25.0	35	25.0	70	50.0	
	Total	70	50	70	50	140	100	
Age	≤ 35 years	28	20.0	20	14.3	48	34.3	0.154
	35 years	42	30.0	50	35.7	92	65.7	
	Total	70	50.0	70	50.0	140	100	
Education	Basic	21	15.0	29	20.7	50	35.7	0.214
	Medium	42	30.0	38	27.1	80	57.1	
	High	7	5.0	3	2 1	10	7.1	
	Total	70	50.0	70	50.0	140	100	
Work Status	Work	51	36.4	40	28.6	91	65.0	0.051
	Not Work	19	13.6	30	21.4	49	35.0	
	Total	70	50.0	70	50.0	140	100.0	

Table 1 showed that the characteristics of the respondents according to age, the majority of respondent aged> 35 years, the flipbook group was 42 (30%) and in the leaflet group was 50 (35.7%) with *p value of* 0.154 indicates that both group were homogeneous. Characteristics of respondents by level of education showed that the majority of respondents hadmedium education, the flipbook group was 42 (30%) respondents and in the leaflet group was 38 (27.1%)respondents with *p value* 0.214, it showed that both groups were homogeneous. Characteristics of respondents by employment status showed that most respondents were work, the flipbook group was 51 (36.4%) respondents and in the leaflet group was 40 (28.6%) respondents with *p value* of 0.51indicated that both groups were homogeneous.

2. The Level of Knowledge About Domestic Violence Before and After Given The Information Through The Flipbook And Leaflets

Table 2. Differences in the value of the level of knowledge about domestic violence on the subject before and after treatment

Variables	Group	Treatment				t	p value	95% significant
		Pre test		Post test				
		X	SD	X	SD			
Level of knowledge about domestic violence	Flipbook	62.8	7.2	78.5	6 6	-15.2	0,000	-17.69- -13, 59
	Leaflet	-13.45	8.9	71.5	10.4	-7.8	0.000	60.8- -7.97

Table 2 showed that the intervention group had average level of knowledge about domestic violence, score of pretest was 62.8, standard deviation 7.2, post-test average 78,5 with a standard deviation of 6,6 p-value of 0.00. It could be concluded

that there was a significant difference mean average level of knowledge before and after given information by flipbook. In the control group, the average score pretest was 60.8, deviation standart 8.9, average score of post test was 71,5 with deviation standar 10,4 p-value of 0.000. It could be concluded that there was a significant difference the average rate of knowledge before and after given informaation by leaflets.

3. Influence Flipbook and Leaflets Against The Knowledge of Domestic Violence

Table 3. The Difference in The Average Difference in The Level Of Knowledge About Domestic Violence on The Subject Before and After Treatment

variable	group		SD	t	P value	95% CI
level of knowledge about domestic violence	Flipbook	15.6	8.5	3.01	0,003	1,666-8.047
	Leaflet	10.7	10.4			

Table 3 showed the results of measurements difference average in increased knowledge about domestic violence. The flipbook group hadmean difference before and after intervention of 15.6, standard deviation 8.5. The control group had mean difference before and after intervention of 10.4 with a standard deviation of 10.7 *p-value* of 0.003. It means that there was a significant differences in the average level of knowledge before and after intervention. It can be concluded that there was an effect on the level of knowledge about domestic violence with flipbook.

DISCUSSION

According table 2, it showed that the experimental group had the average level of knowledge about domestic violence with pretest scoreof 62.8, standard deviation 7.2, post test average 78.5 standard deviation of 6.6 and p-value 0.000. It can be concluded that there was a significant difference of average level of knowledge before and after given flipbook. In the control group, pretest average of 60.8, standard deviation 8.9, post test average 71.5, standard deviation 10.4 with p-value 0.000. This means that there was a significant difference in the average level of knowledge before and after given leaflet.

Factors that affecting domestic violence are patriarchal and traditional values, the lack of financial autonomy of women, and lower socioeconomic status. Those are factors ofphysical domestic violence. In the patriarchal culture, the position of women is lower than in men. Decision-making for woman is also dependent on man.[9]

Media attention-grabbing message sender or recipient of the message will help to accelerate the understandingin the learning process. The media also serves to clarify the presentation of the message so as not only written or spoken, overcoming the limitations of space, more communicative and productive in learning, the time can be conditioned, eliminating the tedium of students in learning, increase the motivation of students to learn something/excite learning, serving a diverse student learning style, as well asincrease levels of activeness in learning activities.[10]Learning media is important in the learning process fordelivering messages and information to learn. Well-designed learning media will greatly help learners achieve learning objectives.[15]

Table 3 showed the results of measurements of the average gap increased knowledge about domestic violence, the flipbook group mean difference before and after treatment of 15.6, standard deviation 8.5, the leaflet group mean difference before and

after treatment 10.7, a standard deviation of 10.4 with a p-value of 0.003, that there are significant differences differences increase in the average level of knowledge before and after treatment can be concluded that there is a flipbook effect of the level of knowledge of the subject of domestic violence.

Development of instructional media should fulfill the principles of VISUALS*(Visible, Interesting, Simple, Useful, Accurate, Legitimate, Structured)* in a systematic planning for the use of media. The types of media that can be prepared or developed in learning which include: visual media are not projected, the projected visual media, audio media, and multimedia. The media will be more lively, interesting and entertaining by incorporating elements of music. The use of instructional media can facilitate learning and optimizing learning outcomes. Teachers should be able to choose and develop the right media.[14]

The use of information and communication technology (ICT) can improve the quality of human resources by improving the quality of education, one of them is by improving the quality of teaching media. If designed properly, ICT products can be utilized in a good learning as a learning tool, Tools of teaching and learning interactions, as well as tools or self-learning resources for students.[15]

CONCLUSIONS

1. There was a significant difference in the average level of knowledge about domestic violence before and after given information by flipbook.
2. There was significant differences the average level of knowledge about domestic violence before and after given information by leaflet.
3. There was an effect on the level of knowledge about domestic violence by flipbook.

ADVICE

Flipbook can be used as an optional tool in delivering health promotion of domestic violence.

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Poster Presentations

P-01

EXPERIENCE OF ADOLESCENTS WITH PREMENSTRUAL SYNDROME AND INFORMATION-FOCUSED THERAPY (IFT) FOR REDUCING ITS AFFECTIVE SYMPTOMS

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ABSTRACT

Premenstrual syndrome (PMS) refers to physical and emotional symptoms that occur before menstruation. PMS is a health problem experienced by around 20-40% of women. The symptoms of PMS affects quality of women's life. Information-Focused Therapy (IFT) is a non-pharmacological treatment that is effective therapy as an treatment of PMS.
This research aimed to find out the effect of IFT in decreasing PMS of adolescent and to described their experience. A Mixed Methods study used sequential exploratory approach. Number of respondents were 26 and 6 female students as informants of SMK Puragabaya Bandung, West Java, that met criteria of PMS based on American College of Obstetrics and Gynecology (ACOG). IFT were presented with information about PMS, nutritional for PMS, activity recommendations, and relaxation management. The data were collected from the questionnaires about symptoms and the results of in-depth interviews. The analysis of data used Paired Sample T-Test and Colaizzi method for data qualitative. Results: Paired t-test was used find out changes of symptoms before and after giving IFT (p=0.003). There is a decrease of symptoms before and after IFT. Six themes were found: PMS perceived as a change that affects the psychological, behavioral and physical; PMS interfere activities and social relationships; Adolescents prefer non-pharmacological treatment to PMS; The Handling of PMS based on Family suggestions; IFT can decrease affective symptoms; and Perception of adolescent being more positif after IFT. Conclusion: IFT effective in reducing PMS. Therefore, nurses have a role to apply IFT for PMS.

Keywords: adolescent, premenstrual syndrome, information-focused therapy

INTRODUCTION

Menstruation is the discharge of blood from the uterus through the vagina which happens monthly[1]. Menstrual disorders are problems which occur in the menstrual cycle. Menstrual disorders happen because of many factors, including abnormal anatomy, physiological imbalance and life style[2.] Premenstrual Syndrome (PMS) refers to physical and emotional symptoms that occur in the one to two weeks before a woman's period. Symptoms often vary between women and resolve around the start of bleeding. Common symptoms include acne, tender breasts, bloating, feeling tired, irritability, and mood changes[3]. An estimated 85-97% of female adolescents experiencing psychological and physical symptoms by PMS before the onset of menstruation[4]. The high number of PMS problems in women, especially adolescents will have an impact on the quality of life, that is if the symptoms of PMS not handled properly can interfere with daily activities and if it occurs in the long term and not handled, it can affect the academic value of school, can disrupt the learning activities so that

adolescents can not concentrate in receiving their lessons at school[5]. A few interventions to reduce PMS include going out for a walk out of the house, sleeping, eating sweet foods, or consuming analgetic. Information-focused therapy (IFT) is one of PMS handling or non-pharmacological treatment for PMS. IFT consist of Information about PMS handling. The information just only on relaxation training, nutritional and vitamin guidelines, dietary and lifestyle recommendations, and assertion training, and did not address belief restructuring[15].

Based on information obtained from the observation of researchers, SMK Puragabaya Bandung was one school that had no subject about health of reproduction such as menstruation, althought prevalency of PMS was highly, exactly 91,2%. So, researchers interested in studying the phenomena that occur in adolescents who experience PMS in SMK Puragabaya, Bandung. This research aimed to find out the effect of Information-Focused Therapy (IFT) in decreasing PMS of adolescent and to described their experience with PMS.

Premenstrual syndrome is characterized by presence of at least one of physical (e.g., breats tenderness, headache, change in appetite, dizziness, lethargy) or physiological symptoms (e.g., irritability, unstable emotion, depression, anxiety) during the 5 days before menstruation and relief of symptoms in the onset of menstruation. Menstrual disorders are problems that occur in the menstrual cycle which may be caused by several factors, namely abnormal anatomy, physiological imbalance and life style[3].

Based on the criteria according to the American College of Obstetricians and Gynecologists (ACOG) criteria for the diagnosis of PMS. To fulfills this instrument by retrospective method with the criteria for PMS said if for 5 days before menstruation until a few days after menstruation experiencing at least one of somatic and physical symptoms; and these symptoms interfere with daily activities (work, study, relationships with family members, relationships with friends, and so on)[3]. The symptoms are an anxiously, difficult to concentrate, suddenly feel sad or cry, easily offended, easy to feel tired, change in appetite (eating lazy or increased appetite), sleep disorder (difficulty initiating sleep, difficulty maintaining sleep well, or need more sleep), breast feels tight, headache, muscle or joint pain, weight gain, depression (feeling sad or feel no hope in the future), decreased interest in routine activities (eg studying, hanging out with friends), and easy to anger

METHODS

The design of this research was a Mixed Methods study used sequential exploratory approach. The research was conducted in SMK Puragabaya Bandung, West Java, Indonesian in March to September 2017. Female Students population at SMK Puragabaya, Bandung, West Java were 159 female students and samples taken for in-depth interviews were 6 girls having reached the saturation of data. Number of respondents were 26 and 6 female students as informants of SMK Puragabaya Bandung, West Java, that met criteria of PMS based on American College of Obstetrics and Gynecology (ACOG). Instruments in this study is questionaires and the researchers themselves who perform in-depth interviews with unstructured interview technique. The researchers also used the interview guide has been prepared before. The tools used interview is voice recorder and field notes.

The data were collected from the questionnaires about symptoms based on ACOG criteria and the results of in-depth interviews with an unstructured interview and for trustworthiness with data source triangulation to their teachers and classmates.The method used purposive sampling with sampling criterion, namely adolescents with inclusion criteria were:

1. Female students at SMK Puragabaya, Bandung, West Java
2. The regular menstrual cycles during the past 3 months (21-35 days),
3. Meet the diagnostic criteria for PMS with ACOG,
4. Willing to be a participant.

The First Step, the female student had PMS based on ACOG criteria as much as 26 female students were measured their symptoms of PMS with questionnaires. The questionnaires of symptoms with likert scales (0-3) consist of 0 means never, 1 means rare, 2 means sometime, and 3 means often. Then, 6 female students among them were interviewed by researcher with in-depth interviews used unstructured interview about their experiences with PMS. After that, the female students as respondents got IFT by therapists. IFT were presented with information on PMS, nutritional for PMS, activity recommendations for PMS, and relaxation management for PMS.

The Second Step, respondents were measured for second measuring of symptoms before their next menstruation period, at least on next month after the first step or between 21-35 days of menstruation cycles based on their cycles. The second measuring of symptoms used the same questionnaires with in first step.Then, six informants were interviewed again about their experiences of PMS after got IFT by therapist.

The Bivariat analysis of data quantitative used Paired Sample T-Test and Colaizzi method for data qualitative. Method of data analysis are the seven stages according Colaizzi (1978) [6], namely:

1. The researcher reading of all transcripts of interviews.
2. Researchers reread the transcript of the participants many times to get the theme of experience symptoms of PMS.
3. Researchers decipher the meanings of statements about adolescent experience to formulate the meaning of these experiences that arise category.
4. Repeating every description and read the rest of the existing categories, comparing and finding similarities between these categories, and in the end grouping similar categories into sub-themes and themes.
5. Researchers combined the results of cluster theme obtained is then used to describe the phenomenon of adolescents with symptoms of PMS experience complete.
6. Formulate a complete description of the phenomenon (exhaustive description) into a clear statement or identify the essence of the adolescent experience.
7. The final stage namely to validate the data that was collected by means of interviews.

RESULTS

1. Characterictics of respondents

   All participants were female students in the first or second level at SMK Puragabaya, Bandung, West Java, Indonesia. They had taken based on inclucion criteria for this study. The participants were 14-15 years old and had regular menstruation in three menstruation periods before.

2. Screening of Premenstrual Syndrome (PMS)

   Screening of PMS at SMK Puragabaya Bandung was done by using screening of PMS diagnosis based on ACOG. The screening results of PMS in female students are as follows:

Table 1. Frequency Distribution of Premenstrual Syndrome (PMS) Screening at female students in SMK Puragabaya, Bandung, West Java, Indonesia, April 2017

No.	Types of PMS	Frequency	Persentase
1.	Non PMS	14	8,8%
2.	PMS (Mild/Moderate)	76	47,8%
3.	PMDD/ severe PMS	69	43,4 %
	Total	159	100%

From table 1 it could be seen that girls in SMK as much as 91.2% experience PMS where 47.8% were in the mild and moderate category of PMS, while as much as 43.4% were in the severe category of PMS or called Premenstrual Dysphoric Disorder (PMDD). Only a small proportion of female students were 8.8% without PMS.

Table 2. Frequency Distribution of PMS Symptoms at Female Students in SMK, Puragabaya, Bandung, West Java, Indonesia, April 2017 (n=159)

No	Symptoms	Frequency	Persentase
1.	Easy to anger	44	57,9%
2.	Irritability	34	44,7%
3.	Restlessness	30	39,5%
4.	Muscle or joint pain	29	38,2%
5.	Breast tenderness or pain	17	22,4%
6.	Difficulties with concentration	12	15,9%
7.	Decreased interest in routine activities, ex: study	12	15,9%
8.	Change in appetite (eating lazy or increased appetite)	10	13,2%
9.	Suddenly feel sad or cry	9	11,8%
10.	Headache	9	11,8%
11.	Sleep disorder (difficulty initiating sleep, difficulty maintaining sleep well, or need more sleep)	8	10,5%
12.	Anxiety	7	9,2%
13.	Weight gain	4	5,26%
14.	Depression (feeling sad or feel no hope in the future)	1	1,3%

3. Univariat Analysis

Table 3. Frequency Distribution of *Premenstrual Syndrome* (PMS) for Pre and Post Information-Focused Therapy (IFT) at Female Students in SMK, Puragabaya, Bandung, West Java, Indonesia, April 2017 (n=26)

No	Symptoms	Mean		Persentase	
		Pre	Post	Pre	Post
1.	Easy to anger	2,11	1,58	70,5%	52,6%
2.	Irritability	1,96	1	65,4%	33,3%
3.	Restlessness	2	2,08	66,7%	69,3%
4.	Muscle or joint pain	1,65	1,81	55,1%	60,3%
5.	Breast tenderness or pain	0,69	0	23,1%	0%
6.	Difficulties with concentration	2,62	1,73	87,2%	57,7%
7.	Decreased interest in routine activities, ex: study	2,19	2,04	73,1%	67,9%
8.	Change in appetite (eating lazy or increased appetite)	2,12	204	70,5%	68,9%
9.	Suddenly feel sad or cry	1,85	2	61,5%	66,7%
10.	Headache	1,62	1,35	53,8%	44,9%
11.	Sleep disorder (difficulty initiating sleep, difficulty maintaining sleep well, or need more sleep)	1,58	1,46	52,6%	48,7%
12.	Anxiety	2,08	2,12	69,2%	70,5%
13.	Weight gain	2	2	66,7%	66,7%
14.	Depression (feeling sad or feel no hope in the future)	1,58	0,96	52,6%	32,1%

Table 4. Frequency Distribution of Premenstrual Syndrome (PMS) Based on Affective and Physical Symptoms for Pre and Post Information-Focused Therapy (IFT) at Female Students in SMK, Puragabaya, Bandung, West Java, Indonesia, April 2017 (n=26)

No.	Symptoms of Premenstrual Syndrome (PMS)	Persentase	
		Pre	Post
1.	Affective	62,7%	51%
2.	Physical	57,1%	57,1%

4. Bivariate Analysis

Table 5. Differentiation Analysis of Premenstrual Syndrome (PMS) for Pre and Post Information-Focused Therapy (IFT) at Female Students in SMK, Puragabaya, Bandung, West Java, Indonesia, April 2017 (n=26)

Symptoms of Premenstrual Syndrome (PMS)	Mean		Deviation Standart		p Value
	Pre	Post	Pre	Post	
Symptoms of PMS	26,0	21,7	6,95	3,76	0,003*
Affective Symptoms	18,8	15,3	5,2	2,66	0,003*
Easy to anger	2,12	1,58	0,9	0,5	0,02*
Irritability	1,96	1,00	0,99	0	0,00*
Anxiety	2,00	2,07	1,02	0,89	0,74
Sleep disorder	1,65	1,81	1,06	1,8	0,59
Depression	0,69	0	0,88	0	0,001*
Restlessness	2,62	1,73	0.63	0,92	0,001*
Change in appetite	2,12	2,03	0,99	0,87	0,78
Difficulties with concentration	2,10	2,11	0,97	0,59	0,86
Decreased interest in routine activities	2,00	2,00	0,98	0,89	1,00
Suddenly feel sad or cry	1,58	0,96	1,14	0,19	0,008*
Physical Symptoms	6,85	6,85	2,24	2,42	1,00
Muscle or joint pain	2,19	2,03	0,89	0,66	0,52
Headache	1,80	2,00	0,83	0,56	0,40
Breast tenderness or pain	1,62	1,35	0,8	0,89	0,33
Weight gain	1,58	1,46	2,00	1,14	0,79

** Paired Sample T-Test <0,05*

The Bivariat Analysis in this study using Paired Sample t-test. Paired Sample t-test was used find out changes in proportion of symptoms before and after giving Information-Focused Therapy (IFT) with p value 0.003. p value in this study <0,05. So, there is a decrease of symptoms before and after IFT.

5. The Thematic Analysis of This Study

There were six themes that describe the experiences of adolescents who experience PMS namely:

a. Theme 1: PMS perceived as a change that affects the psychological, behavioral and physical;
b. Theme 2: PMS interfere activities and social relationships;
c. Theme 3: Adolescents prefer non-pharmacological treatment to PMS;
d. Theme 4: The Handling of PMS based on Family suggestions;
e. Theme 5: IFT can decrease affective symptoms;
f. Theme 6: Perception of adolescent being more positif after IFT.

DISCUSSION

Premenstrual syndrome (PMS) is a set of affective, behavioral and physical symptoms which appears in the luteal phase that could affect productivity and quality of life. This is in accordance with this research bahwa female students were felt symptoms of PMS in several days before their menstruation. From table 1 it could be seen that girls in SMK as much as 91.2% experience PMS where 47.8% were in the mild and moderate category of PMS, while as much as 43.4% were in the severe category of PMS or called Premenstrual Dysphoric Disorder (PMDD). Only a small proportion of female students were 8.8% without PMS.

Table 2 shows that the most PMS symptoms many perceived respondents were easy to anger, irritability,and restlessness, while for physical symptoms are often perceived were the breast tenderness and muscle or joint pain. The previous study reported that the symptoms of irritability is complained by teens that amounted to 58.5%[13]. This is in accordance with the results of this study that female students in SMK Puragabaya most complained of symptoms easily irritable when experiencing PMS as much as 57.9%.

The Participants felt physical changes when PMS such as abdominal pain, dizziness, back pain, stiffness, abdominal bloating, the appearance of acne, neck pain, swelling of the breast and legs, and malaise. In addition to physical changes, the participants also felt psychological changes that include irritability, often bad daydreaming, lack of concentration, easy to be hopeless, easy to forget, and moods change. And this study showed that behavioral changes which they felt such as lazy to did activities, insomnia, hypersomnia, and increased appetite. This is in line with the criteria of PMS diagnosis are divided into two, including affective symptoms and somatic symptoms, somatic symptoms include headache, breast pain, abdominal bloating and swelling of the extremities. The symptoms appear within five days before menstruation and disappear within four days of the onset of menstruation.[7]

The most neglected or felt symptom was depression which was only 1.3%. Depression is a manifestation of psychological that can be caused presence of stress or stress experienced. Women with more stressor tend to complain of depression and mood changes during premenstrual. Stress can exacerbating premenstrual symptoms thus affecting hormone production and stimulates sex hormones such as the hormone cortisol, epinephrine and catecholamines, norepineprin, aldosterone and corticosteroids. This increased stress can worsening symptoms such as anxiety, anger and irritability.

The previous study reported that anxiety is expressed through physiological and psychological responses and indirectly through the development of coping mechanisms. The physiological response of the body by activating the autonomic nervous system (the sympathetic nerves and parasympathetic). The body's reaction to anxiety is fight or flight. When the brain cortex receiving the stimulus will be sent through the sympathetic nerves to the gland adrenal to release adrenaline or epinephrine. It is characterized by breath get deeper, pulse and blood pressure increase. Psychological response to anxiety will affect coordination and reflex motion. Severe anxiety will disrupt social relationships. Cognitive response from anxiety can affect thinking skills such as difficulties with concentration and memory. Affective responses can be expressed in form confusion, anger, irritability and excessive suspicion as being emotional reactions[14].

The impact of PMS to participant’s quality of life were it interferes on the interpersonal relationship between the participant with others and disrupt their activities sosial, be lazy to did activities and also lack of concentration in class. Previous studies have reported that the PMS will have a negative impact on the adolescent's academic and activity[8].

Some of the participants used non and a pharmacological treatments to reduce the symptoms. Non-pharmacological treatments such as massage on the area of the pain, took a rest or sleep, applied cajuput oil on the pain, drank warm water, did activities and sports, and listened to music. In other hand, participants also used pharmacological treatment by consumed analgesic to reduce the pain. Previous studies have reported that all forms of physical activity such as exercise can make women who experience PMS become more rilex because at the time of exercise will produce hormone endorphins by brain that can improve the improvement of liver function and reduce anxiety. The cajuput oil is consist of Menthol. The menthol can be used as herbal treatment for abdominal pain. Oil produced peppermint is powerful to overcome abdominal disturbances such as abdominal cramps9.

The participants also used analgesic to reduce their pain. This analgesic was obtained by buying at drugs store or apotic. The reduction of pain when PMS can be done by pharmacological treatments before menstruation. The analgetic is a non-steroidal and anti-inflammatory drugs (NSAIDs) that inhibit prostaglandin production so as to reduce the pain[7].

The participants said that their reason for did intervention to reduce PMS was influenced by internal and external factors. Previous studies have reported that health behavior influenced by external and internal factors, external factors consist of environmental, social and cultural. Internal factors consist of knowledge, perception, motivation, intention and attitude[10]. External factors in this study that some participants consumed analgetic because their mothers, sisters or classmates also did it. So, external factors was influenced by the surrounding environment, such as friends and family suggesstion especially, her mother. Previous studies have reported that the surrounding environment plays a role in influencing the treatments of PMS[11]. Internal factors in this study was they tend to did physical activities such as exercise because it would make their body be freshly. Also, the participants tends to applied the cajuput oil in the area of pain because its oil could give hot effect and reduce the pain. The experience can influence a person's behavior because she has already experienced the problem so that he already knows what will happen. A person who has been experienced something will increase knowledge about its[12].

This study found that most of participants said the symptoms were reduced after they consumed analgetic, the symptoms were also reduced by massage and after applied the Cajuput oil on area of the pain. The Cajuput oil can increase muscle relaxation and reduce pain due to spasms or stiffness and provide a local warmth. In general, heat is useful for treatment. Heat relieves ischemia by decreasing contractions and improving circulation, can also cause the release of body endorphins to block the transmission of pain stimulation[1].

This study also found that most of respondents said the symptoms were reduced after giving Information-Focused Therapy. Information-Focused Therapy is one of non-pharmacological treatment for PMS handling, where this therapy can change perception someone to be better so, can change her attitude being more better[14]. This is in line with this study, where based on Paired sample t-test was used find out changes of symptoms before and after giving IFT (p=0.003). There is a decrease of symptoms before and after IFT. And from result of in-depth interview, most participant said that her perception about PMS being more positive. They said that their symptoms of PMS are a normal condition as symptoms of PMS. The previous study stated that perception is a process by which a person organize in her mind, interpret, experience and cultivate a harbinger or in everything that happens around the environment. How things are affecting perception, will also be able to influence the behavior that will be choosen[13].

According to previous study reported that perception is a process which is preceded by the process of sensing, that is the process the acceptance of a stimulus by the individual through the sense device or so called sensory process. The process is an understanding of an information submitted by others who are mutually communicate or cooperate. So, everyone does not regardless of perception[14]. This is line with this study that IFT affected adolescent' perception about PMS and how to PMS Handling. And then their perception could changed their attitude and behavior being more be better from before so, their symptoms of PMS could decreased.

CONCLUSION

Paired t-test was used find out changes of symptoms before and after giving IFT (p=0.003). There is a decrease of symptoms before and after IFT. Six themes were found: PMS perceived as a change that affects the psychological, behavioral and

physical; PMS interfere activities and social relationships; Adolescents prefer non-pharmacological treatment to PMS; The Handling of PMS based on Family suggestions; IFT can decrease affective symptoms; and Perception of adolescent being more positif after IFT.

RECOMMENDATION

Experience adolescents who experience symptoms of PMS cause discomfort that interferes adolescent social relations and can increase because stress. The family is the nearest with adolescents, especially the mother, so the mother is expected to provide knowledge about menstruation before their children get menstruation so that the information received can be equipped them when they menstruate. Nurses and other health personnel the health care institution is expected to more actively participate to provide information is related reproductive health education. Information-Focused Therapy (IFT) effective in reducing PMS. Therefore, nurses have a role to apply IFT as one of non-pharmacological treatment for PMS. This study has only with one intervention for reduce PMS. So, expect this study can be considered for further research to be done further research related to PMS or other Intervention fior reduce symptoms of PMS.

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P-02

CORRELATION OF AMOUNT OF PARITY AND MENOPAUSE AGE IN PADUKUHAN CANGKRINGAN, ARGOMULYO VILLAGE, CANGKRINGAN DISTRICT, SLEMAN REGENCY, SPECIAL REGION OF YOGYAKARTA

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ABSTRACT

Menopause is a natural event faced by each woman. The natural event is influenced by different cultural context and individual perception. There are many factors giving effects on the age of menopause, among others are effects of genetic, smoking habit, age of menarche and amount of parity. There is a study comparing age of menopause in nulliparityand Multiparityfinding out that nulliparitywomen have greater potency to face menopause by 16 months faster (p < 0,10) than Multiparity. Results of interview with 10 menopause women on 4 May 2017 shown that there were 5 women with 1 child facing premature menopause, 4 women with 2-4 children facing natural menopause, and was 1 women with 5 children facing late menopause. This research aims to determine the correlation of parity and age of menopause in PadukuhanCangkringan. This research was conducted on 26 July 2017 until 30 July 2017. The method used is *descriptive analytic* with *cross sectional design.* The independent variable used is the amount of parity and the dependent variable is the age of menopause. The sampling technique is*consecutive sampling* with the number of sample is 32 women. The data analysis technique is using *Kendall Tau analysis*.The result is majority amount of parity of menopause women has Multiparityparity by (65,6%). The age of menopause by women in Padukuhan Cangkringan, majority includes in natural menopause (62,5%). It can be concluded that there are correlation of amount of parity and age of menopause in Padukuhan Cangkringan, Argomulyo, Cangkringan, Sleman (*p-value* = 0,002). The close correlation of both variable is medium (=0,523).

Keywords : *Amount of Parity, Age of Menopause*

INTRODUCTION

In passing her life, a woman can face many processes of growth and development, until leading to a period when the growth and development will stop, so that there will be many changes on the functions of woman body. There will be these changes along by the age increase, ultimately woman will reach to a point which is called as menopause and in this point, there will be a worry that the woman will be no longer attractive(1).

Menopause is a natural event faced by each woman. The natural event is influenced by different cultural context and individual perception. In public society, adult age has high appreciation than elderly age in particular for women facing menopause. Menopause is perceived as a loss and creates feeling of worthlessness. Women have self-confident that as a woman, they will be imperfect by the end of menstruation process, and infertile. Cultural and individual perceptions influence on women perception related to menopause process and its symptoms caused by the menopause(2).

There are many factors giving effects on the age of menopause, among others are effects of genetic, history ofovarectomy, index of body mass, smoking habit, age of menarche and amount of parity. For the amount of parity, for example, there are some researches giving report that less amount of parity will lead to greater tendency for women to get faster period of menopause, as a reality today(3).

Number of women in the age of ≥45 years old is 644.175 women. In Slemanregency, there are 174.831 women in the age of ≥ 45 years old, in Bantul, there are 161.604 women, in GunungKidulthere are 158.034 women, in KulonProgothere are 84.921 women, and in Yogyakarta City there are 64.785 women. CangkringanDistrict has the number of women in the age of ≥ 45 years old by 5,558 women. Argomulyo Village is one of the villages inPedukuhanCangkringan which has the highest number of women in the age of ≥ 45 years old, namely by 624 women. Based on the population data in PedukuhanCangkringan in 2016, there were 125 heads of households with the number of women in the age of ≥ 45 years old, namely by 70 people(4).

Results of the interviews with 10 menopause women met by the researchers on May 4th, 2017 indicate that there were 5 women with 1 child facing premature menopause(<45 years), 4 women with 2-4 children facing natural menopause(45-55 years), and was 1 women with 5 children facing late menopause(45-55 years),.

On this basis, the authors are interested to examine the correlation of the amount of parity and the age of menopause in Indonesian women, especially in PedukuhanCangkringan, Argomulyo, Cangkringan, Sleman, Yogyakarta.

METHOD

The type of research used is descriptive analytics, with *cross sectional* approach. This research was conducted on July 26, 2017 until July 30, 2017. The research was conducted atPadukuhanCangkringan, Argomulyo Village, Cangkringan district, Sleman District, Special Region of Yogyakarta. The population in this study is all menopause women in the age of ≥ 45 years old, namely by 56 women. The sampling technique is *consecutive sampling*, namely 32 people as the samples; the bivariate analysis using *kendalltau*analysis test.

RESULTS

1. Characteristics of Menopause Women In Padukuhancangkringan, Argomulyo Village, Cangkringan District

Table 1 Frequency Distribution of Menopause Women Characteristics in PadukuhanCangkringan, Argomulyo Village, Cangkringan District, Sleman Regency

No	Characteristics of menopause women	n	%
1.	Occupation		
	Employed	12	37,5
	Unemployed	20	62,5
	Total	32	100,0
2.	Education		
	Primary	24	75,0
	Secondary	8	25,0
	Total	32	100,0
3.	History of birth control		
	Hormonal	26	81,2
	Non hormonal	6	18,8
	Total	32	100,0

(Source: primary Data, 2017)

Based on table 1, it can be known that the majority of menopause women in PadukuhanCangkringanis unemployed namely by 20 women (62,5%), has primary education by 24 women (75,0%) and history of use of birth control namely hormonal by 26 women (81,2%).

2. Cross Tabulation of Characteristics of Menopause Women with Age of Menopause

Table.2 Cross Tabulation of Characteristics of Menopause Women with Age of Menopause

Characteristics of menopause women	Age of menopause						Total	
	Premature		Natural		Late			
	n	%	n	%	n	%	n	%
Occupation								
Employed	3	9,4	9	28,1	0	0,0	12	37,5
Unemployed	3	9,4	11	34,4	6	18,8	20	62,5
Total	6	18,8	20	62,5	6	18,8	32	100,0
Education								
Primary	5	15,6	13	40,6	6	18,8	24	75,0
Secondary	1	16,7	7	21,9	0	0,0	8	25,0
Total	6	18,8	20	62,5	6	18,8	32	100,0
History of birth control								
Hormonal	4	12,5	17	53,1	5	15,6	26	81,2
Nonhormonal	2	6,2	3	9,4	1	3,1	6	18,8
Total	6	18,8	20	62,5	6	18,8	32	100,0

(*Source: Primary Data, 2017*)

Based on table 2, it can be known that the majority of menopause women in PadukuhanCangkringanfaces natural menopause by 11 unemployed women (34,4%), has primary education by 13women (40,6%) and history of use of birth control namely hormonal by 17women (53,1%).

3. Univariate Analysis
   a. Amount of Parity by Menopause Women in PadukuhanCangkringan, Argomulyo Village,Cangkringan District, Sleman regency

Table 3. FrequencyDistribution of Number of Parity of Menopause Women in PadukuhanCangkringan, Argomulyo Village, Cangkringan District, Sleman Regency

Number of parity	n	%
Nulliparity	1	3,1
Primiparity	4	12,5
Multiparity	22	68,8
Grande Multiparity	5	15,6
Total	32	100

(*source: Primary Data, 2017*)

Based on Table 3, it can be seen that the majority of menopause women have Multiparity parity namely by 22 women (65.6%) and a small number of mothers with nulliparityis only 1 person (3.1%).

   b. Age of Menopause for women in PadukuhanCangkringan, Argomulyo Village, Cangkringan District, Sleman Regency

Table 4 Age of Menopause for women in PadukuhanCangkringan, Argomulyo Village, Cangkringan District, Sleman Regency

Age of menopause	n	%
premature Menopause	6	18,8
Natural Menopause	20	62,5
Late Menopause	6	18,8
Total	32	100

(Source: Primary Data, 2017)

Based on Table 4 it can be seen that the majority of women in PadukuhanCangkringanface natural menopause namely by 20 women (62.5%).

4. Bivariate analysis

Table 5. Correlation of Amount of Parity and Age of Menopause for Women in PadukuhanCangkringan, Argomulyo Village, Cangkringan District, Sleman Regency

Number of parity	Age of menopause						Total		*hitung*	*p-value*	
	Premature		Natural		Late						
	n	%	n	%	n	%	n	%			
Nuliparity	1	3,1	0	0,0	0	0,0	1	3,1			
Primiparity	1	3,1	3	9,4	0	0,0	4	12,5			
Multiparity	4	12,5	16	50,0	2	6,2	22	68,8	4,206	0,002	0,523
Grande Multiparity	0	0,0	1	3,1	4	12,5	5	15,6			
Total	6	18,8	20	62,5	6	18,8	32	100,0			

(Source: Primary Data, 2017)

Based on Table 5, it can be seen that there is 1 mother with nulliparity parity (3.1%) facing premature menopause. There are 3 mothers with primiparity parity facing natural menopause (9.4%), while the majority of women with multiparous parity face natural menopause namely by 16 people (50.0%) and the majority of women facing grandemultiparityincludes in late menopause namely by 4 women (12.5%).

Result of hypothesis test shows p-value value by 0,002. It can be seen that the value of p-value is less than 5% significance level (0.002 <0.05) so it can be concluded that Ho is accepted which means that there is correlation of amount of parity and age of menopause at PadukuhanCangkringan, Argomulyo Village, Cangkringan district, Sleman Regency.

Hypothesis testing can also be seen from the value of Zcount. Based on the calculation results, it can be seen the value of Zcount by 4.206. The value of Zcountis then compared with ZTable of 2.58. Because the value of Zcount>ZTable 4.206> 2.58) it can be concluded that there is a correlation of the amount of parity and the age of menopause in PadukuhanCangkringan, Argomulyo Village, CangkringanDistrict, Sleman Regency.

The closeness of the correlation between two variables can be known from the Kendall Tau correlation coefficient. Based on Table, it can be seen that Kendall Tau correlation coefficient value is 0,523. The number of 0.523 is in the range of 0.400-0.599 which means that the number of parity and the age of menopause have moderate closeness.

DISCUSSION

1. Characteristics of Menopause women in PadukuhanCangkringan, Argomulyo Village, Cangkringan District, Sleman Regency.
   a. Occupation

      Results of analysis show that there are 12 employed menopause women (37,5%) and there are 20 unemployed ones (62,5%). Based on the analysis results, it can be seen that the majority of menopause women is housewife.

      There is 37,5% employed menopause women. The employed menopause women tend to have better economic condition than unemployed women. Occupation is such a bridge to obtain money in order to meet life needs and to obtain better life quality for family.

      Results of cross tabulation show that there are 3 employed women (9,4%) facing premature menopause.

   b. Education

      Results of research show that there are 24 menopause women with primary education (75,0%) and secondary education by 8 women.(25,0%). Based on the results, it can be concluded that the majority of menopause women in PadukuhanCangkringanare graduation of elementary school and junior high school.

      Women with low educational or economic level utilize less health services. The high educational level is related to socio-economic level. The higher educational level will lead to easier way to obtain information, so that women will have more ability to think rationally(5).

      Based on results of cross tabulation, there is 16,7% women with medium educational level facing prematuremenopause.

   c. History of Birth control(KB)

      Resultsof the research about history of birth control show that there are 26 menopause women with hormonal (81,2%) and nonhormonalby6 women (18,8%). Based on the analysis results, it can be concluded that the majority of menopause women have history of birth control in hormonal type. Hormonal contraceptive method obtains more attention by the community because it is considered to be more effective.

      Birth controlhistory will influence on the age of menopause by a woman. There is a significant correlation between the type of contraceptive use and menopausal speed ($p = 0.003$) in which menopause is more likely to occur in women taking hormonal contraceptives. In this study, it can be seen that 53.1% women with birth controlhistory of hormonal faces natural menopause(6). In this case, type of contraception does not significantly influence on the age of menopause.

      Results of cross-tabulation show there are 5 women with hormonal contraception (15.6%) facing late menopause.

2. Univariate Analysis
   a. Amount of Parity

      Analysis results on the amount of parity indicate that there are the majority of women having multiparity namely by 22 women (68,8%) and a small number having nulliparity namely by 1 woman (3,1%). Based on the analysis results, it can be concluded that mean of menopause women has 2-4 children.

      Parity is the number of pregnancy resulted life fetus outside the uterus (28 weeks)(7).

   b. Age of Menopause

      Research results show that there is a same number of women facing prematuremenopause and late menopause; each of which is 6 women (18,8%) and natural menopause by 20 women (62,5%). Based on the results, it can be concluded that the majority of menopause women face natural menopause.

Menopause is a process of aging that must be faced by each woman. This depends on some factors giving effects on the age of menopause[8].

3. Bivariate Analysis

Analysis results obtain *p-value*by 0,002. The *p-value*indicates to be less than the significance level by 5% (0,002<0,05) so that it can be concluded that there is correlation of amount of parity and age of menopause. Higher one's parity will lead to tendency to face late menopause.

The research results show that there is a significant correlation between parity and age of menopause, in which women with nulliparitytend to face menopause more quickly, this is because women having menstruations which are not accompanied by fertilization process or without fertilization process will cause degraded or decreased number of follicles in the ovary (fluid-filled structures as the place for egg growth), this may lead to premature or younger menopause. More often a woman gives birth will lead to longer period to enter the menopause age[9].

The result of cross tabulation show that the majority women with grandemultiparity face late menopause namely by 4 person (12,5%). Biologically, in women with high parity, they have lower cumulative number of menstrual cycles than women without children. The correlation closeness between two variables includes as the moderate one. This is because the age of menopause is not only influenced by the amount of parity factor. However, there are other factors such as: age of menarche, age of first childbirth, history of use of birth control.

CONCLUSION

1. Amount of parity of menopause women in PadukuhanCangkringan, Argomulyo Village, is mostly multiparity.
2. Age of menopause by women in PadukuhanCangkringan, Argomulyovillage is mostly including in natural menopause.
3. Closeness correlation of both variables of amount of parity and age of menopause in PadukuhanCangkringan, ArgomulyoVillage is including in medium category.
4. The correlation of amount of parity and age of menopause for women in PadukuhanCangkringan, Argomulyovillage is mostly including in the natural menopause.

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P-03

THE RISK OF OBESITY AND DEVELOPMENTAL DELAY IN 2-5 YEAR OLD STUNTED CHILDREN IN KANIGORO, SAPTOSARI, GUNUNG KIDUL, YOGYAKARTA

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ABSTRACT

Malnutrition has been known to be the disease burden of the world. Obesity in children has also shown a continuity to rise in tendency. This phenomenon happens to civilization with lower to lower-middle income. It was as stated by Basic Health Research/Riskesdas (2013), that the proportion of obese children in Indonesia was 11,9% and the number of stunted children has reached 35,6% prevalence. Milman*et al.* (2015)suggested that stunted children have bigger risk to suffer obesity and several noninfectious diseases.
The purposes of this research is to figure out the risk of obesity in 2-5 year old stunted children in Kanigoro, Saptosari, Gunung Kidul, Yogyakarta. This observational epidemiology analytic study used the case control approach. The study was conducted in Kanigoro, Saptosari, Gunung Kidul, Yogyakarta.The data was gathered from March to June, 2017. This study performed 1:1 case and control groups comparation, which was 22 cases to 22 controls. Purposive sampling techniques was applied. The data for risk of obesity was gathered by finding out the z-score values of weight/height, while the data for stunting was gathered by finding out the z-score value of height/age. The bivariate analysis used a chi square test with 0,05α. The result is a relationship between obesity and stunting or that stunting is a factor leading to obesity (pvalue 0,016).The data analysis showed OR = 4.66 (95% CI=1,299 – 16,761), which means that 2-5 year old children with stunting have 4 times risk to suffer obesity bigger than normal children. Suggestions: Future researchers are welcome to use this study as a reference to evoke the act of intervention to stunting reduction in 2-5 year old children, as the effect of obesity has begun since the early life.

***Keywords**: Stunting, Obesity, Children*

INTRODUCTION

Malnutrition has been known to be the disease burden of the world. Malnutrition refers to a state of either deficiency or excess of nutrition[1]. Obesity in children has also shown a steady increase of the tendency. This phenomenon happens in the civilization with lower to lower-middle income. It was as stated by Basic Health Research, that the proportion of obese children in Indonesia was 11,9%[2].

There were a number of researches pointing out that the stunted condition, obesity and several diseases, particularly the noninfectious diseases, were caused by genetics. It was then known for that there were not much to do to help improve or change the condition.However, scientific proofs of some studies of the best nutritional research departments in the world have shifted the paradigm. It was found out that the most important cause of stunted stature, obesity, nonifectious diseases, and other indicators of life quality are improvable living environment[3].

It isknown that the stunting condition in children may cause a cognitive and psychomotoric developmental disorder, and therefore the fall of productivity in adulthood[4]. There were also severalfactors, which were thought to be a contribution to the case of

stunted children, which are infant birth weight, history of infectious diseases in children, history of illness and diseases during pregnancy, the height of the parents, and the social and economical factor of the parents[5].Linear growth impair most likely is caused during the intrauterine period and the first several years of life and was caused by insufficient amount of nutritional intake and infections that often happen[6]. A study showed that there is an abnormal fat oxidation process in stunted children which causes obesity in the later years of life[7].

The data gathered by Basic Health Research/Riskesdasin 2010 showed that the prevalence of stunted children in Indonesia had reached the number of 35,6% with 24-36 month old children suffered the higher risk, which was 41,4% prevalence[8]. The stunting prevalence was higher than the prevalence of malnutrition, which was 17,9%, and 13,3% prevalence of wasting, and 14% prevalence of overweight children.

The data gathered by Basic Health Research/Riskesdasin 2013 also showed a result where the prevalence of stunted children had increased to the number of 37,2%[2]. The same happened to the prevalence of malnutrition, which was increased to the number of 19,5%. However, there was a decline in the prevalence in wasting in children, reaching 12,1% and in overweight children, reaching 11,9%. The children nutritional status prevalences based on height-for-age (height/age) in Yogyakarta were10,2% for extremely stunted, and 12,3% for stunted stature. The children nutritional status prevalences based on weight-for-height were 2,6% for extremely wasting, 6,5% for wasting, 77,3% for normal, and 13,6% for overweight.

The data taken by Riskesdasin 2013 shows a rise in tendency for children with stunted and overweight nutritional status compared to the data taken in 2010. However, the overweight prevalences in all provinces of Indonesia are still above the “non-public health problem” range according to WHO standard, which is 10,0%.As for the number for healthy stunting prevalence according to WHO standard is 20%, which means there are still found health problems in all province on this matter.Therefore, it is important to study the risk of obesity and the developmental delay in 2-5 year old stunted children in Kanigoro, Saptosari, Gunung Kidul, Yogyakarta.

METHOD

This study is an observational study in the field of nutrition science in society, with case control study method using restropective approach. The study was conducted in Integrated Service Health Post (Posyandu) in Kanigoro, Saptosari, Gunungkidul, Yogyakarta.

The target population of this study were 2-5 year old children who live in Kanigoro, Saptosari, Gunung Kidul, Yogyakarta. The minimum number of the required samples for the data was counted according to the number of samples required on paired control group for case study formula, with the level of significanceat 95% ($Z\alpha$=1,96), OR=3 so that the samples gathered were 13 children, with the sample ratio between the case and control groups was 1:1. To represent the 2-5 year old children suffering obesity in Kanigoro, Saptosari, Gunungkidul, the study gathered 22 children to be the case group. The sampling method of the study was based on consecutivesamplingtechnique, by considering the inclusion criteria for children in their 2-5 year old of age, the mothers agreed to be the respondents the z-score value for weight-to-height was greater than 2 SD (for case group) and the z-score value for weight-to-height wasbetween-2 SD and +2 SD (for control group). To determine the control group, age and gender were matched. The control group was chosen by the same origin or if they live nearby samples from the case group. Then, to further determine the control group, the study matched samples from the same age and gender as those of case group.

This study made the occurence of stunting as its independent variable, which is categorized as being stunted (< -2 SD) and normal (+2SD s/d -2 SD). The data on the stunting occurence are gathered by measuring the children’s height with 200 cm capacity

and 0,1 cm level of carefulness *microtoice*, then counting the z-score value for the height-for-age (TB/U) using the official WHO's software, that is antro 2005. The occurence of obesity is made the dependent variable of this study, gathered by measuring the children's weight using 0,1 kg level of carefulness seca balance and height using 0,1 cm level of carefulness *microtoice*, and then followed by counting the z-score value of weight-for-height using the official WHO's software, called antro 2005, finally categorizing the data by overweight (> 2SD) and normal (-2 SD s/d +2 SD).

The first gathered data was the data for the obesity case on 2-5 year old children. Then, as the samples were determined for the case and control group based on the z-score value of their weight-for-height, the data on the characteristics of the subjects and the respondents, and the stunting case for the case and control group, were then gathered.

The univariate analysis was performed to describe each variable of the study. The data with normal distribution were analyzed by finding out the mean value, while the data with abnormal distribution were analyzed by finding out the median value. Bivariate analysis was performed to see the correlation between each variable and the chance of getting the risk (OR) between stunting and obesity, using chi square test.

RESULTS

There were 44 children as the samples of the data, consisting of 22 obese children and 22 healthy children. Based on the analysis using chi-square test, stunting was determined as a contribution to obesity in 2-5 year old children. Below in Tabel 1 is shown the results of bivariate test.

Table1. **Risk of Obesity in 2-5 Year Old Stunted Children**

Nutritional Status	Overweight Status				Total		OR 95% CI	P- *value*
	Overweight		Normal					
	n	%	n	%	n	%		
Stunting	14	63.6	6	27.3	20	45.5	4,667 1,299 – 16,761	0,033
Normal	8	36.4	16	72.7	24	54.5		
Total	22	100	22	100	44	100		

As it is shown in Table 1, there are 14 (63.6%) overweight children are also stunted. While in control group, there are 6 (27.3) of them stunted. With chi square test with α = 0,05, it resulted in p-value0,033. This shows a significant correlation between obesity and stunting, or as it is concluded, stunting contributes to the higher risk of getting obesity. The data analysis results in OR = 4.66 (95% CI=1,299 – 16,761), which means that 2-5 year old stunted children will suffer from obesity 4 times most likely than normal children.

DISCUSSION

The results of the study shows that malnutrition still causes problem for children. Malnutrition involves the nutrition deficiency and, in the other hand, there is a rise in the risk of children suffering obesity. These double problems in nutritional intake shows the high number of stunting aside of the rising number of obesity in children. This phenomenon is as just WHO stated, that one from three children in countries with low to lower-middle income suffers a stunted growth[9].

Stunting becomes an important issue because chronic nutrition deficiency suffered is classified as comulative and is a syndrome that may cause fat accumulation in the body, shrinking the lean body mass and the increase of the risk of getting a hypertension[2,9,10,11,12,13]

The results of the analysis show that stunted children have 4,66 times of risk to get overweight compared to children with normal height. An analysis of survey done in Arabic countries found the similar thing, that the Risk Ratio (RR) of overweight in children occurs from 2,14 to 3,85 times of chance[14].As it is, the meaningful correlation between stunting and obesity in children is positive when the RR was around 1,7 to 7,8[15]

One of the causes of weight gain that correlates with stunted growth is the chronic nutrition deficiency that happens in the early life[11].The bad effect of stunted growth positively related to the feeding and theweaning process that shapes the food consumption routine and the eating habit in the later life[16]. A change of metabolism in stunted children happens in the whole tissue and the system[17].This change involves energy saving as well as an effort to speed up the metabolism, so that this phenomenon may cause the stunted children to get abnormality in regulating food and higher proness in high fat diet[15].

Some studies in the past have explained that giving food to children with nutrition deficiency is relatively easy, which may caused by little amount of fat that signals the brain to feel hunger[18]. Other studies also explained that weight gain in children in recovery process from the deficiency of nutrition usually happens 5-15 times more pronounced than it does in normal children[19].

In healthy children, growth can be seen as something that happens as a respond to growth hormone and other growth factors. Through a certain metabolic condition, high proportion of bone and musclegrowth happens in occurence of fat gaining. On the contrary, when weight gain happens without the balance of many factors for growing, the process results in bone and muscle proportion bigger than fat and smaller than lean mass, which would form a new composition of adult tissue that cannot grow anymore[20].

This shows a significant weight gain in children with nutrition deficiency, causing overweight and less muscle tissue in children compared to healthy children in the same age who have never suffered from nutrition deficiency. The same result also happens in stunted children, where there is sharp increase in weight-for-height indicator but not in weight-for-age indicator. In stunted children, higher proness in weight gain in terms of weight-for-height indicator is found if they consume high fat food. In stunted children, obesity is likely caused by a change of metabolism when they suffered from nutrition deficiency.

CONCLUSION

The analysis shows that therer is a significant correlation between stunting and obesity in children (p-value 0.033), and that stunted children has 4.67 times higher risk to suffer obesity compared to healthy children.

SUGGESTIONS

It is important to know the chance of stunted children to suffer obesity to be able to construct an appropriate diet, preventing the stunted children to suffer obesity in the later life. In addition, to prevent more children from suffering from double dilemma in terms of nutritional intake, it is important to get this restorative nutritional dietary program for children in the fast track as a precautionary act.

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P-04

GIVING OF CATFISH ABON TO THE CREATININE LEVEL OF HAEMODIALYSIS PATIENTS

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ABSTRACT

Patients undergoing routine hemodialysis will experience malnutrition, inadequate protein intake, hypoalbuminemia, gastrointestinal disorders such as nausea, vomiting, and decreased appetite. To overcome this, patients need to get nutritional support, one of which can be given in the form of catfish abon. The purpose of this research is **t**o determine the effect of catfish abon to the creatinine level of hemodialysis patients. This study is quasi experimental type, with pre and post test design. The samples were 34 routine hemodialysis patients 2 times a week, aged >18 years, willing to be respondent and follow the study procedure, no catfish allergy. Patients with anasarphic edema, have complications of Diabetes Mellitus and malignancies are excluded. The dependent variable is creatinine level, while the independent variable is providing of catfish abon. Data were analyzed univariate and bivariate with paired t-test. The result of this research is creatinine level's mean of respondents in pre-intervention was 11.47 mg / dL, in post-intervention was 13.27 mg / dL. Result of providing of catfish abon to creatinine level using paired T-test showed p-value = 0,001 (p-value <0,05). The Conclusion is giving of catfish abon affects the creatinine level of hemodialysis patients. There is an increase of creatinine levels in post-intervention level versus pre-intervention.

Keywords : *Catfish Abon, Creatinine Level, Hemodialysis Patient*

INTRODUCTION

RSUD Panembahan Senopati Bantul is one of the hospitals having Hemodialysis Unit in Bantul District, with the number of patients increasing every year. In 2014, the number of routine hemodialysis patients in Panembahan Senopati Bantul Hospital increased by 33 people (29.73%) compared to the number of patients in 2011 which was only 111 peoples.

Hemodialysis is one of the artificial kidney replacement therapy with the aim of eliminating the remnants of metabolic products (protein) and correction of fluid and electrolyte disturbances between the blood compartment and dialysate via semipermeable membrane that act as artificial kidney[1]. Renal function of hemodialysis patients can be known by examination of creatinine levels. Hemodialysis patients often develop complications of hypoalbuminemia, which occurs mainly due to decreased synthesis due to inflammation and lack of protein intake[2]. Therefore, hemodialysis patients need to obtain nutritional support, one with the addition of a protein source that can be met from catfish processed into catfish abon, so it is expected to improve the acceptance and patient intake.

METHOD

This research manifests quasi experiment with pre and post test design. The data collection process was done at Hemodialysis Unit of RSUD Panembahan Senopati Bantul on March 1 - April 5, 2017. Experiment in this study was providing of catfish abon in

amount 0.36 g / kg BW / day for 21 days. Abon catfish given to the respondents was made by researchers. Researchers control this intervention by sending short messages as reminder to remind and ensure the respondent in consuming catfish abon given. Measurements of creatinine levels were done twice, ie before intervention (pre) and after intervention (post).

The samples of this study were 34 patients with routine hemodialysis 2 times a week with an inclusion criteria aged >18 years, willing to be respondents of the study and follow the research procedure, and no catfish allergy. Patients with anasarphic edema, have complications of diabetes mellitus and malignancies were excluded.

The dependent variable was the creatinine level in the ratio scale, while the independent variable is the giving of catfish abon. All data of this research were primary data. Measurement of creatinine level was done in laboratory of RSUD Panembahan Senopati Bantul with blood taking process performed by nurses in Hemodialysis Unit at the time of hemodialysis process took place. The collected data was then analyzed univariate to see the frequency distribution of each variable, and bivariate analysis with paired t-test to determine the effect of giving of catfish abon to the creatinine level of hemodialysis patients. This research has obtained Ethical Clearance from Medical Research Ethics Commission, Faculty of Health Sciences, Universitas Respati Yogyakarta No : 330.4 / FIKES / PL / II / 2017 dated February 15, 2017.

RESULTS

Most of the respondents in this study were adult (32.3%). Female respondents (55.8%) were more than male respondents (44.1%). Most of the respondents had high school education (41.1%).

Table 1. Distribution of Creatinine Content of Respondents

Time of Data Collection	Mean ± Std. Deviation	Minimum	Maximum
Pre-intervention	11,47 ± 4,03	3,36	23,66
Post-intervention	13,27 ± 3,91	6,88	22,55

Table 1 shows that both in pre-intervention and post-intervention conditions, the mean of creatinine levels exceeded the normal standard, ie 0.60-1.110 mg / dL in women and 0.90 to 1.30 mg / dL in man. There is an increase in post-intervention of creatinine levels versus pre-intervention.

The results of data normality test with Shapiro-Wilk test showed that the data was normally distributed with p-value = 0.186. So bivariate analysis of the influence of the giving of catfish abon to creatinine level can be continued with paired T-test. The result of paired T-test test shows that the giving of catfish abon effectively influence the creatinine level of hemodialysis patients, ie with p-value = 0.001 (p-value <0.05).

DISCUSSIONS

Based on age data most of the respondents included the category of adult age and dominated by female respondents. Age is one factor that can affect the health status of individuals. At the age of 40-70 years, the glomerular filtration rate will progressively decrease up to 50% from normal, decreased ability of renal tubes reabsorb and urin concentration, decreased bladder emptying capabilities completely increase the risk of infection and obstruction, and decreased fluid intake risk factors for kidney damage[3]. Sex and age affect the incidence of glomerulonephritis disease which is one of the risk factors of chronic renal failure[4].

Most of the respondents are educated high school / vocational school and at least a college graduate. In patients who have higher education will have a broader knowledge

also allows the patient can control himself in overcoming the problems faced, have a high confidence, experienced, and have a precise estimation how to deal with events and easy to understand what recommended by a health worker, will be able to reduce anxiety so that it can help the individual in making a decision[5]. Knowledge or cognition is a very important domain for the formation of an action, the behavior based on knowledge will be more lasting than not based on knowledge[6].

The results of this study indicate that both in pre-intervention and post-intervention conditions, the mean creatinine levels of respondents exceeded the normal standard should be, that is 0.60-1.1 mg / dL in women and 0.90 to 1.30 mg / dL in men. There is an increase in post-intervention level of creatinine levels versus pre-intervention.

The amount of creatinine a person releases daily depends more on muscle mass than muscle activity or protein metabolism levels. Creatinine levels can be used to determine the renal function of patients with chronic renal failure[7].

The result of paired T-test showed that giving catfish abon effectively affects the creatinine level of hemodialysis patient. Increased serum creatinine levels show decreased creatinine clearance and decreased glomerular filtration rate. The intake of mature meat in large quantities will increase serum creatinine levels, due to the addition of exogenous creatinine[8].

There is an association of animal protein intake with levels of urea and creatinine in patients with chronic renal failure. High blood creatinine levels are influenced by high-creatinine diets derived from low biologically valuable meats and foods such as nuts, seeds, tubers, tempeh, tofu, and corn[9]. High serum creatinine levels are associated with mortality risk and also high doses of hemodialysis. Serum creatinine levels> 11 mg / dL are associated with adequate hemodialysis, somatic protein concentration, muscle mass, and nutritional status[10].

CONCLUSIONS AND RECOMMENDATION

Provision of nutritional support abon catfish effectively affects the creatinine levels of hemodialysis patients. However, by giving the catfish abon it actually increases the average creatinine levels of hemodialysis patients.

Based on these conclusions, it is suggested to the hospital to monitor the intake of hemodialysis patient, especially protein intake, in order not to decrease the nutritional status of patients, whether antropometric nutritional status, biochemistry, physical clinical, and dietary.

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P-05

EFFECT OF MORINGA OLEIFERA COOKIES IN ANEMIA ADOLESCENT

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ABSTRACT

Anemia is one of four nutritional problems in Indonesia. Groups that are susceptible to anemia are young women. Anemic adolescent girls are due to iron intake from insufficient food, menstruation, and activities. With the high incidence of anemia in young women so that prevention and treatment is needed. Anemia treatment efforts can use local foodstuffs for *Moringa Oleifera*. *Moringa* leaves have a high nutritional content of protein and iron. Moringa leaves with processing into cookies is one of the alternative utilization of moringa leaves for the prevention and treatment of anemia in young women. The purpose of research is to assess the effect of *Moringa Oleifera* cookies in anemia women adolescent. The research used was quasi experiment with pre test post test group control design with the intervention of *Moringa Oleifera* cookies in women adolescent anemia. Subjects in this study are 62 women adolescent anemia. The results showed that most respondents aged 10-13 years (64.5%), most of the nutritional status of respondents nornal nutritional status (91.9%), mean Hb before intervention 11.13 ± 0.81 and mean Hb after intervention 12.67 ± 1.08. There showed that there were effect of *Moringa Oleifera* cookies to female teenage Hb (p <0,05).
It can be concluded that there is an effect of *Moringa Oleifera* cookies to anemia female adolescent

Keywords: Cookies, *Moringa Oleifera*, Adolescents, Anemia

INTRODUCTION

Iron deficiency anemia is one of the most widespreas preventable nutritional problems in the world. Globally 50% of anemia is attributed to iron dificiency and accounts for approximately 841.000 death annually worldwide. The prevalence of anemia nationally was 14,8%. There are 20 provinces which have anemia prevalence bigger than national prevalence, one of them is Yogyakarta with 15%.[1]

Anemia is one of four major nutritional problem in Indonesia. Anemia is defined as condition in which blood haemoglobin level less than 9. Iron nutritional anemia is anemia caused by iron deficiency in the body. Some of the common causes of iron deficiency are inadequate intake, chronic or acute blood loss, malabsorption and menstruation. Groups that are at risk of anemia include adolescent girls and this is shown to be a high prevalence of iron deficiency anemia in young women. Adolescents with anemia have symptoms such as apathy, irritability, decreased ability to concentrate and learn.[2] Therefoe anemia becomes the terget of community nutrition improvement by providing iron supplementation. Anemia prevention efforts in Indonesia have three strategies such as iron supplementation, nutrition education and food fortification.

Moringa Oleifera leaves have long been used the problem malnutrition among, children, adolescent and pregnant. In addition, with micronutrient substances Moringa Oleifera can be used an alternative supplement for women adolescent to prevent anemia.[3] Moringa Oleifera have high nutrient content especially iron and protein.[4] Diversification of food by adding Moringa Oleifera to cookies can make products for preventtion and

treatment of anemia in young women. The purpose of this study was to assess the effect of *Moringa Oleifera* cookies to anemia female adolescent.

METHOD

The study design was quasi experiment, pretest posttest group design. The subject are sixty two women adolescent anemia in Primary High School Saptosari.The design was an interventional study with purposive sampling. The intervention conducted for 21 days. The intervention received one portion snack with 100 gram/day of *Moringa Oleifera* cookies.

This study were hb levels before and after intervention. Diagnosis anemia use *cyanmethemoglobin* method, food consumsion using food recall and nutrtitional status using antropometry (weight and height). Analysis was based on percentages and proportions. Pairet t test was used to find out any significant difference between before and after intervention.

RESULT

The characteristic responden age and nutritional status can be seen in table 1 below :

Table 1. Age and Nutritional Status From Respondents

Variabel	n	%
Age (years)		
10-13	40	64,5
14-16	22	35,5
Total	62	100
Nutritional Status		
Underweight	3	4,8
Normal	57	91,9
Obes	2	3,2
Total	62	100

Table 1. Above shows that the Most respondents aged 10-13 years (64.5%), nutritional status most of the normal nutritional status (91.9%). An increase in mean Hb level between before intervention and after intervention. The mean of Hb level before intervention and after intervention can be seen in Table 2.

Table 2 Hb Level Before Intervention And After Intervention

Hemoglobin Levels	Min	Max	Mean±SD
Hb levels before (g/dl)	7,00	11,90	11,13±0,81
Hb levels after (g/dl)	9,30	14,70	12,67±1,08

The mean rate of haemoglobin in measurement before intervention was 11,13 ± 0,81 gr / dl. In the measurement after the intervention, the mean hemoglobin level was 12.67 ± 1.08 gr / dl. The food intake mean known that average energy intake 1215,45 kcal, protein intake 49,15 gram, intake of fat 21,52 gram, intake of iron 8,61 gram, and intake of vitamin C 12,22 gram. The food intake can be seen Table 3. Below

Table 3. Food Consumsion Of Repondents

Nutrient	Min	Max	Mean±SD
Energy	989,30	1531,20	1215,45±106,89
Protein	41,20	61,10	49,15±4,92
Fat	15,60	26,20	21,52±2,04
Carbohidrat	181,50	274,10	220,00±24,65
Iron	7,10	9,60	8,61±0,66
Vitamin C	10,20	15,20	12,22±1,13

Table 4 shows an increase in Hb levels between before and after intervention. This result is supported by the result of paired t-test which shows a significant increase of mean Hb between hemoglobin level before and after intervention. This means that *Moringa Oleifera* cookies can increase hemoglobin levels in adolescent anemia ($p<0,05$).

Table 4. Hb Levels Between Before and After Intervention

Variable	Min	Max	Mean±SD	SE	p
Before	7,00	11,90	11,13±0,81	0,10	0,010
After	9,30	14,70	12,67±1,08	0,14	

There are many studies conducted which the beneficial effect of Moringa Oleifera on anemia. Moringa Oleifera has been known from ancient times and has been used by our ancestors as cure for numerous ailment. After 21 days intervention there was a significant rise in haemoglobin levels ($p<0,05$). The protein in the Moringa Oleifera prevented any loss weight in the adolescent. However the study concluded that Moringa Oleifera being a locally available food must be utilised more effectively instead af the local relying on supplements and fortified food for the assential nutriens.

The linkage of iron with hemoglobin levels can be explained that iron is the main component that plays an important role in the formation of blood (hemopoiesis) that is synthesizing hemoglobin. Excess iron is stored as a ferritin protein, hemosiderin in the liver, spinal cord and the rest in the spleen and muscle. If the iron deposits are reduced and the amount of iron obtained from food is also renegal, there will be an iron imbalance in the body, resulting in hemoglobin levels falling below the normal limit called iron anemia

The increase of Hb level of respondents was caused by the consumption of 100 g/day leaf cookies as long as 21 days. Moringa leaves contain vitamin A, vitamin C, vitamin B, calcium, potassium, iron and protein in very high amounts. The leaves of moringa effectively increase hemoglobin levels in women with anemia[7]. Moringa leaves are rich in nutrients and flour moringa effective in healing anemia [8].

Teenagers who consume kelor leaf cookies can increase hemoglobin levels in the blood by 1.25 g / dl in 30 days. Giving Moringa leaf extract for two months can increase the female hemoglobin level of 1.61 g / dl[9]. Increased levels of hemoglobin adolescent girls occur due to the intake of nutrients contained in the leaf kelor leaf. The iron content contained in moringa leaf cookies has high protein content (8.75 g) and iron (22.86 mg)[10].

The present study also concludes that Moringa Oleifera effectively corrected haemoglobin levels in anemia. Moringa Oleifera powder is effective in treatment of anemia. This evidently is because of its content of quality protein, iron, vitamins A and C.

In conclusion, Moringa Oleifera cookies have significant effect to increase haemoglobin level in women adolescent. This may be promoted in the community as a dietary supplemtation in anemia women.

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P-06

EXPERIENCES OF DRUG USERS IN IIA CLASS JAIL YOGYAKARTA

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ABSTRACT

United Nations Office on Drugs and Crime (UNODC) estimated that about 149-272 million people or 3.3 % - 6.1 % of world population aged 15-64 years used drugs (even once) during their life time. This estimation will increase with time (BNN, 2011). The number of prisoners suffering HIV/AIDS in recent years were increasing as well if compared to its numbers in the year 2011 from 787 people to 1042 people. It was estimated that in the year 2015, the number of drug users in Indonesia would increase to 5.8 million people, since the number of drug users at the present time were reached 4 million people. For the time being, in Yogyakarta second A class drug jail , the number of drug users were 256 people; this number were constant; its mean that if there was prisoner got his / her freedom, another prisoner was incoming. Data from BNN in August 2013 years, 70% of 4 million drug users in Indonesia were workers (productive aged). Aim; To discovered population research experiences that cause them used drugs and depend on its. Research method: This was qualitative research with phenomenological approach. Data gathering technique were deep interview and FGD toward 30 respondents. Data were analyzed using reduction, data display, and conclusion drawing/verification. The majority of respondents mentioned that they used drugs because of they wanted to know and the influence of friends. Drugs, kinds of sabu, used to increase energy and ganja were used to obtain peacefulness. Drugs users wanted to use its forever; therefore, they wanted to stop because of punishment to be in jail not because of the drugs had negative effects to the body. The majority of respondents mentioned that to stop using drugs must be self motivated; on the contrary, the obstacle to stop using drugs because of missing sensation to use it. They named it suggest. Using drugs were conducted by research population because of environmental influence, to increase energy and to obtain peacefulness.

Keywords : The experiences of drug user

INTRODUCTION

Currently, the drugs abuse is getting popularly talked and pay attention from many circles due to has been consumed almost in all community groups not only considered in social status, occupation and age. The problem of drug abuse in any part of the world is an unavoidable reality from modern society[1.] The United Nations office on Drugs and Crime (UNODC) estimates that have been between 149 to 272 million people or 3.3% to 6.1% of the world's 16-64-year-olds have used drugs once in their lifetime. This number is increasing time by time[2].

The number of prisoners who suffering HIV/AIDS currently increase compared to the year 2011 which were from 787 to 1,042 people. (news.detik.com). In 2015 the number of drug users in Indonesia estimated approximately 5.8 million people, given the current drug users have reached 4 million inhabitants. National Narcotics Agency (BNN) in Merdeka Com said that Indonesia became one of the targets of drug

circulation that is distributed from abroad. One reason, they see the number of drug addicts in the country continues to increase. From data owned by BNN, drug users in Indonesia reached 4.9 million people.

Narcotics is already a national problem that occurs in all circles and is very difficult to stop although firm action has been done on all lines including the death penalty on the dealer, and imprisonment on the user. Data According to BNN in Zulfikar[3] Yogyakarta is the fifth highest number of drug users in Indonesia (2.37%). It is ironic that Yogyakarta is known as the nickname of a student city, it is certainly with a positive connotation that its inhabitants are predominantly literate.

Nowadays our country still has not been able to overcome. Need contributions from various groups in preventing drug use in the community, including research. This study is to attempts the experiences exploration of drug users during the consumption of drugs, including factors affecting drug use, factors that encourage them to keep using, whether or not they have the motivation to stop using, the efforts they have done to stop using, and their perceived barriers in an effort to stop drug use. The results of this study can be used as a material of further study in finding solutions/tips more precise in combating drugs in Indonesia.

METHOD

This is a qualitative research with phenomenology approchement. The method that chosen to gained and obtained more complete data, deep, credible, and meaningful to achieved the objectives of the study. Qualitative methods will be able to reveal and describe the wider and deeper, feelings, norms, beliefs, mental attitudes of a person. Source of data/informant is 30 resident/resident of prison correctional institution (prison) class IIA, Yogyakarta. Samples were obtained by snowball sampling by referring to the saturation of the obtained data. Data collection techniques were used in-depth interviews and focus group discussions (FGDs). Data analysis was did data reduction, display data, and conclusion drawing/verification. Testing the credibility of the data is done by means of, triangulation of sources, that is by asking the same thing through different sources of the coaches and health manpower in prisons, and Member Check. Conducted by way of discussing the results of research to data sources that have provided data from resident/prisoners.

RESULTS AND DISCUSSION

1. Factors Affecting Residents Drugs Used

Most respondents said that they use drugs because curiosity and environmental influences (friends) who have been using also included the most submitted. As the following statement of respondents

"Starting from following friends in everyday social circles, and start trying when in junior high, then use until the last before being caught"

"Initially not for nothing. My friend offers, once, twice I see them using that marijuana ... not interested. Then maybe too often I see, finally affected also ... I want try. After join get try there is a calm effect, then imagination come carving out, more focus, more clearly so ... not broken, want to form like this ... so can "

The results of this study appropriate with research who conduct by Indiyah in LAPAS Class IIA Wirogunan Yogyakarta the result is a tendency to follow-up in the group as a factor, because 52% of subjects support The results of this study also supported by research Jimmy[5] in Tanjung Pinang, external factors which affects adolescent abuse of drugs one of them is due to social factors, where the association with peers that are not controlled and deviate from the norms prevailing in the community can result in adolescent abuse of drugs[4].

According to Sumiati[6], internal factors in drug abuse typically stem from self-inflicted behavioral changes, such as: high curiosity, so there is a desire to try, a desire to have fun, a desire to follow the latest lifestyle, accepted by the environment or group, the false notion that the occasional use is not addictive, the lack of knowledge of religion, the ignorance of the dangers of the good for himself, his family, his environment and his future. It is also caused by other factors such as low self-esteem and feel depressed or want to get out of all the rules of the parents.

2. Factors that encourage residents to continue using drugs

Some respondents said they continue to use drugs more than one time in jail, especially for shabu-type drugs, to increase energy (doping), due to work demands, they have to work nights / late at night, and work overtime. Users like this is the person work late night such as drivers, bartenders, street vendors, street vendors, band management in the cafe. The types of drugs were used are shabu-shabu. This is because they feel, the shabu makes them resistant to "literate", also do not immediately get tired and making them hungry. As the statement of several respondents below

"... .if sabu the adrenalin is higher, let a little fly added with marijuana.

"Proverbial like cleaning the motor cycle so, already clean rubbed frequently. House can be raised with only one hand (FGD 1)

"... if sabu more towards doping so more be focused, so not tired. My work on the stage, the management of a band, daynight until morning became a force to push, so I make a dust shadow makeup "

Narcotics is a stimulant that stimulates the central nervous system and improves excitement (fresh and vibrant). This drug can work to reduce sleepiness due to fatigue, reduce appetite, speed up the heartbeat, blood pressure and breathing[7].

Jimmy's research states that the number of victims/drug addicts in Tanjungpinang based on the work of the victim/addict is dominated by private employees with an increasing number from year to year[5]. This suggests that a private worker is particularly vulnerable to drug abuse, especially the notion that consuming drugs can make the body fresher and more enthusiastic to work. The results of Wulandari also showed that the many abused drugs are shabu-shabu (90,36%)[8].

Drug types of marijuana are generally used to obtain calm, comfort, fresh, and increase appetite. As the following statement of respondents

"Yes after wearing marijuana that sleep so nice, so comfortable"

"My feelings marijuana is more peace of mind, body, more relax"

"If marijuana I wear it before sleep, already finished all the work and activity, because the effect of my body is more calm, cool, the plan after using ya ... I want to relax, not want activity again"

There are also respondents who use marijuana to provide calm especially when they are emotional. All the respondents who use marijuana or sabu no one said they feel the negative effects of the use of these narcotics, so they have not intend to stop using them even though the prison sentence they have lived, as the following statement respondents:

"Because its nice mom, yes to screwed up my mind make me feel comfort, if we are emotionally angry, suddenly emotion directly gone. The effects of damaging the body, not think, less know, whether when age is old, hehe (laughing) (Ganja).

This study is in accordance with Wulandari's study results, Interviews with respondents indicate that there are three dominant factors affecting drug abuse among others because of the mistaken notion that the drug is not addictive and wants to try again[8].

3. Motivation to stop using

Basically drug users want to keep using it, if they want to stop is based on the threat of imprisonment, not due to awareness, because the narcotics have had negatively affect to the body. Even they want for certain drugs like marijuana legalized like in some other countries. But there are also;

"Yes plan to stop there mom, punishment is heavy"

"Honestly if for the current situation in Jogja, although there is still a desire .. we stop first, than to enter here again ... If the desire is still there, better we wait it first, help friends fight. There are plans for legalizing marijuana. Later mom will be different story, if it has been legalized .....

"Want to stop, I feel pity to my parents keep thinking"

"Yes mom, deterrent, I was ashamed to the children, my kids are not like this. Beside it, age factor also, make me repent "

Motivation is an inner state that gives power, which is activating, or moving, so that it is called a driving force that directs or distributes behavior toward the goals. There is a need or desire from within that makes someone motivated to do something. For the addicts themselves they want to stop using drugs because of the need, among others, the affection of the people closest because in Indonesia itself using drugs is illegal and the trade and its use is prohibited by the Government so that the family or the nearest person will stay away if there is someone caught using drugs, from which there is a motivation in him to stop using drugs in addition, self-actualization is also a much-sought requirement for drug users. These needs make the addicts want to stop using drugs and start a new and better life. It is proven in the data retrieval where the subject wants to stop using drugs because it is based on the existence of these needs[9]. The motivation of the addicts is low. A strong awareness and motivation is an absolute liability to stop taking drugs. In general, those who undergo rehabilitation because of forced for example caught and must undergo rehabilitation. Partly because of the will of parents or family. In general, those who are "forced" will undergo rehabilitation with a heavy feeling, feel depressed or "pretend" to join the rehabilitation program. The rehabilitation program routine they will undergo to get a certificate has undergone rehabilitation. After getting out of the rehab they will use again if there is a chance. Relapse rate after rehabilitation is still high can reach 80%[10].

4. Efforts ever made to stop using drugs

Most respondents said to stop using the main drug should be self-motivated. If the motivation is not strong it will be easy tempted back to wear. Besides, it also tries to avoid the user community and by practicing the religious worship.

"from myself, if offered but if not say no, if often gathered just like the same, so must be from yourself. Eschew,obviously get away from that community "

"Looking for a new place to stay, to stay away from the old neighborhood"

"I want to live a normal, healthy, healthy thinking, for the sake of the family. Get away from association of the users".

Subagyo in his book recognize drugs and obey his misuse, one of the evil nature of drugs is habitual, namely the nature of drugs that make the wearer always remember, remembered, and imagined that tend to always seek and miss (seeking). It is this nature that causes drug users who have recovered someday can be able to relapse and reuse. Feelings of heavy missed want to reuse caused by the impression of pleasure that in slang word it called ”nagih” (sugest)[11].

Suggest is the strongest teaser that causes drug users who have recovered at one time back to wear. Suggest can only be defeated by the enormous determination born of high consciousness based on true knowledge, supported by

firm faith. Suggest will feel lighter if faced while actively working or developing a hobby.

In coaching efforts on drug users, the IIA Yogyakarta classroom narcotics classifies them with a variety of skills according to their respective talents and interests, with the aim that they should not be unemployed after leaving the prison for high risk for suggestions/ recurrences. When this happens coaching during at jail, to be in vain. Another effort made by prison is the existence of sports and arts activities.

5. Obstacles that are felt in an effort to stop the use of drugs

The main obstacle that respondents feel to stop using drugs is the environment. Users/community users who always offer back, and the goods they find easy to find and are very difficult to destroy. Besides that also the desire of self/ sense missed to use again, which they call with suggest.

"The new on it suggest , if there are people used out, we get suggested, cold, stomach mules, cold". The Factor of friends and environment

"The main obstacle most often the sense of wanting to use drugs from the mind alone, suggest"

"Never stopped, but met with my dear friend, finally re-plunge into the world of drugs"

There is an inner drive from the very powerful addicts (craving, suggestion) so that the addict does not seem to be able to resist the impulses. Suggestion is greatly influenced by past events both psychic and physical. The power of suggestion will last long depending on the duration of use and the type of drug used. The strength of suggestion is also influenced by the type of drug, duration of use, frequency of use and high doses used so far. The drive to wear will also be stronger when there is a user or drug environment available or accessible, experiencing stress, feeling humiliated or lacking in activity.

Drugs abuse are an international outbreak that will spread out to every country, whether the country is developed or on developing. All became the targets of drug syndicates12,14. Although it has been threatened with severe penalties for drug dealers and syndicates but the offense never stops, perhaps because the trade is very profitable or subversion is very heavy. Destruction of cannabis plants occur everywhere but still found new plants. This should be faced jointly by all levels of society with the government apparatus in its crushing. People must respond quickly to things that lead to drug crimes. Communication should be done as well as possible between the community and government officials in the eradication of drug abuse[13, 15].

CONCLUSIONS

Factors affecting the used of narcotics in the convicted citizens of the IIA Yogyakarta Classroom of Narcotics were closest friends in there, and the desire to try initially, continues with addiction. While the factors that encourage to use is to increase the energy/doping (sabu), and to get restful, comfort, fresh, and increase the appetite Ganja . Motivation to stop using drugs is due to the threat of imprisonment, not due to awareness but because of narcotics it has negative effects on the body, even among those who want certain types of drugs such as marijuana legalized like in other countries. Another motivation is for family reasons. Efforts that have been made to stop using drugs are self-motivation, trying to avoid the drug user community and also by practicing the religious practice. The perceived obstacle in trying to stop drug use is drug abuse environment/drug user community that which always offering back, and the

stuff they think is easy to get and very difficult to destroy. Besides it, also the desire of self/sense to use it again, which they call it with “suggest”.

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P-07

A SOCIAL ECOLOGICAL PERSPECTIVE ON THE INDONESIAN MATERNAL MORTALITY PROBLEM; AN ANNOTATED BIBILIOGRAPHY

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ABSTRACT

The Indonesian government has attempted to reduce maternal mortality, including the placement of midwives in the villages, infrastructure development, and the provision of health insurance to the poor. However, the maternal mortality rate is still astonishingly high, with over 15,000 women per year dying from complications of pregnancy and childbirth. The purpose of this study is to use a social ecological perspective – which systematically considers influences at multiple levels from individual and interpersonal, up through community, institutional, and policy – to understand the root of the maternal mortality problem in Indonesia. The study is a literature review structured around the social ecological model, presenting findings at each level. The researches were obtained from variety of publish literature in 2009 until 2015. They were taken from several databases like Pub Med, Google Scholar, and Science Direct. Result: In intrapersonal level; culture, customs, stigma, and belief are the root of causes.In the interpersonal level, in addition to her husband and family, midwives and dukun have an important role in this stage. In the community level, several programs that have been taken by the government seem have good impact, although many things need to be repaired. Conclusion: In every level of social ecological perspective, there are problems that need to be addressed. The collaboration from individual, community and government is important to reduce the maternal mortality problem in Indonesia.

Keywords: Indonesia, maternal mortality, social ecological perspective.

INTRODUCTION

Maternal mortality ratio is not just the numbers. The death of a mother can cause profound sadness for the family members, loss of opportunity for their children to get affection and education of their own mother. Since 1990, the Indonesian government has made great efforts to reduce maternal mortality. Several programs have been conducted including the placement of midwives in the villages, infrastructure development, and the provision of health insurance to the poor. Unfortunately, these efforts have not let the mothers in Indonesia from the threat of death when they were in a state of pregnancy and childbirth. Every day there are 44 mothers die in Indonesia. Sadly, because these deaths could be prevented.

Maternal mortality rate is one indication of health care quality of a country. The high rate shows a weakness of health system in that country, and a narrowed to be a problem of rich and poor (WHO, 2015). Impact of maternal mortality to the family and community in developing country is not just about sadness and feeling lost. It also has long term effect to social, economic, and the children education in family[1]. Indonesia mortality rate is the highest in south-east Asia[2]. Based on the world bank data[3], in 1990, the death of mothers is 446/100,000 live births, 326/100,000 in 1995, 265/100,000 in 2000, 212/100,000 in 2005, 165/100,000 in 2010, and 126 in 2015.

Seeing these problems, it is necessary to study the root of the complicated problem of maternal mortality in Indonesia.

The aim of this study is to use a social ecological perspective – which systematically considers influences at multiple levels from individual and interpersonal, up through community, institutional, and policy – to understand the root of the maternal mortality problem in Indonesia.

METHOD

The study is a literature review structured around the social ecological model, presenting findings at each level. The researches were obtained from variety of publish literature in 2009 until 2015. They were taken from several databases like Pub Med, Google Scholar, and Science Direct.

RESULT AND DISCUSSION

1. Intrapersonal Level

Agus, Yenita., Shigeko, Horiuchi., Porter, Sarah. (2012). Rural Indonesia Women's Traditional Beliefs about Antenatal Care. BMC Research Notes 5:589.

This research is designed for health care provider to know deeply about traditional belief among women in rural area in Indonesia. The purpose is to highlight the women perspective for using or not using health care provider during their pregnancy and childbirth. The research was conducted using interview with 16 women in Dago Village, West Java, Indonesia. The authors discussed some factors based on the qualitative exploratory cross-section design. First, women believe that a pregnancy is a normal condition, they can do at home. Most of the participants did not recognize the danger signs of pregnancy. Second, the death of mother and baby during pregnancy or childbirth is considered as God's will. Third, women follow the tradition using *)paraji, and they are afraid of the consequence if they refuse the tradition. Fourth, the paraji is better choice compared by midwife because of some reasons; the paraji has more experience, they part of the community, they are kind and patient, and they do not push to pay out of the women ability.

In this publication, some women also stated that they did not want to get childbirth in hospital/midwife clinic because of distance, transportation, and they were feeling uncomfortable. The belief that getting childbirth not in-home meaning something bad happened to the women is also being the reason why women tend to get childbirth at home.

Although this research has limitation because of the small number of participants, it can capture the important things that have role in community related to low number of pregnant women using healthcare provider. This condition has direct impact to maternal mortality rate. Although now a day a lot of health approach and program to decrease maternal mortality, without concerning this tradition and women belief, it is hard to gain the target.

2. Interpersonal Level

Hildebrand, Vanessa. (2012). Scissors as Symbols: Disputed Ownership of the Tools of Biomedical Obstetrics in Rural Indonesia. Cult Med Psychiatry.

This paper provides an overview of culture importance in health policy, addressed to public health practitioners, academics, and government. This study describes the ethnography side in the health service using observation and interviews with 7 midwives, 13*)dukuns, and 252 women and their families. The study was conducted in Sungai, Sumbawa, Indonesia.

Article begins with a brief history of dukun involvement in delivery. Dukun helps childbirth since long time ago. They were believed gaining their expertise by the giving of God. At the beginning safe motherhood program, the dukun was invited to cooperate with the government health clinic. They were given tools to help labor, such as a scissor to cut the umbilical. They were also trained, and given the trust as a partner of the government. In 1990 when midwife program began, the dukun were eliminated, and the status of "partner government" was over. Competition to get patients with midwives occurs. Dukun-midwife relationship is not good.

Currently, the dukun's "scissors" as a tool of delivery was blunt, and cannot be used anymore. But, dukun still carry them as a symbol that they are a part of government efforts to save the mother. The Dukun function in community is not just a delivery helper, but also a liaison between the community and the clinic, because many women who simply believe in dukun, and if the dukun advised them to clinics, then they want to. The author dubious the efforts to reduce maternal mortality, if the dukun continues to be removed. Because until now, they have more patients than midwives.

This article is very interesting because highlight the issue about dukun existence. Something that was “announced” already “almost” be eliminated in Indonesia.

Pardosi, Jerico., Parr, Nick., Muhidin, Salut. (2014). Inequity Issues and Mother’s Pregnancy, Delivery, and Early-Age Survival Experiences in Ende District, Indonesia. Cambridge University Press.

This study is necessary for policy makers related to improve health services in Indonesia. The paper presents a qualitative approach about pregnancy, childbirth, and the experience of surviving issues related to inequity in health care. The study was conducted in Ende district, East Nusa Tenggara Province, Indonesia. Population in this area is fairly poor. Research was carried out by conducting interviews with 32 mothers aged 18-45 years who had given birth at least once in the last 5 years. The results show the conditions that influencing the choice of the mother to get childbirth with a dukun were; midwife is not in place, childbirth occurs suddenly and there was time to call the midwife, and for cost reasons. Delivery with a midwife is more expensive than with the dukun. Another reason, some mothers had a bad experience giving birth with a midwife, as the midwife shouting and angry because the mother was too weak. Uncomfortable delivery room condition in the health clinic is also the reason women did not want to clinic. These inconveniences like no privacy, and anyone can get into the delivery room without permission. Transcript of the interview in this publication also shows that the husband and family giving support to the mother to maintain their health during pregnancy and labor. Like the husband reminds his wife to go to get antenatal care, and replace a wife task of washing clothes and cooking. Nevertheless, the husband is also a decision-maker. Although the study was conduct with very limited respondent, this article shows well about the maternal problem that happened almost in every rural place in Indonesia.

3. Community Level

Frankenberg, E., Buttenheim, A., Sikoki, B., &Suriastini, W. (2009). Do Women Increase TheirUse of Reproductive Health Care When It Becomes More Available? Evidence from Indonesia Studies in Family Planning, 27-38.

Research is aimed for healthcare providers and public health practitioners. The research question is whether there is a relationship between midwives’ placement program in the village and the using the public health service. The existence of village midwife is important in addition to attending births, as well as

to provide antenatal care to detect complications as early as possible so that morbidity and mortality could be avoided. The research data was obtained from the Indonesian family life survey in 26 provinces in Indonesia in 1993, 1997 and 2000. The data was processed using multivariate regression. The study results are attached in the form of graphs shows that the presence of midwives have a major impact on the antenatal care of pregnant women. A significant relationship appears especially in women with low education. Based on this research, although there are many shortcomings of the village midwife program that important to addressed, but this program has provided many benefits for community.

Qomariyah et al. (2010). An Option for Measuring Maternal Mortality in Developing Countries:A Survey Using Community Informants. *BMC Pregnancy and Childbirth*, 10:74

This research provides alternative method for measuring maternal mortality for health workers, policy makers. In Indonesia, Maternal Mortality Ratio is classified high. However, based on Indonesia Demographic Health Survey (IDHS), it was noticeable decreasing year to year. The question is whether these figures have described the actual situation of maternal mortality in Indonesia?

This study uses two methods, MADE IN and MADE FOR, to trace the maternal mortality cases in the past two years. The study was covered 708 villages in Serang and Padenglang districts, Indonesia. MADE IN method uses health volunteers (Kaders) and heads of neighborhood units (RTs) in obtaining information about maternal death in their respective communities. While MADE FOR method is a home visit to the family of the deceased mother to confirm and obtain details relating to the death. Results of these study are: combined of MADE IN and MADE FOR method is cost $ 0.102 per women in risk per year with an estimated MMR 434. Compared with the results and the cost of IDHS in 2007/2008 in the same two districts: cost of IDHS per women in risk per year is $12 with an estimated MMR 228.This study brings the understanding that the possibility of MMR posted at Indonesian health profile is under actual MMR. This requires serious attention because generally, health policy is made on the terms of the figures shown in the national profile. With Indonesia geographical that is very wide and consists of many islands, MMR calculation requires appropriate methods and double check, in term getting accurate result.

Tracking maternal mortality with the use of volunteers from the community will be better than using health record because there is a tendency of health workers to cover the actual number of deaths related to achieve the goal of health programs.

Quayyum, Zahid., Nadjib, Mardiai., Sucahya, Purwa. (2009). Level and Determinants of Incentives for Village Midwives in Indonesia.*Health Policy Plan,* 24 (1):2635

This study is aimed for midwives, and the Indonesian government. The study was conducted in Banten province in 2000 with interviewing 207 midwives. In 1990 the midwife village program was started. The Government provides a midwife in almost all parts of Indonesia with the goal of reducing maternal mortality and servicing of health care closer to the community. Some studies show the positive results of this program. In supporting the welfare of the midwife, the government give permission for midwives to undertake private practice, to get paid from the public. Unfortunately, according to the results of this study, it causes a midwife tends to serve the community with higher economic class. Likewise, midwives tend to leave their assigned place in a remote village, and moved to areas where people have a better economic level.

Government's attention to the welfare of midwives is an absolute thing. With a heavy workload, high responsibility, and working time 24 hours every day, the salary given by the government is not comparable. This paper illustrates the gap

between "the demands to get a more decent life" for the midwife and their main task to serve the community.

Shiffman, Jeremy. (2003). Generating political will for safe motherhood in Indonesia. Social Science & Medicine. 56 1197–1207

This publication is beneficial for health practitioner, especially health policy maker. The research objective is to get a comprehensive overview of the political aspects that affect maternal mortality. Thus, the problem can get the government's attention, and make it a priority both in the policy, and financial support. This study is a case study by interviewing 124 people associated with health policy makers, NGOs, and academics in five developing countries; Honduras, Guatemala, Indonesia, India, and Nigeria.

The study finds that there are three important points in each country that affect the success of reducing maternal mortality; transnational influence, domestic advocacy, and national political environment.

Transnational influences are related to international attention of maternal mortality problem, such as the provision of financial assistance. Indonesia received assistance from the World Bank in 1990 about a US $ 104 million. Domestic advocacy is regard to how the system in the country in addressing this issue including better cooperation among government, communities, and health organizations. National political environment is related to political changes and policy priorities. Those can affect the programs that are running. The author gives an example; change of Indonesian government system from centralization to decentralization brings unfavorable influence on the implementation of the safe motherhood program because each region has its own policy that cannot be controlled by the center.

This publication is very good because it contains some description about the situation in 5 different countries, so a reader can compare them. Unfortunately, the study only contains a general overview, and does not discuss in depth. This is possible because most who were interviewed by the researchers directly related to health policy-makers, so the information and data obtained are felt as a formality.

CONCLUSION

Judging from ecological models, the researches above, which is mostly done in the rural areas, there are some determinants that cause the mother's death, either directly or indirectly.

In intrapersonal level; culture, customs, stigma, and belief are the root of causes. For communities, especially those living in villages, the death is a destiny that cannot be circumvented. So, they never question the quality of health care that they receive. The public belief in the dukun becomes one of the determinants in this level. One study in Bali found that, most pregnancies occurred in the absence of the mother's desire to have more child in that time.

In the interpersonal level, in addition to her husband and family, midwives and dukun have an important role in this stage. Both midwives and dukun have contributed to the causes of maternal mortality or decrease the mortality rate, either their existence, the help that they provide, or their attitude.

In the community level, several programs that have been taken by the government seem have good impact, although many things need to be repaired, such as; the village midwife program, but giving low salaries, infrastructure development programs, but insufficient blood supply and lack of important medicine, the insurance program for poor people, but requiring complicated bureaucracy and poor service at the hospital.

RECOMMENDATION

Attention and cooperation of many parties, such as; government, communities, organizations, academia, and the international world are expected to reduce the cases of maternal mortality in the future.

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P-08

THE IMPORTANCE OF ASSISTANCE TO CANCER PATIENTS WITH MENTAL DISORDER

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ABSTRACT

Over the past twenty-five years, psychiatric services have shifted from hospital to community. Managed care reinforces this trend. Mental illness is better understood and less stigmatized, and services are more commonly used. But many in need do not receive care consistent with evidence-based standards, or at all. Cancer patients with mental disorders are very important to get mentoring. The purpose of this study is accompany cancer patients with mental disorders. Research method : Qualitative data collection methods were performed on 5 patients with cancer who experienced mental disorders, using open-ended questions and literature studies. **.** In the results of the study is cancer patients with mental disorders desperately need assistance in following various treatment programs. Chemotherapy is one of the treatment programs that are often overlooked if there is no accompaniment. It can be concluded that **c**Cancer patients with mental disorders may follow all treatment programs recommended by doctors. Patients can not run a treatment program properly without counseling.

Keywords: *Assistance, cancer, patients, mental, disorder*

INTRODUCTION

Over the past twenty-five years, psychiatric services have shifted from hospital to community. Managed care reinforces this trend. Mental illness is better understood and less stigmatized, and services are more commonly used [1]. But many in need do not receive care consistent with evidence-based standards, or at all [2].

The researchers used the global point prevalence rate of 7·3% for anxiety disorders, 3·2% for depression in men, and 5·5% for depression in women. For countries in crisis, the burden of mental health illness might be higher. In Nepal, a decade-long armed conflict was responsible for more than 10 000 deaths, and displacement of more than 100 000 people between 1996 and 2006 [1,7].

Cancer patients with mental disorders are very important to get mentoring. Mental distress can impair treatment processes and outcomes, such as adherence to treatment recommendations, satisfaction with care, and quality of life [1,2]. Mental health is just as important as a healthy body. Caring for oneself at a time of cancer treatment may be difficult [3].

Earlier research suggests poorer outcome of cancer care among people with severe mental illness. Integrated medical and psychiatric care is needed to improve outcomes of cancer care among patients with mental disorder [4].

Being diagnosed with cancer is a stressful, life-changing event that can evoke feelings of fear, worry, sadness, and anger. Depression gives one feelings of hopelessness and helplessness, disinterest in previously enjoyable activities, and a consistently down and sad mood. Depression often interferes with one's ability to work, sleep, eat, and enjoy life. Patients with cancer are especially at risk for depression

because of the physical changes and limitations from symptoms and treatment as well as of the uncertainty their treatment holds on their lives [3,4].

Mortality rates in psychiatric patients are much greater than in the general population, 1-17 including Nordic countries where longstanding egalitarian health and welfare policies might be expected to facilitate treatment access. Chronic physical disorders such as cardiovascular disease and cancer are the main cause,8,10-12 accounting for 10 times the absolute numbers of suicide in one study but receiving far less attention. In cancer, overall mortality is higher in psychiatric patients, even though the incidence is similar to that in the general population. The disparity between incidence and mortality is most marked for several common sites such as prostate and colorectal cancers. Possible explanations might be delayed diagnosis or lack of access to screening, leading to more advanced staging at diagnosis, and reduced access to or use of appropriate treatments after diagnosis [1,4,5].

The purpose of this study was to provide a more useful understanding of the actions to be performed by doctors during a treatment program of cancer patients with mental disorders. Assistance is expected to accelerate the healing of patients so as to not experience any complications that are likely to occur.

METHODS

Qualitative data collection methods were performed on 5 patients with cancer who experienced mental disorders, using open-ended questions and literature studies.

RESULT

Cancer patients with mental disorders desperately need assistance in following various treatment programs. Chemotherapy is one of the treatment programs that are often overlooked if there is no accompaniment.

We found excess mortality in people with a history of psychotic and substance use disorders. Cancer stage and comorbidity did not explain mortality differences. Controlling for cancer treatment decreased the differences. The mortality gap between patients with psychosis and cancer patients without mental disorder increased over time.

Support groups, led by a social worker, clinical therapist, psychiatrist, or psychologist, can be helpful when coping with cancer-related depression [4].

Although incidence is no higher than in the general population, psychiatric patients are more likely to have metastases at diagnosis and less likely to receive specialized interventions. This may explain their greater case fatality and highlights the need for improved cancer screening and detection [5].

Increased financial burden also as a result of cancer care costs is the strongest independent predictor of poor quality of life among cancer survivors [5,6,7].

CONCLUSIONS

Cancer patients with mental disorders may follow all treatment programs recommended by doctors. Patients can not run a treatment program properly without counseling.

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P-09

LARVICIDAL ACTIVITY OF STAR FRUIT EXTRACT (*Averhoa carambola* Linn) AGAINST LARVAE OF *Aedes aegypti*

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ABSTRACT

Star fruit extract (*Averrhoa carambola* L) is potential as a natural larvicides because it contains chemical compounds of flavonoids, alkaloids, saponins. This study aims to determine the larvacidal activity of star fruitextract to *Aedes aegypti* larvae and LC_{50} value after 24 hours exposure. This study used concentration with 1.5%, 2%, 2.5%, 3%, 3.5% and 1 negative control using tap water and 1 positive control using 0.01% temefos. This study was post test only with control group design, total samples is 525 larvae from third stage instar larvae of *Aedes aegypti*. The mortality larvae will be calculated after 24 hours. The results of the study showed the percent mortality at concentrations of 1.5%, 2%, 2.5%, 3%, 3.5% *Aedes aegypti* larvae were respectively 0; 10.68; 21,36,30,68; 54,68; 61,36. The result of Annova test obtained P <0,05 meaning that there is significant difference between death rate of *Aedes aegypti* larvae with various concentration of star fruit extract (*Averrhoa carambola* L) given. The LC_{50} value of the probit test for *Aedes aegypti* larvae is 3.035%. It can be concluded that the star fruit extract (*Averrhoa carambola* L) can kill *Aedes aegypti* larvae.

Keyword *:Star Fruit Extract (Averrhoa carambola L)* **,** *Aedes aegypti larvae, Larvicidal Activities*

INTRODUCTION

Indonesia is one of the tropical countries in the world that has the optimum temperature and humidity for the survival of insects. The mosquitoes is the one of the species of insects that gained great attention in human health, as a potential vector on the transmission of diseases. Some types of mosquito-borne diseases, such as Dengue Hemorrhagic Fever, Dengue Fever, Cikungunya (Break Bone Fever), are transmitted by *Aedes aegypti* mosquitoes. The existence of mosquitoes adjacent to human and animal life is that cause serious problems because mosquitoes act as a vectors.

Eradication of mosquito-borne diseases is to break the chain of life cycle of mosquitoes that consists of four kinds of eliminating the cause of the disease, isolation of the patient, preventing mosquito bites, and vector control[1]. Vector control efforts have been carried out in various ways that is mechanics, biology, and chemistry. These various ways the most popular is the eradication of chemicals by insecticides. However, the use of these chemical insecticides has enormous negative impacts such as environmental pollution, predatory mortality, targeted insect resistance, killing of pets and causing various dangerous diseases in humans [2].

Based on the research of concerning larvae effect of *Averrhoa carambola* Linn of instar larvae of *Aedes aegypti* mosquito, saponin and flavonoid contained in *Averrhoa carambola* Linn have effect as larvicides[3]. Kecombrang (*Etlingera elatior)* stem extract containing flavonoids and saponins is effective as larvicides with concentrations of 0.75% and 1%[4].Based on this fact, an alternative larvicides derived from natural ingredients is needed to reduce the use of chemical insecticides. One of the alternative larvicides used is native Indonesian plants such as starfruit (*Averrhoa carambola* L) which is easy to obtain, cheap and high efficacious. The use of materials derived from plants can be used

as an alternative in mosquito larvae control. The star fruit (*Averrhoa carambola* L) contains compounds such as alkaloids, soponin and flavonoids and other chemical compounds that can affect the nervous system, digestion and breathing in larvae[5].For that, further research on larvicides activity from star fruit extract (*Averrhoa carambola* L) to *Aedes aegypti* mosquito larvae.

MATERIAL AND METHODS

1. Preparation of test materials

   Aedes aegypti mosquito eggs in this study were obtained from the Parasitology Laboratory of Gadjah Mada University Yogyakarta. The mosquitos eggs then placed in a 30x15 cm plastic tray filled with water as for the maintenance of the larvae. Mosquitos eggs will hatch into larvae within 1-2 days. Hatching eggs into larvae are separated by using larval pipettes for colonization and fed by chicken's liver. After the third phase instar larvae, the larvae are removed by using a larval pipette into a plastic cup containing star fruit extract with different concentrations in each cup.

2. Preparation of Test Solution

   This extract made in accordance with the method of maceration, extract used is star fruit washed by tap water and then chopped fine, then dried on room temperature. After dry, star fruit blend dry (without water) then soaked for 24 hours in ethanol 96%. Once soaked, the material is filtered using a gauze cloth. The maserate, concentrated at 40-50^{0}C by a rotary evaporator. Ethanol extract of star fruit dillute by aquadest to 1,5% ; 2%; 2,5% ; 3% ; 3,5%. As for positive control is abate containing 0.01% temefos, and tap water as negative control.

3. Parameters Larvicides Activity of Star fruit

   The larvicidal activity was assesed by the procedur of WHO and Pesticide Commission. According to WHO procedure[6], concentration is considered to have an effect when causing death test larvae of 10-95% which will be used to find the value of lethal concentration. Meanwhile, according to the Pesticide Commission, the use of larvicides is said to be effective if it can kill 90-100% test larvae7.

4. Determination the LC50 Value

   For the bioassay test, larvae were taken into five batch, 25 larvae *Aedes aegypti* of each batch, in 100 ml desired concentration of star fruit extract. The negative control was tap water and 0,01% temefos as positive control. The number of dead larvae were counted after 24 hours of exposure, and the percentage of larvae mortality was reported from the average of three replicate. The mean of death of each treatment group in each unit of observation time was tested by using Probit analysis until LC_{50} value was obtained.

RESULTS AND DISCUSSION

This research was conducted in entomology laboratory of Faculty of Public Health of Ahmad Dahlan University Yogyakarta for 5 days. The making of star fruit extract (*Averrhoa carambola* L) was done in LPPT UGM, it took about 3 weeks. This research started with *Aedes aegypti* egg rearing obtained from Parasitology Laboratory of FK UGM Yogyakarta. The observations were conducted at Ahmad Dahlan Yogyakarta Public Health Laboratory with 3 repetitions with concentration of 1.5%, 2%, 2.5%, 3%, 3.5% with positive control of 0.01% temefos and the tap water as negative control.Before the actual test, firstly done preliminary test to determine the actual concentration for testing third

stage instar larvae of *Aedes aegypti.* The results of the study are presented in the following table:

Table 1. Number of Deaths of *Aedes aegypti* larvae after 24 hours Exposure star fruit extract *(Averrhoa carambola L)*

Group	Number of larvae	Repeat			averagemortality	% mortality
		I	II	III		
0%	25	0	0	0	0	0%
1,5%	25	2	2	4	2,67	10,68%
2,0%	25	5	6	5	5,34	21,36%
2,5%	25	8	8	7	7,67	30,68%
3,0%	25	12	13	16	13,67	54,68%
3,5%	25	18	14	14	15,34	61,36%
Temefos 0,01%	25	25	25	25	25	100%

Source: Primary Data 2017

The highest mortality was found at the highest concentration of 3.5%. The number of larval deaths increases with the increased concentration of star fruit extract (*Averrhoacarambola* L) given. Based on it can be seen that the higher concentration of star fruit (*Averrhoa carambola* L) given the higher the death rate of *Aedes aegypti* larva can be seen in the picture below.

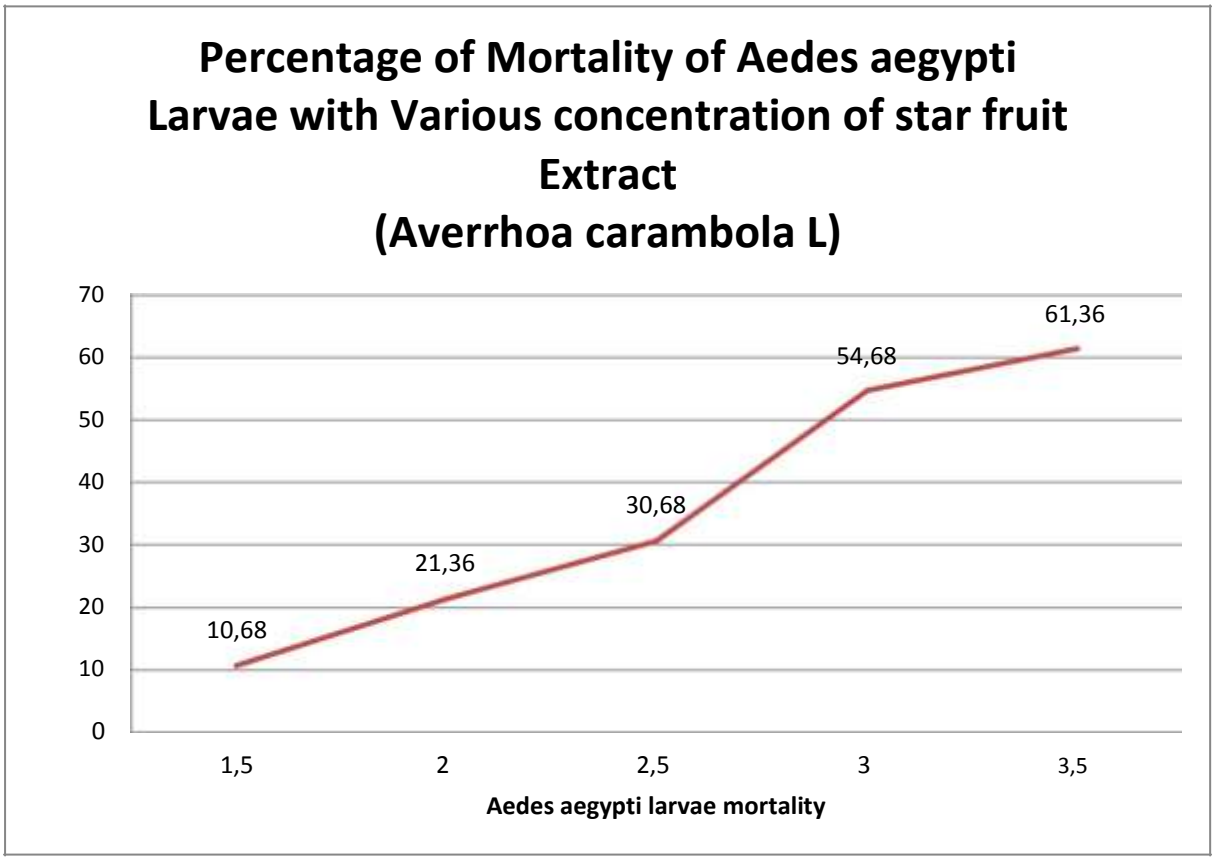

Figure 1. Graph The Percentage of *Aedes aegypti* larvae Mortality With Various Concentrations Of Star Fruit Extract (*Averrhoa carambola* L)

To determine whether there is any difference between treatment groups, statistic test with normality data test is done. Based on the results of statistics conducted by using Kolmogorov smirnov test results obtained as the following table:

Table 2. Results of Probit Analysis Star Fruit Extract (*Averrhoa carambola* L) with Percent Mortality of *Aedes aegypti* larvae

The concentration of star fruit extract (*Averrhoa carambola* L) (%)	Percentage of larval deaths (%)	LC_{50} (%) (IK 99%)	LC_{99} (%) (IK 99%)
1,5	10,68%		
2	21,36%		
2,5	30,68%	3,03581	5,969
3	54,68%	(2,851-3,279)	(5,263-7,155)
3,5	61,36%		

Source: Primary Data 2017

The concentration of 1.5% with 2% and 2.5% with 3% showed no significant difference because (p> 0,05) Furthermore, to find the value of Lethal Concentration 50% (LC_{50}) and 99% (LC_{99}) .The results of probit analysis can be seen in table 2. To determine LC_{50} and LC_{99} a probit test or unit probability is performed. The data of the research were analyzed by using Minitab 14 program with 95% confidence level. From the results of probit analysis, we found a large estimate of concentration resulting in death of *Aedes aegypti* larvae, LC_{50} at 3.03581% with intervals between 2.851% and 3.279%, while for LC_{99} at 5.969% with intervals between 5.263% and 7.155%.

Furthermore, in the figure above can be seen LC_{50} value of 3.035% and LC_{99} of 5.96% means that the effect caused by the extract of star fruit (*Averrhoa carambola* L) can cause death of 50% larvae Ae.aegypti at concentration 3.035%. starfruit is also able to cause death 99% at concentration 5,96% this means concentration 3,035% and 5,96% give effect of mortality in *Aedes aegypti* larvae.

Mosquito is one of the animals that breeding process takes place in two realms. At the egg stage until the pupa lives on the water medium and the adult stage lives on land. At this stage of course the quality of water affects the survival of mosquitoes. Here are the results of measuring the quality of star fruit extract (*Averrhoa carambola* L).

Table 3. Mean Temperature Measurement of Star Fruit Extract *(Averrhoa carambola L)* to Aedes aegypti mortality

Parameter	Concentration (%)	Time 24 hours			Average
		I	II	III	
Temp (^oC)	1,5	27	27,2	27,1	27,1
	2	27	27	27	27
	2,5	27	27	27	27
	3	27	27	27,2	27,06
	3,5	27,1	27	27	27,03

Source: Primary Data 2017

From table 3 it can be seen that the average of temperature measurement on star fruit extract (*Averrhoa carambola* L) in each concentration for 24 hours is 24.03-27,1^{0}C. The temperature range in this medium can still be said to be normal. This is in accordance with the opinion that the *Aedes aegypti* mosquito breeding place is at a temperature of 25-32^{o}C. Thus, larval mortality is not affected by temperature[8].

Table 4. Average Measurement of Star Fruit Extract (*Averrhoa carambola L*) Moisture to Aedes aegypti Mortality

Parameter	Concentration (%)	Time 24 hours			Average
		I	II	III	
moisture (%)	1,5	76,1	76	76	76,03
	2	76	76	76,2	76,06
	2,5	76,2	76	76	76,06
	3	76	76	75,8	75,93
	3,5	76	76	76	76

Source: Primary Data 2017

From table 4 it can be seen that the average of humidity measurements on star fruit extract (*Averrhoa carambola* L) in each concentration during 24 hours is 75,93 - 76%. The normal moisture range in this medium can still be said to be normal. This is consistent with the opinion that the *Aedes aegypti* mosquito breeding place is in moisture> 60%. Thus, larval mortality is not affected by moisture[9].

Table 5. The Average pH Measurement of Star Fruit Extract (*Averrhoa carambola* L) to *Aedes aegypti* Mortality

Parameter	Concentration (%)	Time 24 hours			Average
		I	II	III	
pH	1,5	7,2	7,2	7,2	7,2
	2	7,2	7,2	7,1	7,1
	2,5	7,3	7,2	7,2	7,2
	3	7,2	7,2	7,3	7,2
	3,5	7,2	7,1	7,2	7,1

Source: Primary Data 2017

From table 5it can be seen that the average of pH measurement on star fruit extract (*Averrhoa carambola* L) in each concentration during 24 hours time is 7,1-7,2. The normal pH range in this medium is still normal. Mosquito larvae require a breeding place with pH conditions ranging from 5 to 8. This indicates that the pH of star fruit extract (*Averrhoa carambola* L) did not affect larvae mortality[8].

Thus it can be concluded that the mortality of *Aedes aegypti* mosquito larvae caused only by toxic compounds contained in star fruit extract (*Averrhoa carambola* L)

DISCUSSION

Based on the results of this study, it can be seen that the of star fruit extract(*Averrhoa carambola* L) can be used as larvasida. This occurs because the star fruit extract (*Averrhoa carambola* L) there are active compounds in the form of compounds such as alkaloids, soponin and flavonoids and compounds other chemicals that can affect the nervous system, digestion and breathing in larvae [5].

Mortality of mosquito larvae increases with increasing concentration of star fruit extract (*Averrhoa carambola* L), it indicates that the extract is toxic. In this study the temperature, pH and humidity are still at normal limits, so the possibility of mosquito larvae in this study die caused by external influences such as temperature, pH and humidity. Variation of mosquito larvae mortality caused by the varity of sensitivity and resistance of each larva to the material active in the extract. The death of the larvae is caused by the inability of the larvae to detoxify the toxic compounds that enter the body.

The difference in the percentage of larval mortality is due to the diffusion speed of extracts entering into different cells so that at low concentrations the larvae can still

tolerate these toxic compounds, whereas at high concentrations the larvae can not tolerate the entry of these toxic compounds. This is in accordance with the opinion of [10] who said that the speed of diffusion depends on the difference in the concentration of substances dissolved during the process. This means that if the concentration decreases, the speed of diffusion also decreases. At each concentration showed an increase in the percentage of mortality every 24 hours, this indicates the longer time, the percentage of larval mortality is also increased. The interaction of toxic substances a biological system is determined by the concentration and length of time.Toxic substances that play a role in lethal larvae are alkaloids, saponins, and flavonoids. Alkaloids that enter the body of the larvae through absorption and degrade the skin cell membrane, besides alkaloids can also interfere with the larval nervous system work.

Based on the results of the observations during the test larvae exhibited anxiety symptoms characterized by upward motion movements on the test medium, while the larval control showed a resting state on the surface forming angles. The starfruit extract (*Averrhoa carambola* L) could be as Aedes sp.larvicide this is seen from $LC_{50}$from star fruit extract (*Averrhoa carambola* L) to Ae.aegypti is 3.035%.

Alkaloid compounds act as larvicides by inhibiting the feeding power of the larvae (antifeedant), so the larvae will experience nutritional deficiencies and eventually die. This can also be seen from the results of research about the content of active substances tembelekan (*Lantana* camara L) leaffor *Aedes aegypti* larvae mortality[11]. Based on the results of these studies the alkaloids contained in the leaves of elasticity serves as a poison or poisonning stomach. The content of alkaloids roots and amethyst five time greater than alkaloid content. The alkaloid can also be used as an insecticide[12]. Alkaloids in leaves or fresh fruit taste bitter on the tongue, alkaloid in the form of salt so that it can degrade the cell wall into and damage cells.The alkaloid compound inhibits the work of acetylcholinesterase enzyme that serves in continuing stimulation to the nervous system, so transmission of excitement does not occur[1].

Another active compound contained in the star fruit extract is saponins. Saponins result in decreased activity of digestive enzymes and the absorption of food in insects. In addition, saponins also damage the larvae of the larvae causing the death of larvae. The saponins isolated from Achyranthes aspera plants have larvicidal effects on *Aedes aegypti* and C.quinquefasciatus.

The flavonoid compounds contained in the sweet star fruit extract are also insecticidal because they are respiratory toxins, causing the larvae to not breathe due to respiratory system damage and ultimately causing the death of the larvae. In addition flavonoids also as inhibitors CYP6Z2, family of cytochrome P450 which plays an important role of insecticide resistance in mosquitoes. The flavonoids enter the body of the larvae through siphon located on the surface of the water and cause wilting on the nerves, as well as damage to siphon as a result the larvae can not breathe and eventually die[13]. This study used *Aedes aegypti* mosquito third stage instar larva, has complete organs and body structure of the body has not been hardened so it is suitable for treatment with alkaloid compounds, saponins and flavonoids.

The secondary plant metabolite compounds can disrupt the respiratory system, affect skin immunity and digestive system which eventually leads to mortality[14].The function of active compound content such as alkaloid, saponin, flavonoid as larvicide can also be seen from Tinospora rumphii and Citrus grandis plant can cause *Aedes aegypti* larvae death because it has active ingredient of alkaloids, saponin, flavonoids , steroids and tannins.

Based on the results of this study it can be seen that star fruit extract (*Averrhoa carambola* L) can be used as larvicide to *Aedes aegypti* larvae because there are difference of larvae mortality that signifikan between treatment group and control group.

CONCLUSION

Star fruit extract (*Averrhoa carambola* L) can be used as larvicides against *Aedes aegypti* larvae. LC_{50} value of star fruit extract (*Averrhoa carambola* L.) as larvicides to *Aedes aegypti* mosquito larvae of 3.04%.

SUGGESTION

1. Can be done research of star fruit extract (*Averrhoa carambola* L) against larvae of other species mosquitoes
2. For further researchers can use other techniques in the manufacture of star fruit extract(*Averrhoa carambola* L), to be more effective.

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FACTORS RELATED TO DECISION MAKING CHOOSING PLACE OF DELIVERY IN FAKFAK DISTRICT WEST PAPUA YEAR 2017

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ABSTRACT

Delivery at a health facility. Ministry of Health policy, delivery should be assisted by health personnel in health facilities. It is necessary to factor factors related to the decision to choose where to go. The method of this research is cross sectional design using a quantitative approach. Data collection by interviewing respondents while visiting the home using questionnaires. Population of pregnant women in Fakfak District. Samples of pregnant women in the selected puskesmas area. Statistical test of univariate, bivariate and multivariate analysis. The results of the study there is a significant relationship between education, knowledge, economic status and perception with the decision of choosing the birthplace. The most moderate factors are education and perception. It is recommended to improve health facilities as a place of birth.

Keywords : *Utilization of Health Facility; Selection of Delivery; Delivery at A Health Facility*

INTRODUCTION

Success in efforts to maternal health among which can be seen from indicators Maternal Mortality Rate (MMR) .The failure of indonesia to reach the MDGs 2015 target in lowering MMR namely from 390 every 100.000 live birth, in 1991 became 102 every 100.000 live birth,in 2015 make indonesia must be more work hard in lowering the number of MMR that has been set a target SDGs through 2030 to 70 every 100.000 live birth.This clearly become work that heavy considering the position of MMR in Indonesia according to results of a survey the census of the population between (SUPAS) 2015 is 305 of maternal deaths every 100.000 live birth.This indicator not only capable of judging program maternal health , moreover capable of being assessed degrees of community health , because sensitifitasnya on improvement of health services , either from the side of accessibility and quality [1.2].

Demographic and health survey Indonesia of 2012 suggests that has a decline in MMR in Indonesia happened since 1991 to 2007 , namely the 390 be 228.However ,SDKI in 2012 increased significant battery that is being 359 maternal mortality every 100.000 live birth. MMR showed the back into 305 maternal mortality every 100.000 live birth based on a survey between (the census supas) 2015[3].Cause of death mother - various kinds of but the direct causes of maternal mortality actually happens when delivering mostly threatening because predictable.Morbidity and mortalitas caused complication obstetrics directly occur during deliveries.Cause of death the highest and the lowest bleeding 30,3 %, hypertension 27,1 % and infections 7,3 % [4].The factors are stressed that childbirth have to assisted by paramedics who profetional , because one of indicators to prevent death mother is through childbirth helped health workers and held in health facilities and thus if there is complication will be more easily performed management is quickly and correctly .

The facility of the help health as a place of delivery is one important factor to bring the death rate down mother.Pregnant women who do not health facilities as a place of

childbirth risky to do not have adequate obstetrics and neonatal services.Childbirth carried out at home or at the health facilities may have the same occasion having obstructed, but may be different outcomes.Delivery by health workers will having obstructed by 50 %, and that could endanger the mothers and their babies if delivery held in the home that limited with the right conditions .

The Health Minister Republic of Indonesia no .97 in 2014[5], health services before pregnant, the pregnant, childbirth and the after giving birth, the contraceptive service, and sexual health services. On the third about delivery, the first verse said that delivery to do in health facilities.Similarly in 2016 the Issuance of Health Minister Republic Of Indonesia no.39 years 2016 on guidelines for the program the Healthy Indonesia Family, in article 3 paragraph 1b states that do birth mother at the health facilities[6].Thus but is it is quite clear that delivery to do in health facilities in addition to helped by health workers skilled.In the strategic plans of the ministry of health years 2015-2019 it is stipulated that childbirth health care facilities as an indicator mother health effort , replace help delivery by health workers[7].

Indonesia Health Profile 2015[3] shows that childbirth who are helped by health workers and was conducted in health service facilities in indonesia reach 79,72 %.Nationally this has meet the target controls 75 percent of the strategic plan.Yet they still there are 18 (52.9 %) province of those who do not meet the target.A province in Yogyakarta having 99,81 % highest goals set by as much as, while for West Papua 31,87 % occupying ranking bottom three after Papua and Maluku.The scope of helper delivery by health workers in 2013 and as many as 90.88 % respectively in the year 2015 fell to 88,55 %, compared to the number of deliveries attended at the health facilities by 2015 namely 79,72 % we can see that there are still paramedics who do help childbirth not in health service facilities .

Based on the 2016 district fakfak[8],delivery health workers trained reached 87,87 % in 2016 while in 2010 has reached 91,66 %, this suggests a decrease in achievement.While the delivery was health facilities in 2011 reached 54,4 % while childbirth at home is 46,6 % and in 2016 increase in facilities delivery health being 69,9 %.Thus there is still 30,1 % childbirth performed at home.Despite the increasing the but still stayed targetlessrenstra as 75 %.

The study shows that the scope of delivery by health workers , the maternity election and factors affect the delivery election is important.Then the researcher willing to make research on factors dealing with decision making chose the delivery of the district fakfak west papua.

THEORETICAL

Indicators maternal mortality influenced the status of health have generally, education and services during pregnancy and childbirth[3]. In poor countries, about 25 - 50 % women who die fertile caused matters relating to pregnancy.Death when bring forth usually a major cause mortalitas young woman in the top its productivity [9]. The who data , some 99 % maternal mortality the problem childbirth or births still take place in developing countries.The maternal mortality ratio in the country developing countries is highest with 450 maternal mortality every 100.000 live birth compared with ratio maternal mortality 9 industrialized and 51 commonwealth countries 10.It is estimated that every year 300.000 mother died while giving birth to the world.Some cases 99 % maternal mortality happened in developing countries.It is based on the report released United Nations Population Fund (UNFPA) of the study was conducted in 50 countries worldwide including indonesia[10].

MMR in indonesia since 1991 until 2007 decreased from 390 be 228 every 100.000 live birth. However, in 2012 SDKI back noting the rise in MMRsignificant , namely from 228 become 359 of maternal deaths every 100.000 live birth. MMR back showed a decline to 305 of maternal deaths every 100.000 live birth based on a survey the census of the population between (supas) 2015 [3].

Five cause of death of bleeding mother, hypertension in pregnancy, infection, long delivery/ stalled, and abortus.More than 25 % maternal mortality in indonesia in 2013 caused by hypertension in pregnancy.First place was bleeding is due to 30.3 %.[1]Indonesia s maternal mortality caused by a factor of directly or indirectly. The direct causes include: bleeding, eklamsia, infection, complication the puerperium, abortus, childbirth long / stalled, embolism obstetrics, another other.Cause is indirectly include: pregnant women became very chronic energy (pops) 37 %, anemia (hb less than 11gr %) 40 %. In addition some for the indirectly relate to health problems mother namely: “4 too” in childbirth namely: too young, too old, too often and too much. “3 late”namely: late judge, late to be sent to area health, and late access to health services.Of various penyabab maternal mortality the direct causes the maternal mortality actually happens when delivering and could threaten because predictable [11].

Target strategy to lower maternal mortality rate among them is the increase in the percentage of childbirth at the health facilities as much as 85 %[7]. While the government strategy in lowering mmr one of them is the program planning prevention childbirth and complications (P4K) .The program focused on the concern and the role of family and community efforts in the conduct of early detection , avoid health risk for pregnant women , as well as providing access and service kegawatdaruratan obstetrics and neonatal in the level of basic puskesmas (PONED) and obstetrics service kegawatdaruratan and comprehensive in neonatal hospitals (PONEK) .In its implementations, P4Kis one element of alert village.P4K be introduced by the minister of health in 2007. The implementation of the P4K in the villages it should be ascertained to be able to help family in making planning deliveries good and increase preparedness family in the face of tocsin pregnancy, childbirth, and postpartum that can take appropriate action.

The srategic target to decrease the Maternal Mortality Rate (MMR) is to improve the percentage of delivery in healthy facilities 85%. Meanwhile, one of the government strategy to decrease Maternal Mortality Rate is Delivery Planning Program Complication Prevention (PAK) . Such program is emphazised in caring and the role of family and society in effort to carry out the early detection to avoid the healthy risky for the pregnant women as well as to provide the access of and obstetric emergency service and basic neonatal in local government /clinic (PONED) and obstetric emergengy service and neonatal comprehensive at hospital (PONEK). In the implementation ,Delivery Planning Program Allert. The implementation of Delivery Planning Program is begun recognizing by Healthy Minister o Republic Indonesia in 2017. The implementation of Delivery Planning Program in those villages need to be certain in order to be able assist the family and make the delivery program run well and to improve the readiness of family in facing pregnancy endanger sign, delivery and parturitium in order they can take an ction accurately.

The regulation of Government Health of Republic Indonesia No 47 in 2016 states that healthy service facility is a tool and a place which is used to carry out healthy service effort either preventive, or curativewhich is done by central government,local govermnment and society[12]. Healthy Service Facility is conducted service healhty in form indvidually and society. Healthy Service Facility nowadays consists of many types,either organized by the government or private with each level and type. Generally, healthy which spread in Indonesia enterely disscusion influences directly with mother healthy service and the babies especially prenancy, delivery, parturitium consist of PONEK Hospital,local government clinic, Polindes and Independence Practticed Widwife.

METHODS

The reseach is conducted by using Cross Sectional[13]. The amount of sample is counted based on the formula of hypothesis test with 2 propotion with strong of test is 95% and meaningful degree is 5%[14]. The chosen sample is conducted by multisage sampling[13] is chosen 330 pregnant women respondents. Doing an interview using

quesioner when they carry out home visit. The research is done on May 2017. The data is analized , unvariate,bivariate with chi-squre and multivariate tha t used double logistic regretion test[15,16].

RESULT AND DISSCUSION

1. Decision Making Choosing Place of Delivery

   It is found that from 330 respondents there is 119 respndents (36.1%)decide to do a delivery at home, 9 respondents (2.7%) choose polindes, 54 respondents (16.4%) choose local government clinic and 1 (0.3%) respondent choose independence practiced widwife and 147 respondents (44.5%) choose the hospital as a delivery place.

2. The relationship of predisposition with a decision to choose a delivery place
   a. Age

      The result of research showed that the respondents' age are between 13 to 43 years old are categorized as unrisky age namely 20 to 30 years old and more than 35 years old as many as 58 respondents (17.6%). Analizing result is known that from 58 respondents within risky age, thre are 19 respondents (32.8%) which choose a delivery place not in a healthy facility and 39 respondents (67.2%) choose a delivery in a healthy facility. Meanwhile,from 272 respondents within unrisky age,there are 100 respondents (36.8%) with chose a delivery nt in a healthy facility . The result test of bivariate is showed that respondents within unrisky age (<20 to> 35 years old) are tend to use a delivery in a healthy facility compared with unrisky age (20 to 35 yeras old) . Whereas, the result of test chi squre is obtained that there is a meaningful relationship between the age with the decision to choose delivery place. Hus, it is seen that the benefit of healthy facility as a delivery place is not influenced by the age. Whereas, the age is quite related to pegnant risk and delivery is an indirectly cause the mortality of mother which is known as " too 4" such as too young (< 20 years old),and too old (>35 years old).[11].
      Theoritically, age is quite related to pregnant risky as explained above, although this research does not have a meaningful relatonship with the decion to choose a delivery place. But there is 32.8% respondents with unrisky age and 36.8% respondents with unrisky age are still chosen not a healthy facility as a delivery place, is known that either risky age or unrisky ageare quite unsafety if the delivery is not conducted in a healthy facility because the pergnancy complication often take place which is unpredictable and need a serious handling. Due to, there is still lack of awareness of society about pregnancy risk which is conducted in a healthy facilitty.
      The result of research by Khudori (2012) research is stated that there is no meaningful relationship between the age and a decision to choose a delivery place in IMC Hospital[17]. But it is not in accordance with the research of Gusti I (2006) that is stated that there is meaningful relationship between age and a decision to choose a delivery place[18].

   b. Parity

      Respondent parity ≤ 3 as many as 277 respondents (83.9%) meanwhile parities which are more than 3 are found 53 respondents (16.1%). The relationshi of analized result between a decision to choose a delivery place in Fakfak is recognised that unrisky paties respondents are found 180 respondents (65.058.5%) which choose a healthy facility a s a delivery place and risky parties

respondents are found 31 respondents (58.5%) which choose a healthy facility as delivery place. This data shows that unrisky parties are tendt to choose a healthy facility as a delivery place compared with risky parties respondents. Thus, the result of Pambudi (2010) research which states that there is a significant relationship betwen parity and benefit of healthy which provides a delivery service in Omben District and Campolnh, in Sampang Regency.

c. Education

The result of research , it is known that respondents with low education (beneath SLTP) are found 142 respondents (43.0%) and high level of education (SLTA to College) are found 188 respondents (57.0%). The result of analize shows that respondents with hidh level of education 140 respondents (74.5%) are more disposed to choose a healthy faciility as a delivery place compared with respondents with low education 71 respondents (50.0%).
From the result test of *Chi Square* 0.000 (p <0.05) which means that there is a meaningful relationship between education and a decision to choose a delivery place . This matter is supported by OR value (Odd Ratio) as many as 2.917
which means respondents with high level of education tend to choose give a birth in a healthy facility 2.917 times compared with respondents with low level of education. From the research can be seen that the higher level of education respondents better to make a decision to chose a delivery place and the lower lever of education respondents than most to make a decision to choose a delivery place. It can be concluded that the educated women try to seek the high helthy facility and have a high ability to get a good result of delivery. The statistical result is in balanced with the theoritical result that education factor is variable which is influence organized behaviour in its individual to get more independence to reach the goal of healthy. The basic concept of education is a study process which means the forms of growing level , the development or alteration, better and mature in its individu, group, or society [20].
Healthy education is a study process for unknown individu about the healthy value and are not able to solve individual healthy problems to become more independence. The study process of an individu to increace their knowledge it can be develop not only through formal education but also through non formal education in form of healthy educations, seminar, and healthy training[20]. This matter is in accordance with a research conducting by Handayani (2004) which is stated that there is a meaningful relationship between a decision to give a birth at hospital with predisposing factor (education)[21]. Thus, The result of Retno (2005) shows that the level of education have a meaningful relationship with a decision to choose delivery place[22].

d. Occupation

A great number of respondents are unworkers house wife namely as many as 258 respondents (78.2%),whereas workers house wife are found 72 respondents (21.8%). The result of analysis is known that the proportion of workers respondents are found 47 respondents (65.3%) have chosen a healthy faciliy s a delivery place and 164 unworkers respondents (63.6%) choose a healthy facility as a delivery place.
The result of test *chi square* is obtained P value 0.898 (> 0.05%) which is meant that there is no meaningful relationship between the occupation of respondents with the decision to choose a delivery place. OR value 0.898 which means workers respondents will tend to choose a delivery place not in a healthy faacility 0.898 compared with unworkers respondents. Based on the result of analysis above , the occupation of respondents can not be claimed as a

standardize measure a decision to choose the better place to do a delivery process. Either the workers respondents or unworkers respondents. But there is still about 94 unworkr respondents (36.4%) and 25 workers respondents (34.7%) are still choose a healthy facility not as a delivery place. It is caused by by hbitual delivery assitance which is conducted at home even by trained healthy workers. According to the respondents, i the delivery process conducted at home they will be supported by their family or relatives when they compare with a delivery process in a healthy faacility. The result of the research ith suitable with Kudhori (2012) research, that is stated that there is no infuence between the occupation with the decision to give a birth at Hospital IMC Bintaro[17]. Thus, a research which is done by Pambudi (2010) which is stated that there is no meaningful relationsip between mother occupation with the benefit of healthy facilies which are provided delivery facilities in Omben District nd in Camplonh in Sampang Regency[19].

e. Knowledge

Most of the respondents have a knowledge dealing with pregnancy and delivery. It can be proved by the great number the respondents as many as 255 respondents (77.3%), meanwhile there are about 75 respondents (22.7 %) are still having the lack of knowledge about such matters. It is shown that 52.7 % respondents know that baby is taken a bath after giving a birth about 6 hours,
57% respondents don't know that bleeding during a pregnancy phase can endanger the baby and mother 60.0% respondents are known that the normal process of giving a birth can be taken for 24 hours, 60.6% respondents are known that the pregnant women less than 18 years old are getting more risky than 25 years old and 61.8% mother are known that vomit in the age of pregnancy about 6 months can be categorized as unnormal condition. Thus, less than 62% respondents give the right answer from some questions dealing with such aa lack of knowledge.
The result of analysis shown that the respondents which having a better knowledge tend to choose a healthy facily as delivey place compared with the respondents who hving low knowledge. The statistical test is obtained that the result of *P Value* 0.020 (<0.05) which is meant that there is a meaningful relationship between the knowledge of respondents with decision to choose a delivery place in Fakfak Regency. It is supported by OR value (Odd Ratio) 1.913 which means that the respondents who are having a better knowledge have an opportunity 1.913 times to choose healthy facility as a delivery place comparing with the respondents who are having lack knowledge. The result of research is in accordance with a theoy states that the level education of someone for a matter having a level/degree which placed someone placed someone to act an information or action to be clarified. The higher level of education of someone for certain terms will indicte the behaviour and action to be taken to carry out the response for the information received . It is lso supported by Baby and Mother Healthy in LOCAL Government Clinic namely pregnant mother dealing with the process of pregnancy, delivery,even the treatment o baby . But the respondents are still having lack of knowledge about time bathe a newborn baby, due to the bleeding on pregnancy, the normal delivery, the long of normal delivery, pregnancy risky age and vote which is occured to the pregnancy after 16 weeks , proved by less of 62 % respondents who give the right answer relates to this terms. Thus, it is needed morre healthy promotion dealt with such terms. Moreover, it is needed more healthy promotion dealt with such terms. In accordance with the research that is conducted byRetno(2005) which states tht knowledge has a relationship with the selection of delivery service[22]. Thus, a

research done by Gusti (2006) states that there is a meaningful relation ship between knowledge and the selection of a delivery service[18].

3. Supporting Factor Relationship With The Selection of Chosing A Delivery Place
   a. Economic Status

A great number of respondents with low economic status which has an average income less than Rp 2.421.500 as many as 254 respondents (77.0%), whereas the respondents with the average of income more than Rp 2.451.500 which is come from high economiic status as many as 7 respondents (23.0%). The result of research shown that as many as 57 respondents (23.0). The result of research shown that as many as 57 respondents (23.0%) are come from high ecnomic status and the rest come from low economic status choose a healthy facility as a delivery place.

The research of *Chi Square*is obtained P. Value 0.029 (<0.05)which means that there is a meaningful relationship between either respondents economic status with the decision to choose a delivery place in Fakfak Regency. It is supported by OR Value (Odd Ratio) 1.948 which means the respondents with high economic status have an opportunity 1.948 times not choose a healthy facility as a delivery place compared with respondents of low econmic status. Based on the result of respondents economic status analysis it is a measurement in selecting a delivery proces . It is also supported by 100 respondents (38.4%) with low economic status and 19 respondents (25.0%) with high economic status which choose a delivery place do not carry out in

healthy facility. Even though, in a fact of the policy of healthy government is focussed on the quality of Primary Health Care especially through the development of healthy guarantee, the improment f access and the basic healthy service quality and the reference which is supported by healthy system treatment and the development of healthy fund[11]. But the respondents are still choosing home as a delivery place. Some reasons are found so the respondents do not choose helthy facility as a delivery place. The reason is that the espondents said that a delivery place at home is more comfortable, because they don't need to prepare everything they needed at hospital, including transportation. Such matter is in accordance with the research of Gusti (2006) which states that economic status has a meaningfull relationship with the selection of delivery place[18]. But it

is different with the research of Pambudi (2010) which states that economic status do not relate to the benefit of healthy facility tht provides a delivery place[19].

b. The Cost of Pregnancy

A great number of respondents do not py a delivery cost namely as many as 246 (74.5 %) . It is due to the reason almost the respondents have possess BPJS Healthy Card but as many as 84 respondents (25.5%) who pay the delivery cost and those who have an opinion that the cheap cost delivery are obtained as many as 51 respondents (15.5%) and as many as 33 respondents (10.0) have an assumption that the cost delivery is expensive. The result of relationship analysis between in Fakfak is known that from 246 respndents who do not pay the cost of delivery , it is obtained 60.6% choose to give a birth in a healthy facility and 51 respondents (15.5%) who paid the delivery cost but their assumption is cheap, there are 70.6% choose to give a birth in a healhy facility and even 33 respondents are paid the delivery cost but people assume that it is expensive, as many as 51.5% choose to give a birth in a healthy facility.

The result of analysis shown that there is a meaningful relationship between the delivery cost with a decision to choose a delivery place with P. Value between

those either do not pay or pay the cost have an interpretation that it is cheap as many as 0.159 (> 0.00) and tose who d not pay have an interpretation that is expensive as many as 0.079 (>0.050) . OR value (Odd Ratio) between either do not pay or pay have an interpretation that it is cheap as many as 1.690. Thus, those who do not pay hve an opportunity 1.690 times choose healthy facility as a delivery place compared with those who pay the cost and have an assumption that it is cheap and OR Value (Odd Ratio) who do not pay with thosewho pat the cost but they assume that it is expensive as mny as 0.079. It means that those who do not pay have an opportunity 0.079 times to chose a healthy facility as a delivery place compared with those who pay and assume that it is expensive.

Even though, there is no meaningful relationship statically it is still having as many as 88 respondents 35.8%) do not pay the delivery cost and 15 respondents (29.4%) pay the delivery cost but they assume that it is cheap even 16 respondents (48.5%) who pay delivery cost and assume that it is expensive still choosing not a healthy facility as a delivery place. With the presence of BPJS Card, it is should not become a problem. Another respondents have to spend the delivery cost precisely when they give a birth in a healthy facility because the respondents choose to give a birth at home but they contact the healthy workers to assist a delivery and it is paid. Whereas, if the delivery is being helped because the respondents choose to give a birth at home but they contact the healthy workers to assist the delivery and it is paid. Whereas, if the delivery is being helped by the healthy workers, so it can be claimed to be paid with appropriate standartdize. The reason of respondents is because it is more trusted and comfortable if it is assissted by the healthy workers if the delivery is conducted in a delivery facility . It is not guarantee even they won't see the healthy workers . The research is suitable with Kudhori (2012) research with the result there is no relationship the cost service to a decision t give a birth in Bintaro MC Hospital[17].

c. The Distance To Healthy Facility

The distance of respondents location to healthy service facility is categorized near as many as 156 respondents (47.3%) and the distance to a healthy facility is categorized near as many as 174 respondents (52.7%). The result of analysis relationship between the distance to a healthy facility with a decision to choose a delivery place . It is known that the respondents with a distance to a healthy facility is near as many as 61.5% choose a healthy facility as a delivery place.

Based on the test result *P. Value* (>0.05%) which means that there is a meaningful relationship between the distance to a healthy facility with a decision to choose a delivery place. From the analysis result shown that the distance to a healthy facility is not influence to choose a delivery place,whereas it is occured that the respondents with far away healthy facility are still choosing a healthy facility.As a delivery place because it is more protected themselves with healty facility, meanwhile the respondent with near distance assume that the delivery is safety to do at home even it is helped by trained healty workers and if something happen it will be easlli to get the healty facilities. Whereas it is redate to the risk of give a birth a home or not in a healty facility, if when the complication happen the proses of giving a birthis happening. So "3 late" namely : late to take a decision, late to send to the delivery place and late to get the healty facility will take place and andanger the soul of mother and her baby thus, the healty facility such as polindes as a proper place of delivery which mostly existed in every villages but only two polindes which is used as a delivery place meanwhile the

others are only use as a place for checking ante natal care (ANC) simple treatment, thus the assistance of delivery still done at the patients home, besides, they are suggested to local government clinic or hospital with an adequate long distance the research is a accodance with the result of Khudori research (2012) which states that there is no influence the distance to the hospital with a decision to delivery in Bintaro IMC Hospitas[17].

4. The Relationship of Need Factor With Decision Making Choosing Place of Delivery
   a. Safety Delivery Perception

      The respondent with good perception about a safety delivery as many as 289 respondents (87,6%) whereas only 41 respondents (12,4%) are having lack perception. But there are 29,4% respondents have a perception that the baby from the process of giving a birth in a healty facility it must be healt, if they are found long delivery stall the process of delivery is ran well 44,8% respondents that a baby is giving a birth in a healty place must be health is 51,8% respondents assumed that giving a birth by using expensive healty facility 54,2% assumed that the family should prepare million rupiahs of money to give a birth at hospital and 55,2% assumed that knowing endanger sign to avoid lateness to look for an assistance. Thus, they are still less of respondents perception for such things, which proved with the right answer for some quetion less than 60%. The result of frequency analysis, a safety delivery perception by making a desision childbirth. Its is known that from 41 respondens with less perception, as many as 28 respondents (68,3%) choose to give a birth not in a healty facility and 13 respondents (31,7%) chopse to give a birth in a health facility. Meanwhile, from 289 respondents have a good perception, as many 91 respondents (31,5%) choose to give a birth not in healty facility and 198 respondents (68,5%) choose to give a birth in a healty facility. The result of Chi Square test is gained by P Value/ Asymp.sig (2-sided) as many as 0.000, because P Value < 0,05 so there is a meaningful relationship between safety delivery perception respondents with make a decision childbirth in Fakfak West Papua in 2017. Supporting by OR value (Odd Ratio) 4,686 which means respondents with less perception have an apportunity 4, 686 times to choose not a healty facility as a delivery compared with respondents with good perception.

      The respondents perception are still decrease about safety delivery especially relates to risky delivery which is predictable either mother or the baby, giving a birth in an expensive healty facility, so the family should prepare a million rupiah of money to give a birth at hospital and known the endanger sign to seek an assistance. Thus it is acovdance with Pambudi (2010) with the benefit of healty facilities which provided delivery facilities in Omben and Camplonh in Sampang Regency[19].

   b. Pregnancy Complication

      A great number of respondents in pregnency complication yhere is no complication namely 289 respondents (87,6%) and as many as 41 respondents (12,4%) are having a pregnant complication the result of relationship analysis between pregnant complication with make a decision childbirth in Fakfak know that respondents who do not have pregnant complication as many as 62,3% who choose a healty facility as a delivery place and respondents who choose prenant complication as many as 75,6% decide to choose healty facility as delivery place compared with respondents who do not have pregnant complication.

      The result of test Chi Square P Value 0,136 (>0,05) so there is not meaningful relationship between pregnant complication with a desicion childbirth the value of OR (Odd Ratio) 1.877 wich means that respondents which do not have a

pregnant complication have an opportonity 1.877 times to choose not a healty facilities as a delivery place compared with respondents with pregnant complication is not become a standard the selection of delivery place, but there is still 109 respondents (37,7%) wgo do not have pregnant complication and 10 respondents (24,4%) with pregnant complication who do not choose as healty facility. This is caused by the respondent feel if their pregnant is in good condition so the delivery process will run well. Thus the respondent who have pregnant complication fell that their condition is still safe if the delivery conducted at home meanwhile they usually check up the pregnancy regulary. The result is a accordance with Khudori (2012) with the result of research that states that there is no meaningful relationship between the risk of pregnancy with a decision childbirth in RS IMC Bintaro.[17]

5. Factor Relatis to Make A Decision of Childbirth

the result of analysis is obtained that education variable (P Value 0.001) and perception of safe delivery (0.001) have a positive relationship with the making of decision childbith. The result is consistenly with the result of test bivariate wich shown there is a meaningful relationship between education and safe delivery perception with making a decision childbirth . this metter shown that the higher level of education of respondents will choose to give a birth in a healty facility and the better perception of gething respondents about safe delivery is to choose give a birth in healty facility. Based on the result analysis above, the value of OR (Odd Ratio) shoen that the respondents with high level education then to decide giving a birth in a healty facility 2,391 times and who have safe and good percertion about delivery tend to decide giving a birth in healty facility 3,639 times. Thus, teh high level education of respondent aboute safe delivery so it will make positive to choose childbirth namely more to choose a healty facility as delivery.

From the result of analysis shows that a great influence of variable to make a decision is the perception of safe delivery with the number of coefficient 1,292 and OR as many as 3,639. it is means that the patient who have a good perception about delivery place 3,639 times more beneficial the healty facility as a delivery place than having lack of perception. Thus, the decision to choose a delivery place in healty facility perception

It is obtained the number R2 (R2 Square) as many as 0,155 (15,5%). It is shows that the percentage of contribute from variable education, knowladge, save delivery perception and economic status to choosing variable to a delivery place. Whereas, the rest 84,5% is influence pr clarity by another variable which is not put in the research model.

CONCLUSION

Based on the result of analysis and disscusion of factors related to decision making choosing place of deliveryin Fakfak district West Papua in 2017, therefore It can be concluded as follows :

1. The description of prediposition of pregnant mother in Fakfak regrency is a half part do not a risky mother (20-35 years old), unrisky parity (<3 time give a birth), a level education star from SLTA to collage, some to them do not work, have a knowlage either. Pregnancy to delivery. Whereas, the supported factor namely economic status are still low, some at the do not have delivery cost, the distance to the healty facility is relatively near and the need factor generally have good perception either save delivery or some of them do not have pregnant complication.

2. There a relationship between education, knowlage, economic status, delivery cost and save perception delivery with making choosing place of delivery in Fakfak distric Weat Papua in 2017.
3. There is not relationship among age, parity, accupation, the distance to healty facility and pregnant complication with making choosing place of delivery in Fakfak distric Weat Papua in 2017.
4. The most relate factor to make a decision with making choosing place of delivery in Fakfak distric Weat Papua in 2017 is education and save delivery perception.

SUGGESTION

1. Fakfak District Goverment

   The presence of minister of healty regulation No. 97 th 2014, dealing with healty services pre-pregnant, the pregnant, delivery and phase after giving a birth, contraception services even, sexuality healty services, thus it is need to state regulation of district deals with the regulation of ministrer of healty especially focussed on delivery it is should be assisted by training and competend healty workers to develop the benefitcial healty facilities as a delivery plece to decease delivery risky and to avoid the mortality of mother abd baby because of the complication of pregnancy.

2. Helaty Department of Fakfak District

   A policy to the healty cervices facilities especialy a delivery place, even all the supported facilities and aquipments need to pay more attention and even the development of Primary Health Care to become PONED Primary Health Care in order that a delivery process can be done to reach the goal in decreasing the mortality rate of mother and baby.

3. Primary Health Care

   The development of healty promotion espesially dealing with pregnancy, delivery, and the treatment of newborn baby including endanger sign even complication to be occured and the improvement of society qwareness to make a decision to give a birth in a delivery place and the people should realize that a delivery process need healty facilities as the first aid and to develop the function of polindes.

4. The Society Figure

   People should have a right perception to avoid unproper thoughts such as a delivery process is still assisted by dukun to develop the awareness of pregnant women to make a decision of delivery place.

5. Researcher Extended

   The dissetasion indicated that the study should still to be focussed on another impacts in deciding to choose a delivery place.

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