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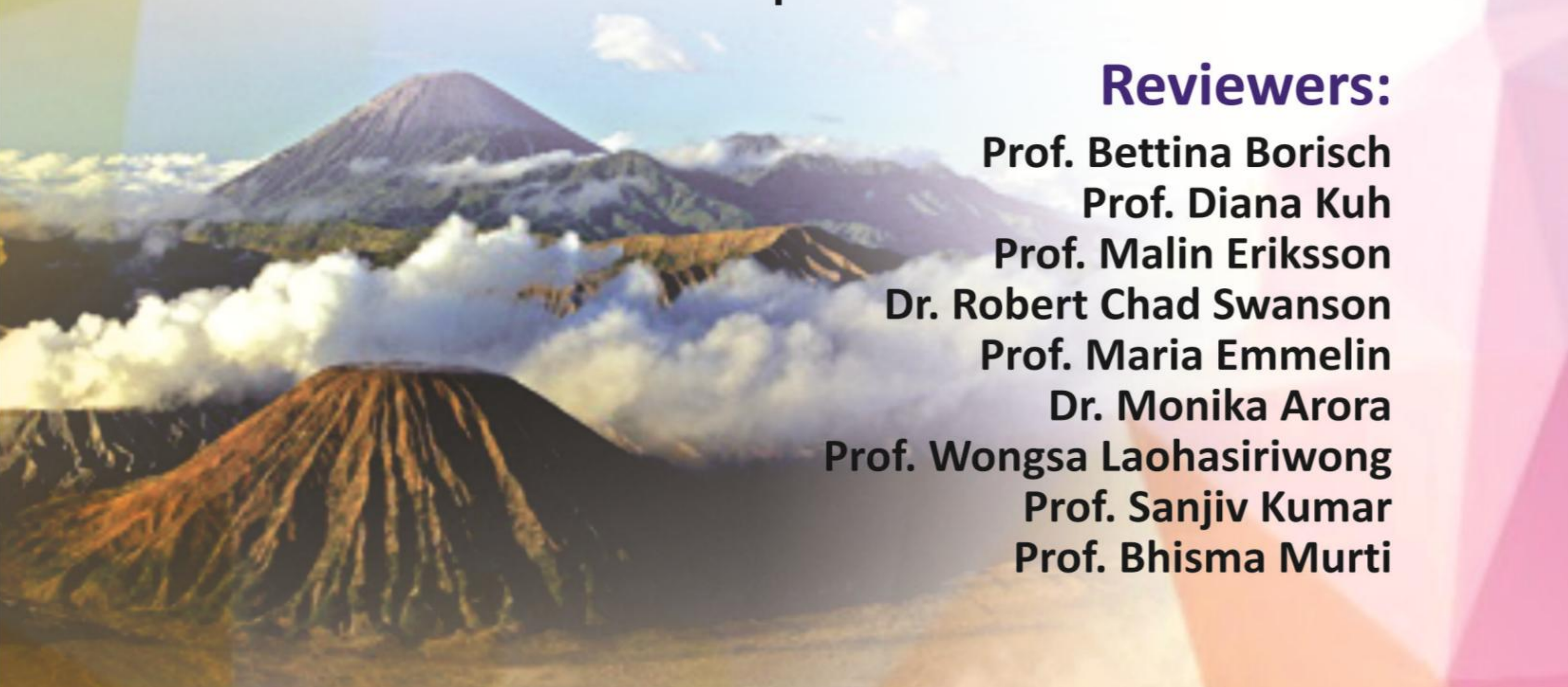
THE 2ND INTERNATIONAL CONFERENCE ON PUBLIC HEALTH

Theme:
"Multisectoral Action to Combat Regional and Social Inequities in Health"



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THE 2ND INTERNATIONAL CONFERENCE ON PUBLIC HEALTH

"MULTISECTORAL ACTION TO COMBAT REGIONAL AND SOCIAL INEQUITIES IN HEALTH"

Organized by:

Masters Program in Public Health,
Sebelas Maret University

In Collaboration with:

World Federation of Public Health Associations
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"Multisectoral Action to Combat Regional and Social Inequities in Health"
Best Western Premier Hotel, Solo, Indonesia
September 6-7, 2017

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PREFACE

Prof. Bhisma Murti,
Chair of the International
Conference on Public Health

Countries around the world have made improvement in population health, and yet there remain major health inequalities between and within countries. Pervasive and systemic health inequalities are a serious problem. Reducing and ultimately eliminating health inequalities have become an important policy objective in many countries for two reasons. First, inequities in health are unfair. Health inequity contradicts the basic human rights principle that everyone has the right to the highest attainable standard of physical and mental health. To be fair everyone deserves a fair chance to lead a healthy life. No one should be denied the resources needed to be healthy.

Second, health inequalities are largely avoidable. The causes of health inequality are complex but they do not arise simply by chance. Many differences in health between groups of population are systematically shaped, and the causes of health inequalities are identifiable and largely modifiable. A plethora of evidences have supported that global efforts to reduce and eliminate health inequalities should address the "causes of the causes"– the fundamental structures of social hierarchy and the socially determined conditions these structures create in which people "grow, live, work and age". Efforts to strengthen health equity should be targeted towards the social determinants of health (SDH), which rest beyond the immediate causes of disease.

Addressing systemic health inequalities and their underlying social determinants are complex and challenging social and policy problems. Concerted efforts to reduce health inequalities should aim at removing obstacles to health in any sector. To be effective and sustainable, interventions that aim to redress inequities must go beyond remedying a particular health inequality and empower the disadvantaged groups through systemic changes, such as law reform or changes in economic or social relationships.

One increasingly important direction that addresses the dynamic and interdependent nature of the social determinants of health has been through collaboration across different policy and program sectors. Research evidence and experiences of leaders and front-line practitioners in many settings builds a compelling case that collaborative and coordinated work across sectors is one vital direction.

Inter-sectoral collaboration has become an essential part of comprehensive strategies to address health disparities and population health. However, further work is needed to understand the factors that support good colla-

boration and to build a case for inter-sectoral collaboration as a best practice. Some critical questions call for answers. What kinds of inter-sectoral collaboration, and to what ends? What success conditions and enablers are needed to realize the potential of inter-sectoral collaboration? How can effective and responsive collaboration address complex social problems and contribute to reducing health inequalities?

International Conference on Public Health (ICPH) is a scientific meeting bringing together government leaders, policy makers, academicians, health planners, public health professionals, health practioners, allied health students, to address, discuss, and solve issues of public health importance, at global, regional, national, and local levels. The 2nd ICPH is to be held at Best Western Premier Hotel, Solo, Indonesia, on September 6-7, 2017. The theme for the 2nd ICPH is "Multisectoral Action to Combat Regional and Social Inequities in Health".

The aim of this conference is to discuss, and develop framework and strategies for multi-sectoral actions to reduce and eliminate regional and social inequalities in health. Specific objectives:

1. To disseminate research evidence on health inequalities and their social determinants of health in various countries
2. To identify existing theoretical models that can be used to understand the causes of health inequities
3. To build capacity in research into social determinants of health and health inequalities
4. To discuss the reorientation of the roles of public health professionals, and public health monitoring, in addressing health inequality issues
5. To identify and discuss the effective strategies for multi-sectoral actions and "best practice" to reduce and eliminate regional and social inequalities in health.
6. To establish partnerships to promote appropriate policies and interventions to tackling health inequalities, at a global, national and local level.

There are 4 programs offered in two days of the conference: (1) Symposium; (2) Workshop; (3) Oral Presentation; and (4) Poster Presentation. Distinguished international speakers are invited from seven countries: UK, Switzerland, Sweden, India, Thailand, United States of America, and Indonesia. They come from several world renowned universities and institutions, including University College London, University of Geneve, Lund University, Umea University, Public Health Foundation of India, Ministry of Health and Family Welfare India, Khon Kaen University, Brigham Young University, and Sebelas Maret University. The honorable invited speakers include chairwoman of World Federation of Public Health Associations (WFPHA), Regent of Karanganyar (Central Java, Indonesia), chairman of the Indonesian Association of Public Health Professionals (IAKMI).

There are five clusters of oral and poster presentation of research work offered at this conference: (1) Epidemiogy and other Public Health Disciplines; (2) Health Promotion and Behavior; (3) Maternal and Child Health; (4) Health Policy and Management; (5) Medicine. More than 160 abstracts of research work are presented at this conference.

I would like to extend my gratitude to all honorable participants, distinguished invited speakers, Sebelas Maret University, and other sponsors including Karanganyar Regent, Bhakti Husada Mulia, and Batik Kenanga, for keen participation and support in this conference. I hope this meeting will be benefiting you and constructive for a better and more equitable population health.

Surakarta (Indonesia), September 6, 2017

Prof. Bhisma Murti
Chair,
International Conference on Public Health

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ORAL PRESENTATION SCHEDULE

BACKGROUND

Concepts, Principles, and Policy Approaches to Tackling Health Inequity

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1. Introduction

The purpose of this paper is to review and update the concepts, principles, and policy approaches to tackling health inequity. At the outset, it is universally acknowledged that health is a fundamental human right and a basic human need. Health is needed for functioning in every sphere of every individual's life. It is a primary public good because many aspects of human potential such as employment, social relationships, and political participation, are contingent on it (IOM, 2003; CSDH, 2017).

As health is invaluable to communities, society, and state, in general, creating the conditions for people to be healthy should also be a shared social goal. The development of society, rich or poor, can be judged not only by the quality of its population's health, but also how fairly health is distributed across the social spectrum, and the degree of protection provided for the disadvantaged and ill-health population (IOM, 2003; CSDH, 2017).

Countries around the world have made improvement in population health, and yet there remain major health inequalities between and within countries (CSDH, 2017). Social injustices make some population groups more vulnerable to poor health than other groups, leading to health inequity. The gross inequalities in health seen within and between countries present a challenge to the world. As a body of evidences have supported, global efforts to reduce and eliminate health inequalities should address the "causes of the causes" – the fundamental structures of social hierarchy and the socially determined conditions these structures create in which people grow, live, work and age. Efforts to strengthen health equity should be targeted towards those social determinants of health (SDH), which rest beyond the immediate causes of disease (CSDH, 2017).

Consequently, concerted efforts to reduce health inequalities should aim at removing obstacles to health in any sector—for example, in education, housing, or transportation—and achieving a standard of living necessary to protect and promote health. To be effective and sustainable, interventions that aim to redress inequities must go beyond remedying a particular health inequality and empower the group in question through systemic changes, such as law reform or changes in economic or social relationships (WHO, 2017a).

2. Why is Equity in Health Important?

It is hardly arguable that good health is fundamental to a good society. Health is needed for functioning in every aspect of human life. Ethicists point to the special role that health plays in the enjoyment of an active life, a thriving community, and a productive nation. Without a certain level of health, people may not be able to fully participate in many of the goods of life, including family and community life, gainful employment, and participation in the political process. This view is also grounded in international codes and agreements, from the World Health Organization's Constitution (WHO, 1946) to the United Nations' Universal Declaration of Human Rights, which ascribe intrinsic value to health (IOM, 2003).

Equity in health is an important policy goal. There are two underlying reasons for the policy objectives to reduce and eventually eliminate health inequity. First, inequities in health are unfair. Health inequity contradicts the basic human rights principle that everyone has the right to the highest attainable standard of physical and mental health. As Frank Dobson (Health Secretary of the UK, 1997–2000) said in 1998, "Inequality in health is the worst inequality of all. There is no more serious inequality than knowing that you'll die sooner because you're badly off". To be fair everyone deserves a fair chance to lead a healthy life. No one should be denied the resources needed to be healthy—including not only medical care but also health-promoting living and working conditions (Dahlgren and Whitehead, 2007; Abrahams, 2016; WHO, 2017b).

Second, health inequalities are largely avoidable. The causes of health inequality are complex but they do not arise simply by chance. Many differences in health between groups of population are systematically shaped, and the causes of health inequalities are identifiable and largely modifiable. As evidences have shown, the social, economic and environmental conditions in which people live strongly influence health between groups. Health inequalities can largely be explained by the consequences of unequal access to good housing, education, adequate income, and healthy food. These conditions are known as the social determinants of health, and are often the results of public policy (Woodward and Kawachi, 2000; Vichealth, 2017; NHS Highland, 2017; WHO, 2017d).

Consequently, health inequities ought to be reduced and ultimately eliminated. Levelling up the health status of less privileged socioeconomic groups to the level already reached by their more privileged counterparts should therefore be a key dimension of all international, national and local health policies (Dahlgren and Whitehead, 2007).

3. Defining "Health Disparities", "Health Inequality", and "Health Equity"

"Health disparities", "health inequality", and "health equity" are three concepts that have become increasingly familiar in public health. However, confusion often occurred as these words are often used interchangeably

and even mistakenly. Ambiguity in the definitions of these terms could lead to misdirection of resources. For example, if these terms are vaguely defined, socially and economically advantaged groups could capitalize the terms and advocate for resources to address their advantaged social group's health needs. The definition determines not only which measurements are monitored by national, state, and local governments and international agencies, but also which activities will receive support from resources allocated to address the disparities. Therefore, it is important to understand the difference between these catchphrases (Thomson et al., 2006; Issar and Seth, 2013; Braveman, 2014; BPHC, 2017).

3.1 Health Disparity

In a dictionary the word "disparity" is generally defined as difference, variation, or, inequality, without further specification. However, difference in health and health disparity are not identical. As Braveman (2014) put it, not all health differences are health disparities. The term "health disparity" was coined in the United States around 1990 to denote a specific kind of difference, namely, worse health among socially disadvantaged people and, in particular, members of disadvantaged racial/ethnic groups and economically disadvantaged people within any racial/ethnic group (Issar and Seth, 2013, Braveman, 2014). Particularly, in the United States "health disparities" often refer to "racial or ethnic differences". For example, the Institute of Medicine (IOM) report on unequal treatment concluded "racial and ethnic disparities in healthcare exist and, because they are associated with worse outcomes in many cases, are unacceptable".

The term disparity may connote a difference that is inequitable, unjust, or unacceptable (Whitehead, 1992; Krieger, 2005). In order to contrast with "health difference", Braveman (2014) points to the concept of social justice that sits at the heart of "health disparity" — justice with respect to the treatment of more advantaged vs. less advantaged socioeconomic groups when it comes to health and health care.

Thus, health disparities do not refer generically to all health differences, or even to all health differences warranting focused attention. They are a specific subset of health differences of particular relevance to social justice because they may arise from intentional or unintentional discrimination or marginalization and, in any case, are likely to reinforce social disadvantage and vulnerability.

As Healthy People 2020 defines it, health disparity is "a particular type of health difference that is closely linked with economic, social, or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater social or economic obstacles to health based on their racial or ethnic group, religion, socioeconomic-status, gender, age, or mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion" (Braveman, 2014).

In this definition, economic disadvantage refers to lack of material resources and opportunities. Social disadvantage is a broader concept that refers not only to economic disadvantage but also to an individual's relative position in a social order, in which individuals or groups can be stratified by their economic resources, as well as by race, ethnicity, religion, gender, sexual orientation, and disability. Environmental disadvantage refers to residence in a neighborhood with concentration of poverty and/or the social disadvantages. These characteristics can influence how people are treated in a society and how health is distributed among social groups. For example, low income or lack of wealth, and the consequent inability to purchase goods and services, can hinder the production of health in one group relative to another, resulting in health disparity (Braveman, 2014).

For example, Figure 1 shows under-5 mortality rates for four countries with households classified according to socioeconomic quintile. Child mortality varies among countries. Within countries, not only is child mortality highest among the poorest households but also there is a social gradient: a "dose-response relationship" where the higher the socio-economic level of the household the lower the mortality (Marmot, 2005). It illustrates health disparity as the differences in health within country are closely linked with economic disadvantage.

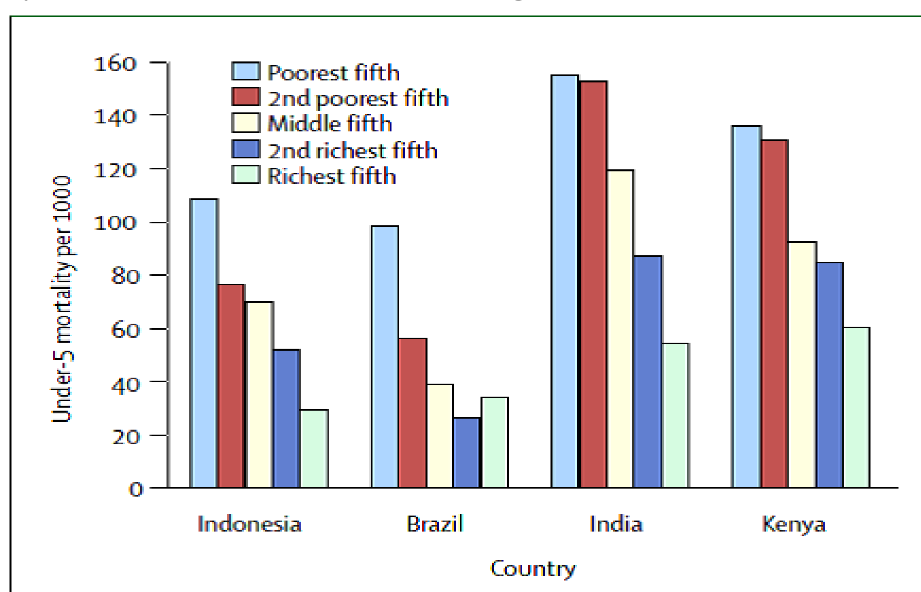

Figure 1 Under-5 mortality rates per 1000 livebirths by socioeconomic quintile of household. Source: Marmot, 2005

3.2 Health Inequity

Health inequity is differences in health that are not only unfair and unjust but also unnecessary and avoidable between groups of people within countries and between countries (Whitehead, 1992; WHO, 2017b; BPHC, 2017). Within the inequity there exist systematic and potentially remediable differences among population groups defined socially, economically, or geographically (Starfield, 2011). Health inequities are rooted in social

injustices that make some population groups more vulnerable to poor health than other groups (BPHC, 2017).

Specifically, to contrast with "health difference" or "health inequality", which are simply differences in the presence of disease, health outcomes, or access to health care between population groups, "health inequities" are differences in health that are not only unnecessary and avoidable but also considered unfair and unjust. The term inequity refers not ony to a moral and ethical dimension, but also to the social cause of inequality, which is social injustice. In order to describe a certain situation as inequitable, the cause has to be examined and judged to be unfair in the context of what is going on in the rest of society. It is considered unacceptable to treat people differently according to their gender, race, ethnicity, religion, sexual orientation, social status, or place of residence. Inequalities in health outcomes associated with such personal characteristics are therefore unfair and should be minimized (Whitehead, 1992; Norheim, 2016).

3.3 Health Equity

Equity is widely acknowledged to be an important policy objective in public health. Equity, like efficiency, is a goal that is pursued by policymakers in all types of health care systems. Health equity has been defined as the fair distribution of health and health determinants, outcomes, and resources within and between segments of the population, regardless of social standing (CSDH, 2017; Klein and Huang, 2017). Health equity also denotes the study and causes of differences in the quality of health and healthcare across different populations (Colorado Department of Public Health and Environment, 2011).

Health equity is different from health equality, as it refers not only to health difference but also to some kind of social justice. The term is a normative ethical construct that embodies an underlying principle to reduce—and, ultimately, eliminate—disparities in health and in its determinants, including social determinants (Whitehead, 1992; Braveman, 2014).

Healthy People 2020 defined health equity as "attainment of the highest level of health for all people". It implies the norm to value all people equally, and therefore everyone should have a fair opportunity to live a long, healthy life. No one is denied the possibility to be healthy for belonging to a group that has historically been economically/socially disadvantaged. In other words, health should not be compromised or disadvantaged because of an individual or population group's race, ethnicity, gender, income, sexual orientation, neighborhood, or other social condition. Pursuing health equity means striving for the highest possible standard of health for all people and giving special attention to the needs of those at greatest risk of poor health, based on social conditions (Braveman, 2014; BPHC, 2017).

Health Equity and Health Disparity. "Health equity" and "health disparities" are intertwined constructs. Both constructs have a common principle that social justice sits at their cores. Health disparities and health

equity cannot be defined without defining social disadvantage (Braveman, 2014; Arcaya et al., 2015). As Arcaya et al. (2015) writes it, “a health inequity, or health disparity, is a specific type of health inequality that denotes an unjust difference in health”.

However, distinction can be drawn between the two concepts in two aspects. First, as Starfield noted, “health disparities” are systematic, not isolated, or exceptional situations. “Health disparities” are systematically linked with social disadvantage, and may reflect social disadvantage, but a causal link may not be demonstrated. Whether or not a causal link exists, “health disparities” adversely affect groups who are already disadvantaged socially, putting them at further disadvantage with respect to their health. It is important to define “health disparities” without requiring proof of causality, because there are important “health disparities” for which the causes have not been established, but which deserve high priority based on social justice concerns (Braveman et al., 2011).

The term “health equity”, in contrast, refers to social justice in health. It is the distribution of health within population or between populations that is causally linked with the existence of social justice. Thus the causal link is an important feature of “health equity”. In addition, within health equity there is the value underlying commitment to reduce and ultimately eliminate health disparities (Braveman et al., 2011).

Second, “health equity” refers to a theoretical and unobservable construct that denotes fairness in health distribution to be achieved. As Starfield (2011) writes it “some people use the term ‘unfairness’ to define inequity, but unfairness is not measurable…”. McLachlan and Maynard (1982) once remarked somewhat cynically that “… equity, like beauty, is in the mind of the beholder …”. In contrast, “health disparities” is observable. It can be viewed as an operationalization of “health equity” construct at the observational (empirical) level. “Health disparities” can be regarded as a system of related measures that facilitates the quantification of health equity. A reduction in health disparities, in absolute and relative terms, is evidence of progressivity in realizing health equity (Braveman et al., 2011; Bravement, 2014).

Health Equity and Altruism. Another distinction need to be drawn between “equity” and “altruism”. As a social policy objective, fair distributions of health, health determinants, and resources, within and between segments of the population, can arise from two sources. First, they can arise from considerations of social justice and fairness – that is health equity. Second, the distributional objectives can arise from feelings of altruism or caring (Wagstaff et al., 1989).

Altruism is quite distinct concept from equity and has quite different policy implication. Caring and altruism are matters of preference. In the context of health care, a caring individual might be one who derives utility—i.e. an external benefit—from *seeing* another person receiving health care. In this case the caring individual prefers that the person in

question receives health care and is prepared to sacrifice resources to ensure that the person actually obtains treatment. How much the individual is prepared to sacrifice will depend on how much he cares (which will depend on his income) and on the cost of providing health care (Wagstaff et al., 1989).

Alternatively, a caring individual might be one that derives utility from the act of *providing* health care for others. How much of his income the individual will be prepared to sacrifice to provide health care for others will depend on the utility he derives from the act of providing medical care (which again will depend on his income) and on the cost of providing health care (Wagstaff et al., 1989).

Types of Health Equity. Health equity falls into two major categories: horizontal or vertical. Horizontal equity refers to the equal treatment of individuals or groups in the same circumstances. Horizontal equity exists when people with the same needs have access to the same resources. It is often the case that what might be considered equity (such as equal use across population subgroups) is, in fact, inequity. For example, in population surveys, similar use of services across population groups signifies inequity, because different population subgroups have different needs, some more than others. There comes up the second category of equity-vertical equity. Vertical equity refers to the principle that individuals who are unequal should be treated differently according to their level of need. Vertical equity exists when people with greater needs are provided with greater resources (Starfield, 2011).

Mooney and Le Grand have identified several meanings of "equality" in the definitions of "equity" in the context of health care provision. Four of the meanings are as follows:

1. Equality of expenditure per capita;
2. Equal distribution according to need;
3. Equality of access; and
4. Equality of health (Culyer and Wagstaff, 2009).

The "equality of expenditure per capita" definition has underlied the regional budget allocation formulae used in some countries, and yet is open to criticism as it makes no place for "need" (Dwyer et al., 2004).

The "distribution according to need" definition is found in several policy documents and is frequently encountered in the academic literature, but is severely hampered by the lack of agreement as to the meaning of "need". The "equality of access" definition is more common in policy documents than any other definition. However, there is as much confusion about the meaning of the term "access" as there is about "need". Many writers in the health care field use the terms "access" and "utilization" synonymously, while others have argued that policy-makers do draw a distinction between "access" and "utilization". Evidently, equality of access will not necessarily result in all individuals consuming the same amount of care, even when

their diagnoses and prognoses are the same, because their *preferences* may differ (Dwyer et al., 2004).

The "equality of health" underlies the Black Report of 1980 in the UK (Black et al., 1980; Culyer and Wagstaff, 2009). The UK government-commissioned Black Report of 1980, which reviewed available evidence regarding health inequalities, provided a landmark analysis of social class differences in the health of the population in England and Wales. It remains a seminal document in health inequalities research, not only in the UK but also internationally (Smith et al., 2016). However, equality of health outcomes is not generally seen as a realistic goal, given the impact of factors as diverse as individual genetics and climate on the longevity and wellbeing of human beings (Dwyer et al., 2004).

3.4 Health Inequality

The term health inequality generically refers to differences or variations in the health of individuals or groups. Any measurable aspect of health that varies across individuals or according to socially relevant groupings can be called a health inequality (Kawachi et al., 2002; Arcaya et al., 2015). Health inequality can also refers to differences in the distribution of health determinants. As WHO states it, "Health inequalities can be defined as differences in health status or in the distribution of health determinants between different population groups".

Health Inequality and Health Inequity. Distinction need to made between "health inequality" and "health inequity". Not all "health inequalities" are unjust or inequitable. For "health inequality" to be called "health inequity", it must be causally linked with social injustice. If an uneven distribution of health between population groups are attributable to biological variations (e.g., age, sex, genetic) rather than to social injustice, it can be called "health inequality", not "health inequity". Health inequality can also result from health-damaging behaviour if freely chosen, such as smoking and participation in certain sports (Whitehead, 1992; Braveman, 2014; WHO, 2017c).

For example, male infants are generally born at a heavier birth weight than female infants. This is a "health inequality", not "health inequity", because the difference in birthweight is rooted in genetics, a biological factor. This difference is at large unavoidable. For another example, women, in general, live longer than men. This is likely to be a consequence of biological sex differences, and as such is a "health inequality", not a "health inequity" (WHO, 2017c; CSDH, 2017).

Health Inequality and Health Disparity. To draw a stark distinction between "health inequality" and "health disparity", it holds that not all "health inequalities" show linkage with social disadvantages. For "health inequality" to be called "health disparity", it must be closely linked with economic, social, or environmental disadvantage. The "health inequality" can be said "health disparity" if it reflects differences in social and environ-

mental conditions and thus adversely affects socially disadvantaged groups (Thomson et al., 2006).

For example, a massive body of empirical evidences have shown that there is more genetic variation within races than between races and that race is more of a social construct than a biological construct. More than 100 studies have linked experiences of racism to negative health outcomes. In this instance, the variations in health between races represent a "health disparity" issue, rather than just a "health inequality" issue (Egede, 2006; BPHC, 2017).

4. Measuring Health Disparities

Measuring health disparity is important, as monitoring national trends in disparities in different diseases could provide measures to evaluate the impact of intervention programs designed to reduce health disparities. There are a number of statistical measurements that have been used to quantify various forms of health disparity.

As epidemiological method has shown, when two or more populations of individuals are compared, measures of disease frequency such as risk ratio or rate ratio can be calculated to measure a particular disparity in relative term. In absolute term, two or more groups groups can also be compared by calculating risk difference or rate difference (i.e. the absolute difference in risk or rate, respectively) (Issar and Seth, 2013; Moonesinghe and Beckles, 2015; Arcaya et al., 2015).

Both relative and absolute differences can be used, but it is worth noting that these two measures of disparities are different in scale, magnitude, interpretation, and implication. For example, temporal changes in the magnitudes of these measures can occur in opposite directions (Moonesinghe and Beckles, 2015).

Socioeconomic status may be measured based on level of education, occupational characteristics, income and expenditures, accumulated wealth, health insurance, and/or residence in geographic areas or physical environments with particular social or economic conditions. More complex statistical measurements such as population attributable risk can be used to quantify the magnitude of socioeconomic inequalities of health (Issar and Seth, 2013; Arcaya et al., 2015).

Economic inequality in particular can be measured using the Gini coefficient. Braveman explains this measure as one that reflects the overall difference between the observed distribution of economic resources (such as income) in a given society and a theoretical situation in which everyone has exactly the same economic resources. Some researchers have examined how income inequalities in certain geographic areas (using the Gini coefficient or similar measures) are associated with aggregate levels of health experienced by people residing in those areas (Issar and Seth, 2013).

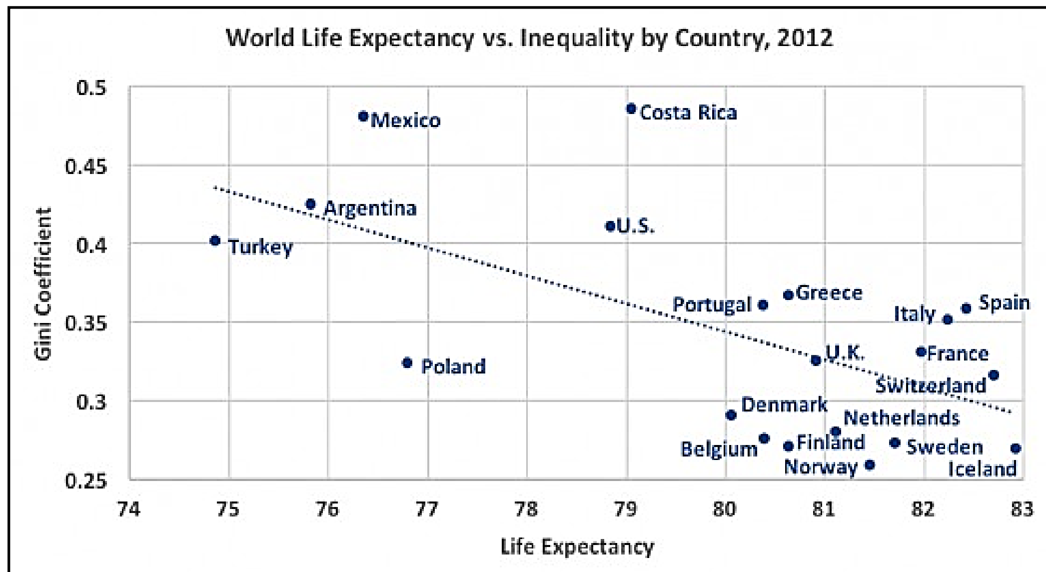

Figure 2 Gini coefficient and life expectancy by country in 2012, Source: Inequality, 2017

For example, economists and health experts have known for years that people who live in poorer societies live shorter lives. But research also points to an additional factor in explaining survival: a society's level of inequality. As Figure 2 shows, people live shorter in nations with higher levels of inequality, as measured here by the Gini coefficient, a standard global benchmark (Inequality, 2017).

Figure 3 Income inequality (Top 90%: Bottom 10% Ratio) and infant mortality by country in 2012, Source: Inequality, 2017

Likewise, as Figure 3 shows, in 2012, nations with the smallest income gaps between households at the 90th and 10th percentiles had significantly fewer infant deaths than other nations. A household at the 90th percentile has more income than 90 percent of households.

Another common measure of socio-economic disparity within a population is the index of dissimilarity (ID). It has been proposed by some authors to measure the overall magnitude of disparities across diverse kinds of groups (such as those separated by race/ethnicity or socioeconomic status). The ID can be used to show neighborhood segregation. It measures the evenness with which two groups are distributed across the component geographic areas that make up a larger area. The ID for a given health indicator sums the differences between rates in each subgroup and the overall population rate, expressing the total as a percentage of the overall population rate (Wagstaff et al., 1991; Issar and Seth, 2013; University of Michigan, 2017).

5. Theories of Health Inequalities

Different theories have been proposed to explain the factors and the pathways through which these factors affect health inequalities. These theories point to artefact, biological, behavioral, cultural, psycho-social factors, materialist/ structuralist, political-economy accounts, and life-course approach (Macintyre et al., 1993; McCartney et al., 2013; Arcaya et al., 2015; Smith et al., 2016).

Theories that explain causes of health inequalities, the consequential mechanisms, as well as supporting evidences, are important, so as to be able to identify appropriate actions to reduce them. Unless the underlying mechanisms that determine health inequalities are fully understood, it will be hard for policy-makers to create well-targeted public policy strategies.

5.1 Artefact Theory

The artefact view proposes that the association between markers of social status and health outcomes is a statistical artefact relating to the way in which social status has been classified over time. However, the theory is gravely undermined by the ubiquitous demonstration of inequalities in health outcomes, even where different statistical measures of social status are used (including income, area deprivation, education, social class and occupational group). In light of this, it is very difficult to sustain a theory that such outcomes are unrelated to social status. Consequently, this theory can confidently be discarded (McCartney et al., 2013).

5.2 Biomedical Theory

This theory explains that health inequalities stem from the differences in biological health risk factors that are patterned across social groups or contexts or varied across individuals in a population. Biomedical explanation can suffer the weakness when it focuses on the downstream effects of social context without acknowledging why levels of biological risk factors vary across populations (Arcaya et al., 2015; Smith et al., 2016).

5.3 Behavioral Theory

Behavioral theories of health inequalities suggest that differences in the prevalence of behaviors such as smoking, alcohol consumption, illicit drug-taking, diet, physical activity, and sexual behaviors, between groups, or differences in the dominant cultures between groups, are responsible for the prevalence of health inequalities (Townsend et al., 1992; McCartney et al., 2013; Arcaya et al., 2015; Smith et al., 2016).

These theories also assert that the link between social class and health is wholly or partially a result of class differences in health-related behaviors. The whole behavioral explanation, which focuses only on behaviors, has some problem in that it fails to explain how and why individuals in particular social groups adopt unhealthy behaviors (McCartney et al., 2013).

In the partial behavioral explanation, lifestyle behaviors contribute to health inequality patterns, but it is an insufficient explanation, since the lifestyle behaviors are significantly affected by the socioeconomic contexts in which people live. The behavioral choices are heavily structured by one's material conditions of life, and these behavioral risk factors account for a relatively small proportion of variation in the incidence and death from various diseases. As such, difference in health-related behaviors serve as a contributory factor to the social gradient of health, but not the entire explanation (Townsend, 1992; McCartney et al., 2013; Arcaya et al., 2015; Smith et al., 2016). Alternatively, for health behaviors to be the cause of health inequalities, socio-economic factors would have to be an effect modifier in the relationship as shown in Figure 4 (McCartney et al., 2013).

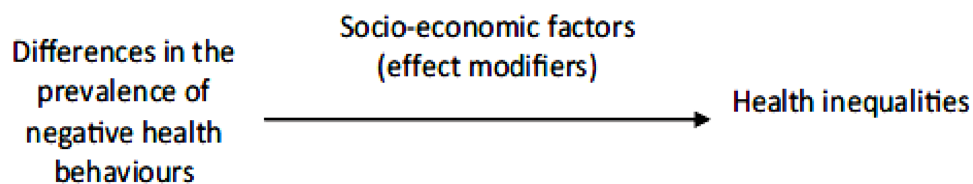

Figure 4 The relation between health behaviors, socio-economic factors and health inequalities in the behavioral theory. Source: McCartney et al., 2013.

5.4 Culturally-Orientated Theory

Culturally-orientated theories suggest that differences in the dominant cultures between groups are responsible for the prevalence of health inequalities. They are closely related to behavioral theory. The culture determines or frames behavioral choices, including decisions affecting health, i.e., engaging in higher risk lifestyles that may include drinking, smoking, or an unhealthy diet. The culturally orientated theories have been expressed over time, including: Durkheim's theory of "anomie", Oscar Lewis' "culture of poverty", and more recently Charles Murray's

"underclass" or "dependency culture" theory (Sundmacher et al., 2011; Mc Cartney et al., 2013).

The latter two theories contend that certain poor populations tend to develop aberrant cultural patterns which have destructive and negative implications for social and health outcomes. The term "culture of poverty" was introduced by Oscar Lewis in his seminal 1959 book "Five Families: Mexican Case Studies in the Culture of Poverty". The "culture of poverty" theory states that living in conditions of pervasive poverty will lead to the development of a culture or subculture adapted to those conditions. This culture is characterized by pervasive feelings of helplessness, dependency, marginality, and powerlessness. According to Lewis, individuals living within a "culture of poverty" have little or no sense of history and therefore lacking the knowledge to alleviate their own conditions through collective action, instead focusing solely on their own troubles (McCartney et al., 2013; Encyclopedia, 2017).

For Lewis, a "culture of poverty" tended to be self-perpetuating-even when the broader structural environment which gave rise to it changed, allowing for better outcomes. The imposition of poverty on a population was the structural cause of the development of a "culture of poverty", which then becomes autonomous, as behaviors and attitudes (including health behaviors) developed within a culture of poverty get passed down to subsequent generations through socialization processes (McCartney et al., 2013; Encyclopedia, 2017).

The sociological concept of "underclass" refers to a group of people who due to lack of employment, skills, income, wealth or property, appear to stand outside ordinary society. These people are at the bottom of a society having become victims of poverty trap. This class is largely composed of the young unemployed, long-unemployed, chronically-sick, disabled, old, or single-parent (usually the mother) families. It also includes those who are systematically excluded from participation in legitimate economic activities, such as cultural, ethnic, or religious minorities or illegal immigrants. A perception of a lack of self-efficacy is one of these shared problems. (Wilson, 2006; McCartney et al., 2013; Sociologytwynham, 2017).

"**Dependency culture"** refers to a system of social welfare that encourages people to stay on benefits rather than work. American Sociologist Charles Murray viewed "excessive" state welfare payments as creating a "dependency culture". For Murray, social welfare (social security as it was once known) started out as a safety-net for people when hit with hard-time, but has become hijacked by a group of people with no intention of working (McCartney et al., 2013; Sociologytwynham, 2017).

The implication of both theories is that behaviors reflect cultural patterns which become inter-generational, entrenched, and rather resistant to remediation (McCartney et al., 2013).

5.5 Materialist

The materialist/ structuralist explanation emphasizes the material conditions under which people live. These conditions include availability of resources to access the amenities of life, working conditions, and quality of available food and housing among others. Material wealth increases access to various goods and services, such as health care, transport, an adequate diet, good-quality education and housing, and opportunities for social participation, all of which are recognized as promoting health. (Clarkwest, 2008; Arcaya et al., 2015; Smith et al., 2016).

Material wealth also enables people to limit their exposures to known risk factors for disease such as physical hazards at work or adverse environmental exposures. Conversely, poverty exposes people to health hazards. Disadvantaged people are more likely to live in areas where they are exposed to harm such as air-pollution and damp housing (Arcaya et al., 2015; Smith et al., 2016). Figure 5 depicts linkages between poor health and poverty (Dahlgren and Whitehead, 2007).

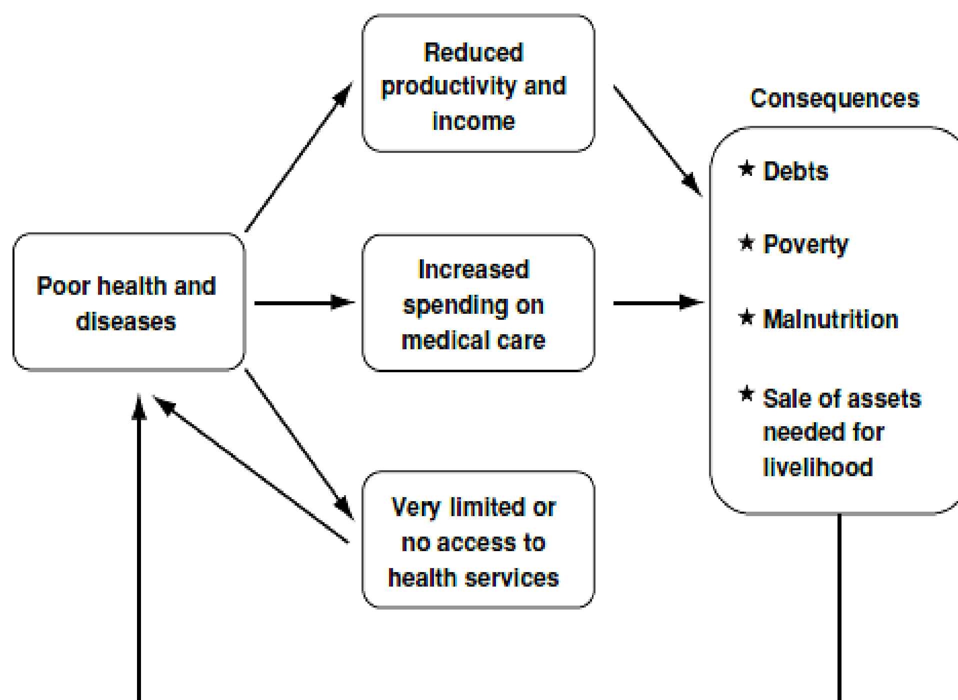

Figure 5 Linkages between poor health and poverty.
Source: Adapted from Dahlgren and Whitehead, 2007

Poor health and disases cause increased expenditure on medical care, reduced productivity and income. These conditions in turn result in debts, poverty, malnutrition, and sale of assets needed for livelihood. This pathway reverts to the previous state of poor health and diseases forming a sequence of reciprocal cause and effect between poor health and poverty.

While most experts in public health agree that materialist explanations play a role in explaining health inequalities, many find a simple materialist

model to be insufficient. For example, the full impact of living standards, however, can only be understood over the course of the life term. It follows that accounting for the life-course perspective is important in analyzing the health impact of material resources. (Healthknowledge, 2017; Judge and Paterson, 2017).

5.6 Neo-materialist

The neo-materialist explanation extends the materialist analysis by examining the mechanism through which the living conditions come about. It asserts that economic inequality affects population health by means of investment in health-enhancing infrastructure. Lynch et al. (2000) argued that the effect of income inequality on health reflects both a lack of resources held by individuals, and systematic under-investments across a wide range of community infrastructures. "Infrastructure" refers to any number of factors ranging from provision of clean water and sewer systems to access to high quality medical care to pollution abatement laws. According to Lynch et al. (2000), understanding the patterns of strategic public and private investment in what they call "neomaterial living conditions" is likely to provide the most complete interpretation of the mechanisms between income inequality and health. Figure 6 depicts a neo-material interpretation of income inequality and health (Judge and Paterson, 2001 adapted from the model presented by Lynch et al., 2000).

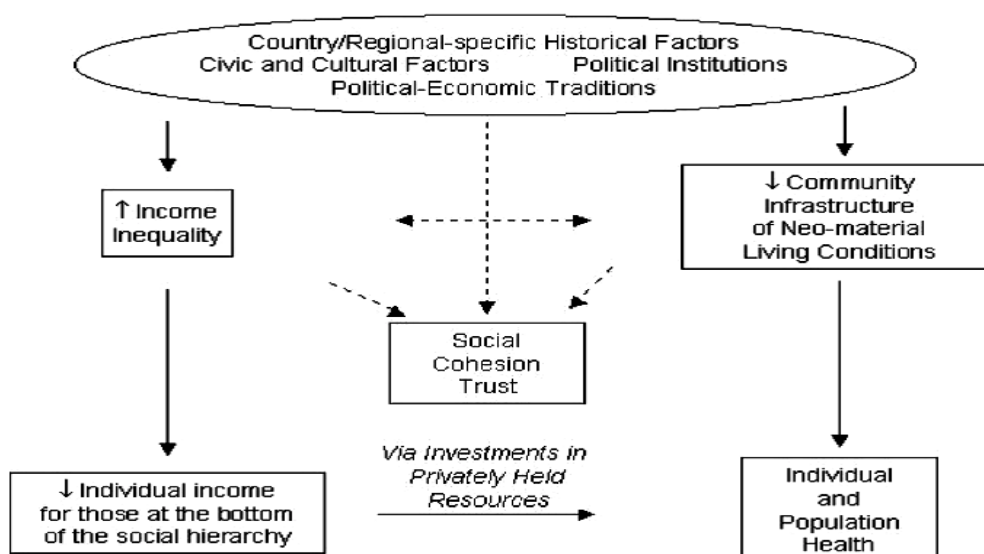

Figure 6 A neo-material interpretation of income inequality and health. Source: Judge and Paterson, 2001 adapted from the model presented by Lynch et al., 2000),

Background historical, cultural, political, and economic factors, both create income inequality and, through the lack of resources held by individuals and inadequate investment, negatively impact upon the community infrastructure. The figure shows that both pathways are detrimental to social cohesion and trust.

The figure also suggests that there is no necessary observable association between income inequality and health at the aggregate level. The association between geographic variations in health and income inequality may depend upon the nature and distribution of the community infrastructure, characterized by “neo-material living conditions”. Nevertheless, the extent of income inequality will always be directly associated with health inequalities at the individual level through its role in determining individual income and, in turn, the ability to buy health-related goods and services. This is consistent with the association established between income and health at the individual level discussed in the materialist section earlier.

In summary, the neo-materialist view directs attention to both the effects of living conditions–the social determinants of health–on individuals' health, as well as the societal factors that determine the quality of the distribution of these social determinants of health. How a society decides to distribute resources among citizens is important. This distribution of resources can vary widely from country to country, region to region, and city to city (Judge and Paterson, 2001; Arcaya et al., 2015; Smith et al., 2016; WHO, 2017d).

5.7 Psycho-Social Theory

This approach de-emphasizes the importance of material pathways. Psychosocial explanations see neurohormonal pathways as connecting the psychosocial and biological changes. Social inequality may affect how people feel which in turn can affect body chemistry. For example, stressful social circumstances produce emotional responses which bring about biological changes that increase risk of heart disease. Psycho-social risk factors include social support, control and autonomy at work, the balance between home and work, and the balance between efforts and rewards.

There has been a plethora of research exploring associations between psycho-social factors and health. Evidence shows that people who have good relationships with family and friends, and who participate in the community, have longer life expectancies than those who are relatively isolated (Healthknowledge, 2017).

Marmot and Wilkinson (2001) produced evidence that supports the view that economic and social circumstances affect health through the physiological effects of their emotional and social meanings, not just through the direct effects of material circumstances. They do not accept that material conditions adequately explain health inequalities.Both interpretations are ofequal validity: Recognizing that the socio-economic structure has powerful psychosocial as well as material effects means that it is important to identify and tackle the structural issues.

There are two mechanisms by which the psychosocial factors may affect health. At the individual level, the perception and experience of one's status in unequal societies lead to stress and poor health. Psychosocial health

impacts stem from feelings of social exclusion, discrimination, stress, low social support, and other psychological reactions to social experiences. Feelings of shame, worthlessness, and envy can lead to harmful effects upon neuro-endocrine, autonomic and metabolic, and immune systems (Wilkinson, 1996, 1997; Lynch et al., 2000).

The psychosocial comparison explanation considers whether people compare themselves to others and how these comparisons affect health and wellbeing. This approach holds that the social determinants of health play their role through citizens' interpretations of their standings in the social hierarchy. It emphasizes the role of subjective measures of wealth and considers psychosocial pathway link between income and health. It implies that, beyond a certain basic level of wealth, health is more closely linked to how egalitarian a society is (Arcaya et al., 2015; Smith et al., 2016; WHO, 2017d).

The psychosocial comparison explanation includes the "income inequalities hypothesis", or the "relative income hypothesis", which posits that an individual's health depends not only on his own income (absolute income) or wealth and but also what others in a population earn (relative income). It emphasizes the role of subjective measures of wealth and considers psychosocial pathway link between income and health. It implies that, beyond a certain basic level of wealth, health is more closely linked to how egalitarian a society is (Arcaya et al., 2015; Smith et al., 2016). As such, addressing material factors alone may not be sufficient to reduce health inequalities.

For example, living in a non-egalitarian society can lead to an individual's long-term feelings of subordination or inferiority that in turn can stimulate stress responses with consequences in poorer physical and mental health. Comparisons to those of a higher social class can also lead to attempts to alleviate such feelings by overspending, taking on additional employment that threaten health, and adopting health-threatening coping behaviors such as overeating and using alcohol and tobacco (Bartley 2003; Arcaya et al., 2015).

At the communal level, widening and strengthening of hierarchy weakens social cohesion, which is a determinant of health. The social comparison approach directs attention to the psychosocial effects of public policies that weaken the social determinants of health.

5.8 Political Economy Theory

The political economy theory of health inequalities draws on materialist and psychosocial explanations, but highlight that these social determinants of health are themselves shaped by macro-level structural determinants, including politics, the economy, the state, the organization of work, and the labor market (Bambra 2011; Ottersen et al., 2014).

The distributions of social determinants are shaped by public policies that reflect the influence of prevailing political ideologies of those governing a jurisdiction. Politics, and the balance of power between key political actors/ groups, determine whether, for example, states provide collective interventions to reduce inequalities (as would be expected in a strong welfare state) and whether policy interventions are individually, environmentally, or socially focused (Mikkonen and Raphael, 2010).

For example, the existence of public policies and services can shape the extent to which key goods and services, such as schools, transport, and welfare, are dependent on wealth. Likewise, Sewell (2016) argued that many racial disparities in health are rooted in political economic processes that undergird racial residential segregation at the mesolevel—specifically, the neighborhood.

5.9 Life Course Perspective

The life-course perspective considers the importance of timing and the whole life course, rather than just particular points within it, in the explanation of health inequalities. Taking a life course perspective involves considering the various risks that individuals are exposed to across their life courses, from fetal development through to old age. This is particularly important for chronic diseases, many of which are known to have long latency periods (Arcaya et al., 2015; Smith et al., 2016).

A lifecourse approach has its origins in the discipline of epidemiology. Life-course epidemiology is the study of long-term biological, behavioural and psycho-social processes that link adult health and disease risk to physical or social exposures acting during gestation, childhood, adolescence, earlier in adult life, or across generations (Kuh and Ben-Shlomo, 1997).

A life-course approach recognizes the unusually high number of critical or sensitive periods during childhood and adolescence. A critical period occurs when there are rapid and usually irreversible changes towards greater complexity taking place. Influences in these periods can have long-lasting, permanent effects. A sensitive period is also a period of rapid change, but one in which there is some scope to modify, or even reverse, the changes at a later time (Kuh and Ben-Shlomo, 1997; Law, 2009).

A life-course approach illuminates the role of childhood disadvantage in determining adult health and inequalities in adult health. Graham and Power (2004) describe two main pathways through which childhood disadvantage results in poor adult health. First, childhood circumstances may influence adult circumstances which in turn affect adult health. For example, poor educational attainment is associated with increased risk of unemployment, and joblessness is associated with poor adult health.

Second, the circumstances that children experience as they grow up influence their childhood health and development (in the widest sense to include mental, social and emotional health as well as physical health and health behaviours). Good childhood health tends to lead to good adult-health and vice versa. For example, a mother living in disadvantaged circumstances has a high risk of giving birth to a low birth weight child, and low birth weight is associated with a range of adverse health outcomes in childhood as well as adult life (Graham and Power, 2004; Law, 2009).

Applying a life course perspective to the consideration of the other explanations entails that factors from each category may serve as main exposures, mediators, or moderators, which create a useful but complex causal model in thinking about how health inequalities arise (Arcaya et al., 2015).

6. Models of Health Inequalities

There are a myriad of models have been constructed to explain the multiple causes or factors that determine health and health inequalities. Some of them are revisited as follows.

6.1 Dahlgren-Whitehead Model

Göran Dahlgren and Margaret Whitehead in 1991 developed the “rainbow model” of health determinants (Figure 7). It maps the relationship between the individual, their environment and health. This framework can help researchers to construct a range of hypotheses about the determinants of health, to explore the relative influence of these determinants on different health outcomes, and the interactions between the various determinants. It can be used to discuss existing approaches to the study of inequalities (Dahlgren and Whitehead, 1991; ESRC, 2017).

At the heart of the Whitehead-Dahlgren model are the biological factors, including age, sex, and hereditary factors. These factors represents biological variations over which the individual has no control.

Surrounding these biological determinants are direct and indirect health influences located in different layers. The first layer, also known as the micro level or “downstream” level, describes individual behavioral factors, some of which may be labelled “lifestyle”. These factors include smoking, alcohol consumption, eating patterns, and propensity to exercise, which are to some degree controllable. Some of these are theorized to have direct effects on health outcome, while others are seen to operate indirectly. By far the most numerous of the epidemiological studies have directed at understanding the role of risk factors such as these in health inequalities. This body of work is widely referred to as “risk factor epidemiology”.

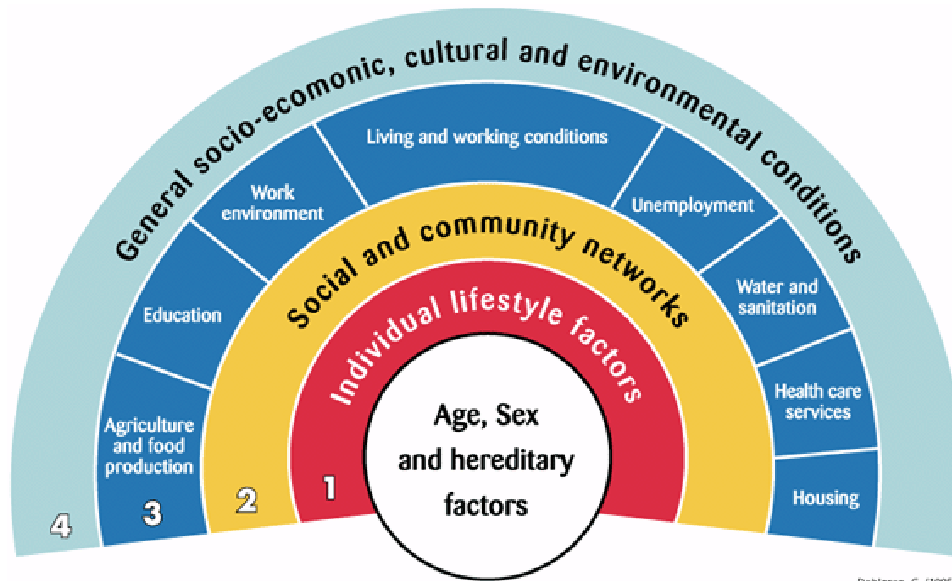

Figure 7 The Dahlgren-Whitehead model of (determinants of health inequalities. Source: Dahlgren and Whitehead, 1991

The second layer, also known as the meso level, describes health influences due to individuals interaction with their peers and immediate community. These factors at the community level include social and community networks and social capital. There are some potential pathways by which neighborhoods share characteristics that might influence their health (Macintyre et al., 1993; Graham, 2009):

1. Physical features of the environment shared by all residents in a locality (for example, air and water quality)
2. Availability of healthy environments at home, work and play (for example, decent housing, secure and non-hazardous employment, safe play areas for children)
3. Services provided to support people in their daily lives (for example, education, transport, street cleaning and lighting, and policing)
4. The socio-cultural features of a locality (for example, its political, economic, ethnic and religious history, the degree of community integration)
5. The reputation of an area (for example, how the area is perceived by residents, service or amenity planners, and investors)

The third layer, also known as the exo level, describes health infuences due to individuals living and working conditions, food supply, access to essential goods and services, including health care services. The fourth layer, also known as the macro level or "upstream" level, describes mediators of population health, including the wider economic, cultural and environmental influences prevalent in the overall society (Dahlgren and Whitehead, 1991).

This model for describing health determinants emphasizes interactions. Individual lifestyles are embedded in social norms and networks, and in

living and working conditions, which in turn are related to the wider socioeconomic and cultural environment. As such, health (or the lack thereof) is associated with a complex, and not entirely understood, interplay among innate individual factors (e.g., a person's sex, age, and genes), personal behavior, and a vast array of powerful environmental conditions (Dahlgren and Whitehead, 1991; 1997).

Because health is influenced by these complex interactions and because many threats to health (e.g., drug-resistant microbes or environmental contaminants) confront entire populations, protecting and assuring the population's health requires an organized communal undertakings.

6.2 The Commission on the Reduction of Health Inequalities Model

The Commission on the Reduction of Health Inequalities in Spain (2010) constructed a conceptual framework of the determinants of social inequalities in health, based on the models proposed by Orielle Solar and Alec Irwin for the WHO Commission on Social Determinants of Health1 and by Vicenç Navarro. This framework comprises structural determinants of health inequalities and intermediary determinants (Figure 8).

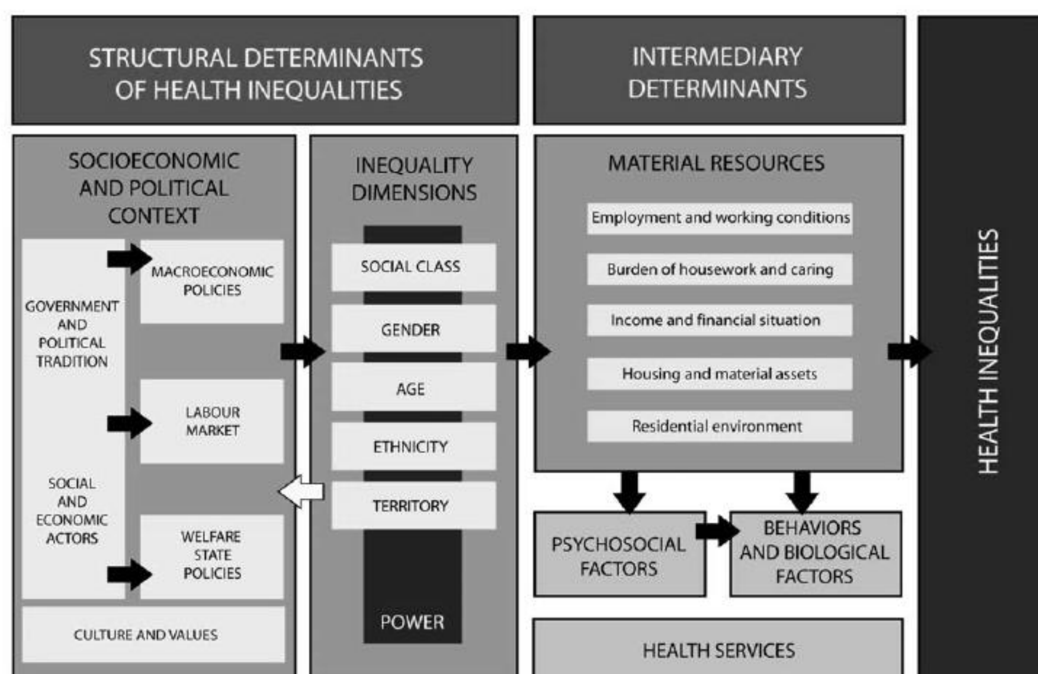

Figure 8 Conceptual framework of the determinants of social inequalities in health. Source: The Commission on the Reduction of Health Inequalities in Spain, 2010

The structural determinants of health are made up by two components: (1) Socioeconomic and political context; and (2) Social structure. The socio-economic and political context refers to the political traditions, policy choices, and social-economic actors, that significantly affect social struc-

ture and distribution of money, power, and resources within the social structure, at global, national, and local levels.

The social structure refers to the various dimensions of inequality in society pertinent to social class, gender, age, ethnicity, race, and territory. These dimensions define the differential opportunities for good health due to inequalities in power and access to resources within the social structure as manifested in discrimination and unfair class, gender, or race relationships.

For example, differences in health between men and women are not only biological, but are also gender inequalities due to the social differences that exist between sexes involving differences in education opportunity, employment condition, burden of housework, etc. The uneven distribution of roles and power between men and women leads to different uses of time with an impact on health. The greater burden of domestic work and care prevent women from investing the same time as men in paid work and leisure activities, including physical activity.

Similarly, age (beyond its biological implications), race, ethnicity, and place of origin are other individual characteristics that, depending on the historical context of a country, gain social relevance and can determine health inequalities linked to discrimination and segregation processes.

The social structure determines inequalities in intermediary factors which, in turn, determine health inequalities. The intermediary determinants of health inequalities are made up by the material resources available for the individuals and communities, as shaped by the social structure. These material resources include:

1. Employment and working conditions (job situation, job insecurity, physical and ergonomic risks, working organization and its psychosocial environment)
2. Burden of housework and caring
3. Income and financuial situations (income level, economic and property status)
4. Housing and material assets (ownership and quality of housing and its equipment)
5. Residential environment (physical characteristics of the residence area and neighborhood)

The material resources, which are shaped by the socioeconomic and political context and the social structure, are often referred to as social determinants of health (SDH). The social determinants of health is defined as the conditions in which people are born, grow, live, work and age (WHO, 2017d; CSDH, 2017). The SDH are responsible for health inequities with some mechanisms as follows. First, the environment in which people live and work determine their individual experiences or response such as the income they earn, the house they live in, the food they eat, the services

they access etc, which infleence the capacity to create heath. Thus, the differences in health and wellbeing are manifestations, or symptoms, of the social inequalities experienced throughout the life course (Beeston, 2014; Braveman, 2014; CSDH, 2017).

Second, the social environment in which people live and work determine the extent of social inequality, the nature of social relationship, and psychosocial process, existing within a society. Social inequality may affect how people feel which in turn can affect body chemistry. Psychosocial risk factors, including the lack of social support, stressful situations (negative life events), etc. influence health.

Third, the socioeconomic contexts in which people live and work influence health behaviors and lifestyle which people adopt, particularly those behaviors which adversely affect health (smoking, poor diet, lack of physical activity, excessive alcohol consumption and irresponsible sexual behavior).

Fourth, some of the material resources as well as physical environment interact with human biology over time to influence distribution of health across groups (e.g. age, sex). Fifth, the material resources also include the health system available for the communities. Although health services themselves scantily contribute to generating health inequalities, less access and lower quality of health services may result in worse health outcomes.

7. Tackling Health Inequities

Policies to reduce health inequalities are a priority to many countries and respond to goal number2 of the World Health Organization (WHO) Health Strategy for the 21st Century: “By the year 2020, the health gap between socioeconomic groups within countries should be reduced by at least one fourth in all Member States, by substantially improving the level of health of disadvantaged groups” (WHO, 1999; WHO, 2005).

Health inequities have their roots in the socio-political decisions and the resulting unequal distribution of power, money and resources. The socio-political decisions drive the distribution of wider environmental influences that create or undermine health through the availability or not of good jobs, housing, transport, education, shops, services, green space etc.

As such, these social determinants of health and health inequalities need to be addressed at various levels. High-level macro social and economic policy changes that reduce overall inequality are fundamental. Economic/ social disadvantage can be ameliorated by social policies, such as minimum wage laws, progressive taxation, and statutes barring discrimination in housing or employment based on race, gender, disability, or sexual orientation (Danaher, 2011; Braveman, 2014; BPHC, 2017; Health Scotland, 2017; WHO, 2017d).

At the same time, community level policy, programs, and investment to ameliorate the impact of health and related inequalities, to adapt national strategy to local conditions, to more effectively coordinate local services, and to leverage and integrate local community-based initiatives are also crucial (Danaher, 2011).

7.1 Three Ways of Addressing Inequalities

The objective of reducing inequalities can be pursued by focusing on three ways: Remedying the health of the most disadvantaged, Narrowing the health gap, and Reducing the health gradient (Graham, 2004).

1. Remedying the Most Disadvantaged

One common way to address health inequalities is to direct policies at the most disadvantaged groups in an attempt to raise their health status. The powerful moral argument behind this approach is that health is a basic need which no one should be unnecessarily denied (Graham, 2004).

The policy advantage of this approach is that defining health inequalities as health disadvantages aligns public health policy with other elements of the government's welfare program. It allows connection between public health and social exclusion agenda, steering both towards interventions targeted at groups vulnerable to social disadvantage.

However, defining health inequalities as health disadvantages poses some problems. It turns socioeconomic inequality from a structure which impacts on all to a condition to which only those at the bottom are exposed. Firstly, tackling health inequality is not a population-wide strategy. Instead, it is one confined to sub-groups which make up a relatively small proportion of the population. it is therefore possible for the targeted policies to have negative effects on the health of other groups, either in absolute or in relative terms.

Secondly, tackling health inequality does not extend to bringing levels of health in the poorest groups closer to the national average. In a society where overall rates of health are improving, absolute improvements in their health may be insufficient to narrow the gap between the worse and better off (Graham, 2004).

2. Narrowing the Health Gaps

The health gap is a measure of health inequality widely used in research to compare the health of those at the extreme ends of the socioeconomic hierarchy. The health gap is typically expressed as the ratio of one group to the other, for example, the odds of poor health in the lower group relative to that in the higher. Through its incorporation into health policy, the range has increasingly served, not simply to measure health inequality, but to define it. This measure of health inequality is an important driver for

policy. It draws attention to the fact that population averages mask wide differences in health between social groups (Graham, 2004).

The moral case for addressing health gaps is enshrined in the constitution of the WHO. Its guiding principle, that "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being", was reiterated in the 1998 World Health Declaration (World Health Assembly, 1998).

However, while the goal is more ambitious, the underlying model of health inequalities is the same. The burden of ill health resulting from social inequality is again seen to fall on the poor alone. Like a health-disadvantages approach, a health-gaps perspective conflates inequality with disadvantage, and health inequality with the health deficits of being poor.

A health-gaps understanding of health inequalities limits the reach of public health policy in a number of important ways. Firstly, it directs effort at minorities rather than the majority. Much less attention has been given to how the privileges enjoyed at the top of the socioeconomic hierarchy facilitate rates of health improvement which have consistently outstripped those of other socioeconomic groups.

Secondly, in focusing attention on the worst off, it can obscure what is happening to intermediate groups. The health-gaps approach can underestimate the pervasive effect which socioeconomic inequality has on health, not only at the bottom but also across the socioeconomic hierarchy.

Thirdly, the focus on health-gaps can also be challenged on moral grounds. It raises ethical question if it is acceptable "to give absolute priority to improving the health of the worst-off class if those who are next to the worst-off are also doing very badly" (Marchand et al., 1998).

3. Reducing the Health Gradient

Further along the continuum, health inequalities are not only about health differences between poorer and better-off groups. Health inequalities follow a social gradient. They are related to an individual's position in society at every level. Data from around the world show that socially constructed gradients exist in every country and can be described by differences in social economic position, such as education (Figure), and place of residence (Figure). Reducing the health gradient means looking not only at the gaps that exist between those at the top and at the bottom of the scale or at the situation of those most disadvantaged, but also at how health is distributed across all population group (Graham, 2004).

Data from around the world show that socially constructed health gradients exist in every country and can be described, for example by differences in education (Figure 9), or place of residence (Figure 10).

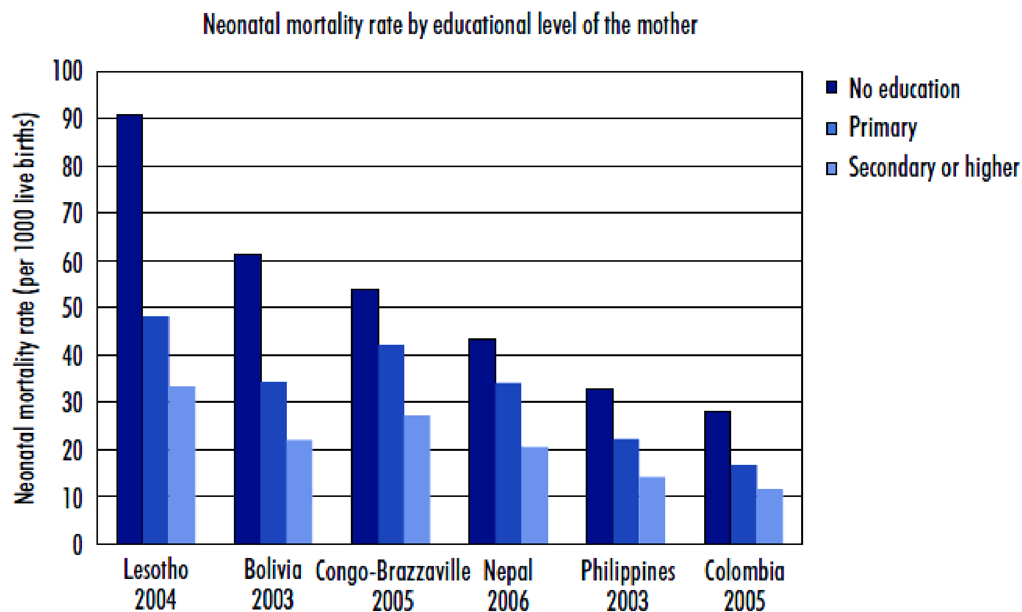

Figure 9 Neonatal mortality rate gradient by educational level of the mother. Source: WHO, 2013a

The moral case for tackling socioeconomic gradients lies in the moral equality of people with respect to health. As the WHO constitution states, and the Health For All charter reasserts, the highest attainable standards of health should be within reach of all “without distinction for race, religion, political belief, economic or social condition” (Graham, 2004).

A focus on socioeconomic differentials rather than on social disadvantages widens the frame of health inequality policy in three major ways. Firstly, it searches for the causes of health inequality, not in the disadvantaged circumstances and health-damaging behaviours of the poorest groups, but in the systematic differences in life chances, living standards and lifestyles associated with people’s unequal positions in the socioeconomic hierarchy.

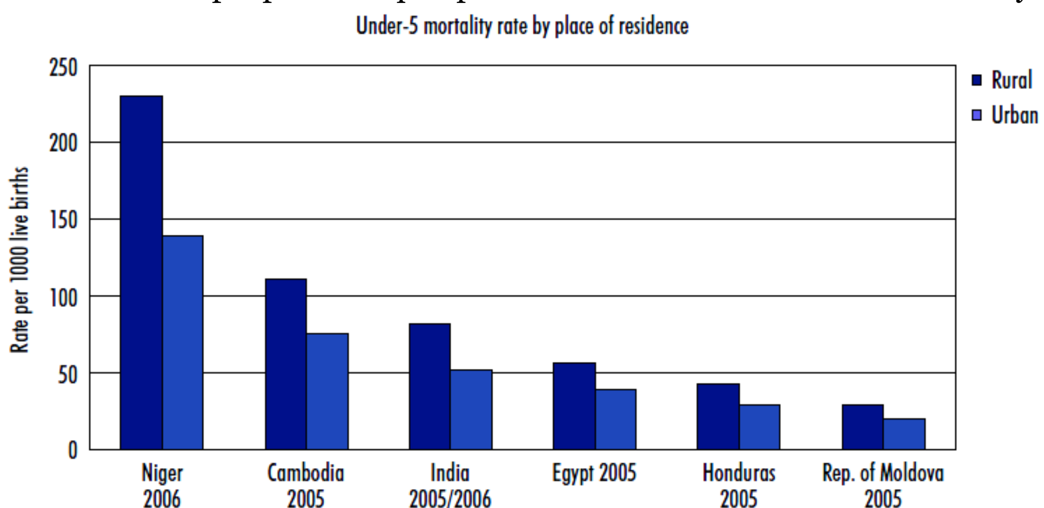

Figure 10 Under-5 mortality rate gradient by place of residence. Source: WHO, 2013a

Secondly, tackling health inequalities becomes a population-wide goal. Like the goal of improving health, it includes everyone. Framed in inclusive terms, a health-gradient approach directs attention to the composition of the population: to the distribution of socioeconomic advantage and disadvantage.

Thirdly, reducing health gradients provides a comprehensive policy goal: one that subsumes remedying disadvantages and narrowing health gaps within the broader goal of equalizing health chances across socioeconomic groups.

7.2 Principles in Tackling Health Equities

1. Addressing Social Determinants of Health

Efforts to reduce health inequalities need to address social determinants of health and to be extended to tackle social inequalities. Achieving health equity requires creating fair opportunities for health and eliminating gaps in health outcomes between different social groups. It requires solutions outside of the health care system, involving changes in environmental regulation, education, housing, employment, income, and transport policies, so as to improve the opportunities for health in communities (Danaher, 2011; Braveman, 2014; BPHC, 2017; Health Scotland, 2017; WHO, 2017d).

Health-improving structural changes to the environment, legislation, fiscal policies, income support, accessibility of public services and intensive support for disadvantaged population groups are all likely to be effective in reducing health inequalities. In contrast, information-based campaigns, written materials, information campaigns reliant on people opting-in and messages designed for the whole population are least likely to reduce health inequalities (Danaher, 2011; Braveman, 2014; BPHC, 2017; Health Scotland, 2017).

The social determinants of health are complex, dynamic and interdependent. This means that the impact of any single government, policy lever, or program in isolation is necessarily limited. A key driver for multiple sectors to work together is the recognition that solving complex health and social problems is beyond the capacity of any one sector and beyond the realm of the health sector alone (CSDH, 2008; Danaher, 2011; WHO, 2017d).

2. Policy Development and Implementation

The ability to get policies and decisions implemented effectively has become a key principle in the delivery of the government's reform program in health. The complexity and breadth of the health inequalities agenda, at both national and local levels, are certain. Therefore, implementing policy and delivering improved health poses a significant challenge. If progres-

sive policies are to succeed, there needs to be a shift from hierarchical and command-and-control modes of operating to more lateral network models. An optimal balance between the top-down approach and bottom-up translation is required (Hunter and Killoran, 2004).

This is not solely a management process – politics and power are fundamental. Unequal distribution of power across the population is one of the fundamental causes of health. Social inequalities, driven by the distribution of power, income and wealth, shape health inequalities within populations. Therefore, power imbalances and powerlessness must be addressed if the needs of the most deprived communities are to be given due attention (Dahlgren and Whitehead, 2007; Hunter and Killoran, 2004).

Evidence-based policy is desirable to ensure public policies and interventions optimize benefits and minimize negative outcomes, and use scarce resources effectively. There are gaps in the evidence, and further research is necessary, but there is an equal challenge in implementing what has been proven to work. In some cases research exists, but is not exploited. There may be a case for shifting the balance in "research and development" in favor of development, to provide a greater understanding of the process of change. This may mean a more prominent role for action research (Hunter and Killoran, 2004).

3. Promoting active citizenship

Interventions which enhance participation in the democratic process and promote genuine empowerment of the whole population are likely to make important contributions to reduced inequalities. At a community or local level, inter-sectoral collaboration can involve a wide range of district and municipal government agencies, social service providers, foundations, business, community-based organizations, and other stakeholders coming together (Dahlgren and Whitehead, 2007).

The focus of collaboration can range from improving service coordination, through community development and advocacy, to comprehensive community initiatives to address the structural foundations of health and other inequalities.

4. Developing Multi-Sectoral Policies and Actions

Developing multi-sectoral policies and actions are critical to the success of policies to tackling health inequalities. Addressing systemic health inequalities and their underlying social determinants are complex and challenging social and policy problems. One increasingly important direction that addresses the dynamic and inter-dependent nature of the social determinants of health has been through collaboration across different policy and program sectors (Dahlgren and Whitehead, 2007; Danaher, 2011; WHO, 2017ad).

Health in All Policies(HiAP) is recommended to tackle health inequities. It is an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts, in order to improve population health and health equity (WHO, 2013b).

This inter-sectoral collaboration can operate at the policy level - where different departments and agencies within a government or different levels of government coordinate or share responsibility for policy development and implementation.

8. Conclusion

Pervasive and systemic health inequities are a serious problem within and between countries around the world. There is consistent and inequitable gradient of health in which people with lower income, education, or other resources have lower life expectancy, higher rates of chronic disease and poorer overall health. The basis for these health inequaities lies in wider structures of social and economic inequality and in access to adequate housing, nutrition, safe environments, and overall social determinants of health.

Addressing systemic health inequalities and their underlying social determinants are complex and challenging social and policy problems. The complexity of the causes of inequalities in health means that multifaceted and therefore multisectoral action is required to tackle the problem. Interventions must tackle the macroenvironmental factors (income and education) and the physical and social environment, as well as adverse health behaviors and access to health care.

Making the broad changes needed to improve health inequities requires collaboration and partnerships across sectors.It requires engagement of unusual players such as public health professionals, businesses, planners, economists, academics, and faith-based leaders, in addition to public health professionals and traditional social service-related fields. A challenge all countries face is the shortage of evidence on effective interventions to reduce inequalities in health.

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MISSION

International Conference on Public Health (ICPH) is a scientific meeting bringing together government leaders, policy makers, academicians, health planners, public health professionals, health practioners, researchers, allied health students, to address, discuss, and solve issues of public health importance, at global, regional, national, and local levels.

THEME

"Multisectoral Action to Combat Regional and Social Inequities in Health"

AIM AND OBJECTIVES

A. AIM:

The aim of this conference is to discuss, and develop framework and strategies for multi-sectoral actions to reduce and eliminate regional and social inequalities in health.

B. OBJECTIVES:

1. To disseminate research evidence on health inequalities and their social determinants of health in various countries
2. To identify existing theoretical models that can be used to understand the causes of health inequities
3. To build capacity in research into social determinants of health and health inequalities
4. To discuss the reorientation of the roles of public health professionals, and public health monitoring, in addressing health inequality issues
5. To identify the effective strategies for multi-sectoral actions and "best practice" to reduce and eliminate regional and social inequalities in health.
6. To establish partnerships to promote appropriate policies and interventions to tackling health inequalities, at a global, national and local level.

After the meeting, these recommendations, commitments and responsibilities are undertaken by all stakeholders.

CURRICULUM VITAE

Dr. Anung Sugihantono, MKes. Dr. Anung was born in Temanggung on March 20, 1960. He was Director General of nutrition and maternal and child health in the Ministry of health and head of the Central Java Health Office in 2011 as well as head of Investment Agencies of Central Java province in 2009.

He was graduated from the Faculty of Medicine in the Diponegoro University and master at the Gadjah Mada University. In January 2016, he appointed by the Minister of health as the General Director of public health in the Ministry of health. The last award was 30 years "Satyalancana" Paper. In May 2017, he joined with some health experts to publish "Building resilient health systems: a proposal for a resilience index."

Prof. Bettina Borisch. Prof. Bettina Borisch was born in Lubeck on November 11, 1956. She is a MD and a Histopathologist, MPH and Fellow of the Royal College of Pathology (UK). Her scientific research work delves into neoplastic lesions of the immune system and breast cancer. Her interests also include community-based oncology, as well as health communication and global health.

She is the Editor in Chief of "Pathobiology" and the Co-Editor of "Journal of Public Health Policy". She was president of Europa Donna, The European Breast Cancer Forum, and Founding President of the Swiss. Forum of Europa Donna. She is author of over 120 scientific papers and 2 books.

Dr. Ridwan Thaha, MSc. Dr. Ridwan was born in Tual, Maluku on September 6, 1958. He completed undergraduate study in the Anthropology Faculty of social and political sciences, Hasanuddin University in 1983. He completed masters program in public health, interest in health promotion and behavioral sciences at the Indonesia University in 1991, and a doctor of public health promotion and behavioral sciences at the University of Indonesia in 2001, with health promotion areas of expertise.

He started his career as a lecturer in Faculty of public health Hasanuddin University in 1986 and became 1st Vice Dean of academics, cooperation and development network, Faculty of Public Health, Hasanuddin University 2006-2010, in 2009-2014 also became the Chairman of DPP-IV IAKMI. He became Chairman of PP-IAKMI in 2016-2019.

Prof. Diana Kuh. Prof. Diana Kuh was born in Chichester on February 23, 1953. She is a Professor of Life Course Epidemiology at College London University, Director of the MRC Unit for Lifelong Health and Ageing (LHA), and the MRC National Survey of Health and Development (NSHD), the oldest of the British birth cohort studies that has followed up over 5000 individuals since their birth in March 1946.

Prof. Diana is also the principal investigator of the Healthy Ageing across the Life Course (HALCyon) network and co-Director of a new NIH-funded programme on the Integrative Analysis of Longitudinal Studies of Ageing (IALSA) that bring together cohort studies to investigate lifetime influences on ageing. Prof. Diana's research involves three key and mutually reinforcing areas where she has made internationally acknowledged seminal contributions.

Prof. Sanjiv Kumar. Prof. Sanjiv Kumar was born in Rohtak Haryana on July 2, 1953. He has 38 years of experience in public health in 29 countries in Central and South Asia, Eastern and Southern Africa, Central Eastern Europe and in academics. He started his career as MO in Indian Army. Later he worked at PHCs in Haryana, urban slums in Delhi, and in UNICEF as health specialist at state and national level in India and then moved to international positions as Chief of Health, Nutrition, Child Survival & Development, and Senior Advisor in Iraq, Kenya, Uganda and Somalia and Regional Advisor for 22 countries in Central Asia, Central and Eastern Europe.

His current interests are capacity building in leadership, strategic management team building for corporate sector, UN and health institutions. He currently heads National Health Systems Resource Centre that provides technical support to Ministry of Health and Family Welfare, state governments in India.

Dr. Robert Chad Swanson. Dr. Swanson was born in Utah USA on December 13, 1972. Chad Swanson, DO, MPH is a community emergency physician in Provo, Utah, with a passion for applying "complex systems thinking" concepts, approaches, and methods to transform health systems. After medical training, he received a Masters Degree in Public Health from the Johns Hopkins Bloomberg School of Public Health.

Dr. Swanson has a volunteer research professor at Arizona State University, USA, and his paper has published in journals such as the Lancet and PLoS Medicine on topics related to health policy, health systems strengthening, and global health. Chad is interested in high-impact activities that cross disciplines, mobilize stakeholders, and transform systems. He currently

Prof. Maria Emmelin. Prof. Maria Emmelin was born in Lund on September 12, 1953. She is a Professor of Global Health. She has a special interest in public health evaluation and the social determinants of health. She has spent over twenty years at Umeå University and was a Senior Lecturer in Epidemiology and Public Health Sciences during the period 2004-2010.

Her research has focussed on self-rated health and the social aspects of cardiovascular disease prevention in northern Sweden. She has long experience of the HIV/ AIDS epidemic in Tanzania and has worked with smoking cessation in South Africa, reproductive health in Ethiopia, and violence against women (and children) in Ethiopia, Tanzania and Indonesia.

Drs. Juliyatmono, MM. Drs. Juliyatmono was born in Karanganyar, Central Java, July 29, 1966. He was Regent of Karanganyar who served from 2013-2018. For the Regent of Karanganyar, Juliyatmono was awarded the Golden fields of the residency Papers Manggala family planning and development Family of the year 2016, the awards in field Population of Central Java Province 2016, and Pawitra Kawastara Award from the Minister of education and culture.

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She has extensive experience in policy research, epidemiological research and qualitative research in the area of adolescent health and prevention and control of NCDs. She completed her MSc (child development) from Lady Irwin College, New Delhi (Delhi University), India. She completed her PhD in Health Promotion (Department of Cardiology) from All India Institute of Medical Sciences, New Delhi, India.

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Prof. Ismi Dwi Astuti Nurhaeni. Prof. Ismi was born in Purworejo, on August 25, 1961. She completed her Bachelor Degree in Public Adminstration Science-Sebelas Maret University (1985), Master Degree in Public Administration Science-Gadjah Mada University (1995), and Bachelor Degree in Public Adminstration Science-Sebelas Maret University (1985).

Dr. Triono Soendoro, PhD. Dr. Triono was born in Surabaya in 1953. The last level of education is at Yale University, USA. Agencies/work Unit current World Health Organization – New Delhi, India, as a Regional Advisor for Research, Policy, and Coorperation (RA-RPC). Currently, he is a Chair, National Ethic Comission for Health Research and Development, Ministry of Health, Indonesia

Dr. Hanung Prasetya. Dr. Hanung was born in Surakarta, on April 4, 1971. He was a Hypnoterapist the copyright owner Hanung Induction is a way of putting the client with effective, comfortable and safe. Hanung Induction is already registered on the Dirjen HAKI Kemenkum HAM RI.

Hanung Prasetya is actively providing training at various educational institutions, hospital even banking. Until the middle of March 2016 he has given hypnosis training on over 1800 people with a background of Diploma to doctoral degrees. Currently he is finishing an education S-3 with the topic of his dissertation is Hypnoterapi.

PROGRAMS

1. Symposium
2. Workshop
3. Oral presentation
4. Poster presentation

1. Symposium

Invited Speakers:

1. Dr. Anung Sugihantono, MKes-Director General Nutrition and Maternal and Child Health, Ministry of Health, Jakarta, Indonesia

Topic: "Maternal and Child Health Inequity in Indonesia: How Indonesia Has Overcome the Issues"

2. Prof. Bettina Borisch - Executive Officer, World Federation of Public Health Associations (WFPHA); Institute of Global Health, University of Geneva, Geneva, Switzerland

Topic: "Global Public Health Today: Challenges for Public Health and Public Health Professionals to Address Health Inequity Issues"

3. Dr. Ridwan Thaha, MSc-Chairman, Indonesian Public Health Association, Hasanuddin University, Makassar, Indonesia

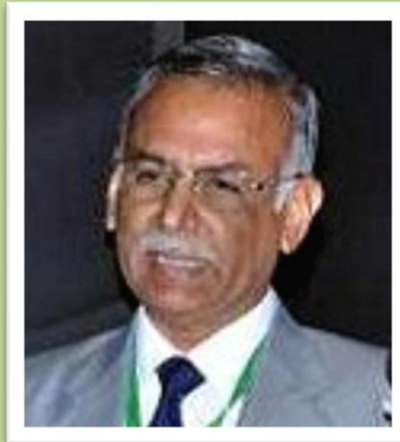
Topic: "Revitalizing the Role of Public Health Professionals in Indonesia to Tackle Health Inequities"

4. Prof. Diana Kuh-Director, MRC Unit for Lifelong Health and Ageing, Institute of Epidemiology and Health, University College London, London, UK

Topic: "The Utility of Life-Course Epidemiology Studies with Social Perspectives to Address Social Inequities in Health"

5. Prof. Sanjiv Kumar-Executive Director at National Health Systems Resource Centre, MOH-FW, Government of India, New Delhi, India

Topic: "Strategic Planning and Managing of Health Programs to Address Social Inequities In Health: Lesson Learned from Worldwide Experience"



6. Dr. Robert Chad Swanson-Arizona State University, USA

Topic: "Shifting the Paradigm: Complex Systems Thinking for Multisectoral Action in Health"

7. Prof. Maria Emmelin-Department of Clinical Sciences, Social Medicine and Global Health, Lund University, Clinical Research Centre, Malmö, Sweden

Topic: "Integrating Social Determinants of Health in Local Policies"

8. Drs. Juliyatmono, MM-Regent of Karanganyar, Central Java, Indonesia

Topic: “Social Economic Development Policies to Overcome Health Inequity Issues in Karanganyar District”

9. Dr. Monika Arora-Director of Health Promotion and Tobacco Control Divisions, Public Health Foundation of India, New Delhi, India

Topic: "Developing Multi-Component and Multilevel Interventions for Behavior Change in Population in Multiple Settings"

10. Prof. Malin Eriksson-Department of Social Work, Umea University, Umea, Sweden

Topic: "Capitalizing the Utility of Social Capital in Planning and Managing Health Promotion"

11. Prof. Bhisma Murti-Chairman, ICPH Masters Program in Public Health, Graduate School, Sebelas Maret University, Surakarta, Indonesia

Topic: Host, Moderator.

2. Workshop

Resource Persons
Cluster A: Health Policy and Management

1. Prof. Wongsa Laohasiriwong-Faculty of Public Health, Khon Kaen University, Khon Kaen, Thailand

Topic: "Capitalizing Seven Principles of Public Service Reform to Promote Healthy Public Policies"

2. Dr. Robert Chad Swanson - Arizona State University, USA

Topic: "Complex Systems Thinking for Transformational Change in Health: Applying the Perspectives, Approaches, and Methods"

3. Prof Ismi Dwi Astuti Nurhaeni-Department of Public Administration, Faculty of Social and Political Sciences, Sebelas Maret University

Topic: "Measurement and Analysis of Gender Inequalities in Health Equity Studies"

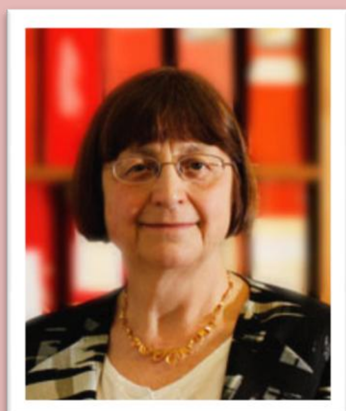
4. Prof. Sanjiv Kumar - Executive Director at National Health Systems Resource Centre, MOHFW, Government of India, New Delhi, India

Topic: "Capacity Building in Leadership for Health System Strengthening"

Resource Persons
Cluster B: Health Promotion, Social Epidemiology, Life-Course Epidemiology, and Research Method (Grounded Theory, Gender Studies, SEM/ Path Analysis, Research Ethics)

1. Prof. Maria Emmelin - Department of Clinical Sciences, Social Medicine and Global Health, Lund University, Clinical Research Centre, Malmö, Sweden

Topic: "Qualitative Research Method: Grounded Theory and Qualitative Content Analysis to Capture and Analyze Health Care Experiences"

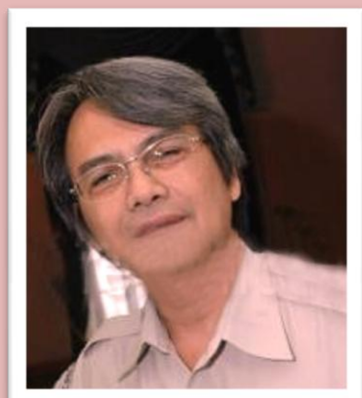


2. Prof. Diana Kuh - Director, MRC Unit for Lifelong Health and Ageing, Institute of Epidemiology and Health, University College London, London, UK

Topic: "Application of Life-Course Epidemiology Studies to Address Health Inequities Issues"

3. Prof. Malin Eriksson - Department of Social Work, Umea University, Umea, Sweden

Topic: "Research Design Incorporating the Social Determinants of Health"



4. Dr. Triono Soendoro, MD, PhD - Chair, National Ethic Comission for Health Research and Development, Ministry of Health, Indonesia

Topic: "Legitimate Health Research by International Ethical Standards"

5. Dr. Hanung Prasetya - School of Health Polytechnics, Surakarta, Indonesia

Topic: "Application of Unconscious Communication Techniques in Health Promotion"

6. Prof. Bhisma Murti - Sebelas Maret University, Surakarta, Indonesia

Topic: "Application of Path Analysis (Structural Equation Model) in Health Studies"

3. Oral Presentation and Poster Presentation

The conference calls for research papers in the following areas:

1. Epidemiology and Public Health
2. Health Promotion and Behavior
3. Maternal and Child Health
4. Health Policy and Management
5. Medicine

Research papers eligible for submission are not restricted to the areas delineated above. All research authors are kindly encouraged to submit their research papers in any topic as long as it addresses health equity, multi-sectroral action, public health and medicine in general.

SCHEDULE OF INTERNATIONAL CONFERENCE ON PUBLIC HEALTH

Best Western Premier Hotel, Solo, Indonesia
September 6-7, 2017

Symposium Schedule
Date: Wednesday, September 6, 2017

No.	Time	Topic	Speaker/ Moderator
1.	07.30-08.00	Registration	Organizing Committee
2.	08.00-08.10	1. Commencement Ceremony 2. National Anthem "Indonesia Raya"	Master of Ceremony: 1. Mardhatillah (Indonesia) 2. Tiur (English) 3. Yunita Kristiani (Conductor)
3.	08.10-08.15	Aim and Programs of the International Conference on Public Health	Prof. Bhisma Murti (Sebelas Maret University, Surakarta, Indonesia)
4.	08.15-08.30	Opening Remarks from Rector of Sebelas Maret University	Prof. Dr. Ravik Karsidi, MS (Rector of Sebelas Maret University, Surakarta, Indonesia)
5.	08.30-09.00	Coffee Break	
6.	09.00-09.30	**Symposium I:** Global Public Health Today: Challenges for Public Health and Public Health Professionals to Address Health Inequity Issues	Prof. Bettina Borisch (Executive Officer, World Federation of Public Health Associations (WFPHA); Institute of Global Health, University of Geneva, Geneva, Switzerland)
7.	09.30-10.00	Revitalizing the Role of Public Health Professionals in Indonesia to Tackle Health Inequities	Dr. Ridwan Thaha, MSc (Chairman, Indonesian Public Health Association, Hasanuddin University, Makassar, Indonesia)
8.	10.00-10.30	The Role of Life Course Epidemiology Studies from a Social Inequalities Perspective	Prof. Diana Kuh (Professor of Life Course Epidemiology, MRC Unit for Lifelong Health and Ageing at University College London, UK)
9.	10.30-11.00	Strategic Planning and Managing of Health Programs to Address Social Inequities in Health: Lesson Learned from Worldwide Experience	Prof. Sanjiv Kumar (Executive Director at National Health Systems Resource Centre, MOHFW, Government of India, New Delhi, India)

No.	Time	Topic	Speaker/ Moderator
10.	11.00-12.00	Discussion	
11.	12.00-13.00	Lunch	
12.	13.00-13.30	**Symposium 2:** Maternal and Child Health Inequity in Indonesia: How Indonesia Has Overcome the Issues	Dr. Anung Sugihantono, MKes (Director General Nutrition and MCH, Ministry of Health, Jakarta, Indonesia)
13.	13.30-14.00	Shifting the Paradigm: Complex Systems Thinking for Multisectoral Action in Health	Dr. Robert Chad Swanson (Arizona State University, USA)
14.	14.00-14.30	Developing Multi-Component and Multilevel Interventions for Behavior Change in Population in Multiple Settings.	Dr. Monika Arora (Director of Health Promotion and Tobacco Control Divisions, Public Health Foundation of India, New Delhi, India)
15.	14.30-15.00	Discussion	
16.	15.00-15.30	Coffee Break	
17.	15.30-16.00	**Symposium 3:** Public Policies of Social Economic Development to Overcome Health Inequity Issues in Karanganyar District	Drs. Juliyatmono, MM (Regent of Karanganyar, Central Java, Indonesia)
18.	16.00-16.30	Integrating Social Determinants of Health in Local Policies	Prof. Maria Emmelin (Department of Clinical Sciences, Social Medicine and Global Health, Lund University, Clinical Research Centre, Malmö, Sweden)
19.	16.30-17.00	Capitalizing the Utility of Social Capital in Planning and Managing HealthPromotion	Prof. Malin Eriksson (Department of Social Work, Umea University, Umea, Sweden)
20.	17.00-17.30	Discussion	
21.	17.30-17.35	Closing Day 1	Prof. Bhisma Murti

INTERNATIONAL CONFERENCE ON PUBLIC HEALTH
Best Western Premier Hotel, Solo, Indonesia
September 6-7, 2017

Workshop Schedule

Date: Thursday, September 7, 2017
Cluster A: Research Methods in Health Policy and Management

No.	Time	Topic	Resource Person
1.	07.30-09.00	Capitalizing Seven Principles of Public Service Reform to Promote Healthy Public Policies	Prof. Wongsa Laohasiriwong Faculty of Public Health, Khon Kaen University, Khon Kaen, Thailand)
2.	09.00-09.30	Coffee Break	
3.	09.30-11.00	Complex Systems Thinking for Transformational Change in Health: Applying the Perspectives, Approaches, and Methods	Dr. Robert Chad Swanson (Arizona State University, USA)
4.	11.00-12.30	Measurement and Analysis of Gender Inequalities in Health Equity Studies	Prof. Ismi Dwi Astuti Nurhaeni (Department of Public Administration, Faculty of Social and Political Sciences, Sebelas Maret University)
5.	12.30-13.30	Lunch	
6.	13.30-15.00	Capacity Building in Leadership for Health System Strengthening	Prof. Sanjiv Kumar (Executive Director at National Health Systems Resource Centre, MOHFW, Government of India, New Delhi, India)
7.	15.00-15.30	Coffee Break	
8.	15.30-17.00	Qualitative Research Method: Grounded Theory and Qualitative Content Analysis to Capture and Analyze Health Care Experiences	Prof. Maria Emmelin (Department of Clinical Sciences, Social Medicine and Global Health, Lund University, Clinical Research Centre, Malmö, Sweden)
9.	17.00-17.05	Closing of the day	

Cluster B: Research Methods in Health Inequities and Research Ethics

No.	Time	Topic	Resource Person
1.	07.30-09.00	Application of Life-Course Epidemiology Studies to Address Health Inequities Issues	Prof. Diana Kuh (Professor of Life Course Epidemiology, MRC Unit for Lifelong Health and Ageing at University College London, UK)
2.	09.00-09.30	Coffee Break	
3.	09.30-11.00	Research Design Incorporating the Social Determinants of Health	Prof. Malin Eriksson (Department of Social Work, Umea University, Umea, Sweden)
4.	11.00-12.30	Legitimate Health Research by International Ethical Standards	Dr. Triono Soendoro, MD, PhD (Chair, National Ethic Comission for Health Research and Development, Ministry of Health, Indonesia)
5.	12.30-13.30	Lunch	
6.	13.30-15.00	Application of Subconscious Communication Techniques in Health Promotion	Dr. Hanung Prasetya (School of Health Polytechnics, Surakarta, Indonesia)
7.	15.00-15.30	Coffee Break	
8.	15.30-17.00	Application of Path Analysis (Structural Equation Model) in Health Studies	Prof. Bhisma Murti (Sebelas Maret University, Surakarta, Indonesia)
9.	17.00-17.05	Closing of the day	

SUBJECT

A. Editorials The Global Charter for the Public's Health

Bettina Borisch

Executive Officer, World Federation of
Public Health Associations (WFPHA);
Institute of Global Health, University of Geneva,
Geneva, Switzerland

European Journal of Public Health, Vol. 26, No. 2, 207
doi:10.1093/eurpub/ckw013

In September 2015, world leaders issued a challenge to the global public health community. Meeting in New York, they agreed on a programme of 17 Sustainable Development Goals that effectively places health at the centre of the global agenda between now and 2030. Goal 3 deals explicitly with health stating 'ensure healthy lives and promote well-being for all at all ages'. Yet that is only the beginning. The classic determinants of health, such as poverty (Goal 1), food (Goal 2) or water (Goal 6) feature prominently, as do core public health concerns such as inequality (Goal 10). More recent thinking on planetary health is recognised too. For example in Goals 13–15, on climate and ecosystems, while governance, increasingly recognised as key to achieving health (Kickbusch I, 2014), features in Goal 16. These goals demonstrate a clear ambition to improve the health of all of the people living on this planet. However, if the corresponding targets, now numbering almost 170, are to be achieved, everyone must play a role.

The World Federation of Public Health Associations (WFPHA) has risen to this challenge. Working with the World Health Organization, it has asked how the global al public health community should position itself to influence all of the key actors across the entire spectrum of public health issues, whether in government, civil society or industry.

The result is the Global Charter for the Public's Health (The Charter) published in this issue of the Journal. Recognising the need to adapt policies to differing circumstances, The Charter provides 'a clear and flexible framework that can be applied globally and within individual countries'. It builds on a long tradition of public health thinking, from the time of The Declaration of Alma Ata through to The Ottawa Charter and the Commission into the Social Determinants of Health. Individually and collectively, these have long provided inspiration for measures to improve public health. There have been many successes. The Global Burden of Disease studies have demonstrated health gains that few thought possible. Yet

there have also been many setbacks (McMichael AJ, 2004). Too often, the public health community remains fragmented, and many governments pay little more than lip service to the commitments that they have made. This recognition provided a catalyst for the development of The Charter.

By identifying the enabling functions of 'Governance, Advocacy, Capacity and Information' The Charter provides the groundwork necessary to deliver the most effective public health policy and outcomes locally, nationally and internationally. The focus of many of the previous declarations and charters has been on specific issues such as health promotion or the social determinants of health. The role of The Charter is to ensure a comprehensive approach to tackle the threats to health everywhere.

Of course, the production of The Charter is only the first step. The challenge that the WFPHA has set itself is to ensure that it becomes embedded in the work of as many as possible of its member public health associations around the world, who can use it to support and advance the ambition that their political leaders have signed up to in the Sustainable Development Goals, which The Charter should be read in conjunction with. Using both as an opportunity to influence their governments. Crucially, The Charter speaks to the entire public health community, whether in policy, practice, training or research. All have a role to play. There is an enormous need to build public health capacity in many countries, to foster and sustain the next generation of public health workers, and to undertake high quality multidisciplinary research to generate the knowledge needed to inform policy.

The process has commenced and needs to be extended. The Public Health Association of Australia is in the process of embedding The Charter into it strategic planning approach. By tying the Branches, Special Interest Groups and members into the policy approach there is an increasing opportunity to provide significant improvements in public health practice, advocacy and implementation. EUPHA is beginning a similar process, working through its sections with their in-depth knowledge of key issues.

There is no silver bullet to improving public health. However, the comprehensive approach identified by The Charter provides an opportunity for those approaches to public health that can make a difference.

The Charter provides a comprehensive, coordinating tool for ensuring that public health outcomes improve whether internationally, nationally or at the local government level. It recognises the need to challenge new threats to public health in a globalised world. These include the power of industries dealing in unhealthy commodities (Mindell JS, 2012), the challenges to public health posed by international treaties (Weiss M, 2015), and an ideology, peddled by powerful forces, that attacks any sensible regulation as an infringement on individual freedom or the creation of a 'nanny state' (Carter SM, 2015). Just as The Alma Ata Declaration provided a catalyst for comprehensive primary care and The Ottawa Charter provided a driving force for health promotion, the Charter has the potential to provide a

driving force for widespread adoption of public health principles and practice. The challenge now for public health associations and professionals internationally is to ensure its visibility, use and implementation.

Viewpoint A Global Charter for the Public's Health-the public health system: role, functions, competencies and education requirements

European Journal of Public Health, 1–3
doi:10.1093/eurpub/ckw011

Introduction

Growth, development, equity and stability
Political leaders increasingly perceive health as being crucial to achieving growth, development, equity and stability throughout the world. Health is now understood as a product of complex and dynamic relations generated by numerous determinants at different levels of governance. Governments need to take into account the impact of social, environmental and behavioural health determinants, including economic constraints, living conditions, demographic changes and unhealthy lifestyles in many of the World Health Organization (WHO) Member States. This understanding and increasing globalization means it is very timely to review the role of (global) public health in this changing societal and political environment.

Globalization
The positive and negative impacts of globalization need to be better understood by public health professionals and more widely acknowledged by policy makers. Globalization is marked by increased interconnectedness and interdependence of peoples and countries, based on the opening of borders to increasingly fast flows of goods, services, finance, people and ideas across international borders and the changes in institutional and policy regimes at the international and national levels that facilitate or promote such flows. It is recognized that globalization has both positive and negative impacts on health development. Increasingly trade agreements provide frameworks for intergovernmental relationships; however, possible impacts on human health are not routinely assessed prior to signing.

The proposal for a Global Charter for the Public's Health
In this context, the World Federation of Public Health Associations (WFPHA) has developed the A Global Charter for the Public's Health (GCPH) as the main output of its collaboration plan with the WHO to adapt today's public health to its global context in the light of and in conjunction with the Sustainable Development Goals (SDGs). GCPH brings together the best of all the existing models and provides a comprehensive, clear and flexible framework that can be applied globally and within individual countries, whether low, middle or high income. The WFPHA has engaged with its over 100 national public health associations to discuss the new roles that global public health professionals have to assume and the needed changes with regard to education and recruitment of public health personnel. A literature review and widespread consultation formed part of

this initiative (Jenkins C, 2016; Lomazzi M, 2016).
Outcome of literature review and consultation As part of the consultation process, several key points were raised:

1. The need for genuine political engagement was stressed, underlying that too often politicians only paid lip service to public health.
2. Commercial, social and environmental determinants of health, as well as social inequalities should be tackled and resources allocated in a sustainable and accountable way.
3. The impacts of underlying ideologies should be taken into consideration.
4. More comprehensive and reliable data are needed in many programmatic areas of the public's health.
5. The multisectoral and holistic approach should be reached, engaging public health in big dialogues and in the concerted decision-making processes.
6. Participants of the consultation stressed that WHO should provide leadership in this process.
7. New leaders for public health are required.
8. A flexible common framework of instruments to influence governments has been suggested.
9. New creative solutions are needed.
10. Specific projects of selected countries where public health has a strong voice and is integrated in government policies and initiatives might be possible models for other settings.

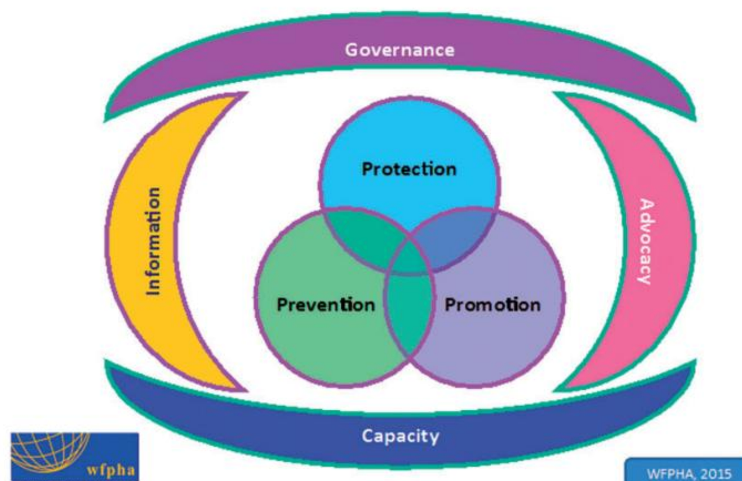
While publications on global public health are exponentially increasing in the literature, the term 'Global public health' itself remains ill defined. The term is frequently used though, but more in the context of a 'problem' or a 'challenge'. The framing of global public health is frequently medical and technical. This may be a result of the vertical technically oriented programs that are run throughout the world. Political and economic constraints found in the literature are important but there is not a large body of literature around this topic.

Despite the evidence that the different public health functions need to be much better integrated into health systems, a 'know-dogap' is apparent. While multi-sectoral approaches in public health are increasingly chosen, they are by no means mainstream.

A Global Charter for the Public's Health
Resilient public health systems are needed locally to globally and within each country. However, the current reality consists of fragmented, variable and incomplete public health services and functions, with little common understanding of what a good public health service looks like.

Currently, there is no global agreement on what public health functions or services consist of, and the lack of a common vocabulary in public health adversely affects the efforts of public health systems, including security and workforce development and quality standards across the world. Many public health policies, especially those that look at disease specific topics, remain vertical, even if they outline some inter-sectoral components. Many

are not well coordinated with other related societal fields and, therefore, have a huge impact on population health. A GCPH has the potential to become an established framework to allow public health systems to communicate globally, compare capacity and improve performance through systematic action.



Functions and services

The proposed GCPH consists of two groups of functions/services including:

1. Services: a group of core services—Protection, Prevention and Promotion
2. Functions: a group of enabler functions—Governance, Advocacy, Capacity and Information

Headings for the GCPH

There exists overlap between all these services and functions, especially between health promotion, primary prevention and environmental health, which benefit from a cross-sector approach. Specific public health topics require components drawn from across the range of services and functions. These include:

1. **Governance**: public health legislation; health and cross-sector policy; strategy; financing; organisation; assurance: transparency, accountability and audit.
2. **Information**: surveillance, monitoring and evaluation; monitoring of health determinants; research and evidence; risk and innovation; dissemination and uptake.
3. **Protection**: international health regulation and co-ordination; health impact assessment; communicable disease control; emergency preparedness; occupational health; environmental health; climate change and sustainability.
4. **Prevention**: primary prevention: vaccination; secondary prevention: screening; tertiary prevention: evidence-based, community-based, integrated, person-centred quality healthcare and rehabilitation; healthcare management and planning.
5. **Promotion**: inequalities; environmental determinants; social and economic determinants; resilience; behaviour and health literacy; life-course; healthy settings.

6. **Advocacy**: leadership and ethics; health equity; social-mobilization and solidarity; education of the public; people-centred approach; voluntary community sector engagement; communications; sustainable development.
7. **Capacity**: workforce development for public health, health workers and wider workforce; workforce planning: numbers, resources, infrastructure; standards, curriculum, accreditation; capabilities, teaching and training.

Recommendations

Recommendation 1–Consensus: A common conceptualization of global public health should be defined and adopted by the WFPHA and its members and used as a basis for public health education and training. It should be followed by a process of engagement with partners and Member States to adopt a WHO action plan on public health functions, based on the approved GCPH.
Recommendation 2–Co-ordination: WFPHA in association with partners supports and recognises WHO's leadership role to facilitate global public health in global multi-sectoral dialogues, co-ordination and decision making.
Recommendation 3–Leadership: Public health leadership to be strengthened to integrate the public health charter into cross-sector policy, health systems policy and governance mechanisms, building on and enhancing existing frameworks.
Recommendation 4–Workforce: Applying the GCPH encompassing functions, services and healthy public policy to scale up the public health workforce to ensure global health security and the sustainability of health systems.
Recommendation 5–Tools and application: Case studies, tools and standards to be developed to illustrate the application of the GCPH at the global, national and local levels and for use in public health education and training. Adoption of a GCPH will require skilful communication and practical application.
Recommendation 6–Resources: In order to strengthen Global Public Health, political commitment is needed, with co-ordinated roles and resources with partners and donors.

Conclusion

In the broadest sense, public health in our globalized world is multifaceted, serving as a basis for everyday life, crucial for growth and development, equity and stability and is a function of numerous social, environmental and behavioural determinants, not least of 2 of 3 by guest on March 14, 2016 http://eurpub.oxfordjournals.org/ Downloaded from which are the impacts of globalization itself. To realize the potential of a healthy global citizenry to support economic growth and development, equity and stability, there is an urgent need for genuine political acknowledgement of, engagement with and leadership for the public's health supported by a global public health system.

Action on two levels is required. First, consensus on a concepttualization of global public health and on a framework for sustainable and secure health infrastructures and services are essential first steps to underpin health in everyday life and to minimize the negative economic, social and environmental impacts of globalization on health development and community stability. Additionally, new models and skill sets are needed to address new and re-emerging public health challenges within the different socio-economic realities around the world, varying political capacities and new political entities.

Second, development of global public health requires political engagement, use of social networks, identification of political leverage points and steerage of public health agendas through the new societal and political environments. Importantly, global public health values should inform, be embedded within and be used to assess political and policy decisions.

Acknowledgement
The WFPHA appreciates the efforts of all who contributed to this Charter (in alphabetical order): Borisch B., Jenkins C., Hernandez I., Krech R., Laaser U., M. Lomazzi, Miron E., Nurse J., Robinson P., Yeatman H.; the WFPHA leadership (M. Asnake, M. Moore and J. Chauvin), the WFPHA Policy Committee (Chair: I. Hernandez), the WFPHA Governing Council, L. Bourquin and all other people involved for their helpful suggestions.

Conflicts of interest: None declared.

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B. Strategic Management and Leadership for Health Professionals – Skills to Leverage Resources to Achieve Health Goals

Sanjiv Kumar

Executive Director at National Health Systems Resource Centre, MOHFW, Government of India, New Delhi, India

Indian Journal of Community Medicine : Official Publication of Indian Association of Preventive & Social Medicine are provided here courtesy of Wolters Kluwer - Medknow Publications, 2015 Jul-Sep; 40(3): 158–162. http://doi.org/10.4103/0970-0218.158845

Introduction

The recent approach to healthcare considers the broader determinants of health to improve population health. One is able to positively impact health goals only when these are addressed through multi sectorial coordination.(1) Marc Lalonde in 1974(2) was among the firsts to elaborate the need to look beyond health care organizations to impact health. His report paved the way for an international debate on the role of non-medical determinants of health, including individual risk behavior setting the tone for a new public health discourse and practice in the decades to come.(3)

Lalonde's framework groups health determinants in four areas [Figure 1]. There are different weightages assigned to contribution of the four areas to population health. Behavior contributes to around 50%, Environment around 20%, Biology around 10% and health care 20%.(4) There is no data from developing countries on contribution to health by these four broad areas but environment with lack of safe water, sanitation, lack of safety standards at work place and home is likely to be a larger contributor to health. Health system is certainly not a major contributor to population health.

While the traditional patient-health care provider driven approach held the health professional within the realm of health sector where the majority of time was spent to operationalize mechanisms for disease-centered care. Rampant surge of non-communicable diseases requires a boarder action that promotes good health. The current disease scenario seeks the health professional to look beyond the health sector. After achieving the eradication of small pox, polio and elimination of Guinea worm, and substantial reduction in HIV/AIDS, Leprosy etc. in India, it is now required to move ahead and look at health in a comprehensive manner to achieve sustainable and equitable improvement in health. In India,

non-communicable diseases [NCD] account for 60% of deaths followed by communicable, maternal, perinatal and nutritional diseases [28%] and injuries [12%]. [5] The root causes of all these diseases are - lifestyle and pollution for NCDs; inadequate water and hygiene etc. for communicable diseases; malnutrition, illiteracy and lack of resources to access timely health care for maternal child health conditions; and unsafe vehicles, houses and road conditions for accidents. It is clear that prevention of deaths in all four major groups of diseases can be done only if other sectors are adequately engaged and the health sector is involved in providing excellent medical care.

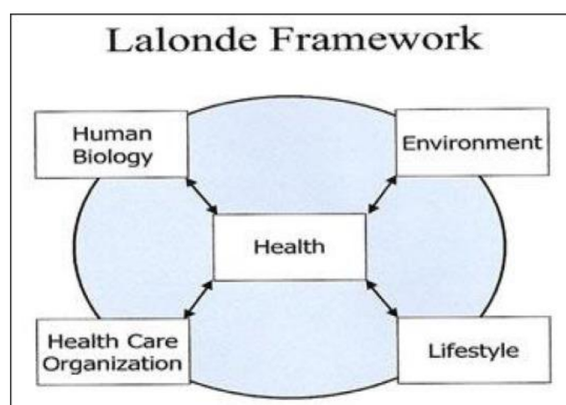

Figure 1
Four domains of determinants of population health

Thus, the new approach requires policy makers across all sectors to be realize the consequences of their decisions on health and be accountable for population health.(6) Similarly, health ministers, policy makers, health systems scientists, program implementers and other health professional should actively engage with other sectors while continuing with efforts in traditional disease control approaches. It demands for a new skill set where the health professional in his new role interacts with key influencers in other sectors to make decisions that do not lead to ill health and improve health. Influencing others, identifying windows of opportunity, art of advocacy, negotiation and networking form the key skills for a health professional to achieve health goals through multi-sectorial efforts. Last thirty years have also seen a global surge to use health promotion approach to improve health. Health Promotion can be used effectively to address both communicable and non-communicable diseases by going beyond boundaries of health sector.(3)

Influencing Others

As one moves up the ladder of leadership, one's priorities need to shift from doing own work to managing team and spending more time in networking. In public health, the team leader interacts with other health professionals, bureaucrats, politicians within the Ministry of health and other ministries. One is required to influence and convince them to be able to generate interest in health and actions required. This also gains prospects for his team to positively impact policy making or implementation of

a program to improve health of the population. This helps in better planning and execution where the team's goals are aligned with the current needs of the society. In addition to technical knowledge and analytical skills, good communication skills and networking help in advocacy. The ability to visualize future scenario, identify windows of opportunity and negotiation skills further drive the leader towards success.

Identifying windows of opportunity

Identifying windows of opportunity is the key to influence the policy environment and decision makers within and outside the health sector. A leader should identify opportunities, take advantage of these and engage in activities involved to achieve goals. Some examples of such opportunities in India are presented below:

1. The New health and education policies are being drafted. These present several opportunities to engage people from various organizations/capacities to provide inputs, especially on the role and responsibilities of other sectors in improving health. Like education Policy should include healthy life style education in school children.
2. Pre-service and In-service training of bureaucrats, public health professionals, social sciences and related sectors.
3. New legislations: New Public Health Act being drafted
4. Outbreaks: Any outbreak of disease gets more attention of politician, bureaucrats and media for example, water borne diseases such as Polio, Dengue, Jaundice, Cholera can be used to leverage action in water supply and sanitation; Flu to promote hygiene and dengue to mobilize municipalities, corporations and local self-governments for health starting with elimination of mosquito breeding within and outside households etc.
5. Professional bodies of health and related professions: The potential of these professional bodies is underutilized. They hold regular conferences and bring out journals where these aspects can be highlighted especially in the sessions attended by politicians and bureaucrats.
6. Political agenda: 'Swachh Bharat Abhiyan', for example, is an opportunity to push for universal safe water and sanitation and will go a long way in preventing common diseases. 'Swachh Hospital Abhiyan', as part of this campaign builds on this opportunity to eliminate hospital acquired infections.
7. Health Impact Assessment unit needs to be established in the Ministry of Health and Family Welfare and empowered to review the impact on health of all projects in all other sectors

Advocacy

Advocacy is essential for every health professional to promote effective interventions to address public health problems. Advocacy is the act of pleading or arguing in favour of something. It highlights to change the “what is” into a “what should be".(7) It is a process adopted by an individual or a group to influence policy and resource allocation decisions within political, economic, and social systems and institutions. Advocacy can include many activities that a person or organization undertakes

including media campaigns, public speaking, publishing research etc. The information for advocacy can be packaged in many ways including the following depending on the audience: Press Release, Fact Sheet, Power Point, Website/Internet, Television/Radio spots, Article in newspapers, magazines, Research Update, Policy Brief, White paper, Talking Points, research Summary, Publication in Journal etc. One opportunity often missed is short encounter with an important person such as a minister or a top bureaucrat. We can use these opportunities to convey a message effectively. This is often referred to as 'one minute' message. A one-minute message includes: The statement of the issue, Evidence to support the issue. An example of the problem, the desired policy action ideally, only one main point should be communicated or, if that is not possible, two or three points at the most.

Negotiation

Negotiation is a common everyday activity from birth till death. It is a process by which we attempt to influence others to help us achieve our needs, while at the same time taking others' needs into account. It is a fundamental skill, not only for successful management but also for successful living. This important skill is essential while negotiating to include health action in other sectors. [8]

The suggested steps for a successful negotiation:

1. Identify your own goals, priorities and bottom-line before you negotiate
2. Identify your strong points and weak points in negotiation
3. Find out and understand other person's or party's agenda and priorities. Try to accommodate these without compromising on yours.
4. Clear message of what you want and why? How it will best appeal to the person you are negotiating with.
5. Identify the possible outcomes and practices to deal with unfavorable outcome

Be prepared to deal with deadlock by revisiting your own priorities and other person's priorities and start with pointing out areas of agreement and move to negotiate areas of disagreement.

Networking

Networking is a force multiplier in your advocacy efforts to achieve your professional and personal goals. You can do much more through your effective, relevant contacts in your network if you cultivate and sustain it. Networking is the exchange of information or services among individuals, groups, or institutions; *specifically*: The cultivation of productive relationships for employment or business. [9] Ability to network is becoming more and more important. Maintaining good relations fosters trust and fidelity commitment. [10]

1. Virtual Networking: Internet has made networking very easy. Various professional and social networking sites such as Linkedin, Facebook, Researchgate, Blogs, Twitter and e mail need to be used effectively to reach out those in your and your contacts network easily and fast to communicate and mobilize like-minded persons and groups. These networks help in:
   a. Establishing new contacts [both individuals and groups].
   b. Keeping in touch with old contacts especially those in distant places in other cities and other parts of the world with whom you may not be able to maintain face-to face contact.
   c. Researching potential contacts who may add value.
2. Face to face Networking: Strong way of making new contacts and effect-tively maintaining old contacts.

Attributes that help in networking:

1. Listening skills focus on others, empathy and intimacy
2. Understanding body language: Ability to observe and interpret body language of others
3. Open attitude to new ideas which should also be reflected in body language during the interaction with others.
4. Creating a positive atmosphere: According to Market Watch, more than 85% of success comes from the ability to create good atmosphere and only 15% from professional competence.
5. Practice and deliver an effective message in short time say in one minute or a small talk to cash in the opportunity of casual short encounters with influential persons such as a politician or a bureaucrat.

Networking is an arrangement where several individuals or organizations share a common interest. The main activity is information sharing and facilitating. Well-functioning networks usually have an efficient "node" or secretariat. There are three forms of networking. The first helps manage current internal responsibilities, the second boosts personal development, and the third opens one's eyes to new directions and the stakeholders one would need to enlist [Figure 2]. [11]

Scope	Forms of network		
	Operational	Personal	Strategic
Purpose	Getting day-today work done	personal and professional development	Address future priorities and anticipate and prepare for change
Orientation	Mainly internal to the organization one works in	Both internal and external	Mainly external
Context	Prescribed by task at hand	Self-development	Strategic context and environment
Key attributes	building strong relationship	Contacts and referrals	Linkages within and outside the organization

Figure 2
Three forms of networking based on what you want to achieve

Netweaving

Networking has long been cited as an effective means of making new professional contacts and as a way to expand career horizons. Now there's a new twist to this long time career tool-Netweaving. Netweaving is a con-

cept focused on more effectively developing reciprocal business relationships that has far-reaching potential. In Netweaving, the focus is on "How can we help each other?" and the approach is more relaxed and reciprocal.(12)

Other Important Skills/ Concepts

Three pillars of leadership

It important for leaders in health care to continuously upgrade their skills in three domains which are:

1. Technical: The health sector is dynamic and it is important for a leader to keep updating his technical knowledge.
2. Cognitive: A leader is required to learn new skills to deal with technological advances and keep pace with emerging technology such as using social media to strengthen and retain his networks.
3. Emotional competencies: Emotional competencies contribute to improved professional performance and determine success in life. It also important for one to have a good family and social relationship.(13) Emotional competencies can be learned at any age in life. To be a successful leader one needs to regularly review one's emotional competencies and improve these by learning from interactions one could have done better.

Managing difficult colleagues

One always comes across people who are difficult to deal with. A leader has to get work done from all his team members, hence must deal with such people effectively. A difficult person is anyone who causes anyone else irritation, upset, stress or anxiety. There are three levels of difficult persons; First level-are difficult some of the times and it includes almost everybody; Second Level - when a person's behavior affects more than one person on a regular basis; Third level - includes persons who purposely hurt or harm others through their behavior. Such persons are rare but really test your skills when you come across them.(14) Difficult colleaguescan be dealt by sharpening the following skills:

1. Separate person from problem. Practice to keep your focus on the problem you are discussing and not on the person. If you keep your focus on the person, even non issues will become issues.
2. Agree on parameters with the person
3. Agree with the person what are the issues that need to be addressed and resolved. Focus your conversation on logic and issues.
4. Look for options that will be agreeable to both of you.

Managing 360 degrees

Successful leaders and managers manage in all three directions at the same time; downwards- their subordinates, upwards - their bosses, and horizontally - their peers. This is referred to as managing 360 degrees. The skills of managing team always receive attention in most training courses

on leadership. The skills of managing up and across are very often neglected. These skills are equally, if not more, important to succeed.(15) To reach leadership position and become an effective leader one must acquire skills to manage 360 degrees.

Walk the talk

A leader is always under watch by his team and peers. Every step you take, every word you speak, your body language and behavior are under continuous observation. As a leader one is asking his team to have some values and skills. He has to demonstrate these in his day-to-day work and behavior and only then others will take him seriously.

Conclusion

The three domain model, based on leadership theories, gives a good insight into areas requiring attention in learning leadership skills.(16) All three domains [Figure 3] need attention at every level of career. However, as one moves up in hierarchy, the priority shifts from managing self to devote more time to managing teams and when at the top managing with an eye on what is changing in health and other sectors. In the first domain address skills for managing self(12) and in the second domain the skills of building and leading teams,(17) managing bosses and peers.(14) The third domain includes change management skills(18) and this concluding article covers leveraging your contacts to achieve your goals and other skills such as managing difficult people, concept of 360 degree leadership and need for the leader to walk the talk.

Figure 3
Three domains leadership capacity development model

Recent understanding of health determinants outside of health sector contribute much more to health and there is a need for public health professionals to convince their peers, administrators and politicians within the health sector to influence other ministries and departments to address these determinants to achieve sustainable improvement and inequities in health. The inequities in health are due to underlying causes such as poverty, lack of water and sanitation, livelihood etc which are essentially in sectors outside health. The health professionals while continuing to advocate for more resources to improve health care need to get other ministries, sectors and departments at all levels to take actions for improving population health. To do this they must acquire skills to identify and use 'windows of opportunity', advocacy, networking and negotiation.

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C. Multi-Sectoral Action for Addressing Social Determinants of Noncommunicable Diseases and Mainstreaming Health Promotion in National Health Programmes in India

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Abstract

Major noncommunicable diseases (NCDs) share common behavioral risk factors and deep-rooted social determinants. India needs to address its growing NCD burden through health promoting partnerships, policies, and programs. High-level political commitment, inter-sectoral coordination, and community mobilization are important in developing a successful, national, multi-sectoral program for the prevention and control of NCDs. The World Health Organization's "Action Plan for a Global Strategy for Prevention and Control of NCDs" calls for a comprehensive plan involving a whole-of-Government approach. Inter-sectoral coordination will need to start at the planning stage and continue to the implementation, evaluation of interventions, and enactment of public policies. An efficient multi-sectoral mechanism is also crucial at the stage of monitoring, evaluating enforcement of policies, and analyzing impact of multi-sectoral initiatives on reducing NCD burden in the country. This paper presents a critical appraisal of social determinants influencing NCDs, in the Indian context, and how multi-sectoral action can effectively address such challenges through mainstreaming health promotion into national health and development programs. India, with its wide socio-cultural, economic, and geographical diversities, poses several unique challenges in addressing NCDs. On the other hand, the jurisdiction States have over health, presents multiple opportunities to address health from the local perspective, while working on the national framework around multi-

sectoral aspects of NCDs.

Keywords: Health promotion, mainstreaming, multi-sectoral partnerships, noncommunicable diseases, social determinants of NCDs

NCD Burden in India

In the past few decades, India has undergone rapid epidemiologic, demographic, nutritional and economic transitions, which have brought about the "dual burden" of diseases. While India is witnessing declining trends in morbidity and mortality from communicable diseases, there has been a gradual increase in the prevalence of chronic noncommunicable diseases (NCDs), such as cardiovascular diseases (CVDs), diabetes, chronic obstructive pulmonary disease (COPD), cancers, injuries, and mental health disorders. India currently accounts for about 17% of the world population(1) and contributes to about fifth of the world's share of diseases and an equal proportion of nutritional deficiencies, diabetes, and CVDs among all NCDs.(2) Projections suggest that NCDs in India would rise from 3.78 million in 1990s to 7.63 million in 2020.(3) In 2005, NCDs accounted for 53% of the total deaths (10.3 million) and 44% (291 million) of the disability adjusted life years (DALYs) lost in India.(4) It is expected that CVD-attributable deaths will reach 4 million by 2030.(5,6) Evidence suggests that NCDs disproportionately impact people at younger ages(7,8) and are increasingly afflicting the poorer segments of the Indian population.(9,10) It imposes huge social and economic costs, impeding not only health improvements but also economic progress and social development of the country.(11)

Risk Factors Associated with NCDs

Compared to infectious diseases, the causes of NCDs are complex in nature as these diseases have multi-factorial causation. Several risk factors are associated with the incidence of NCDs including physical environment, biological, behavioral and socio-economic (local, national, global) factors. Individual risk factors (non-modifiable) including age, sex and genetics and behavioral risk factors (modifiable) such as alcohol consumption, tobacco use, lack of physical activity and unhealthy foods contribute to the development of NCDs.(12) The major NCDs are preventable as they are primarily caused by modifiable behavioral risk factors. Other risk factors associated with NCDs are referred to as "social determinants" pertaining to economic and social causes.

Social Determinants Associated with NCDs

Rising population and socio-economic transition in the country have led to rapid urbanization and unplanned expansion of cities, as more and more people are migrating from rural areas to urban centers in search of better livelihood opportunities. "This has placed increased demand on urban infrastructure, services and public places, leading to upsurge in disease burden through increased susceptibility to risks for NCDs".(13) Following

these changes in the socio-economic environment of individuals, risk factors for NCDs have become widespread.(14) Market liberalization and agricultural subsidies have made unhealthy products easily available at reduced prices, which are causing negative health outcomes.(15)

Some of the behavioral risk factors of NCDs are closely interlinked to poverty, low education, poor diet, inequitable access to health services, and gender disparity. Diabetes (particularly type 2) was previously seen as a disease of affluence, which now seem misleading, as approximately 70% of the world's diabetic people live in low and middle income countries, with high prevalence in world's poorest cities, where access to health care and social support is either not available, or is very limited.(16) Low intake of fruits and vegetables and lower levels of physical activity coupled with unhealthy food consumption is now being witnessed among the urban poor in India.(17) Tobacco, seen as the single largest preventable risk factor,(18,19) disproportionately affects the poor and the less educated.(20) The inequities in vulnerability and exposure to tobacco use (social, psychological, health status, exposure to tobacco through advertising, lack of cessation services) is clearly evident, and often leads to prolongation of tobacco use among the adolescents and adults from poor socio-economic backgrounds.(21) In the case of mental disorders, the risk is determined by an interface of genetic, biological, social, psychological factors. Increased rates of depression are associated with NCDs, and socio-economically disadvantaged groups bear uneven burden of negative health outcomes, with poor access to mental health services.(22) Evidence gathered so far indicates higher burden of alcohol-attributable disease among people of lower socio-economic sections, despite lesser overall consumptions levels, as health outcomes depend not only on the amount but also on the type and quality of alcohol consumed.(23)

High NCD mortality in India, which is attributed among other reasons to a weak health system, leads to high and many a times catastrophic out-of-pocket expenditure on health.(18) For a country like India, which is facing scarce resources, prevention of diseases, particularly NCDs that are expensive to treat, is the most cost-effective strategy.(2) India spent nearly INR 846 billion out of pocket on health care expenses in the year 2004, amounting to 3.3% of India's Gross domestic product (GDP) for that year. This marked a substantial increase from INR 315 billion spent out of pocket on health care in the year 1995-96 (about 2.9% of India's GDP in the year 1995-96).(11) Out of this, a total out of pocket health expenditure on NCDs including heart diseases, hypertension, respiratory diseases, orthopedic problems, kidney diseases, neurological disorders, cancer, accidents, and injuries was INR 99.61 billion in 1995-1996, which has increased to INR 400.31 billion in 2004. Access to basic health care in itself is a challenge in India and contributes to health inequalities as this is mainly influenced by wider social determinants of health and infra-structural support.(24) Thus, combating NCDs requires effectively addressing these social determinants of health, through comprehensive action focusing on prevention and control of NCDs.

Multi-sectoral Action for NCD Prevention and Control

Given that inequities in NCDs manifest themselves in the form of differential health consequences, due to varied exposure, social stratification, and differential vulnerability, action is needed from health as well as allied sectors.(25) This may require structural and policy level interventions, which address issues that lie outside the health domain, but have a strong bearing on achieving positive health outcomes for the communities. Thus, aligning the NCD effort with the health and development agenda at all levels will help address these challenges. Addressing challenges through creation and utilization of opportunities for collaboration in health and exploring innovative ways of working together to achieve accelerated response to NCDs by achievement of health and development goals form the basis of multi-sectoral partnerships.

For instance, the mid-day meal scheme of the Ministry of Human Resource Development (Education) can be effectively utilized to provide healthy food to 120 million children in underprivileged sections of the society.(26) This will not only ensure nutrition for healthy growth (physical and cognitive), but will also help in forming healthy food habits. National Schemes like the 'Mahatma Gandhi National Rural Employment Guarantee Act' under the Ministry of Rural Development aims to enhance the livelihood security of people in rural areas, can be strengthened to address the social determinants of rural health.(27)

Thus, innovative partnerships whereby every sector of relevance reviews and reforms with a goal to reduce the risk factors that predisposes the public to the NCDs and their socio-economic after effects, through a spectrum of interventions ranging from health promotion, to providing affordable medication, access to quality health care to rehabilitation of the survivors is critical.

Whole-of-Government approach to the development of a "National Multi-sectoral Framework for the Prevention and Control of NCDs" is recommended under the WHO 2008-2013 Action Plan for the Global Strategy for prevention and control of NCDs.(28) Inter-sectoral coordination will need to start at the planning stage and continue to the implementation, evaluation of interventions and enactment of public policies. An efficient multi-sectoral mechanism is also crucial at the stage of monitoring, evaluating enforcement of policies, and analyzing impact of multi-sectoral initiatives on reducing NCD burden in the country.

More recently, the "Delhi Call for Action on Partnerships for Health" adopted at the "Partners for Health in South-East Asia Conference," in March 2011 in New Delhi calls for a commitment to create, revitalize and sustain partnerships through aligned and integrated action in consonance with national development priorities.(18) Multi-sectoral action requires partnerships within Government and with non-Government stakeholders. Multi-sectoral policies can be addressed through partnerships within health sector and with other departments within Government and Inter-

Governmental organizations.(29) Community is core to any health intervention, and is an important partner in delivering interventions, such as spreading health messages, advocacy for better access to information and services and ground level monitoring of the efforts.(18) Other stakeholders include the private sector and foundations, NGOs and civil society, UN organizations, and the media. Mainstreaming requires NCDs to be included in the agendas of Heads of States and Governments, so that health is viewed as a worthwhile investment and not merely as expenditure. In the present context, adopting an integrated approach to prevention and control of NCDs will require piggybacking on existing systems instead of creating parallel systems. This will ensure resource sharing for priority interventions, and will avoid burdening the health systems any further.

International Experiences in Multi-sectoral Partnerships to Combat NCDs

Finland's community-based CVD prevention project (North Karelia Project) (30)

It is a well-published model that successfully lowered risk factors associated with CVD at the population level, utilizing a multi-sectoral approach. This comprehensive intervention involved community health education and empowerment, improved health services delivery, prevention efforts in multiple settings (schools, workplaces), media partnership, with greater involvement of civil society and the private sector. Health promoting public health policies too had a critical role in this success through regulating food labeling, tobacco regulations, and shifting agricultural subsidies to encourage low-fat alternatives.

Singapore's health promotion board

Established in 2001, coordinates national health promotion efforts and disease management programs to reduce NCDs, by engaging multiple sectors.(31) It adopts a settings based approach for health promotion activeties to prevent NCDs, complemented by screening and treatment of those with clinical diseases. Public education through media, food labeling, and tobacco control policies has facilitated adoption and practice of healthy choices by communities.(32) The National Health Commission (NHC) in Thailand is a cross-sectoral mechanism that is chaired by the Prime Minister and comprises of three broad sectors-government, academia and civil society-to emphasize health promotion and support development of Healthy Public Policies (HPP).(18)

National Experiences of Multi-sectoral Partnerships

Multi-sectoral mechanisms for the implementation of tobacco control laws

Tobacco control provides a good example for the need and the potential impact of multi-sectoral action in NCD prevention and control. Effective tobacco control involves not only addressing it at the individual level

(preventing use by individuals, helping users to quit) but also leveraging multi-sectoral approaches to address production, trade, taxation, and implementation of tobacco control laws. The implementation of the international tobacco control treaty, Framework Convention on Tobacco Control (FCTC), requires and obligates the participation of sectors beyond health in achieving its goals. In India, an "Inter-ministerial Task Force for Tobacco Control" exists, under the aegis of the Ministry of Health and Family Welfare (MoHFW) that has participants from ministries including: Labour, Commerce, Information and Broadcasting, Agriculture, Ministry of Rural Development, Department of Revenue, Department of Industrial Policy and Promotion, Food Standards and Safety Authority of India; Drug Controller General of India and civil society members among others. A Steering Committee that facilitates the enforcement of tobacco advertising ban exists at National, State, and District levels. This Committee at the center includes members representing Ministry of Information and Broadcasting, Ministry of Law and Justice and NGO members from multi-disciplinary backgrounds.

Multi-sectoral project for HIV/AIDS prevention

The Red Ribbon Express project of National AIDS Control Organization presents one successful model of partnership comprising of Government (Ministries of Railways, Social Welfare, AIDS Control Organization) and Non-Governmental stakeholders (Rajiv Gandhi Foundation), intergovernmental bodies (UNAIDS and UNICEF), engaging national programs such as National Rural Health Mission and local governments (Panchayati Raj) to address a communicable disease.(33) The project drew on the strengths of its partners such as the Railways for mobility, Information and Broadcasting for publicity and UNICEF for communication strategy, thus proving cost-effective and resourceful.

Multi-sectoral Coordination Mechanism

A comprehensive multi-sectoral action on NCDs in India requires a partnership approach that combines action of all relevant stakeholders. Thus a "Whole of Government" or "Health in all Government policies" approach to influence public health policy is required, by engaging multiple government ministries such as Health, Finance (Excise and Taxes), Home, Education, Agriculture, Civil Supplies, Food Processing, Urban and Rural Development, Transport, Women and Child Development, Commerce, Environment, Local self-government and Panchayati Raj,Information and Broadcasting. In addition, participation of civil society organizations, private healthcare sector, media, and donor organizations, is equally important to devise policies and programs which will find wide acceptability, an essential criterion for successful implementation. This proposed mechanism is presented in Figure 1, with clear intersections to work on NCD control and Prime Minister at the core of this mechanism to ensure smooth coordination. NGOs provide the connectivity between Government programs and the community and have

a strong role to contribute in this multi-sectoral mechanism.

Figure 1 Model for a multi-sectoral partnership with political commitment

Managing difficult colleagues

A key factor in deciding the partners for a multi-sectoral initiative is the agreement on its goals and excluding those with conflicting interests. For instance, certain players in the private sector with no conflicting interest can be engaged in promoting healthy diet and physical activity, limiting levels of saturated fats, trans-fatty acids, high sugars and salt, increasing availability of healthy and nutritious food choices, and reviewing current market practices. Example for a clear case for explicit exclusion from such partnership would be the alcohol and the tobacco industries. India being a ratifying party to the FCTC, is bound by Article 5.3 of the treaty and is required to protect its public health policies pertaining to tobacco control from tobacco industry interests.(34)

Role of Health Promotion in Tackling NCDs

Health promotion is an effective process in tackling the underlying determinants of NCDs by enabling people and communities to increase control over the determinants of health and thereby improve their health.(35) It is an inclusive process, of social and political mobilization, to facilitate action at various levels for achieving improved health outcomes. Intervention activities can focus on risk reduction through life skills education, facilitating adoption of healthy life styles (creation of enabling and supportive environment to practice healthy behaviors through pro-

gressive policies, legislations, regulations), and availability of preventive health information and services.(36).

Health Promotion Interventions in India

Worksite wellness interventions in lowering risk of CVD in India

Sentinel surveillance system for CVD risk factors in the Indian Industrial Population was developed by Initiative for Cardiovascular Health Research in Developing Countries. This effort's key feature was a population-based approach of behavior change, implemented through a multicomponent, multilevel, and multi-method intervention, involving trained local health-care personnel in the participating industries. This worksite-based health promotion initiative adopted a multi-sectoral approach by building partnerships between employees, healthcare personnel, and research institute providing health promotion intervention.

School health program

School-based educative programs can significantly influence children's behavior for inculcating healthy lifestyle practices. The school-based intervention, MARG (Medical education for children/Adolescents for Realistic prevention of obesity and diabetes and for healthy ageing) revealed a significant increase in the intake of healthy foods, reduced intake of fried and fatty energy dense foods, increased physical activity and time spent on outdoor games along with improvements in glycemic parameters and lipid profiles.(37)

HRIDAY-CATCH (Child and Adolescent Trial for Cardiovascular Health), 1996-1998, and MYTRI (Mobilizing Youth for Tobacco Related Initiatives in India), 2002–2007, were randomized controlled intervention trials that established the effectiveness of school health interventions in reducing tobacco use among Indian adolescents by reducing current tobacco use, reducing their future intentions to use tobacco, and by enhancing their health advocacy skills.(38,39) Such initiatives require partnerships between public health professionals, NGOs, students, parents, teachers, schools, department of education, and community.

Mainstreaming health promotion in national health and development agendas

Indian government has launched several initiatives for prevention and control of NCDs. This includes the National Cancer Control Programme (NCCP), the National Trauma Control program, the National Program for Control of Blindness, the National Mental Health Programme, the National Tobacco Control Program, and the National Program for Control of Diabetes, Stroke and Cardiovascular Diseases. Health Promotion is a common component in all these vertical programs. At sub-national levels, health being a state subject, states such as Tamil Nadu and Kerala have piloted efforts around NCD prevention and control, through various health

promotion activities. However, to have a population level impact, and to reach communities in the periphery, NCD program efforts along with other health and development programs will have to mainstream health promotion as a core component.

While there is no universally accepted definition of mainstreaming, it is usually understood as a process whereby a sector analyses how diseases can impact it now and in the future, and subsequently considers how policies, decisions, and actions might influence the longer-term development of the diseases and the sector. Thus, the sector recognizes the relevance of disease conditions and takes action to address it internally and externally. Mainstreaming health promotion for NCDs is about modification of process from a vertical to a horizontal plane, from a lack of action toward a push, demand, and request for support and coordinated action and increased ownership. It is about a growing consciousness and culture toward integrating health promotion messages and interventions for NCDs.

Mainstreaming in the context of NCDs need to follow a dual approach for optimal outcomes. The first approach requires sectors that currently contribute to the NCD epidemic to review and revise their programs and practices with a view to mitigate the challenge. For instance, the processed food industry needs to reduce salt content in their products to reduce the risks for cardio-vascular diseases. Similarly, the Urban Planning Departments and Department of Transport would need to jointly replace existing infrastructure plans that promote the use of private transport with those that facilitate transportation of more people through faster, comfortable, and well-connected public transport network.

Secondly, sectors that bear the brunt of these diseases develop policies and practices that address the risk factors in order to contain its after effects. This could, for example, involve the Ministry of Information and Broadcasting legislating to regulate the promotion of unhealthy food or city corporations improving public transport system and thereafter increasing parking charges on car owners with a view to discourage the use of private transport.

Mainstreaming could help address NCDs from diverse directions, reduce the human and economic cost incurred to roll out programs that could provide universal access to health promotion, and care by leveraging the reach and strengths of diverse stakeholders and avoiding duplication.

Challenges and Opportunities for Mainstreaming NCDs

Challenges

Most non-health departments within the Government lack understanding of their role in NCD prevention and perceive this as strictly a health sector's domain, which shows lack of ownership for the issue and functioning in silos.

Lack of institutional arrangement and resources (financial, physical and technical) to work under a multi-sectoral arrangement. Prioritizing one's own sector's program and activities due to existing work load. Weak and fragmented health system does not reach the disadvantaged and marginalized populations.

A critical shortage of the public health workforce in India.

Knowledge gap and translation inhibits evidence-based decision making due to inadequate and underutilized health information systems. Death and disease registries are not robust or available to inform policies and programs.

Opportunities

Innovative partnerships like the Wellcome Trust, the Roll Back Malaria Partnership, the Global Alliance for Vaccines and Immunization (GAVI), and the World Bank can be developed for NCD prevention and control. Community's involvement for demanding better services, implementation of public health laws, and improving health outcomes has been effective. Precedence exists for inter-ministerial task force on tobacco control. Broadening the functions of this task force to include health promotion for NCD prevention and control. Government is committed to increase funding for NCD prevention programs. Many state Governments are increasing taxes on tobacco products. Such approach can be used for increasing taxation on harmful products like alcohol and energy dense foods in partnership with Ministry of Finance, to subsidize healthy food options. Indian pharmaceutical industry is strong and people are able to access NCD management drugs at affordable prices. Health care costs must be contained and catastrophic expenditure avoided through early screening and management, in partnership with existing strong private sector. India has successful well-evaluated health promotion examples in various settings that can be up-scaled. The mid-day meal program can be scaled up and improved to ensure healthy and nutritious food to children in underserved areas.

Conclusions

High political commitment

None of these would happen without political will and commitment at the highest level. Modeled along the lines of the UN Special Summit on HIV/AIDS of 2001 that led to the creation of UNAIDS agency and the Global Fund to fight AIDS, Tuberculosis and Malaria and National AIDS Programs in several countries, a UN Summit on NCDs held in the month of September 2011, witnessed the Heads of States adopting a Political Declaration to address the emerging epidemic. Time has come particularly for countries like India that has at stake its economic growth and productive workforce on account of escalating NCDs, to translate the global commitments to action at the national level.

Unlike the communicable diseases that are caused by pathogens, the risk factors for four of the major NCDs (tobacco and alcohol use, unhealthy diet, and lack of physical activity) are of human origin, propelled by corporate interests and spread through aggressive marketing. Therefore, risk-reduction policies are often resisted by businesses that contribute to the NCD burden. Firm political will and stern action is therefore required to prioritize public health and development ahead of trade interests.

Revitalizing primary health care will require decentralization, which can address health inequities and will depend upon achieving good governance, forming productive partnerships at all levels in the community, implementing a comprehensive approach to pro-poor growth, improving public services, coordination among stakeholders, and addressing the social determinants of health. Translating policy to action can be achieved only if there is a sense of ownership among all stakeholders involved in the development and implementation of healthy public policies.

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D. Subconscious Communication as An Approach Strategy to Health Promotion

Hanung Prasetya*)

The year 2015 has passed and it was the end of one of the world's development programs known as the Millennium Depelopment Goals (MDGs). Instead, a new development system called Sustainable Depelopment Goals (SDGs) was launched. SDGs has 17 Goals and 169 Targets, one of the efforts to achieve these goals is by strengthening the ability of health workers to promote health. Promotion of health is a unity of activities of the endeavor of health efforts including promotive, preventive, curative and rehabilitative. By definition the term of health promotion in public health sciences (health promotion) has two understandings. The first meaning of health promotion is as part of the prevention rate of disease. Level and Clark, who say there are four levels of disease prevention in a public health perspective, namely:

1. Health Promotion
2. Specific Protection (special protection through immunization).
3. Early Diagnosis and Prompt Treatment (early diagnosis and immediate treatment).
4. Disability Limitation (limiting or reducing the occurrence of disability).
5. Rehabilitation (recovery).

Therefore, health promotion in this context is referred to the way of promoting health. While the second sense; Health Promotion means marketing, disseminating, introducing or "selling" health. In other words, health promotion is "marketing" or "selling" or "introducing" health messages or health "efforts," so that people "receive", or "buy" (in the sense of receiving health behavior) or "recognize" the health messages, which eventually people want to behave healthy.
Based on the understanding of health promotion then the health promotion profession as a health promoter must have the ability to communicate well to deliver health messages.

In order to communicate effectively, the communicator must be able to approach as quickly as possible, namely by using the strategy of the subconscious approach. The ability of applying approach through unconscious communication is a competency that I think is a must to have. Because when the client or a friend talk has established trust with health promoter then the communication becomes fluent and when the communication smoothly then the messages submitted health promoter will be

more easily accepted. In the 1970s Richard Bandler and Jhon Grinder have introduced what is now called Neuro-Linguistic Programming. Coolingwood (2005) defines NLP as "NLP studies the way people take information from the world, how they describe it to themselves with their senses, filter it with their beliefs and value and act on the result", but others call it science Modeling. One part of the NLP technique is to approach your friends as fast and as well as possible so that ideas or goals to be delivered can be easily accepted without being criticized.

How is the use of subconscious approach so that communication is more fun? The simple answer is a health promoter should be able to build rapport.
According Dilts, rapports are described as the willingness of the parties concerned to influence each other subconsciously.
The point of subconsciously means that it is not through conscious filtering or evaluation of the mind. A good rapport building strategy is; 1) Build commonality, 2) Best intentions, 3) Become a preferred person, and 4) Make Benefit

Rapport building is a process of equating perception, creating comfort and building familiarity with friends.
Some techniques that can be used include:
1. Equalize body language
2. Equating speech styles
3. Equalize the rhythm of breathing
4. Equate hobbies, beliefs and values
5. Equalize the communication path V-A-K

In addition to the macthing and mirroring mentioned above, Lowndes (1996) simply recommend techniques that are still effective today. The techniques are:
1. Smile, a smile is one way of communicating most effectively to melt the atmosphere, especially when the first time you meet someone. In order to be genuine smile, Lowndes posed a technique with a delayed smile.
2. Open posture, when standing in front of a friend, try to open body position. Open body position will convey a message that you like and open yourself with friends.
3. Forward Leaning, while talking and listening to your friends then lean your body slightly forward. Subconsciously you have conveyed the message that you are interested and interested in what the conversation is talking about.
4. Touch, giving the right touch in place can make the atmosphere more familiar and closer relationship with friends.
5. Eye contact, maintaining eye contact with friends during conversations can give you the message that you are interested, seriously pay attention and listen to what is being discussed.
6. Nod, nodding your head during the conversation gives a nonverbal message that you are seriously listening, understanding and agreeing with your friends.

7. Enthusiasm, an enthusiastic attitude when communicating can give the impression that you are a friendly, warm and friendly person.
8. Reach, please note that everyone has a different personal or territory territory depending on the character, culture and closeness of your relationship with friends.

All of the above strategies of course if applied wisely will be able to be a subconscious message that you are a warm, friendly, kind and want to help for the health and goodness of friends. The material is practiced in more detail during the workshop.

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Oral and Poster Presentation

TOPIC I: EPIDEMIOLOGY AND PUBLIC HEALTH

CASE STUDY ON MULTI-DRUG RESISTANCE TUBERCULOSIS IN GROBOGAN, CENTRAL JAVA

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ABSTRACT

Background: Tuberculosis is a communicable disease that remains a major public health issue worldwide. Tuberculosis epidemics have become a primary public health concern for the last few decades. The problem becomes aggrevated due to the emergence of Multiple Drugs Resistant Tuberculosis (MDR-TB). It is estimated there are 6,100 MDR-TB cases annually in Indonesia. Grobogan is one of the 6 districts in ex-residential Pati in Central Java with the second highest MDR-TB cases after Kudus. Between 2011 and 2016 the annual incidence was 23 cases with case fatality rate of 52.17%. This study aimed to investigate the different roles of MDR-TB patients, families, TB progammers, and health providers, in the incidence of MDR-TB in Grobogan, Central Java
Subjects and Method: This was an analytic qualitative study with case study approach. The study was conducted in Grobogan, Central Java, from May to June 2017. A total of 26 informants were selected purposively for this study, consisting of 7 MDR-TB patients, 7 family members who served as drug-taking supervisor, 7 TB programmers at Community Health Centers, 1 TB programmer at District Hospital, 3 Community Health Center doctors, and 1 District Hospital doctor. The data were collected by in-depth interview, direct observation, and document review. Interactive analysis was used to analyze data, including data collection, reduction, presentation, and verification.
Results: All MDR-TB patients had favorable perceived susceptibility, perceived severity, and self-efficacy, that drove them to adhere to TB treatment. Most patients reported that the treatment was beneficial. The existing barrier was not of serious concern that made them to stop treatment.
Families of the patients had positive attitude towards TB treatment so they provided the necessary support in acessing treatment and adherence to treatment. However, TB program management at District Hospital, was sub-optimal as it did not administer appropriately the standard DOTS-TB treatment guideline, despite the existence of TB standard operating procedure. Likewise, TB treatment management by hospital doctors and private practice doctors was inadequate, due to the lack of DOTS-TB training. The lack of adherence in implementing the standard DOTS-TB treatment guideline was the dominant causal factor for the incidence of MDR-TB in Grobogan district, Central Java.
Conclusion: Adequate DOTS-TB treatment management and quality health services at both primary and secondary level facilities are needed in the efforts to prevent MDR TB. It is suggested that the government through the District Health Office hold DOTS-TB promotion program and invest in developing skilled DOTS-TB providers.

Keywords: multidrug resistance, tuberculosis, TB management program, adherence

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THE EFFECT OF DIETARY INTAKE AND SOCIAL ECONOMIC FACTORS ON THE RISK OF STUNTING IN PRIMARY SCHOOL CHILDREN IN SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Globally it was estimated approximately 156 millions (23%) children are stunted. The prevalence of stunting in children is 29% in Indonesia, which is the highest rate in South East-Asian countries. Stunting may cause delayed mental development and low intellectual capacity. This study aimed to investigate the effect of dietary intake and social economic factors on the risk of stunting in primary school children in Surakarta, Central Java.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was conducted in Surakarta, Central Java, from February to March 2017. A sample of 145 primary school children was selected for this study by multi-stage random sampling. The independent variables were energy intake, protein intake, maternal education, maternal employment status, and family income. The dependent variable was stunting. The data were collected by a set of questionnaire and antropometry. The data were analyzed by path analysis.
Results: Stunting was affected by energy intake (b= 0.02; SE<0.01; p<0.001), protein intake (b= 0.02; SE= 0.01; p<0.001), maternal education (b= 0.23; SE= 0.18; p= 0.187), family income (b= 0.01; SE= 0.01; p= 0.051). Energy intake was affected by maternal education (b=9.56; SE=32.55; p=0.770), and family income (b=1.81; SE=0.91; p=0.005). Protein intake was affected by maternal education (b=1.75; SE=2.67; p=0.051), maternal employment status (b=-2.30; SE=2.36; p=0.330), and family income (b=0.12; SE=0.08; p=0.110).
Conclusion: Stunting was affected by energy intake, protein intake, maternal education, family income. Energy intake was affected by maternal education and family income. Protein intake was affected by maternal education, maternal employment status, and family income.

Keywords: primary shool children, dietary intake, stunting

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EFFECT OF AGE AND SOCIO ECONOMIC STATUS ON THE QUALITY OF LIFE OF PATIENTS WITH CERVICAL CANCER UNDERTAKING CHEMOTHERAPY AT DR. MOEWARDI HOSPITAL SURAKARTA

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ABSTRACT

Background: Cervical cancer is a type of cancer affecting women with high incidence and mortality in the world. Patient with cervical cancer have to undertake prolonged sequential treatment and therefore may experience physical, physicological and social changes, which may affect their quality of life. This study aimed to examine effect of age and socio economic status on the quality of life of patients with cervical cancer undertaking chemotherapy at Dr. Moewardi hospital Surakarta.
Subjects and Method: This was an analytic observational study with cross-sectional design. This study was conducted at Dr. Moewardi Hospital, Surakarta, from February to March 2017. A sample of 100 patients was selected by fixed disease sampling. The dependent variable was quality of life. The independent variables were age, education and family income. The data were collected by questionnaire and medical record, and then were analyzed by linear regression model.
Results: Education ≥ Senior High School (b= 10.25; 95% CI=5.24 to 15.26; p<0.001) and family income ≥ Minimum Regional Wage (b= 0.47; 95% CI=0.12 to 0.83; p=0.009) increased quality of life in patients with cervical cancer. Age ≥ 45 years (b=-0.53; 95% CI=-0.84 to -0.21; p=0.001) decreased quality of life in patients with cervical cancer.
Conclusion: The quality of life of patient with cervical cancer is determine by age, education, and family income.

Keywords: age, social economic status, quality of life, cervical cancer, chemotherapy

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EFFECT OF LOCUS OF CONTROL, SELF-EFFICACY, AND PERSONALITY TYPE ON THE QUALITY OF LIFE AMONG CAREGIVERS OF SCHIZOPHRENIA PATIENT IN GODEAN SUB-DISTRICT, YOGYAKARTA

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ABSTRACT

Background: Caregivers of schizophrenia patients have an important role in fulfiling the need of patients. This task implicates on care burden and physological problems on the caregivers. The quality of life of the caregivers may have important impact on the caring process. This study aimed to examine effect of locus of control, self-efficacy and personality type on the quality of life among caregivers of schizophrenia patient.
Subjects and Method: This study was analytic observational with cross-sectional design. It was carried out at Godean Sub-District, Yogyakarta, from March to April 2017. A sample of 102 caregivers of schizophrenia patient were selected for this study by fixed diseases sampling. The dependent variable wa quality of life. The independent variables were age, gender, personality type, locus of control, self-efficacy, family concern, family income. The data was collected by questionnaire, and analyzed by path analysis.
Results: Higher quality of life of caregivers was affected by self-efficacy (b= 0.46; SE=0.15; p<0.001), extrovert personality (b=0.21; SE=0.10; p=0.01), and higher family income (b=0.18; SE=0.05; p=0.02). Self-efficacy was affected by better family concern (b=0.22, SE=0.16; p=0.02) and extrovert personality (b=0.33; SE=0.06; p<0.001).
Conclusion: Higher quality of life of caregivers was directly affected by self-efficacy, extrovert personality, and higher family income. Higher quality of life of caregivers was indirectly affected by better family concern and extrovert personality.

Keywords: quality of life, locus of control, self-efficacy, schizophrenia, caregiver

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EFFECT OF BIOPSYCHOSOCIAL FACTORS AND ENVIRONMENTAL SANITATION ON NUTRITIONAL STATUS OF CHILDREN UNDER FIVE YEARS OLD IN NGANJUK DISTRICT

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ABSTRACT

Background: One of the important public health issues in Indonesia is nutritional status, particularly in children under five years old. Lack of maternal awareness of dietary intake for their children may affect growth and development. This study aimed to investigate the effect of biopsychosocial factors and environmental sanitation on nutritional status of childrens in Nganjuk District.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was conducted at Loceret Community Health Center, Nganjuk District, East Java, from March to Aprl 2017. A sample 136 children under five years old were selected for this study by fixed exposure sampling. The variable dependent was nutrition status measured in weight for age. The independent variables were dietary intake, history of infection disease, maternal stress, maternal education, family income, and environmental sanitation. The data were collected by anthropometry, medical record, and questionnaire. The data were analyzed by path analysis.
Results: Weight for age of children under five was affected by dietary intake (b= 0.23; SE<0.001; p= 0.003), maternal education (b= 0.72; S.E= 0.28; p= 0.012), and history of infectious disease (b= 0.80; SE= 0.29; p= 0.007). History of infectious disease was affected by environmental sanitation (b= 0.31; SE<0.001; p<0.001), and family income (b= 0.25; SE= 0.05; p<0.001). Dietary intake was affected by family income (b= 0.58; SE= 0.21; p= 0.007), history of infectious disease (b= 12.31; SE= 3.20; p<0.001), and maternal education (b=7.39; SE=3.09; p=0.017). Maternal stress was affected by family income (b=-0.16; SE= 0.06; p= 0.008).
Conclusion: Weight for age of children under five was directly affected by dietary intake, maternal education, and history of infectious disease. Weight for age of children under five was indirectly affected by environmental sanitation, family income, history of infectious disease, and maternal education.

Keywords: biopsychosocial, path analysis, environmental sanitation, nutrition status

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EFFECT OF SOCIO-DEMOGRAPHIC FACTORS ON THE CONSISTENCY OF CONDOM USE AMONG FEMALE SEX WORKERS IN TULUNGAGUNG DISTRICT, EAST JAVA

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ABSTRACT

Background: Sexually Transmitted Infection (STI) is common among female sex workers (FSW). STI can be cured by correct diagnosis and prompt treatment. Correct treatment depends on the specific causal infection agent, as well as host and environmental factors. This study aimed to examine the effect of socio-demographic factors on the consistency of condom use among female sex workers in Tulungagung district, East Java.
Subjects and Method: This was an analytic and observational study using cohort design. It was conducted at Ngujang and Gunung Bolo prostitution areas, Tulungagung, East Java, from November to December 2017. A total sample of 90 female sex workers was selected for this study. The dependent variable was consistency of condom use. The independent variables were age, marital status, education, urban-rural residence, exposure to information from health personnel. The data were collected by a set of questionnaire and diary. The data were analyzed by chi square and logistic regression model.
Results: Bivariate analysis with chi square test showed that female sex workers working at Ngujang prostitution area (OR= 11.7; 95% CI=11.7 to 95.9; p<0.001), widow (OR= 1.28; 95% CI= 1.12 to 1.45; p=0.012), education level lower than senior high school (OR= 1.30; 95% CI= 1.13 to 1.49; p= 0.005), were more likely to use condom consistently than those working at Gunung Bolo, married/ single, education level senior high school or higher, respectively. Female sex workers aged ≥35 years old (OR= 0.77; 95% CI= 0.68 to 0.89; p= 0.006), rural origin (OR=-0.65; 95% CI= 0.2 to 2.12; p= 0.474), receiving health information from health personnel (OR= 0.79; 95% CI= 0.70 to 0.90; p= 0.017), were less likely to use condom consistently than aged <35 years old, urban origin, not receiving information from health personnel.
Conclusion: Female sex workers working at Ngujang prostitution area, widow, education level less than high school, were more likely to use condom consistently than at Gunung Bolo, married/ single, education level senior high school/higher, respectively.

Keywords: sexually transmitted infection, consistent use of condom, socio-demographic factors

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FACTORS AFFECTING THE SUCCESS OF MULTI DRUG RESISTANCE (MDR-TB) TUBERCULOSIS TREATMENT IN RESIDENTIAL SURAKARTA

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ABSTRACT

Background: Tuberculosis (TB) is a global public health concern. The new challenge in TB control is the development of TB multi drug resistance (MDR-TB). Indonesia ranks 8th highest in the incidence of MDR-TB with 8,900 MDR-TB cases in 2004. A case was defined as MDR-TB if the Mycobacterium tuberculosis was resistant to rifampicin dan isoniazid. This study aimed to determine the factors affecting the success of multi drug resistance (MDR-TB) tuberculosis treatment.
Subjects and Method: This was an analytic observational study using case control design. The study was conducted at Dr. Moewardi Hospital, Surakarta, Central Java, Indonesia, in October 2014. The case population were MDR-TB patients visiting Dr. Moewardi Hospital for TB treatment from 2011 to October 2014. A sample of 84 TB cases consisting of 26 patients who dropped out, defaulted, or died, and 58 patients who successfully completed TB treatment, were selected for this study. The independent variables were sex, age, marital status, nutrional status, education, employment status, drug side effect, family support, and distance to health facility. The dependent variable was success of treatment. The data were collected by direct interview, questionnaire, and medical record. Logistic regression was employed for data analysis.
Results: Age (OR= 0.93; 95% CI= 0.88 to 0.97; p= 0.004) and drug side effect (OR= 6.84; 95% CI= 2.50 to 18.74; p<0.001) affected the success of TB treatment and statistically significant. Sex (OR= 0.66; 95% CI= 0.17 to 2.58; p= 0.556), education (OR= 0.90; 95% CI= 0.52 to 1.58; p= 0.724), employment status (OR= 0.87; 95% CI= 0.59 to 1.28; p= 0.485) affected the success of TB treatment but statistically not significant.
Conclusion: Success of TB treatment is affected by age and drug side effect.

Keywords: success of treatment, tuberculosis, multi drug resistance

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THE INFLUENCE OF FAMILY SUPPORT, SOCIAL CAPITAL, SELF EFFICACY, EDUCATION, EMPLOYMENT, INCOME, AND RESIDENTIAL STATUS ON THE QUALITY OF LIFE AMONG THE ELDERLY IN SALATIGA, CENTRAL JAVA

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ABSTRACT

Background: Lengthening life expectancy of population worldwide has led to rapid growth of the elderly population. This change indicates good development progress. However, it also poses quality of life concern among the elderly. Since the elderly have limitation in many ways, their quality of life decreases, often requiring self-confidence, family support, as well as community awareness, to improve their quality of life. Quality of life is affected by physical, psychological, social and environmental conditions. This study aimed to determine the effects of self efficacy, education, employment status, income, family support, social capital, and residential status on the quality of life of the elderly.
Subjects dan Method: This was an analytic observational study using cross-sectional design. The study was conducted in 6 villages, in Sidorejo sub-district, Salatiga, Central Java, from March to April 2017. A total sample of 150 elderlies aged between 60 to 74 years old were selected for this study by stratified random sampling. The exogenous variables were education, social capital and residential status. The endogenous variables were family support, self efficacy, employment status, income, and the quality of life. The data were collected by a set of questionnaire and analyzed by path analysis.
Results: The quality of life of the elderly was directly affected by income (b=0.06; SE= 1.16; p=0.005), family support (b=0.14; SE=0.22; p=0.003), and self efficacy (b=0.79; SE= 0.11; p<0.001). Family support was affected by residence status (b=0.54; SE=0.88; p<0,001), income (b=0.21; SE=0.40; p<0.001), and social capital (b=0.41; SE=0.02; p<0.001). Self efficacy was affected by family support (b=0.54; SE=0.10; p<0.001), and social capital (b=0.40; SE=0.04; p<0.001). Employment status was affected by education (b=0.16; SE=0.09; p=0.043). Income was influenced by education (b= 0.71; SE= 0.06; p<0.001).
Conclusion: The quality of life of the elderly is directly affected by income, family support, and self efficacy. The quality of life is indirectly affected by education, employment status, social capital, and residential status.

Keywords: quality of life, influencing factor, elderly, path analysis

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HEALTH BELIEF MODEL ON THE FACTORS ASSOCIATED WITH THE USE OF HPV VACCINE FOR THE PREVENTION OF CERVICAL CANCER AMONG WOMEN IN KEDIRI, EAST JAVA

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ABSTRACT

Background: Cervical cancer is a deadly disease with high incidence rates in the world and in Indonesia. In Kediri, East Java, there were 33 women who had cervical cancer in 2016, 3 of them died. Cervical cancer is caused by type 16 and type 18 Human Papilloma Viruses (HPV). This disease can be prevented by the application of HPV vaccine. This study aimed to examine factors associated with the use of HPV vaccine for the prevention of cervical cancer among women in Kediri, East Java, using health belief model (HBM).
Subjects and Method: This study was an analytic observational with case control design. It was conducted in Kediri, East Java, from February 10 to March 10, 2017. A sample of 120 women consisting of 40 women who had used HPV vaccine and 80 women who had not used HPV vaccine, were selected for this study by fixed disease sampling. The dependent variable was use of HPV vaccine. The independent variables included perceived susceptibility, perceived severity, perceived benefit, perceived threat, perceived barrier, and cues to action. The data were collected by a set of pre-tested questionnaire. Logistic regression was employed for data analysis.
Results: The use of HPV vaccine was associated with perceived susceptibility (OR= 0.79; 95% CI= 0.23 to 2.70; p= 0.710), perceived severity (OR= 5.19; 95% CI= 1.30 to 20.66; p= 0.019), perceived threat (OR= 1.04; 95% CI= 0.32 to 3.35; p= 0.942), perceived benefit (OR= 1.33; 95% CI= 0.40 to 4.38; p= 0.638), perceived barrier (OR= 0.42; 95% CI= 0.14 to 1.27; p= 0.126), and cues to action (OR= 5.90; 95% CI= 1.30 to 26.74; p = 0.021).
Conclusion: The use of HPV vaccine is associated with perceived susceptibility, perceived severity, perceived threat, perceived benefit, perceived barrier, and cues to action. Constructs in health belief model can be used to predict the use of HPV vaccine.

Keywords: health belief model, use of HPV vaccine

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BIOPSYCHOSOCIAL DETERMINANTS OF QUALITY OF LIFE IN THE ELDERLY AT TRESNA WERDHA SOCIAL NURSING HOME, YOGYAKARTA

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ABSTRACT

Background: Aging process is a multidimensional natural process with implicating problem involving various aspects, i.e. biological, psychological, and social aspects. Efforts are needed to prolong life expectancy and to improve the quality of life of the elderly. This study aimed to analyze biopsychosocial determinants of quality of life in the elderly at Tresna Werdha Social Nursing Home, Yogyakarta.
Subjects and Method: This study was analytic observational study with cross-sectional design. It was conducted at Abiyoso and Budi Luhur units, Tresna Werdha Social Nursing Home, Yogyakarta, in April 2017. A sample of 100 elderly were selected for this study by purposive sampling and simple random sampling. The independent variables were health status, level of independence, intellectual function, depression, and social activities. The dependent variable was quality of life. The data were collected by a set of pre-tested questionnaire and analyzed by logistic regression.
Results: Biopsychosocial determinants of quality of life in the elderly included health status (OR= 11.66; 95% CI = 2.18 to 62.14; p= 0.004), level of independence (OR= 4.12; 95% CI = 1.08 to 15.60; p= 0.037), intellectual function (OR= 9.75; 95% CI = 1.09 to 87.08; p= 0.036), depression (OR = 3.38; 95% CI = 1.01 to 11.24; p= 0.047), and social activities (OR= 6.02; 95% CI = 1.12 to 32.25; p = 0.047).
Conclusion: Health status, level of independence, intellectual function, depression, and social activities, are biopsychosocial determinants of quality of life in the elderly

Keywords: biopsychosocial, determinant, quality of life, elderly

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BIOLOGICAL, PHYSICAL, SOCIAL, AND ENVIRONMENTAL FACTORS ASSOCIATED WITH DENGUE HEMORRHAGIC FEVER IN NGANJUK, EAST JAVA

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ABSTRACT

Background: Dengue Hemorrhagic Fever (DHF) is an infectious disease transmitted by mosquitoes that carry dengue virus (DV). This disease is endemic in more than 100 countries. Nganjuk district, East Java, is a DHF endemic area with sharp increase in DHF incidence by 286% from 2014 to 2015, of which 9 cases died. This study aimed to examine biological, physical, social, and environmental factors associated with dengue hemorrhagic fever in Nganjuk, East Java.
Subjects and Method: This study was observational analytic with case control design. It was conducted in Nganjuk District, East Java, from May to June, 2017. A sample of 120 children aged less than 15 years old were selected for this study by fixed disease sampling. This sample consisted of 40 children with DHF selected as cases and 80 neighboring children without DHF selected as controls. The independent variables were the existence of bush surrounding the house, existence of mosquito larvae, still water, hung clothes, mosquito breeding place control (PSN), and activity of larva monitoring cadre. The dependent variable was DHF cases. The data were collected by a set of pre-tested questionnaire and observation with a checklist. Logistic regression was employed for data analysis.
Results: Incidence of DHF case was determined by the existence of bush surrounding the house (OR= 2.14; 95% CI= 0.99 to 4.6; p= 0.052), existence of mosquito larvae (OR= 14.94; 95% CI= 5.91 to 37.73; p<0.001), still water (OR=11.42; 95% CI= 4.68 to 27.89; p<0.001), hung clothes (OR= 4.31; 95% CI =1.92 to 9.70; p<0.001), mosquito breeding place control (OR=0.06; 95% CI= 0.02 to 0.15; p<0.001), and activity of larva monitoring cadre (OR= 0.14; 95% CI= 0.06 to 0.32; p<0.001).
Conclusion: Existence of bush surrounding the house, existence of mosquito larvae, still water, hung clothes, mosquito breeding place control, and activity of larva monitoring cadre, are the determinants of DHF incidence.

Keywords: biological, physical, social, environmental factor, mosquito breeding place control, Dengue Hemorrhagic Fever

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EFFECTS OF PREDISPOSING, ENABLING, AND REINFORCING FACTORS ON COMPLETENESS OF CHILD IMMUNIZATION IN PAMEKASAN, MADURA

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ABSTRACT

Background: According to WHO Weekly Epidemiological Record, Indonesia ranked fourth the lowest country in immunization coverage after India, Nigeria, and Democratic Republic of Congo. Likewise, Pamekasan District in Madura was one of districs in East Java with the lowest immunization coverage. This study aimed to determine the effects of predisposing, enabling, and reinforcing factors on completeness of child immunization, using PRECEDE and PROCEED model and health belief model.
Subjects and Method: This was an observational analytic study with case control design. This study was carried out at 4 community health centers in Pamekasan District, Madura, East Java, in March to April, 2017. A sample of 135 mothers who had infants aged 10 to 12 months were selected for this study by fixed disease sampling. The dependent variable was completeness of immunization use. The independent variables were maternal education, attitude towards immunization, perceived susceptibility, perceived severity, perceived benefit, perceived barrier, self efficacy, family support, and distance to health service. The data were collected by questionnaire and analyzed using path analysis.
Results: Perceived barrier (b= -0.5; 95% CI = -1.5 to 0.4; p= 0.255) and distance to health service (b= -1.0; 95% CI= -2.0 to -0.1; p= 0.037) had a negative effect on completeness of immunization. Perceived susceptibility (b= 1.1; 95% CI= 0.2 to 2.0; p= 0.022), perceived severity (b= 1.5; 95% CI= 0.5 to 2.5; p= 0.003), perceived benefit (b= 0.7; 95% CI= -0.1 to 1.6; p= 0.110), and self efficacy (b= 0.6; 95% CI= -0.3 to 1.5; p= 0.193) had a positive effect on completeness of immunization. Perceived susceptibility was affected by maternal education (b= 1.0; 95% CI= 0.3 to 1.7; p= 0.005). Perceived severity was affected by maternal education (b= 0.9; 95% CI= 0.5 to 1.6; p= 0.018) and attitude towards immunization (b= 1.0; 95% CI= 0.3 to 1.8; p= 0.007). Perceived benefit was affected by family support (b= 0.7; 95% CI= -0.1 to 1.4; p= 0.078). Likeliwise, self efficacy was affected by family support (b= 0.6; 95% CI = 0.1 to 1.3; p= 0.134).
Conclusion: Perceived barrier and distance to health service have a negative effect on completeness of immunization. Perceived susceptibility, perceived severity, perceived benefit, and self efficacy have a positive effect on completeness of immunization.

Keywords: completeness of immunization, PRECEDE and PROCEED model, health belief model

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BIOPSYCHOSOCIAL FACTORS ASSOCIATED WITH MENTAL RETARDATION IN CHILDREN AGED 6-17 YEARS IN TULUNGAGUNG DISTRICT, EAST JAVA

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ABSTRACT

Background: According to WHO, 15% of the world population, or 785 million people, suffer mental or physical disorders. Mental retardation is a serious problem socially and medically. Mental retardation affects child development in various forms: physical, self-care, communication, social, emotional, and mental. The objective of this study was to determine biopsychosocial factors associated with mental retardation in children aged 6-17 years.
Subjects and Method: This study was observational analytic with case control design. It was conducted at Kauman and Tulungangung community health centers in Tulungangung District, East Java, from April to May, 2017. A sample of 100 parents of children aged 6 to 17 years old were selected for this study by fixed disease sampling. This sample consisted of 25 parents of children with mental retardation and 75 parents of children without mental retardation. Children with mental retardation were identified and sampled at a disability special school in Tulungagung, East Java. The dependent variable was mental retardation. The independent variables were prenatal history, perinatal history, maternal stress during pregnancy, maternal education, and family income. The data were collected by a pre-tested questionnaire. Maternal stress was measured by Holmes and Rahe stress scale. The data was analyzed by path analysis.
Results: Mental retardationjn was directly associated with prenatal history (b= 1.17; 95% CI= 0.65 to 2.27; p= 0.038), perinatal history (b= 1.41; 95% CI= 0.87 to 2.73; p= 0.037), and maternal stress during pregnancy (b= 1.84; 95% CI = 0.59 to 3.09; p= 0.004). Prenatal history was associated with maternal education (b= -1.16; 95% CI= -2.17 to -0.15; p= 0.025) and maternal stress during pregnancy (b= 1.48; 95% CI= 0.43 to 2.54; p= 0.006). maternal stress during pregnancy was associated with maternal education (b= -1.65; 95% CI= 2.62 to -0.69; p= 0.001) and family income (b= -1.35; 95% CI= 2.29 to -0.41; p=0.005). Family income was associated with maternal education (b= 1.70; 95% CI= 0.82 to 2.57; p<0.001).
Conclusion: Mental retardation is directly associated with prenatal history, perinatal history, and maternal stress during pregnancy.

Keywords: mental retardation, biopsychosocial factors, children

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EFFECTS OF EDUCATION, NUTRITION STATUS, TREATMENT COMPLIANCE, FAMILY INCOME, AND FAMILY SUPPORT, ON THE CURE OF TUBERCULOSIS IN MOJOKERTO, EAST JAVA

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ABSTRACT

Background: Tuberculosis is an important global public health issue. Countries around the world have committed to control the disease with various programs. However, the cure of Tuberculosis treatment in many countries is still low, which can hamper the success of Tuberculosis control program. Productivity of Tuberculosis patients continues to decrease that leads to socioeconomic burden. This study aimed to examine the effects of education, nutrition status, treatment compliance, family income, and family support, on the cure of Tuberculosis.
Subjects and Method: This was an observational analytic study with case control design. The study was conducted in Mojokerto, East Java, from April to May, 2017. A total sample of 108 Tuberculosis patients were selected for this study by fixed disease sampling. The sample consisted of 35 uncured cases of Tuberculosis and 73 cured cases of Tuberculosis. The dependent variable was cure of Tuberculosis. The independent variables were education, nutrition status, treatment compliance, family income, and family support. The data was collected by a set of questionnaire and analyzed using path analysis.
Results: Nutritional status (b= 1.31; 95% CI= 0.41 to 2.22; p= 0.004) and treatment compliance (b= 1.07; 95% CI= 0.17 to 1.97; p= 0.019) directly and positively affect the cure of Tuberculosis. Nutritional status was affected by high education (b= 1.62; 95% CI= 0.62 to 2.63; p= 0.002), family income (b= 1.66; 95% CI= 0.70 to 2.62; p= 0.001), and strong family support (b= 1.50; 95% CI= 0.36 to 2.63; p= 0.010). Treatment compliance was affected by high education (b= 0.84; 95% CI= -0.14 to 1.81; p= 0.093), family income (b= 1.36; 95% CI= 0.42 to 2.30; p= 0.005), and strong family support (b= 2.08; 95% CI = 0.96 to 3.19; p<0.001).
Conclusion: Cure of Tuberculosis is directly affected by nutritional status and treatment compliance. Education, family support, and family income, indirectly affect cure of Tuberculosis.

Keywords: cure of Tuberculosis, education, nutrition status, family income, family support, treatment compliance

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BIOPSYCHOSOCIAL FACTORS ASSOCIATED WITH CHILD GROWTH AT NGEMBAL KULON COMMUNITY HEALTH CENTER, KUDUS

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ABSTRACT

Background: The first five years of life is widely acknowledged as a sensitive period for child growth. Any interruption exposing during this period may cause problems in child growth. Various internal and external factors can affect child growth. This study aimed to analyze the effects of biopsychosocial factors associated with child growth with life course perspective.
Subjects and Method: This was an observational analytic study with cross-sectional design. It was conducted at Ngembal Kulon community health center, Kudus, Central Java, from December 2016 to February 2017. A total sample of 160 children aged 1 to 5 years old and their mothers were selected for this study by purposive sampling. The dependent variable was child growth as measured by weight for age (WAZ) and height for age (HAZ). The independent variables were birth weight, body length at birth, maternal height, number of children, and family income. The data was collected by a set of questionnaire. Child and maternal heights were measured by microtoise. Data on birthweight and body length at birth were obtained from maternal and child health book. Multiple linear regression was used for data analysis.
Results: Child growth (WAZ) was associated with family income (b= 0.36; 95% CI= 0.22 to 0.49; p<0.001), birthweight (b= 0.42; 95% CI= 0.25 to 0.58; p<0.001), and number of children (b= -0.25; 95% CI= -0.42 to -0.08; p= 0.004). Child growth (HAZ) was associated with family income (b= 0.26; 95% CI= 0.12 to 0.39; p<0.001), body length at birth (b= 0.21; 95% CI= 0.12 to 0.30; p<0.001), and maternal height (b= 0.43; 95% CI= 0.27 to 0.58; p<0.001).
Conclusion: Child growth (WAZ) is associated with family income, birthweight, and number of children. Child growth (HAZ) is associated with family income, body length at birth, and maternal height. Life course influences were demonstrated in this study.

Keywords: child growth, WAZ, HAZ, birthweight, body length at birth, number of children, maternal height, family income

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KNOWLEDGE, ATTITUDE, SEXUAL BEHAVIOR, FAMILY SUPPORT, AND THEIR ASSOCIATIONS WITH HIV/AIDS STATUS IN HOUSEWIVES

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ABSTRACT

Background: Approximately 36.7 million people in the world were infected by HIV and 2.1 million new cases occured in 2015. A total of 191,073 HIV cases were reported in Indonesia in 2016, including 77,940 AIDS cases, and 13,247 deaths. Housewives ranked highest among HIV/AIDS patients in Indonesia. This study aimed to investigate knowledge, attitude, sexual behavior, family support, and their associations with HIV status in housewives using PRECEDE PROCEED model.
Subjects and Method: This was an analytic observational study with cross-sectional design. The study was conducted at Toroh community health center, Grobogan, Central Java, in July, 2017. A total sample of 129 housewives were selected for this study using exhaustive sampling technique. The dependent variable was HIV status. The independent variables were knowledge, attitude, sexual behavior, and family support. The data was measured by a set of questionnaire and analyzed using path analysis.
Results: HIV status was directly and positively associated with risky sexual behavior (b= 4.48; 95% CI= 2.30 to 6.65; $p<0.001$). Risky sexual behavior was associated with attitude (b= -1.27; 95% CI= -0.03 to -2.51; $p<0.045$) and family support (b= -1.86; 95% CI= -0.69 to -3.03; $p<0.002$). Attitude was associated with knowledge (b= 2.06; 95% CI= 0.86 to 3.25; $p<0.001$).
Conclusion: HIV status is directly and positively associated with risky sexual behavior. HIV status is indirectly associated with attitude, knowledge, and family support.

Keywords: HIV, AIDS, risky sexual behavior, housewives, PRECEDE PROCEED model

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SAFE SEXUAL BEHAVIORS FOR EARLY DETECTION AND PREVENTION OF HIV/AIDS TRANSMISSION AMONG QUEERS IN TULUNGAGUNG, EAST JAVA, USING THEORY OF PLANNED BEHAVIOR

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ABSTRACT

Background: Sexual intercourse is one of the primary modes of HIV transmission. Sexual activity among heterosexuals has the highest risk of HIV transmission. However, sexual activity among queers also contributed much of the HIV/AIDS case increase. The prevalence of HIV/AIDS infection was high among queers in Tulungagung, East Java. This study aimed to examine safe sexual behaviors for early detection and prevention of HIV/AIDS transmission among queers using Theory of Planned Behavior.
Subjects and Method: This was a qualitative study with phenomenology approach. The study was caaried out at queers' peer group namely Aprikot basecamp, Tulungagung, East Java, from 23 April to 17 June, 2017. The informants in this study included queers with positive HIV status and those with negative HIV status. These informants consisted of queer commercial sex workers, queers with steady partner, queers who had recently been registered as Apricot members, queers who had become Apricot members for long, Cesmid NGO, program manager of Local Commision for AIDS Control, health personnels, and officers at District Health Office Tulungagung. The informants were selected by maximum variation sampling. The data were collected using in-depth interview, observation, and document review methods. The data were analyzed by interactive analysis method, including data collection, data reduction, data display, and verification.
Results: Five queer informants who worked as commercial sex workers were HIV positive. A queer informant who owned beauty salon had a steady partner. In general, queers had positive attitude towards early detection and prevention of HIV by undertaking regular three monthly HIV tests. The subjective norm in the community was very influential such that all Apricot members always complied with every rule available in the community. As a result, the queers had a stronger intention to do HIV early detection and prevention.
Conclusion: Subjective norm is an important determinant for HIV early detection and prevention among queers. It is suggested that the positive norm in the community pertinent to sexual behavior be capitalized and strengtened so as to increase adherence to healthy and safe sexual behaviors among the queers.

Keywords: risky sexual behaviors, early detection, prevention, HIV/ AIDS, queer

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SANITATION-RELATED BEHAVIOR, CONTAINER INDEX, AND THEIR ASSOCIATIONS WITH DENGUE HEMORRHAGIC FEVER INCIDENCE IN KARANGANYAR, CENTRAL JAVA

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ABSTRACT

Background: Dengue Hemorrhagic Fever (DHF) causes not only epidemic but also social and economic impacts. Environmental sanitation, water reservoirs, and community behavior can influence the incidence of DHF. This study aimed to examine sanitation-related behavior, container index, and their associations with dengue hemorrhagic fever incidence.
Subjects and Method: This was an analytic observational field study using case control design. The study was conducted in sub-districts with the highest and lowest DHF cases in Karanganyar, Central Java, from May to July, 2017. A total sample of 120 study subjects was selected for this study using fixed disease sampling, including 40 people with DHF and 80 people without DHF. The dependent variable was DHF. The independent variables were age, education level, family income, container index, and sanitation behavior. The data were measured by a set of questionnaire and examined using path analysis.
Results: Sanitation behavior (b= 1.50; 95% CI= 0.57 to 2.42, p= 0.001) and Container Index (b= 0.90; 95% CI= 0.03 to 1.84; p= 0.057) were directly and positively associated with DHF incidence. Container Index was associated with sanitation behavior (b= 2.09, 95% CI= 1.21 to 2.97, p<0.001). Age (b= -0.76, 95% CI= -1.60 to 0.08, p= 0.074), education level (b=-1.02, 95% CI= -1.87 to -0.17, p= 0.019), and family income (b= -0.70, 95% CI= -1.60 to 0.19, p= 0.122) were associated with sanitation behavior.
Conclusion: DHF incidence is directly and positively associated with sanitation behavior, and container index. DHF incidence is indirectly associated with age, education level, and family income.

Keywords: dengue haemorhagic fever, sanitation, container index, behavior, path analysis

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SOCIAL LEARNING THEORY ON FACTORS ASSOCIATED WITH DENTAL CARIES AMONG MENTALLY DISABLED SCHOOL CHILDREN IN SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Mentally disabled adolescents have limitations that make them are at greater risk of dental caries. There is a lack of studies on the factors associated with dental caries in adolescents using Social Learning Theory. This study aimed to determine factors associated with dental caries among mentally disabled adolescents using Social Learning Theory.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was conducted at several special schools for disabled children (SLB) Surakarta, including: SLB C Setya Darma, SLB C YPSLB, SLB CG YPPCG Bina Sejahtera, and SLB C1 YSSD, in Surakarta, Central Java, from June to July 2017. A sample of 150 mentally disabled school children were selected for this study by purposive sampling. The dependent variable was caries dental status. The independent variables were parenting time, maternal oral health knowledge, maternal attitude towards oral health, maternal oral hygiene practice, child oral hygiene practice, maternal sweet food intake, child sweet food intake. Dental caries status was measured by decay, missing, filled-teeth (DMF-T) index. The other data were collected by questionnaire. The data were analyzed by path analysis.
Results: Dental caries was directly and positively associated with sweet food intake (b= 0.27, SE= 0.09, p= 0.002), poor child oral hygiene practice (b= 0.09, SE= 0.04, p= 0.018), and poor maternal oral health knowledge (b= 0.36, SE= 0.10, p<0.001). Maternal oral hygiene practice was associated with maternal attitude towards oral health (b= 0.33, SE= 0.13, p= 0.012) and maternal oral health (b= 0.18, p<0.001). Child oral hygiene practice was associated with maternal oral hygiene practice (b= 0.33, SE= 0.06, p= 0.012), maternal oral health knowledge (b= 0.91, SE= 0.18, p<0.001), and parenting time (b= 1.39, SE= 0.18, p<0.001).
Conclusion: Dental caries is associated with sweet food intake, poor child oral hygiene practice, and poor maternal oral health knowledge. Maternal knowledge, attitude, and practice in oral hygiene have an important role on dental caries in mentally disabled adolescents.

Keywords: dental caries, adolescents, maternal oral health practice, social learning theory

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MATERNAL HEPATITIS C (HCV) INFECTION AND ANTI-D IMMUNOGLOBULIN THERAPY: STUDY TESTING ANTIBODIES, RNA AND GENOTYPE OF HCV IN BAGHDAD

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ABSTRACT

Background: Hepatitis C virus (HCV) infection is a serious health problem worldwide. About 130 - 200 million people, and 1- 8% of all pregnant women were infected. It is a major contributor to end-stage liver disease. Women with viral hepatitis may be at an increased risk of pregnancy complications. Several obstetrics intervention act as risk factors which are specific to women pertaining the HCV infection; anti-D immunoglobulin (Ig) therapy may be one of them. The objectives of this sudy were to estimate the prevalence of HCV antibodies (anti-HCV), RNA as well as HCV genotype among women with a history of anti-D Ig therapy.
Subjects and Method: A cross sectional study was carried out involving 154 Rhesus negative (Rh-ve) blood group pregnant women regardless of the anti-D Ig therapy. Anti-HCV was tested using third generation enzyme immunoassay (EIA-3) and immunoblot assay (Lia Tek-111), subsequently. In addition, 89 serum samples were subjected to molecular analysis using RT-PCR and DNA enzyme immunoassay (DEIA) method for HCV-RNA and genotypes.
Results: Anti-HCV and HCV-RNA seroprevalence were higher (17.1%, 35.5%) among recipients of anti-D Ig than their counter group (6.4%, 13.16%, respectively), and it was stastically significant (p= 0.038, p= 0.010, respectively). Significant direct positive dose response correlation (r= 0.78, p= 0.005) had been seen between number of anti-D Ig and anti-HCV seropositive rate. Anti-D Ig therapy act as a risk factor (OR= 3.01, 95% CI: 1.01 to 8.9) especially from the third dose onward. Women with anti-D Ig therapy were at higher risk (3.6 times more) of positive HCV-RNA (OR= 3.6, 95% CI= 1.19 to 10.837). HCV-1b showed higher prevalent (52.9%) among the recipients of anti-D Ig therapy while genotype HCV-3a (6.6%) was the lowest.
Conclusion: This study showed that Anti-D immunoglobulin therapy acts as a risk factor for HCV infection. Screening for HCV is recommended for all recipients of anti-D Ig. Not only HCV antibodies but also HCV-RNA detection is recommended for the diagnosis of HCV infection.

Keywords: maternal health, hepatitis C virus (HCV), anti-D immunoglobulin, HCV genotypes, risk factor

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ANALYSIS OF INPUTS IN THE SEXUALLY TRANSMITTED INFECTION SCREENING WITH VOLUNTARY COUNSELLING AND TESTING PROGRAM FOR FEMALE PRISONERS AT CLASS II A JAIL, IN MALANG

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ABSTRACT

Background: The increasing incidences of Sexually Transmitted Infection (STI) and Human Immonodeficiency Virus (HIV) infection are becoming serious public health concerns in Indonesia and other countries. These issues are of concern that call for close attention not only for general public but also for male and female prisoners. As studies have shown the prevalences of HIV and syphilis were 1.1% and 5.1% in male prisoners, respectively, 6% and 8.5% in female prisoners. For those reasons, at some jails Voluntary Counseling and Testing (VCT) have been provided for HIV/AIDS control and prevention. The success of the screening program with VCT would depend on the provision of supplies, equipment, infrastructure, health personnel, and fund. This study aimed to analyze the adequacy of various inputs in the STI screening program with VCT for prisoners at the Class II A female jail, in Malang, East Java.
Subjects and Method: This was a qualitative study with evaluation approach. This study was conducted at the Class II A female jail, in Malang, East Java. The study applied CIPP (Context, Input, Process, Product) evaluation model. Key informants for this study included health personnels at the Class II A female jail clinics, in Malang, East Java, the STI mobile health care team from Arjuno Community Health Center Malang, and female prisoners, who were known as *Warga Binaan Pemasyarakatan* (WBP).
Results: Average monthly visits at the VCT clinic were 21 female prisoners, which amounted to only a few of the total number of female prisoners. The health care team involved in the STI screening with VCT program, included skilled health personnel from the jail and the mobile STI team from Arjuno Community Health Center, Malang. The sources of fund for these programs came from the international as well as domestic funding agencies. The international funding came from the Global Fund. The domestic funding came from the Ministry of Law and Human Civil Rights, and the Municipality Health Office Malang, which provided reagents and medicine. Supplies, equipments, and infrastructure, were provided by Arjuno Community Health Center Malang and the Class II A female jail clinics, in Malang. The laboratory was provided by the health center. The reagents were sufficiently provided by the municipality health office, although there was a supply delay in February 2016.
Conclusion: Inputs of the STI screening with VCT program at the Class II A female jail clinics, in Malang, East Java, which included supplies, equipment, infrastructure, health personnel, and funding, are sufficiently provided.

Keywords: analysis, input, screening, STI, VCT

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A MULTISECTORAL APPROACH IN DENGUE MANAGEMENT IN SEREMBAN MALAYSIA: AN ECOBIOSOCIAL PERSPECTIVE

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ABSTRACT

Background: Dengue has been established as a major public health issue in many parts of the world particularly those in the tropical regions. In Malaysia, the rising rate of dengue cases had remained uncurbed, alarming to both the public and the local authorities. Despite the existence of legislations and control activities, why does the number of dengue cases keep on increasing every year? The objective of this study was to assess the existing environmental and health policies/strategies towards sustainable prevention and control of dengue/DHF in Malaysia. In addition, it also aimed to review the eco-bio-social approach and its advantages in prevention and control of dengue.
Subjects and Method: Series of in-depth interviews were conducted on 12 key- informants aged between 36-58 years old. They were selected based on their roles that were divided into three categories, i.e. (1) policy makers, (2) middle managers, and (3) implementers at the ground level. Each interview explored in detail, on the important domains which were the ecology, biology, and social factors. Each session took an average of 45 minutes to 1 hour. There were a total of 10 males and 2 females selected for the in-depth interview. Open-ended questions were asked and the interviews were voice recorded, after obtaining consent from the respondents. The interviews were terminated once data saturation was achieved. The qualitative data was analyzed using Atlas.ti software.
Results: The three main themes that emerged and were identified to contribute to sustainable dengue control and prevention were (1) adequate implementation of existing health policy, (2) good integration and coordination between agencies, (3) commitment from political and community leaders. Local data showed that areas which did not have these important components became hot spots for dengue with high number of dengue cases.

Conclusion: It is vital that the community and relevant authorities focus on these themes/domains that will significantly improve the chances of having sustainable denguecontrol and management program in their localities.

Keywords: multisectoral approach, ecobiosocial, engue control, sustainable management

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AGEING AND WEAKENING SOCIAL COHESION AMONG STROKE PATIENTS IN MANADO

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ABSTRACT

Background: Stroke is one of the major public health problem worldwide. Data from several hospital in Indonesia showed that stroke is the leading cause of mortality among adults in Indonesia. Stroke patients experience diminishing quality of life. This study aimed to determine the effect of ageing on weakening social cohesion among stroke patients in Manado.
Subjects and Method: This was an analytic observational study with cross sectional design. This study was conducted in Manado, North Sulawesi. A sample of 42 ischemic stroke patients were selected for this study from several hospitals in Manado by stratified random sampling. The dependent variable was social cohesion. The independent variable was age. The sample patients were divided into 2 age groups: <60 years old (non-geriatric patients) and ≥ 60 years old (geriatric patients). The data were collected by questionnaire. Data on stroke diagnosis was obtained from the medical record. The data were analyzed using Odd Ratio and Chi Square.
Results: Mean (SD) age of stroke patients was 57.6 years (12.0 years). Proportion of geriatric stroke patients (aged ≥ 60 years old) was 38.1%. Female patients were 57.1%. Patients with ≥ high school attainment or higher were 42.9%. Patients belonging to Minahasa ethnic was 76.2%. The proportion of poor social cohesion was 37.5% among geriatric patients and 11.5% among non-geriatric patients. Ageing was associated with poorer social cohesion (OR= 4.60; 95% CI=0.95 to 22.16; p= 0.046).
Conclusion: Ageing is associated with poorer social cohesion among ischemic stroke patients.

Keywords: ageing, social cohesion, stroke patients

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THE IMPACT OF CEMPO FINAL WASTE DISPOSAL ON SKIN DISEASE IN MOJOSONGO COMMUNITY, SURAKARTA

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ABSTRACT

Background: Garbage has the potential to cause pollution and health problems. Pollution can occur in the air as a result of waste decomposition, can also contaminate water and soil caused by leakage (liquid waste) resulting in various skin diseases. The skin disease are caused by several types of pathogenic microorganism that live and breed in the waste. This study aimed to determine the impact of long residence adjacent to sanitary landfill, distance to landfill, and skin contact with garbage on skin disease symptoms at Putri Cempo final waste disposal, Mojosongo, Surakarta.

Subjects and Method: This was an analytic observational study using cross sectional design. This study was conducted in Putri Cempo final waste disposal, Mojosongo, Surakarta, Central Java. A sample of 102 residents living near the Putri Cempo waste disposal were selected for this study. The dependent variable was symptoms of skin disease. The independent variables were duration of residence near the sanitary landfill, house distance to landfill, and skin contact with garbage. The data were collected by questionnaire and analyzed using multiple logistic regression.

Results: Residence near the sanitary landfill near ≥ 3 years (OR= 6.00; 95% CI= 1.97 to 18.20; p= 0.002) and house distance to landfill <1 km (OR = 9.50; 95% CI= 3.10 to 28.80; p = 0.001) increased the risk of skin disease symptoms. Indirect contact with waste (OR= 0.68; 95% CI= 0.10 to 2.90; p= 0.605) was associated with decreased skin disease symptoms, but it was statistically insignificant.

Conclusion: Residence near the sanitary landfill near ≥ 3 years and house distance to landfill <1 km increase the risk of skin disease symptoms.

Keywords: skin disease, symptomp, waste disposal, sanitary landfill, residence

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SOCIODEMOGRAPHIC CHARACTERISTICS AND THEIR ASSOCIATIONS WITH KNOWLEDGE, ATTITUDE, AND PRACTICE ON LEPROSY

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ABSTRACT

Background: Leprosy is a contagious disease caused by Mycobacterium leprae. It has negative impacts on the lives of the leprosy patients. For example, stigmatization on the patients has surfaced along the years, which has made leprosy patients, including those who are cured, difficult to reintegrate into society. The purpose of this study was to determine the associations between sociodemographic characteristics and knowledge, attitude, and practice on leprosy.

Subjects and Method: This was an analytical cross-sectional study with ethical approval obtained from the Research Ethics Committee of Universiti Teknologi MARA. This study was conducted in Malaysia. A total of 437 study subjects were interviewed face-to-face using validated questionnaires for a period of 18 days. The dependent variables were knowledge, attitude, and practice on leprosy. The independent variable was sociodemographic characteristics: age, sex, education, and ethnic. The questionnaire consisted of two parts: (1) sociodemographic information, and (2) knowledge, attitude, and practice on leprosy. Association between variables under study was analyzed using Odds Ratio and Chi Square test.

Results: Young adults, i.e. adults aged <40 years old (OR= 5.07; p= 0.002), female (OR= 6.19; p= 0.013), Malay (OR= 4.14; p= 0.042), and higher education level (OR= 3.73; p= 0.054) were associated with better knowledge on the etiology of leprosy. Young adults (OR= 4.77; p= 0.029) and female (OR= 11.40; p= 0.001) were associated with positive attitude (stronger perceived susceptibility to leprosy). Low education level (OR= 5.74; p= 0.016) was associated with negative practice towards leprosy patients (i.e. They stated that leprosy patients should be isolated from society).

Conclusion: Young adults, female, Malay, and higher education level are associated with better knowledge on the etiology of leprosy. Young adults and female are associated with positive attitude towards leprosy patients. Low education level is associated with negative practice towards leprosy patients. Stigmatization still exists within the population under study.

Keywords: leprosy, patients, sociodemographic characteristics, knowledge, attitude, practice

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FACTORS ASSOCIATED WITH THE QUALITY OF LIFE AMONG THE ELDERLY

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ABSTRACT

Background: Most countries in the world have succesfully prolong life expectancy of their populations. However, the quality of life may be decreasing with increasing age. This study aimed to investigate factors associated with the quality of life of the elderly.
Subjects and Method: This was a cross sectional study carried out in Surakarta, Sragen, Karanganyar, and Klaten, in Central Java, from January to March 2017. A total of 224 elderlies were selected for this study. The dependent variable was quality of life. The independent variables were age, education, income, behavior, locus of control, family support, peer support, and social support. Data were collected by questionnaire and analyzed by path analysis.
Results: Quality of life among the elderly showed positive association with education ≥SMA (b= 0.43; SE= 0.43; p= 0.668), income ≥Rp 876,420 (b= 0.92; SE<0.001; p= 0.357), positive behavior (b= 2.07; SE= 0.18; p= 0.039), and peer support (b= 7.35; SE= 0.22; p<0.001). Quality of life among the elderly showed negative association with age (b= -1.06; SE= 0.05; p= 0.290) and external locus of control (b= -1.07; SE= 0.25; p= 0.284).
Conclusion: Quality of life among the elderly increases with higher education ≥SMA, higher income, positive behavior, and peer support. Quality of life decreases with increasing age and external locus of control.

Keywords: quality of life, age, education, income, peer support, locus of control, elderly

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ASSOCIATIONS BETWEEN NUTRITION ATTITUDE AND BLOOD PRESSURE AMONG THE ELDERLY WITH HYPERTENSION IN KLATEN, CENTRAL JAVA

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ABSTRACT

Background: Many diseases affecting the elderly are associated with dietary factors. For example, cerebrovascular disease, diabetes, osteoporosis and cancer, are associated with dietary factors. The purpose of this study was to examine the associations between nutrition attitude and blood pressure among the elderly with hypertension in Klaten, Central Java.
Subjects and Method: This was a cross sectional study. Conducted at community health center Juwiring, Klaten District, Central Java, on May 2017. A sample of 125 elderly with hypertension were selected for this study. The dependent variable was hypertension. The independent variable were age, sex, nutritional knowledge, nutritional attitude, vitamin C, and vitamin E. Data on vitamin C and vitamin E were measured by 24 hour Food Recall and semi quantitative FFQ. The other data were collected by questionnaire. The data were analayzed by multiple linear regression.
Results: Age (b= 0.057; p= 0.257), sex (b= 1.58; p= 0.441), nutritional knowledge (b= 0.07; p= 0.011), nutritional attitude (b=2.59; p= 0.016), vitamin E (b= 0.39; p= 0.037), and vitamin C (b= 2.83; p= 0.012) had positive associations with blood pressure among elderly with hypertension.
Conclusion: Blood pressure among the elderly with hypertension is asssociated with age, sex, nutritional knowledge, nutritional attitude, vitamin E, and vitamin C

Keywords: Blood pressure, elderly, hypertension age, sex, nutritional knowledge, nutritional attitude, vitamin E, vitamin C

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ASSOCIATION BETWEEN KNOWLEDGE, ATTITUDE, BEHAVIOR, ABOUT HOME ELECTRICAL SAFETY, AND FIRE INCIDENT IN EAST JAKARTA

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ABSTRACT

Background: Jakarta is a province with the highest residential fire incidence in Indonesia. In 2015, 232 fire incidents occurred in East Jakarta alone. Often the fire was caused by short electrical connection. The purpose of this study was to investigate the association between knowledge, attitude, behavior, about home electrical safety, and fire incident in East Jakarta.
Subjects and Method: This was an analytical observational study with case control design. This study was conducted in Pekayon, East Jakarta, from July to August 2016. A sample of 78 residents were selected for this study, consisting of 35 residents who had experienced fire incident and 43 residents who had not experienced fire incident by fixed disease sampling and random sampling. The dependent variable was fire incident. The independent variables were knowledge, attitude, and behavior about home electrical safety. Data were collected by questionnaire and interview. Data were analyzed using odds ratio and chi square test.
Results: Fire incident was associated with poor knowledge (OR=3.16; 95% CI= 1.25 to 8.00; p=0.014), unfavorable attitude (OR= 5.16; 95% CI= 1.90 to 14.00; p=0.001), and negative behavior (OR= 4.95; 95% CI= 1.89 to 12.99; p= 0.001).
Conclusion: Fire incident is associated with poor knowledge, unfavorable attitude, and negative behavior about home electrical safety. It is suggested to take measures that improve community knowledge, attitude, and behavior about home electrical safety.

Keywords: fire incident, knowledge, attitude, behavior, home electrical safety

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DETERMINANTS OF DENGUE HEMORRHAGIC FEVER OUTBREAK IN CIPAYUNG, EAST JAKARTA

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ABSTRACT

Background: Dengue hemorrhagic fever (DHF) is an infectious disease that is caused by dengue virus. To date no specific medicine is available for this disease. Jakarta Province ranks 5th in the incidence of DHF. In 2014, the cumulative incidence (CI) of DHF was 48.7 cases/100,000. In Cipayung sub district (East Jakarta), there were 136 new cases of DHF (CI= 52.1/100.000) in 2015. This study aimed to investigate the determinants of DHF outbreak in Cipayung, East Jakarta.
Subjects and Method: This was a cross-sectional study, conducted in Cipayung, East Jakarta. A sample of 594 households were selected at random for this study. The dependent variable was DHF. The independent variables were dweller density, water container drainage, container supervision. The data were collected using questionnaire and observation. The data was analyzed by multiple logistic regression.
Results: DHF incidence was affected by container supervision <1 time per week (OR= 2.45; 95% CI= 1.57 to 3.84; p<0.001), container drainage <4 times/month (OR= 1.82; 95% CI= 1.19 to 2.79; p= 0.006), dweller density <4 (OR=0.61; 95% CI= 0.42 to 0.87; p=0.007).
Conclusion: DHF incidence is affected by container supervision <1 time per week, container drainage <4 times/month, dweller density <4.

Keywords: DHF, container drainage, container supervision, dweller density

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ASSOCIATION BETWEEN EXCLUSIVE BREASTFEEDING AND THE RISK OF TONSILITIS IN CHILDREN UNDER FIVE IN DEMAK, CENTRAL JAVA

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ABSTRACT

Background: Upper respiratory infection (URI) remains one of the primary causes of child mortality in Indonesia. Some studies have shown that exclusive breastfeeding can prevent various infectious diseases including URI. However, in some places the incidence of tonsilitis is still high although target of exclusive breastfeeding coverage has been met. This study aimed to determine association between exclusive breastfeeding and the risk of tonsilitis in children under five in Demak, Central Java.
Subjects and Method: This was a cross sectional study conducted at 3 Community Health Centers, Demak, Central Java, from March to April 2017. A sample of 35 children under five years old were selected for this study. The dependent variable was the incidence of tonsillitis. The independent variable was history of exclusive breastfeeding. The data were collected by questionnaire. Tonsillitis was determined by history taking and physical examination. The data were analyzed by exact Fisher test.
Results: Children without history of exclusive breastfeeding had an increased risk of contracting tonsillitis (OR= 9.58; p= 0.015) compared to those with history of exclusive breastfeeding.
Conclusion: Provision of exclusive breastfeeding is associated with lower risk of tonsilitis in children under five.

Keywords: tonsillitis, exclusive breastfeeding, children under five

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MATERNAL EMPLOYMENT STATUS, ETHNICITY, FOOD INTAKE, AND THEIR EFFECTS ON TEENAGE OBESITY, IN SURAKARTA

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ABSTRACT

Background: Obesity is one of the main causes of premature death in adulthood. The prevalence of teenage obesity in Indonesia has been increasing from 1.4% in 2007 to 7.3%. It is hypothesized that the risk of obesity is influenced by lifestyle and socio-economic status. This study aimed to determine the effect of maternal job status, ethnicity, and food intake, on the risk of obesity in teenagers.
Subjects and Method: This was an analytical observational using case-control design. This study was conducted in Surakarta, in September – November 2016. A total of 120 teenagers were selected for the study, consisting of 41 obese teenagers aged 16-18 years old and 79 normal weight teenagers, using fixed disease sampling. The dependent variable was obesity. The independent variables were maternal employment status, ethnicity, carbohydrate intake, fat intake, and energy intake. The data were collected using a set of questionnaires. Food intake was measured by 24 hour food recall. The data were analyzed using path analysis model.
Results: Energy intake had positive, significant, and direct effect on the risk of teenage obesity (b= 6.75; 95%CI= 4.36 to 9.14; p<0.001). Working mother indirectly had positive and significant effect on teenage obesity, via fat intake (b=0.77; 95% CI= 0.03 to 1.52; p=0.040). Fat intake indirectly had positive and significant effect on teenage obesity, via energy intake (b=4.16; 95%CI=1.95 to 6.38; p=0.001). Likewise, carbohydrateintake had positive and significant effect on teenage obesity, via energy intake(b=3.31; 95% CI=1.73 to 4.88; p=0.001). Ethnicity (Chinese versus Javanese) did not have significant effect on teenage obesity (b=-1.14; 95% CI =-3.56 to 1.28; p= 0.355).
Conclusion: Energy intake has direct effect on the risk of teenage obesity. Fat intake, carbohydrate intake, and maternal employment status, have indirect effect on the risk of teenage obesity.

Keywords: maternal employment status, ethnicity, food intake, obesity, teenager.

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LEAD POISONING IN GULF OF YOUTEFA, JAYAPURA, PAPUA

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ABSTRACT

Background: Lead is a cumulative toxicant that affects multiple body systems and is particularly harmful to young children. Its widespread use has resulted in extensive environmental contamination, human exposure and significant public health problems in many parts of the world. Young children are particularly vulnerable to the toxic effects of lead and can suffer profound and permanent adverse health effects, particularly affecting the development of the brain and nervous system. This study aimed to investigate lead poisoning in Gulf of Youtefa, Jayapura, Papua, particullary it aimed to estimate lead level in water, fish, and shell in the Gulf of Youtefa.
Subjects and Method: This was a descriptive cross sectional study conducted in Gulf of Youtefa, Jayapura, Papua. A sample of 75 community members living adjacent to Gulf of Youtefa were selected for this study. In addition, samples of water, fish, and shell were taken from 12 stations in the Gulf of Youtefa. The dependent variable was lead level. Lead poisoning in human subjects was measured from urine sample by Liquid Chromatography Mass Spectrophotometry Detector. Samples of water, fish, and shell were measured by Inductively coupled plasma Thermo IRIS Interepid II.
Results: All study subjects showed corpoporphyrin level ≥20 µg/dL indicating lead poisoned, consisting of 57 (76%) females and 18 (24%) males. Out of 57 females, 18 (31.5%) were at reproductive age (20-35 years old), 29 (68.5%) females were ≥35 years old. Mean lead level in water was 0.0265 indicating lead polluted since it exceeded ≥0.008 mg/L. Lead level in fish was 2.16 mg/kg indicating lead polluted since it exceeded ≥0.3 mg/kg. Lead level in the shell was 0.57 mg/kg indicating lead polluted since it exceeded ≥0.3 mg/kg.
Conclusion: All study subjects are lead poisoned. Twelve water stations are lead polluted. Fish and shell are also lead polluted.

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THE ROLE OF DRUG-TAKING SUPERVISORS AND PATIENT ADHERENCE TO ANTI TUBERCULOSIS TREATMENT AT NGAWI HEALTH CENTER, EAST JAVA

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ABSTRACT

Background: Treatment adherence is essential for DOTS TB completion and cure. In Ngawi, East Java, DOTS TB treatment coverage has not reached the targeted level of 100%. Some patients did not adhere treatment or even did not complete it. This study aimed to investigate the association between the presence of drug-taking supervisors and patient adherence to DOTS TB treatment at Ngawi Health Center, East Java.
Subjects and Method: This was a analytic cross-sectional study conducted at Ngawi community health center, East Java. A sample of 41 patients undertaking TB DOTS treatment were selected for this study. The dependent variable was treatment adherence. The independent variabe was presence of drug-taking supervisor. The data were collected using a set of questionnaire and observation. The data was analyzed using Odds Ratio and Chi Square.
Results: There were 25 (94.7%) patients who adhered DOTS treatment and 6 (40%) patients who did not adhere DOTS treatment. Patient adherence to DOTS treatment was associated with the presence of drug-taking supervisor (OR= 16.67; 95% CI= 1.76 to 158.12; p=0.003).
Conclusion: Patient adherence to DOTS treatment is associated with the presence of drug-taking supervisor.

Keywords: drug-taking supervisor, treatment adherence, tuberculosis, patient

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ASSOCIATION BETWEEN EXPOSURE TO ENVIRONMENTAL TOBACCO SMOKE AND THE RISK OF UNCONTROLLED ASTHMA IN CHILDREN

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ABSTRACT

Background: Studies have shown that exposure of environmental tobacco smoke (ETS) is harmful to infant and child health. Cigarette smoke contains nicotine that may cause inflammation and airway obstruction resulting in uncontrolled asthma. Therefore, efforts to control tobacco are needed in society. The study aimed to determine the association between exposure to environmental tobacco smoke and the risk of uncontrolled asthma in children.
Subjects and Method: This was an analytic observational study with cross-sectional design. The study was carried out at three hospitals: Center for Healthy Lung Community (BBKPM), Surakarta, Dr. Moewardi Hospital, Surakarta, and Lung Health Center, Klaten, Central Java. A sample of 114 children aged 12-18 years old, diagnosed as having asthma based on medical record from January 2016 to March 2017 from the three hospitals, were selected for this study. The dependent variable was asthma control. The independent variable was environmental tobacco smoke exposure. Asthma control was assessed by Asthma Control Test (ACT), with a score less than 20 classified as uncontrolled asthma and a score greater or equal to 20 classified as controlled asthma. The data on ETS were collected by questionnaire. The data were analyzed usig Odds Ratio and Chi Square test.
Results: The asthmatic children under study had mean age= 15 years. Male= 47.4%. Female= 52.6%. Exposure to ETS was associated with an increased risk of uncontrolled asthma in asthmatic children (OR= 3.20; 95% CI= 1.40 to 6.90; p= 0.003).
Conclusion: Children who are exposed to environmental tobacco smoke (ETS) have a higher risk of uncontrolled asthma. Therefore, a free-smoking area is needed for children with asthma.

Keywords: asthma, environmental tobacco smoke, uncontrolled asthma

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PREVALENCE STUDY OF INTESTINAL WORM IN PRIMARY SCHOOL CHILDREN IN KURANJI COASTAL AREA, LOMBOK, WEST NUSA TENGGARA

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ABSTRACT

Background: Intestinal worm infection among school children has become one of the major public health problems in Indonesia and worldwide. Intestinal worm infection has been widely known as associated with poor environmental sanitation, poor hygiene, lack of access to clean water, which lead to poor nutritional status, poor academic achievement, high morbidity and mortality rates. This study aimed to estimate the prevalence of intestinal worm among primary school children in Kuranji coastal area, Lombok, West Nusa Tenggara.
Subjects and Method: This was a descriptive cross-sectional study. The study was carried out in Kuranji coastal area, Lombok, West Nusa Tenggara, in May 2017. Stool specimens from 144 primary school children in Kuranji, Lombok, were collected as sample and examined. Intestinal worm examination was carried out by Kato Katz method. Prior to specimen collection, information about the purpose of the study was provided. Small stool containers with name label were distributed to the study subjects. In addition to microscopic examination, environmental examination was carried out. Albendazole 400 mg and Pirantel pamoat 125 mg were administered to primary school students who were identified as infected with intestinal worm.
Results: Out of 144 small stool containers distributed, 115 stools were collected and examined. Among 115 stools examined, 24 (20.87%) students had been infected by *Trichuris trichiura,* 5 (4.35%) students had been infected by *Ascaris lumbricoides,* and 7 (6.09%) students had been infected by *Trichuris trichiura* and *Ascaris lumbricoides*.
Conclusion: Approximately one out of three primary school children in Kuranji coastal area, Lombok, are infected by intestinal worm. There is a strong need for early detection, health education, and effective treatment to reduce infection, morbidity rate, and mortality rate due to intestinal worm.

Keywords: prevalence, intestinal worm, primary school, children

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ASSOCIATION BETWEEN PARTICIPATION IN HIV/ AIDS PEER GROUP, STIGMA, DISCRIMINATION, AND QUALITY LIFE OF PEOPLE LIVING WITH HIV/ AIDS

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ABSTRACT

Background: The quality of life of people living with HIV/ AIDS (PLH) is of public health concern and calls for attention.The quality of life of PLH may be affected by stigma and discrimination. Peer group of PLHs may have an important role in improving the quality of life of PLHs. This study aimed to investigate the association between participation in HIV/ AIDSpeer group, stigma, discrimination, and quality of life of PLHs.
Subjectsand Method: This was an analytic and observational study with cross sectional design. This study was conducted in Tulungagung, East Java, from November, 2016 to January, 2017. A total of 65 PLHs participating in HIV/ AIDS peer group and 35 PLHs not participating in HIV/ AIDS peer group were selected by fixed exposure sampling. The dependent variable was quality of life of PLHs. The independent variables were participation in HIV/ AIDS peer group, stigma, and discrimination. The data were collected by a set of questionnaire and analyzed using path analysis model.
Results: Participation in HIV/ AIDS peer group ($b=0.27$; $p<0.001$), social support ($b=0.43$; $p<0.001$), and family support ($b=0.18$; $p=0.021$), had positive associations with a decrease in stigma and discrimination towards PLHs. Higher income ($b=0.33$; $p=0.026$), higher education level($b=0.21$; $p<0.001$), less stigma and discrimination ($b=0.33$; $p<0.001$), had positive associations with quality of life of PLHs. Core self evalutionshowed positive association with quality of life of PLHs ($b=0.31$; $p<0.001$).
Conclusion: Participation in HIV/ AIDS peer group, social support, and family support, are positively associated with a decrease in stigma and discrimination towards PLHs. Higher income, higher education, less stigma and discrimination, are positively associated with quality of life of PLHs. Core self evalutionis positively associated with quality of life of PLHs.

Keywords: HIV/ AIDS peer group, stigma, discrimination, social support, family support, quality of life

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RISK FACTORS OF GONORRHOEA AMONG FEMALE INDIRECT SEX WORKERS

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ABSTRACT

Background: Gonorrhoea is one of sexually transmitted infections (STI) with high incidence, besides chlamydia, syphilis, and trichomoniasis. STIs are spread predominantly by sexual context including vaginal, anal, and oral. STIs have a profound impact on sexual and reproductive health worldwide. STIs can increase the risk of HIV acquisition three fold or more. This study aimed to determine the risk factors of gonorrhoea among female indirect sex workers.

Subjects and Method: This was a case control study carried out in Wonosobo district, Central Java, from April to May 2017. A sample of 84 female indirect sex workers were selected for this study consisting of 42 cases of gonorrhea and 42 control. The dependent variable was gonorrhoea. The independent variables were sex combination and condom use. Data on gonorrhoea was collected from STI clinic. The other data were collected by questionnaire. The data were analyzed using logistic regression.

Results: The risk of gonorrhoea among female indirect sex workers increased with sex combination practice (OR=3.17; p=0.027; 95% CI= 1.14 to 8.82) and absence of condom use (OR= 8.04; 95% CI= 2.30 to 28.12; p=0.001).

Conclusion: The risk of gonorrhoea among female indirect sex workers increases with sex combination practice and absence of condom use.

Keywords : gonorrhoea, sex combination, condom use, female, indirect sex workers

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MEDICAL WASTE MANAGEMENT AT SAMUEL J. MOEDA NAVAL HOSPITAL KUPANG, NUSA TENGGARA TIMUR

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ABSTRACT

Background: Hospital is a public health service agency that produces daily medical waste, especially solid waste that must be handled properly. Although the Indonesian Naval Hospital Samuel J. Moeda has implemented waste management and disposal, management is still ineffective in light of the lack of managerial resources, basic management processes, and incinerator unavailability as a final waste management tool. This study aimed to analyze the management of medical waste starting from input, process, and output, at Samuel J. Moeda Naval Hospital, Kupang, Nusa Tenggara Timur.
Subjects and Method: This study was descriptive with qualitative approach. It was conducted at Samuel J. Moeda Naval Hospital, Kupang, Nusa Tenggara Timur. A sample of 14 informants were selected for this study. The data were collected by in-depth interview, direct obesrvation, and document review. Checklist sheets were used to assist direct observation.
Results: Waste management was not well-performed with limited facilities and infrastructure, unspecified and inadequate budgeting. The process of solid medical waste management was not optimally performed, and there were some errors found during the process. Similarly, the output of solid medical waste management did not meet the standards set by the Minister of Health Regulation No. 1204/ 2004. It appears that waste management issues received little attention from the hospital management.
Conclusion: Medical waste management at Samuel J. Moeda, Naval Hospital, Kupang has not been well-performed. The hospital can pay attention to the potential of medical waste recycle for extended hospital purposes. Recruitment, education, and training, of medical waste management staff are urgently needed. Routine waste management evaluation is also needed to help create a healthy hospital environment.

Keywords: solid medical waste, management, hospital

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THE EFFECT OF WASTEWATER DISPOSAL MANAGEMENT SYSTEM ON POPULATION HEALTH AT TIBAR VILLAGE, BAZARTETE SUB-DISTRICT, LIQUIÇA DISTRICT, TIMOR-LESTE

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ABSTRACT

Background: Poor waste disposal management is an important public health issue in developing countries including Timor Leste. Data from Posto Saúde Tibar, Liquiça sub-district, Liquiça district, Timor Leste showed that people who resided near final waste disposal were often affected by infectious diseases such as malaria acute respiratory infection, dengue, diarrhea, and skin disease. The purpose of this study was to determine the effect of wastewater disposal management system on population health at Tibar village, Bazartete sub-district, Liquiça district, Timor Leste.
Subjects and Method: This was a cross setional study conducted at SucoTibar, Bazartete sub-district, Liquiça district, Timor Leste. A sample of 34 families were selected for this study. The dependent variable was population health status. The independent variables were reduce, reuse, and recycle management system. Data were collected by questionnaire and observation sheet. The data were analyzed by multiple logistic regression.
Results: Absence of reduce (OR= 0.33; 95% CI= -1.53 to 2.19; p=0.004), reuse (OR= 0.23; 95% CI= -1.59 to 2.13; p= 0.009), and recycle (OR= 0.22; 95% CI= -1.64 to 2.08; p= 0.020) in the management system were associated with poorer population health status.
Conclusion: Absence of reduce, reuse, and recycle in the management system are associated with poorer population health status.

Keywords: reduce, reuse, recycle, management system, population health status

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FLUORIDE IN DRINKING WATER: A COMPARISON BETWEEN TWO AREAS IN SELANGOR AND KUALA LUMPUR, MALAYSIA

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ABSTRACT

Background: The fluoridation of drinking water is a systemic approach by health authorities to eradicate dental-related problems among the population at large. However, numerous studies have shown that consumption of high levels of fluoride from unchecked or untested sources may lead to dental fluorosis, which, in severe form, leads to brownish mottling of the teeth. Children aged between 6 months to 2 years who are exposed to high levels of fluoride (more than 1.5 mg/L) may suffer from this abnormality. Fluoride levels in a few Malaysian states were above the recommended levels and this may be a factor contributing to the higher prevalence of dental fluorosis among the population. This study aimed to determine levels of fluoride in drinking water between two areas, one in Selangor (Seri Serdang) and the other in Kuala Lumpur (Kampung Pandan).
Subjects and Method: A cross sectional study was conducted in Seri Serdang, Selangor and Kampung Pandan, Kuala Lumpur involving a total of 111 water samples (71 from Seri Serdang, 40 from Kampung Pandan). Samples were analyzed using a HACH brand direct reading spectrophotometer model DR 1900.
Results: Mean fluoride levels in drinking water for both areas did not exceed the recommended range (0.4 – 0.6 mg/L). Mean fluoride level in Seri Serdang was 0.49 ± SD 0.12 mg/L, while in Kampung Pandan, it was 0.35 ± SD 0.01 mg/L.
Conclusion: Mean level of fluoride was low or within the stipulated range. A more thorough study is needed to determine other intakes of fluoride that may influence the formation of dental fluorosis.

Keywords: fluoride, drinking water, Seri Serdang, Kampung Pandan

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DEPRESSION, ANXIETY AND STRESS AMONG ADULTS IN PUTRAJAYA, MALAYSIA: A CROSS-SECTIONAL STUDY

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ABSTRACT

Background: Mental health problem is rising globally, affecting the function and quality of life of the sufferers. In 1996, National Health Morbidity Survey (NHMS) showed that the prevalence of Malaysian aged 16 years and above with mental illness was 10.7% but in 2015, the prevalence had increased to 29.2%. The aim of this study was to determine the prevalence of depression, anxiety and stress, and their associated sociodemographic and other factors.
Subjects and Method: This study was a cross-sectional study using data from the ongoing Mental Health Screening and Health Status Screening Programs among adults in Putrajaya, Malaysia. Data was obtained from 576 study subjects who attended the clinic via self-administered questionnaire. Mental Health Screening questionnaire which consisted of Depression Anxiety Stress Scale (DASS-21) and Health Status Screening questionnaire which consisted of medical history, smoking, alcohol consumption, drug abuse, history of violence, duration of exercise per week, and body mass index (BMI) was utilized in this study.
Results: The prevalence of depression, anxiety, and stress were 20.5%, 31.6%, and 10.1%, respectively. Mean depression, anxiety, and stress score were significantly different among study subjects with history of being abused with p= 0.006, p= 0.001, and p= 0.001 respectively. Marital status was the only factor that was significantly associated with anxiety and stress score with p= 0.025 and 0.029 respectively, but was not significantly associated with depression score (p= 0.088). Other factors were not statistically associated with depression, anxiety, and stress.
Conclusion: History of being abused and single was associated with the prevalence of depression, anxiety, and stress. However, further study is needed to investigate other significant factors of depression, anxiety, and stress for future intervention.

Keywords: depression, anxiety, stress, adults, Putrajaya

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RISK FACTORS OF TYPE 2 DIABETES MELLITUS IN YOGYAKARTA

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ABSTRACT

Background: Diabetes Mellitus (DM) is a non infectious disease with an increasing trend in Indonesia. This study aimed to investigate the risk factors of Type 2 Diabetes Mellitus in Yogyakarta.
Subjects and Method: This was a case control study conducted in Yogyakarta. A sample of 80 study subjects consisting of 40 patients with DM and 40 without DM were selected for this study. The dependent variable was DM status. The independent variables were age, sex, and family history. Data were collected by questionnaire and analyzed by multiple logistic regression.
Results: Age ≥40 years old (OR=31.22; p=0.032), female (OR= 7.32; p= 0.055), and family history (OR= 13.6; p= 0.054) were associated with an increased risk of type 2 Diabetes Mellitus.
Conclusion: Age ≥40 years old, female, and family history are risk factors of type 2 Diabetes Mellitus.

Keywords: Type 2 Diabetes Mellitus, age, sex, family history

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ART THERAPY FOR PEOPLE WITH AUTISM

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ABSTRACT

Background: Art therapy is a technique used in mental health profession in which patients with special needs use creative process facilitated by the art therapist to explore patients' interpersonal and art skills. Art therapy teaches knowledge of visual art (drawing and painting) and the creative process involved is not only beneficial for fine motor skills development but also assists in dealing with emotions. The objectives were to identify interpersonal skills, to develop art skills and to increase self-esteem through art therapy activities.
Subjects and Method: This was a qualitative study. A series of art therapy workshop were conducted in University of Malaya in collaboration with Malaysian Rehabilitation Council, Maybank Foundation, and University of Malaya. A number of 38 participants from Malaysian Rehabilitation Council who were autistic were invited to University of Malaya for the art therapy workshop. Their age range was from 8 - 17 years old and consisted of Malays, Chinese and Indians. It was a participant observer study in which the researcher studied the life of a group by sharing in its activities. Art therapy workshop was conducted for 6 months duration twice a month and each session was for 4 hours. Art template, art materials and a list of activities were given to each participant. Throughout the sessions, the way participants communicate and interact with researcher were documented to identify interpersonal skills. The development of art skills was through the teaching of art using the different art template for each session.
Results: From the outcome of the artwork, participants showed increased self-esteem as their art skills improved throughout the art sessions.
Conclusion: Art therapy is able to develop interpersonal skills, art skills and increase self-esteem of people with autism.

Keywords: Art therapy, autism, interpersonal skills, art skills, self-esteem

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TOPIC II:

HEALTH PROMOTION AND BEHAVIOR

EFFECT OF PERSONAL FACTORS, FAMILY SUPPORT, POCKET MONEY, AND PEER GROUP, ON SMOKING BEHAVIOR IN ADOLESCENTS IN SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Indonesia is the third largest country with current smokers in the world, including young smokers. It is widely known that smoking is hazardous to health and detrimental to economy. Surakarta is one of the major cities in Central Java where the prevalence of current smokers has been increasing among adolescents. This study aimed to determine the effect of personal factors, family support, pocket money, and peer group, on smoking behavior in adolescents in Surakarta, Central Java.
Subjects and Method: This was an analytic observational study using cross-sectional design. This study was carried out in 5 sub-districts in Surakarta, Central java, from February to March 2017. A sample of 50 adolescent smokers and 150 adolescent non-smokers was selected for this study by fixed disease sampling. The dependent variable was current smoking status. The independent variables were cigarette availability, peer-group, family support, pocket money, cigarette advertisement, attitude toward smoking, subjective norm, perceived preventive behavioral control, and intention. The data were collected by a set of questionnaire. The data were analyzed by path analysis.
Results: Smoking behavior was affected by strong intention (b= 3.7; 95% CI= 2.5 to 4.9; p<0.001), and weak perceived behavioral control (b= 3.1; 95% CI= 1.7 to 4.5; p<0.001). Intention to smoke was affected by weak perceived preventive behavioral control (b= 2.1; 95% CI= 1.1 to 3.2; p<0.001), weak preventive subjective norm (b= 1.8; 95% CI= 0.7 to 2.9; p= 0.001), negative attitude (b= 1.9; 95% CI= 0.8 to 2.9; p<0.001), and exposure to cigarette advertisement (b= 1.6; 95% CI= 0.5 to 2.6; p= 0.004). Weak perceived preventive behavioral control was affected by pocket money ≥ Rp 10.000 (b= 1.3; 95% CI= 0.5 to 2.0; p= 0.001). Weak preventive subjective norm was affected by weak family support (b= 2.1; 95% CI= 1.3 to 2.8; p<0.001) and smoker peer-group (b= 1.4; 95% CI= 0.6 to 2.1; p<0.001). Cigarette advertisement was affected by cigarette availability (b= 0.7; 95% CI= 0.1 to 1.3; p= 0.028).
Conclusion: Smoking behavior was directly affected by strong intention and weak perceived behavioral control. Smoking behavior was indirectly affected by weak preventive subjective norm, negative attitude, exposure to cigarette advertisement, pocket money ≥ Rp 10.000, weak family support, smoker peer-group, and cigarette availability.

Keywords: path analysis, smoking behavior, intention, adolescents

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HEALTH BELIEF MODEL ON PSYCHOSOCIAL FACTORS INFLUENCING HIV/AIDS PREVENTION BEHAVIOR ON LESBIAN COMMUNITY IN SURAKARTA

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ABSTRACT

Background: HIV/AIDS keeps on becoming a global problem. Even though there are some scientific breakthroughs on the disease and how to prevent, most people are still under the risk to contract it. The number of HIV/AIDS incidences on lesbian is still low, up to the point of considering them as low risk. This study aimed to analyze Health Belief Model on the psychosocial factors that influence HIV/AIDS prevention behavior in lesbian community in Surakarta.
Subjects and Method: This was an analytic qualitative study with phenomenology approach, conducted at Talita Kum Community, Surakarta. Key informant in this study was the Head of Talita Kum Community, with their members as main informants, and supporting informants from the health workers, Non-Government Organization and Regional Commission on AIDS Prevention (KPAD), selected by purposive and snowball sampling. The data were collected by in-depth interview, non-participating observation, and document review. The data were analyzed by Miles and Huberman method.
Results: The lesbian community in Surakarta is quite knowledgeable on the HIV/AIDS concept. But they still did not have enough understanding of how to prevent it. This could be very beneficial to lessen the chance of HIV from spreading and evolving into AIDS. The study result stated that the lesbian community did not consider themselves to be on the risk. Therefore, they lack the preventing method. However, bisexual woman considered herself to be at high risk; therefore, she regularly conducted medical check-up.
Conclusion: The knowledge of HIV/AIDS risk factors on lesbian have to be socialized so they could take the proper prevention steps.

Keywords: lesbian, health belief model, psychosocial factor

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PRECEDE-PROCEED THEORY REGARDING SOCIO-CULTURAL ASPECTS THAT INFLUENCE THE TREATMENT OF HEALTHY REPRODUCTION ORGANS AMONG SENIOR HIGH SCHOOL FEMALE STUDENTS IN SURAKARTA

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ABSTRACT

Background: The group that has been vulnerable to the abandonment of reproductive health rights in Indonesia is adolescents. The lack of adolescents' awareness toward their behaviors in maintaining genital organs cleanliness is due to socio-cultural limitations might cause negative impact toward their reproductive health. This study aimed to analyze the socio-cultural aspects that influenced the behaviors in treating healthy reproductive organs among female senior high school students in the City of Surakarta.
Subjects and Method: This was a mixed-method study with quantitative and qualitative approach. This study was conducted in State Senior High School located in the City of Surakarta, from February to March 2017. A total of 120 subjects were selected by stratified random sampling. In addition, the sample also included 5 mothers and fathers who had been selected by purposive sampling. The dependent variable was the behaviors in treating reproductive organs. The independent variables were knowledge toward reproduction organ health, family support, toilet/ bathroom availability, clean water availability, culture and information exposure. The dependent and independent variables were collected by a set of questionnaire and analyzed by path analysis. The qualitative data were collected by in-depth interview and analyzed by Miles Huberman method.
Results: The behaviors in treating reproductive organ were influenced by good knowledge (b= 0.21; SE= 0.09; p= 0.020), high information exposure (b= 0.20; SE= 0.07; p= 0.005), positive culture (b= 0.15; SE= 0.07; p= 0.039), toilet/ bathroom availability (b= 0.21; SE= 0.07; p= 0.026), clean water availability (b= 0.14; SE= 0.08; p= 0.073) and strong family support (b= 0.16; SE= 0.08; p= 0.041). Then, the knowledge of reproductive health was influenced by high information exposure (b= 0.31; SE= 0.07; p<0.001) and positive culture (b= 0.16; SE= 0.07; p= 0.016).
Conclusion: The behaviors in treating reproductive organs are influenced by good knowledge, high information exposure, positive culture, toilet availability, clean water availability and strong family support. The knowledge of reproductive health are influenced by high information exposure and positive culture.

Keywords: PRECEDE-PROCEED, path analysis, socio-culture, reproductive health

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PATH ANALYSIS ON THE FACTORS AFFECTING PEOPLE'S BEHAVIOR IN HIV/AIDS COUNTERMEASURE ON PEOPLE LIVING WITH HIV/AIDS (PLWHA) IN SOLO PLUS PEER SUPPORT GROUP, SURAKARTA

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ABSTRACT

Background: HIV or *Human Immunodeficiency Virus* is a virus that infects white blood cells so the person's immunity declining thus causing it to become AIDS. HIV/AIDS countermeasure is far more effectively done by people living with HIV/AIDS (PLWHA) accompanied by good attitude and peer support, family, and health workers, Regional AIDS Countermeasure Commission, perceived behavioral control, and positive intention. The study aimed to analyze factors affecting the attitude in HIV/AIDS countermeasure on PLWHA in Solo Plus Peer Support Group (PSG) Surakarta with *theory of planned behavior application.*
Subjects and Method: The study design was analytic observational with cross sectional study approach. The location of the study was Solo Plus Peer Support Group Surakarta. Time of study was from January-February 2017. There was a total of 100 PLWHA as the sample, and the study employed purposive sampling technique. The dependent variable was the attitude towards HIV/AIDS countermeasure. The independent variables were the attitude, peer, family, health workers, Regional AIDS Countermeasure Commission support, perceived behavioral control and their intention. The variables were measured with questionnaires. Data analysis technique used was path analysis.
Results: HIV/AIDS countermeasure attitude affected by intention(b= 0.27; SE= 0.10; p= 0.012), peer support (b= 0.26; SE= 0.14; p= 0.066), AIDS Countermeasure Commission support (b= 0.10; SE= 0.10; p= 0.321), health workers support (b= 0.25; SE= 0.14; p= 0.073) and perceived behavioral control (b= 0.23; SE= 0.13; p= 0.065). Intention affected by attitude (b= 0.28; SE= 0.15; p= 0.059), peer support (b= 0.29; SE= 0.13; p= 0.026), family support (b= 0.16; SE= 0.09; p= 0.090) and perceived behavioral control (b= 0.21; SE= 0.11; p= 0.090).
Conclusion: HIV/ AIDS countermeasure behavior was very much affected by the intention, peer support, AIDS Countermeasure Commission support, health worker support, and perceived behavioral control. Their intention was affected by attitude, peer support, family support, and perceived behavioral control.

Keywords: HIV, PLWHA, TPB, countermeasure

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BIOPSHYCHOSOCIAL AND ECONOMIC DETERMINANTS OF PERSONAL HYGIENE IN THE PREVENTION OF DIARRHEAL DISEASES IN SRAGEN DISTRICT, CENTRAL JAVA

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ABSTRACT

Background: Poor environmental sanitation and personal hygiene have been shown to be associated with increased risk of diarrheal disease. Poor personal hygiene that is associated with an increased risk of diarrheal disease may be explained by the constructs of Health Belief Model, such as perceived susceptibility and perceived seriousness. This study aimed to examine biopshychosocial and economic determinants of personal hygiene in the prevention of diarrheal diseases.
Subjects and Method: This was an analytic observational study with case control design. This study was conducted at Mondokan, Gesi, and Sambungmacan Health Centers, Sragen District, Central java, from January to March, 2017. A sample of 150 subjects, consisting of 50 cases of diarrheal disease during the past month and 100 subjects without diarrheal disease, was selected in this study by purposive sampling. The dependent variable was prevention behavior of diarrheal disease. The independent variable included perceived susceptibility, seriousness, threat, benefit, barrier, cues to action, and self-efficacy. The data was collected using a pre-tested questionnaire, and analyzed by path analysis model.
Results: There were positive, and statistically significant effects of perceived seriousness (b= 0.26; SE= 0.06; p= <0.001), threat (b= 0.29; SE= 0.06; p= <0.001), benefit (b= 0.21; SE= 0.06; p= <0.001), barrier (b= -0.12; SE= 0.08; p= 0.032), cues to action (b= 0.17; SE= 0.07; p= 0.003), and self-efficacy (b= 0.28; SE= 0.14; p= <0.001) on prevention behavior of diarrheal disease. There were positive, indirect, and statistically significant effect of perceived susceptibility (b= 0.55; SE= 0.06; p= <0.001), seriousness (b= 0.34; SE= 0.06; p= <0.001), and benefit (b= 0.12; SE= 0.07; p= 0.025) on prevention behavior of diarrheal disease, via perceived threat.
Conclusion: Perceived seriousness, threat, benefit, barrier, cues to action, and self-efficacy, are direct determinants of prevention behavior of diarrheal disease. Perceived susceptibility, seriousness, and benefit, are indirect determinants of prevention behavior of diarrheal disease.

Keywords: biopshychosocial, economy, personal hygiene, health belief model

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EFFECTS OF FRUIT AND VEGETABLE CONSUMPTION, A SOCIO-ECONOMIC FACTOR OF ADOLESCENT OBESITY IN SURAKARTA CITY

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ABSTRACT

Background: Adolescent obesity is an escalating global epidemic. It is estimated that 70% of obese teenagers aged 10 to 13 years are at risk of being obese over their life course. Obesity becomes a problem because it brings complications and it is associated with accelerated atherosclerosis, increased incidences of degenerative diseases, such as cardiovascular diseases, stroke and diabetic. The purpose of this study was to decribe the effects of fruit and vegetable consumption, a socio-economic factor of adolescent obesity.
Subjects and Method: The study was an analytical observation using case control design. The study was conducted in Surakarta city in February to March 2017, and it involved 140 subjects. Samples were collected using purposive sampling technique with fixed disease sampling. The independent variables under the study were fruit and vegetable consumption, mothers' education, family income, and age. The dependent variable of the study was obesity. Data was collected using questionnaire, information on the fruit and vegetable consumption was gathered through a 24-hour food recall, and weight and height were measured. The data was analyzed using path analysis.
Results: The statistic finding showed that obesity was affected by fruit and vegetable consumption (b= -0.01; SE <0.01; p= 0.010), and age (b= -0.28; SE= 0.14; p= 0.048), and the fruit and vegetable consumption was affected by the mothers' education (b= 14.118; SE= 9.39; p= 0.133) and family income (b= -0.35; SE= 0.44; p= 0.431).
Conclusion: Fruit and vegetable consumption and age are directly associated with adolescent obesity. Mothers' education and family income are indirectly associated with adolescent obesity.

Keywords: Adolescent, fruit and vegetable consumption, socio-economic, obesity

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THE INFLUENCE OF PERSONAL FACTOR, PARENTAL SUPPORT AND PERCEIVED VALUE OF CHILDREN ON EARLY MARRIAGE IN TROWULAN SUBDISTRICT MOJOKERTO REGENCY

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ABSTRACT

Background: According to *United Nations Development Economic and Social Affairs,* Indonesia is 37th country in the world and 2nd in Southeast Asia after Cambodia with high percentage of early marriage. World Health Organization expects Indonesian government to be more committed to decrease maternal and infant mortality rates as the impacts of early marriage. This study aimed to discover the influence of personal factor, parental support and perceived value of children on early marriage in Trowulan Subdistrict Mojokerto Regency.
Subjects and Method: This was an analytic observational study with case control design. Subjects were women of reproductive age as case (married at the age of ≤20) and control (married at the age of 21-25), each consisted of 60 women. The dependent variable was early marriage and the independent variables were levels of education, premarital sexual behavior, perceived behavioral control, perceived benefits, parental support and perceived value of children. The data were analyzed by path analysis.
Results: Perceived behavioral control (b= -1.27; 95% CI= -2.20 to -0.33; p= 0.008), perceived benefits (b= -1.06; 95% CI= -1.97 to -0.16; p= 0.020), parental support (b= -1.28; 95% CI= -2.16 to -0.39; p= 0.005) and perceived value of children (b=- 2.94; 95% CI= -5.20 to -0.68; p= 0.011) had direct influence on early marriage and were statistically significant. The levels of education had indirect influence on early marriage based on the figures of perceived behavioral control (b= 0.92; 95% CI= 0.17 to 1.68; p= 0.016) and perceived benefits (b= 1.31; 95% CI= -0.53 to 2.17; p= 0.001). Sexual behavior was influenced by perceived behavioral control (b= 1.35; 95% CI= 0.52 to 2.17; p= 0.001).
Conclusion: Early marriage is influenced by perceived behavioral control, perceived benefits, parental support and perceived value of children. Levels of education influence early marriage based on perceived behavioral control and perceived benefits. Premarital sexual behavior is influenced by perceived behavioral control.

Keywords: Personal factor, parental support, perceived value of children, early marriage

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BIOPSYCHOSOCIAL AND ECONOMIC DETERMINANTS OF CONDOM USE AMONG GAY IN TULUNGAGUNG DISTRICT, EAST JAVA

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ABSTRACT

Background: HIV/ AIDS epidemics emerged among men who have sex with men, particularly among gay, due to unsafe anal sex practice. As studies have shown having sex without condom increases the risk of HIV/ AIDS 18 times as many as per-vaginal sex. This study aimed to examine biopsychosocial and economic determinants of condom use among gay in Tulungagung district, East Java.
Subjects dan Method: This was an analytic observational study using cross-sectional design. The study was conducted in Tulungagung district, East Java, from January to February 2017. A sample of 165 gays was selected by random sampling out of all 300 gays in the community. The independent variables were perceived susceptibility, perceived seriousness, perceived benefit, perceived barrier, and self- efficacy. The dependent variable was condom use. The data were collected by a set of pre-tested questionnaire, and analyzed by multiple logistic regression.
Results: Perceived seriousness (OR= 2.83; 95% CI= 1.14 to 7.04; p= 0.025), perceived benefit (OR= 4.90; 95% CI= 2.11 to 11.36; p<0.001), self-efficacy (OR= 4.48; 95% CI= 2.03 to 9.89; p<0.001), increased the likelihood of condom use. Perceived susceptibility (OR= 1.02; 95% CI= 0.40 to 2.59; p= 0.972) increased the likelihood of condom use, although it was not statistically significant. Perceived barrier (OR= 0.36; 95% CI= 0.13 to 1.00; p= 0.050) decreased the likelihood of condom use, and it was statistically significant.
Conclusion: Perceived seriousness, perceived benefit, and self- efficacy, increased the likelihood of condom use among gay. Perceived barrier decreased the likelihood of condom use.

Keywords: biopsychosocial, determinant, condom use, HIV/ AIDS, Gay

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BIOPSYCHOSOCIAL DETERMINANTS OF PREGNANT WOMEN'S BEHAVIOR IN CONDUCTING HUMAN IMMUNODEFICIENCY VIRUS/ ACQUIRED IMMUNODEFICIENCY SYNDROME (HIV/AIDS) TESTS IN MADIUN

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ABSTRACT

Background: Human Immunodeficiency Virus (HIV) is top ranked infectious disease which causes death with high mortality and morbidity rates, and requires diagnosis and long-term therapy (WHO, 2013). In October 2016, Health Office of Madiun City stated that in 2015, there were 2,772 pregnant women, among those only 1,120 conducted HIV-AIDS tests and 4 of them declared HIV positive. These numbers indicated that the participations of pregnant women in conducting HIV-AIDS tests are not optimal. This study aimed to discover biopsychosocial determinants in conducting HIV-AIDS tests on pregnant women in Madiun.
Subjects and Method: This was an analytic observational study with case control design. A total of 108 samples of pregnant women in Madiun which consisted of 54 pregnant women who conducted HIV/AIDS tests as cases, and 54 pregnant women who did not conduct HIV/ AIDS tests as controls were collected by using fixed disease sampling. The device to gather the data was a set of questionnaire. Data analysis used Chi Square and path analysis.
Results: There were positive influence of family support (b= 1.57; 95% CI= 0.52 to 2.63; p= 0.004), information exposure (b= 1.14; 95% CI= 0.33 to 1.95; p= 0.006), perceived seriousness (b= 1.21; 95% CI= 0.14 to 2.28; p= 0.027), perceived vulnerability b= 1.12; 95% CI= 0.12 to 2.13; p= 0.028), perceived benefit (b= 1.28; 95% CI= 0.23 to 2.31; p= 0.017) on pregnant women's behavior in conducting HIV/ AIDS tests, and statistically significant. There were negative influence of family income (b= -0.73; 95% CI= -1.51 to 0.05; p= 0.067), perceived obstacles (b= -0.92; 95% CI= -1.99 to 0.15; p= 0.093) and statistically significant.
Conclusion: Family support, information exposure, family income, perceived seriousness, perceived vulnerability, perceived obstacles, and perceived benefit influence pregnant women in conducting HIV/ AIDS tests.

Keywords: determinants, bipsychosocial, HIV/ AIDS test

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EFFECT OF SEXUAL KNOWLEDGE AND ATTITUDE, EXPOSURE TO ELECTRONIC MEDIA PORNOGRAPHY, PEER GROUP, AND FAMILY INTIMACY, ON SEXUAL BEHAVIORS AMONG ADOLESCENTS IN SURAKARTA

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ABSTRACT

Background: Globalization has tremendous impact on adolescent behaviors, including sexual behavior. Sexual behaviors that exceed socially accepted norms may result in undesireable impact adolescent health. Many factors can affect the sexual behavior of adolescents, both from within and from outside the adolescent self. This study aimed to investigate the effect of sexual knowledge and attitude, exposure to electronic media pornography, peer group, and family intimacy, on sexual behaviors among adolescents.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was conducted at SMA Negeri Kota Surakarta, Central Java, from March to April 2017. A sample of 100 students were selected for this study by multi-stage sampling. The dependent variable was sexual behavior. The independent variables were sexual knowledge, attitude toward sex, exposure to electronic pornography, peer group, and family intimacy. The data were collected by a set of pre-tested questionnaire. Path analysis was employed for data analysis.
Results: Adolescent sexual behavior was affected by sexual knowledge (b=0.16; SE=0.05; p=0.006), attitude toward sex (b= 0.18; SE= 0.06; p= 0.005), exposure to electronic pornography (b= -0.13; SE= 0.05; p= 0.026), peer group (b= 0.06; SE= 0.03; p= 0.042), and family intimacy (b= 0.07; SE= 0.03; p= 0.038). Sexual knowledge was affected by exposure to electronic pornography (b= -0.20; SE= 0.09; p= 0.037), and peer group (b= 0.14; SE= 0.05; p= 0.005). Attitude toward sex was affected by exposure to electronic pornography (b= -0.21; SE= 0.08; p= 0.013), sexual knowledge (b= 0.14; SE= 0.08; p= 0.110), and group (b= 0.12; SE= 0.05; p= 0.009).
Conclusion: Sexual behavior of adolescents is directly affected by their sexual knowledge, attitude toward sex, exposure to electronic pornography, peer group, and family intimacy.

Keywords: sexual behavior, exposure to electronic pornography, PRECEDE PROCEED model, path analysis

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THE REPRESENTATION OF SOCIAL, ECONOMIC, PSYCHOLOGICAL, AND REPRODUCTIVE HEALTH CONDITION OF THE COMMERCIAL SEX WORKERS POST-CLOSING OF THE DOLLY COMPLEX IN SURABAYA

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ABSTRACT

Background: Dolly was the biggest red light district in Southeast Asia with more than 1000 (a thousand) women working as commercial sex workers. Because the district imposed a very negative effect to the surrounding inhabitants especially to children, therefore red light district area of Dolly and Jarak which are located in residential area had to be closed. The quality of life of the residents especially the commercial sex workers was very much affected after the district was closed. The study aimed to understand the representation of the social, economic, psychological, and reproductive health condition after the Dolly district in Surabaya was closed.
Subjects and Method: This was a qualitative descriptive study with phenomenology approach. This study was conducted in former red light districts of Dolly and Jarak in Surabaya from January 18-February 28, 2017. The informant of this study were commercial sex workers, former commercial sex workers, head of hamlet (RW), former pander of Dolly, Head of Civil Society Organization, healthcare workers, and Social Office of Surabaya City. The sampling technique used was snowball sampling, with in-depth interviews, observation, documentation study. The data were analyzed by interactive analysis model including data collection, data reduction, display and verification.
Results: The commercial sex workers characteristic prior and post closing of the district were around 28-43 years old, with elementary – senior high school educated. Most of the commercial sex workers were from outside the city with 1-5 customers/day. They charged Rp. 100-300 thousand (Dolly's commercial sex workers) per customer and Rp. 100-200 thousand/customer (Jarak's commercial sex workers). The representation of quality of life post-closing was poor, altered social condition, lack of interaction with others, the degradation of economic condition, poor psychological condition due to the economical problem, and reproductive health was less protected because they did not get regular examination like before the complex was closed.
Conclusion: The representation of quality of life in terms of the condition of social, economic, psychology, and reproductive health of the commercial sex workers post Dolly and Jarak closing were poor. Therefore, government intervention was very much needed to help improving the quality of life of the commercial sex workers.

Keywords: Commercial sex workers, social, economic, psychological, reproductive health

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THE INFLUENCE OF PERSONAL FACTOR, HUSBAND'S SUPPORT, HEALTH WORKERS AND PEERS TOWARD THE USE OF IVA SCREENING AMONG WOMEN OF REPRODUCTIVE AGE IN THE REGENCY OF KARANGANYAR

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ABSTRACT

Background: Cervix cancer has been one of the highest cancer cases and becomes one of the main problems in women's health throughout the world. The percentage of Women of Reproductive Age who performs early cancer detection is an indicator of success for health development. The Regency of Karanganyar is one of the regencies in the Province of Central Java with the percentage of Women of Reproductive Age who perform Visual Inspection with Acetic Acid (IVA) is equal to 5.50%. This percentage is still far below the target that has been set which is 10.00%.
Subjects and Method: This was an analytic observational study with cross-sectional design. This study was carried out in Regency of Karanganyar. The subjects who had been involved were 150 respondents and these subjects were selected by means of fixed disease sampling. This sampling resulted in 50 cases and 100 controls. The dependent variable was behavior of using IVA screening, while the independent variables were perceived susceptibility, perceived seriousness, perceived benefits, perceived obstacles, husband's support, health workers support, peer support, perceived threats and self-efficacy. In processing the data, the researchers implemented path analysis by means of Stata 13.
Results: The results of the study showed perceived threats (b= 0.08; 95% CI= <0.01 to 0.16; p= 0.043), perceived benefits (b= 0.05; 95% CI= <-0.01 to 0.117; p= 0.091), perceived obstacles (b= -0.49; 95% CI= -0.07 to 0.11; p= 0.091), self-efficacy (b= 0.04; 95% CI= -0.13 to 0.11; p= 0.125), perceived susceptibility (b= 0.23; 95% CI= 0.11 to 0.34; p <0.001), perceived seriousness (b= 0.11; 95% CI= 0.00 to 0.22; p= 0.049), husband's support (b= 0.14; 95% CI= -0.01 to 0.29; p= 0.068), health workers support (b= -0.23; 95% CI= -0.54 to 0.08; p= 0.149) and peer support (b= 0.18; 95% CI= -0.13 to 0.51; p= 0.256).
Conclusion: There is a direct influence from perceived benefits, perceived obstacles, perceived threats and self-efficacy toward behavior of using IVA screening. Then, there is indirect influence from perceived susceptibility, perceived seriousness, husband's support, health workers support and peer support toward behavior of using IVA screening.

Keywords: IVA, HBM, support, path analysis

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PRECEDE-PROCEED MODEL: PREDISPOSING, REINFORCING, AND ENABLING FACTORS AFFECTING THE SELECTION OF BIRTH ATTENDANT IN BONDOWOSO DISTRICT

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ABSTRACT

Background: Skilled birth attendant is one of the determinants of maternal and infant mortality. One of the primary causes of maternal mortality in Bondowoso District was the reliance on the traditional birth attendant (TBA). In 2016, the number of birth delivery attended by TBA reached 510 out of 10,326 deliveries. This study aimed to determine the predisposing, reinforcing, and enabling factors affecting the selection of birth attendant in Bondowoso.
Subjects and Method: This was an analytic observational study using case control design. The study was conducted at 5 community health centers in Bondowoso District, East Java, from April to May 2017. A sample of 160 delivering mothers, consisting of 110 mothers assisted by skilled birth attendants and 50 mothers assisted by traditional birth attendants, were selected for this study by fixed disease sampling. The dependent variable was the selection of birth attendant (skilled birth attendant vs. TBA). The independent variables were age, education, working status, ANC visit, tradition, and family support. The data were collected by a set of questionnaire. Path analysis was employed to analyze data.
Results: Age 20-34 years (b= -2.10; 95% CI= -3.96 to -0.25; p= 0.026), working outside the house (b= 2.23; 95% CI= 0.84 to 3.61; p= 0.002), ANC visit (b= 2.71; 95% CI= 0.80 to 4.62; p= 0.005), good tradition (b= 4.05; 95% CI=2.38 to 5.72; p<0.001) increased the likelihood of selecting skill birth attendant. Age 20-34 years (b= 2.54; 95% CI= 1.24 to 3.84; p<0.001) and maternal education ≥high school (b= 3.69; 95% CI= 2.47 to 4.92; p<0.001) increased ANC visit. Maternal education ≥ high school (b=0.74; 95% CI= -0.02 to 1.51; p= 0.059) increased age. Maternal education ≥ high school (b= 1.39; 95% CI= 0.63 to 2.14; p<0.001) increased the likelihood of mother working outside the house. Family support (b= 2.02; 95% CI= 1.21 to 2.82; p<0.001) increased the likelihood of good tradition.
Conclusion: Age 20-34 years, working outside the house, ANC visit, good tradition, directly increase the likelihood of selecting skill birth attendant.

Keywords: selection of birth attendant, predisposing, enabling, reinforcing factors

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HEALTH BELIEF MODEL FOR THE ANALYSIS OF FACTORS AFFECTING HYPERTENSION PREVENTIVE BEHAVIOR AMONG ADOLESCENTS IN SURAKARTA

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ABSTRACT

Background: Hypertension is an important public health issue in developed and developing countries. The incidence of hypertension continues to rise to a serious level. Raising awareness of the seriousness of hypertension among peer groups may be an important factor for preventive health behavior. This study aimed to examine the used of health belief model for the analysis of factors affecting hypertension preventive behavior among adolescents.
Subjects and Method: This study was an observational analytic study with cross sectional design. It was conducted at 5 Vocational High Schools (SMK) in Surakarta from April to May, 2017. A sample of 200 class X and XI SMK students aged 15-17 years was selected for this study by stratified random sampling. The dependent variable was hypertension preventive behavior. The independent variables were perceived susceptibility, perceived seriousness, perceived benefit, perceived barriers, cues to action, and self efficacy, with perceived threat as a mediating variable. The data were collected by a set of pre-tested questionnaire. Path analysis was employed for data analysis using SPSS AMOS 22.
Results: Perceived threat (b= 0.24, SE= 0.07, p= 0.002), perceived benefit (b= 0.24, SE= 0.10, p= 0.021), self efficacy (b= 0.40, SE= 0.23, p= 0.084), and cues to action (b= 0.45, SE= 0.15, p= 0.003) showed direct positive effects on hypertension preventive behavior. Perceived barrier (b= -0.26, SE= 0.10, p= 0.015) showed direct negative effect on hypertension preventive behavior. Perceived susceptibility (b= 0.27, SE= 0.09, p= 0.005), perceived seriousness (b= 0.29, SE= 0.09, p<0.001), and cues to action (b= 0.34, SE= 0.13, p= 0.008) showed indirect positive effects on hypertension preventive behavior.
Conclusion: Hypertension preventive behavior is positively and directly affected by perceived threat, perceived benefit, self, and cues to action. The preventive behavior is negatively and directly affected by perceived barrier. Perceived susceptibility, perceived seriousness, and cues to action indirectly and positively affect on hypertension preventive behavior.

Keywords: health belief model, hypertension, preventive behavior, adolescents

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PATH ANALYSIS ON THE ASSOCIATION BETWEEN PREDISPOSING, ENABLING, AND REINFORCING FACTORS, AND HOUSE SANITATION IN BENGKULU, SUMATERA

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ABSTRACT

Background: Poor sanitation is one of the primary causes of communicable diseases in the world. According to UNICEF (2012) 116 million people in Indonesia in 2010 were lacking in standard sanitation. In Bengkulu province, only 33.18% household in 2014 and 39.22% in 2015 had access to good sanitation. This coverage was lower than that of the national level at 62.14%. This study aimed investigating the association between predisposing, enabling, and reinforcing factors, and house sanitation in Bengkulu, Sumatera.
Subjects and Method: This was an analytic and observational study with cross sectional design. This study was conducted in Teluk Segara District, Bengkulu, Sumatera from November to December 2016. A total of 120 households were selected by fixed exposure sampling for this study. The dependent variable was household sanitation. The independent variables were family education, family income, health education, social capital, and health behavior. The data were collected by a set of questionnaire and analyzed by path analysis.
Results: Family education (b= 1.08; SE= 0.48; p= 0.024) and health education (b= 0.19; SE= 0.07; p= 0.007) had positive and statistically significant effect on household sanitation. Health education had positive and statistically significant effect on healthy behavior (b= 0.09; SE= 0.04; p= 0.018). Social capital had positive and marginally significant effect on healthy behavior (b= 0.05; SE= 0.03; p= 0.099). Family income (b= 0.14; SE = 0.45; p= 0.756) and family education (b= 0.15; SE= 0.25; p= 0.566) did not show significant effect on household sanitation.
Conclusion: Family education and health education had positive and statistically significant effect on household sanitation. Health education had positive and statistically significant effect on healthy behavior. Social capital had positive and marginally significant effect on healthy behavior. Family income and family education did not show significant effect on household sanitation.

Keywords: path analysis, predisposing, enabling, reinforcing factors, household sanitation

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EFFECT OF KNOWLEDGE, PEER GROUP, FAMILY, CIGARETTE PRICE, STIPEND, ACCESS TO CIGARETTE, AND ATTITUDE, ON SMOKING BEHAVIOR

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ABSTRACT

Background: Passive smokers inhale 75% of ambient smoke and 50% of exhaled smoke. A cigarette contains 4.000 poisonous chemical agents, at least 69 of which are carcinogenic. Therefore ambient tobacco smoke is detrimental to health. The purpose of this study was to analyze the effect of knowledge, peer group, family, cigarette price, stipend, access to cigarette, and attitude, on smoking behavior.
Subjects and Method: This was an analytic and observational study with cross sectional design. This study was conducted at School of Health Polytechnics, Surakarta, Central Java. A total of 105 male students was selected for this study. The dependent variable smoking status. The independent variables knowledge, peer group, family, cigarette price, stipend, access to cigarette, and attitude. The data were collected by a set of questionnaire, and were analyze by logistic regression model.
Results: High smoking peer group (OR= 3.21; 95% CI= 1.18- 8.72; p= 0.022), high stipend (OR= 3.66; 95% CI= 1.28-10.49; p= 0.016), convenient access to cigarette (OR= 3.02; 95% CI= 1.04 to 8.73; p= 0.042) increased the likelihood of smoking. High knowledge about tobacco smoking (OR= 0.35; 95% CI= 0.13-0.95; p= 0.039) and non-smoking family (OR= 0.16; 95% CI= 0.03 to 0.70; p= 0.015) decreased the likelihood of smoking. High price of cigarette (OR= 0.86; 95% CI= 0.23 to 3.19; p= 0.819) and possitive attitude (OR= 0.88; 95% CI= 0.33 to 2.36; p= 0.795) did not show statistically significant effect on smoking.
Conclusion: Smoking peer group, stipend, access to cigarette increase the probability of smoking. Knowledge about tobacco smoking and non-smoking family decrease the probability of smoking.

Keywords: knowledge, peer group, family, cigarette price, stipend, access to cigarette, attitude, smoking behavior

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BIOPSYCHOSOCIAL AND INSTITUTIONAL FACTORS ASSOCIATED WITH EXCLUSIVE BREASTFEEDING AMONG WORKING MOTHERS IN KLATEN, CENTRAL JAVA

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ABSTRACT

Background: Breast milk has an important role in health maintenance and survival of infants. It is acknowledged as the best food for infant. The World Health Organization has recommended exclusive breastfeeding (EBF) for infants until 6 months of age. However, many working mothers did not provide EBF to their infants. This study aimed to examine biopsychosocial and institutional factors associated with exclusive breastfeeding among working mothers, using health belief model and PRECEDE-PROCEED model.
Subjects and Method: This study was observational analytic with cross sectional design. It was conducted in Klaten District, Central Java, from March to April, 2017. A sample of 120 working mothers was selected for this study by simple random sampling. The dependent variable was exclusive breastfeeding. The independent variables were maternal education, perceived benefit, perceived barrier, self efficacy, family support, health personnel support, and availability of lactation room at workplace. The data were collected by a pre-tested questionnaire. Logistic regression was employed for data analysis.
Results: Maternal education (OR= 4.2; 95% CI= 1.09 to 11.51; p= 0.001), availability of lactation room at workplace (OR= 4.11; 95% CI= 1.21 to 14.29; p= 0.001), family support (OR= 6.25; 95% CI= 1.45 to 15.96; p<0.001), health personnel support (OR= 3.76; 95% CI= 1.43 to 16.06; p= 0.002), perceived benefit (OR= 2.30; 95% CI= 1.09 to 12.87; p= 0.044), self-efficacy (OR= 3.57; 95% CI= 1.21 to 14.29; p= 0.002) had positive effect on EBF. Perceived barrier (OR= 0.18; 95% CI= 0.64 to 0.76; p<0.001) had negative effect on the provision of EBF.
Conclusion: Maternal education, availability of lactation room at workplace, family support, health personnel support, perceived benefit, self-efficacy have positive effect on EBF. Perceived barrier has negative effect on the provision of EBF among working mothers.

Keywords: biopsychosocial factors, exclusive breastfeeding, PRECEDE-PROCEED model, health belief model

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EFFECTIVENESS OF PRACTICAL INTEGRATIVE MODULE IN EMPOWERING FAMILY EMPOWERING FAMILY OF CHILDREN WITH CEREBRAL PALSY

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ABSTRACT

Bacground: There is a lack of health care services for children with cerebal palsy (CP) in Indonesia. In addition, family of the children with CP are lacking in skills of CP services. A simple, practical, easily readable modul of CP services for families of children with CP has been developed. This study aimed to analyze effectiveness of practical integrative module in empowering family empowering family of children with CP.
Subjects and Method: This was a quasi experimental study, consisting of intervention and control groups without randomization. The study was conducted at Child Growth Clinic Dr. Soedjarwadi hospital, Klaten, and YPAC, Surakarta, Central Java. A sample of 100 families of children with CP was selected for this study by purposive sampling. The sample was divided into two groups: 50 families in the intervention group and 50 families in the control group. The independent variable was practical integrative module of CP handling, i.e. the intervention under study. The dependent variables were knowledge, attitude, and level of family empowerment in CP services. The data were collected by a set of questionnaire and analyzed by linear regression.
Results: After controlling for knowledge before intervention, average knowledge in the intervention group was 0.84 points higher than the control group (b= 0.84; 95% CI= 0.33 to 1.86; p = 0.002). The average attitude in the intervention group was 2.48 points higher than the control group (b= 2.48; 95% CI= 0.85 to 4.10; p= 0.003). The average level of family empowerment in the intervention group was 3.41 points higher than the control group (b= 3.41; 95% CI= 1.34 to 5.48; p= 0.001).
Conclusion: The integrative module of CP handling under study is effective in improving knowledge, attitude, and level of family empowerment in families with CP children.

Keywords: knowledge, attitude, empowerment, family, cerebral palsy, children, integrative module, cerebral palsy handling

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ASSOCIATION BETWEEN CIGARETTE ADVERTISEMENT, PEER GROUP, PARENTAL EDUCATION, FAMILY INCOME, AND POCKET MONEY WITH SMOKING BEHAVIOR AMONG ADOLESCENTS IN KARANGANYAR DISTRICT, CENTRAL JAVA

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ABSTRACT

Background: Adolescents are susceptible to positive and negative influences from the social environment. One of the negative influences is smoking behavior. Smoking in adolescents can have deleterous effect on health and academic achievement. This study aimed to determine the association between cigarette advertisement, peer group, parental education, family income, and pocket money on smoking behavior among adolescents.
Subjects and Method: This was an analytic observational study using cross-sectional design. This study was carried out in Colomadu Sub district, Karanganyar District, Central Java. A sample of 100 teenagers was selected for this study. The dependent variable was smoking behavior. The independent variables were exposure to cigarette advertisement, peer group, parental education, family income, and pocket money. The data were collected by a set of questionnaire. The data were analyzed by logistic regression.
Results: Smoking behavior in adolescents was associated with exposure to cigarette advertisement (OR= 22.58; 95% CI= 2.42 to 210.69; p= 0.006), peer group (OR= 44.00; 95% CI= 3.99 to 485.33; p= 0.002), parental education (OR= 36.92; 95% CI =3.12 to 427.81; p= 0.004), family income (OR= 0.09; 95% CI= 0.01 to 0.97; p= 0.047), and pocket money (OR= 10.56; 95% CI= 1.22 to 91.56; p= 0.032).
Conclusion: Smoking behavior in adolescents was associated with exposure to cigerrete advertisement, peer group, parental education, family income, and pocket money.

Keywords: cigarette advertisement, peer group, parental education, family income, pocket money

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EFFECTS OF PREDISPOSING, ENABLING, AND REINFORCING FACTORS ON THE UPTAKE OF VOLUNTARY COUNSELLING AND TESTING AMONG FEMALE SEX WORKERS IN GROBOGAN, CENTRAL JAVA

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ABSTRACT

Background: Human Immunodeficiency Virus (HIV) infection is a global public health issue. Global AIDS Response Progress Reporting (GARP) reported that in 2015, about 36.7 million people worldwide suffered from HIV-AIDS in all age groups. The highest number of HIV/AIDS cases occured in East Africa and South Africa. This study aimed to examine the effects of predisposing, enabling, and reinforcing factors on the uptake of voluntary counselling and testing (VCT) among female sex workers in Grobogan, Central Java.
Subjects and Method: This was an analytical observational study with cross-sectional design. It was conducted in Grobogan, Central Java, in July 2017. A sample of 142 female sex workers were selected for this study by exhaustive sampling. The dependent variable was uptake of VCT. The independent variables were attitude, perceived benefit, external motivation from others, and social support. The data were collected by a questionnaire and analyzed by multiple logistic regression.
Results: Positive attitude towards HIV status (OR= 6.09; 95% CI= 0.968 to 38.38; p= 0.054), positive perceived benefit (OR= 10.58; 95% CI= 1.48 to 76.93; p= 0.019), external motivation (OR= 8.30; 95% CI= 1.21 to 56.82; p= 0.031), and social support (OR= 9.45; 95% CI= 1.46 to 60.83; p= 0.018), positively affected uptake of VCT.
Conclusion: Positive attitude towards HIV status, positive perceived benefit, external motivation, and social support, positively affect uptake of VCT.

Keywords: HIV, Voluntary Counselling Testing, female sex workers

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HEALTH BELIEF MODEL AND PRECEDE PROCEED ON THE USE OF ANTENATAL CARE AND THE RISK OF PREECLAMPSIA IN KEDIRI, EAST JAVA

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ABSTRACT

Background: Preeclampsia is the leading cause of maternal death in developing countries. Maternal mortality rate (MMR) is still high in Indonesia. MMR was reported at 97.39 deaths/ 100,000 live births in East Java. This study aimed to determine the factors associated with the utilization of antenatal care and the risk of preeclampsia using Health Belief Model and PRECEDE PROCEED model.
Subjects and Method: This was an observational analytical study with case control. The study was conducted in Kediri District, East Java, from October 11, 2016 to March 8, 2017. A sample of 160 pregnant women were selected for this study using fixed disease sampling, consisting of 40 pregnant women with preeclampsia and 120 pregnant women without preeclampsia. The dependent variables were use of antenatal care and preeclampsia. The independent variables were perceived barriers, cues to action, and social support. The data were collected using questionnaire and analyzed by path analysis.
Results: Preeclampsia was negatively associated with the use of antenatal care (b= -0.91; 95% CI= -1.65 to -0.17; p= 0.015). The use of antenatal care was positively associated with existence of cues to action (b= 0.70; 95% CI= 0.03 to 1.36; p= 0.038) and strong social support (b= 0.72; 95% CI= 0.04 to 1.41; p= 0.038). The use of antenatal care was negatively associated with perceived barrier (b= -0.89; 95% CI= -1.56 to -0.22; p= 0.009).
Conclusion: Preeclampsia is associated with the use of antenatal care. The use of antenatal care is associated with cues to action, social support, and perceived barrier. Health Belief Model and PRECEDE PROCEED can be used to study factors associated with the use of antenatal care and the risk of the preeclampsia.

Keywords: the use of antenatal care, preeclampsia, Health Belief Model, PRECEED PROCEED model

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THE EFFECTS OF INFORMATION, KNOWLEDGE, AND ATTITUDES ABOUT REPRODUCTIVE HEALTH ON SEXUAL BEHAVIOR AMONG ADOLESCENTS IN DENPASAR, BALI

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ABSTRACT

Background: The purpose of this study was to examine the effects of information, knowledge, and attitudes about reproductive health on sexual behavior among adolescents in Denpasar, Bali.
Subjects and Method: This was an analytic observational study with cross-sectional design. The study was carried out in Denpasar, Bali. A sample of 1,200 junior and senior high school students were selected for this study by cluster random sampling. The dependent variable was sexual behavior as measured by having some sort of sex. The independent variables were exposure to information, knowledge, and attitude about reproduction health. The data were measured using questionnaires and analyzed using logistic regression.
Results: As many as 880 (73.33%) of 1,200 adolescents reported to have had some sort of sex (mild or heavy). Negative attitude increased the risk of having some sort of sex (OR= 2.01; 95% CI= 1.51 to 2.65; $p<0.001$). Exposure to good information (OR= 0.42; 95% CI= 0.30 to 0.60; $p<0.001$) and good knowledge in reproductive health (OR= 0.98; 95% CI= 0.59 to 1.11; p= 0.929) decreased the risk of having some sort of sex among adolescents.
Conclusion: Exposure to information, knowledge, and attitudes about reproductive health affect sexual behavior among adolescents in Denpasar, Bali.

Keywords: sexual behavior, information, knowledge, attitude, reproductive health, adolescents

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FACTORS ASSOCIATED WITH USE OF VOLUNTARY COUNSELING TESTING SERVICE AMONG LESBIAN, GAY, BISEXUAL, TRANSGENDER GROUPS IN KUPANG

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ABSTRACT

Background: Lesbian, Gay, Bisexual, Transgander (LGBT) continu to grow rapidly in Kupang. LGBT is at high risk for Sexually Transmitted Infections (STI) and HIV/ AIDS. Voluntary Counseling Testing (VCT) service is provided by the government to screen and control STI and HIV/ AIDS among LGBTs. VCT is very important because it serves as an entrance to prevention and treatment of HIV and AIDS. However, only 18 LGBTs visited VCT in 2015. This study aimed to determine the factors associated with the use of VCT service by LGBT groups in Kupang.
Subjects and Method: This was a mixed qualitative and quantitative study with cross sectional design. This study was carried out in Kupang, East Nusa Tenggara, where the population of the LGBTs was 460 people. A sample of 210 LGBTs were selected by random sampling technique. The dependent variable was use of VCT. The independent variables were knowledge, intention, counselor empathy, counselor knowledge, and social support. The data were collected by questionnaire and analyzed using multiple logistic regression.
Results: Use of VCT was associated with knowledge (OR= 1.32; 95% CI= -0.54 to 3.18; p= 0.008), intention (OR= 1.32; 95% CI= -0.54 to 3.18; p= 0,010), counselor empathy (OR= 1.38; 95% CI= -0.48 to 3.24; p= 0.081), counselor knowledge (OR= 1.38; 95% CI= -0.34 to 3.24; p= 0.003), and social support (OR= 1.25; 95% CI= -0.61 to 3.11; p= 0.037).
Conclusion: Use of VCT is associated with knowledge, intention, counselor empathy, counselor knowledge, and social support.

Keywords: Lesbian, Gay, Bisexual, Transgender, HIV, VCT

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CASE STUDY ON THE BIOPSYCHOSOCIAL IMPACTS AND COPING BEHAVIORS AMONG VICTIMS OF FEMALE SEXUAL VIOLENCE IN SUKOHARJO, CENTRAL JAVA

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ABSTRACT

Background: Sexual violence on women is a serious social problem. It may cause various impacts including biological, reproductive, psychological, and social impacts. There is a need for behavioral change to deal with the impact of sexual violence. This study aimed to explore the biopsychosocial impacts and coping behaviors among female sexual violence victims.
Subjects and Method: This was a qualitative descriptive research using case study method. The study was conducted in Sukoharjo from 15 June to 25 July 2017. Key informants were included female sexual violence victims and close persons, Chairman of NGO Alliance of Concern in Women's Welfare (APPM), volunteers of One Heart Disability Society, staff of Office for Women's Empowerment, and Head of Women and Child Protection Unit, and medical personnel. The data were collected by in-depth interview, observation, and document review. Interactive analysis included data collection, reduction, display, and verification.
Results: The age of female victims of sexual violence ranged between 15 and 21 years. They had no schooling or junior high school education. All of them came from Sukoharjo, Central Java. The forms of sexual violence were sexual harassment and rape. The perpetrators were close persons of the victim. The biological, reproductive, and psychological impacts of the victim included fear, irritation, trauma, worry, self-imprison, self-contain, feelings of revenge, emotion, stress, pain during urination, fever, unwanted pregnancy, and complications of childbirth. The social impacts included isolation, gossiping, and negative stigma of the victim. The victim's behaviors in coping with the biopsychosocial impacts included routine medical check up, attempt to forget, taking for granted, and avoidance of bringing up the incidents of sexual violence, preoccupation with positive activities, seeking support of the close person, being more careful of the opposite sex, and avoidance of mingling with unrecognized people in a strange environment.
Conclusion: Female sexual assault cases suffered undesireable biological, reproductive, psychological, and social impacts. The impacts of biological and reproductive health take the forms of health problems, unwantted pregnancy, and complications of childbirth. There is a need for support to help overcome the biopsychosocial impacts of sexual violence victims.

Keywords: Health Belief Model, biopsychosocial impacts, sexual violence

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HEALTH BELIEF MODEL ON SEXUAL BEHAVIOR ISSUES AMONG PRISONERS AT PRISON IN PEKALONGAN, CENTRAL JAVA

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ABSTRACT

Bacground: One of the basic human needs to be fulfilled is sexual need. Prisoners face problem in their sexual need fulfilment and freedom, due to the prison's diciplinary system, including supervison, strict disciplinary mechanism, and enactment of spatial division between men and women. As a consequence, there often occur perverted sexual behaviors, including homosexuality. This study aimed to analyze the sexual behavior issues among prisoners at prison using Health Belief Model.
Subjects and Method: This was a qualitative descriptive study with phenomenological approach. The main key informants in this study were prisoners having imprisoned for one year or more and officers at Class IIA prison, in Pekalongan, Central Java. The supporting informants included health personnel (doctors and nurses) at Class IIA prison clinic.
Results: All informants reported that they were susceptible to engage in risky sexual behaviors in order to fulfil their sexual need, such as masturbation and homosexuality. The psychological adverse effects they had experienced included fear and feeling of embarrassment their perverted sexual behaviors were recognized by others. The informants reported that they did not have self-efficacy in coping with sexual need issues while in prison.
Conclusion : The imprisonment system has an impact on the way inmates meet their sexual needs through masturbation. The role of prison officials is urgently needed to enable prisoners to address the problems of their biological needs through beneficial activities while in prison.

Keywords: prisoners, sexual behaviors, Health Belief Model

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FACTORS ASSOCIATED WITH OVERWEIGHT AND OBESITY IN ADOLESCENTS IN KARTASURA, CENTRAL JAVA

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ABSTRACT

Background: Adolescents experience rapid growth. Therefore, they are at risk to have malnutritional problems such as overweight and obesity. The Indonesian Basic Health Research in 2013 showed that the prevalence of overweight among adolescents aged 13-15 years old in Indonesia was 10.8%, consisting of 8.3% overweight and 2.5% obese or very obese. The prevalence of overweight and obesity in adolescents aged 15 years and over was 18.4% in Central Java, and 10.7% in Surakarta. Overweight and obesity are important public health problems because they are known as risk factors of various chronic diseases. This study aimed to determine the factors associated with overweight and obesity in adolescents using Health Belief Model.
Subjects and Method: This was an analytic observational study with cross-sectional design. The study was conducted at Islamic Boarding School (Pondok Pesantren Modern Islam) Assalaam Kartasura, Central Java, from March to May 2017. A total sampel of 120 adolesents aged 12 to 18 years old were selected for this study using fixed disease sampling, including 30 adolescents with overweight or obesity and 90 adolescents with normal weight. The exogenous variables were perceived threat, perceived benefit, perceived barrier, self efficacy, and maternal education. The endogenous variables were physical activity, dietary pattern, and overweight or obesity. Data on dietary pattern were collected by dietary questionnnaire. The other data were collected using a set of questionnaire. Path analysis was used to analyze the association between variables involving mediating variables.
Results: Overweight or obesity was directly and negatively associated with perceived threat (b= -0.14, SE= 0.04, p< 0.001), perceived benefit (b= -0.10, SE= 0.02, p< 0.001), physical activity (b= -0.24, SE= 0.10, p= 0.016), and dietary pattern (b= -0.33, SE= 0.08, p< 0.001). Overweight or obesity was directly and positively associated with perceived barrier (b= 0.13, SE= 0.07, p= 0.051). Dietary pattern was affected by perceived barrier (b= -0.22; SE= 0.007; p= 0.002), perceived benefit (b= 0.10; SE= 0.002; p<0.001), perceived threat (b= 0.09; SE= 0.04; p= 0.023), self effication (b= 0.22; SE= 0.09; p= 0.015), and maternal education (b= 1.05; SE= 0.41; p= 0.010). Physical activity was affected by perceived benefit (b= 0.05; SE= 0.001; p= 0.002), perceived barrier (b=-0.16; SE= 0.05; p= 0.002), perceived threat (b=0.14; SE= 0.03; p<0.001), self efficacy (b=0.24; SE=0.06; p< 0.001), and maternal education (b=0.86; SE= 0.30; p= 0.005).
Conclusion: Overweight or obesity is negatively associated with perceived threat, perceived benefit, physical activity, and dietary pattern. Overweight or obesity is positively associated with perceived barrier. Health Belief Model can be used to explain factors associated with overweight or obesity.

Keywords: overweight, obesity, Health Belief Model

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CADRE EMPOWERMENT MODEL FOR EARLY DETECTION AND INTERVENTION OF PREGNANCY RISK IN SLEMAN DISTRICT, YOGYAKARTA

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ABSTRACT

Background: Maternal Mortality Rate (MMR) is an important public health issue in developing countries. Current MMR in Indonesia amounted to 359 deaths/ 100,000 live births, which was higher than neighboring countries in Southeast Asia. Efforts to reduce MMR by empowering cadres are believed to be effective for reducing MMR. This study aimed to identify cadre's empowerment model that explain factors associated with cadre's early detection and intervention of pregnancy risk in Yogyakarta.
Subjects and Method: This was an analytical observational study using cross-sectional design, supported by qualitative information. The study was conducted in Sleman District, Yogyakarta, from February to May 2016. A total sample of 269 active cadres were selected for this study by multistage cluster random sampling. The dependent variables were cadre's early detection of pregnancy risk factors and intervention to address the problem. The independent variables included attitude, experience, motivation, compensation, workload, education and training, supervision, perceived seriousness, and perceived benefit. The data were collected by a questionnaire and analyzed by path analysis.
Results: Cadre's intervention to address the problem was directly and positively affected by attitude (b= 0.55; SE= 0.12; p<0.001), experience (b= 0.18; SE= 0.10; p= 0.079), motivation (b= 0.37; SE= 0.15; p= 0.014), compensation (b=0.65; SE= 0.20; p=0.001), supervision (b= 0.49; SE= 0.18; p= 0.008), and early detection of pregnancy risk factors (b= 0.29; SE= 0.05; p<0.001). Cadre's early detection of risk factors was affected by attitude (b= 0.58; SE= 0.11; p= <0.001), experience (b=0.38; SE=0.10; p<0.001), motivation (b= 0.63; SE= 0.14; p<0.001), compensation (b= 0.68; SE= 0.19; p<0.001), workload (b= 0.64; SE= 0.23; p= 0.005), education and training (b= 0.69; SE= 0.13; p<0.001), supervision (b= 0.99; SE= 0.17; p<0.001), perceived seriousness (b= 0.73; SE= 0.16; p<0.001), and perceived benefit (b= 0.84; SE= 0.18; p<0.001).
Conclusion: Attitude, experience, motivation, compensation, supervision, and early detection of pregnancy risk factors affect cadre's intervention to address the problem. Cadre's early detection of risk factors is affected by attitude, experience, motivation, compensation, workload, education and training, supervision, perceived seriousness, and perceived benefit.

Keywords: early detection, intervention, pregnancy risk, empowerment, cadre

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SELF-EFFICACY IN POSITIVE SEXUAL BEHAVIOR AMONG STUDENTS PARTICIPATING IN THE CENTER FOR INFORMATION AND COUNSELING OF REPRODUCTIVE HEALTH IN MADIUN

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ABSTRACT

Background: The study aimed to determine the effectiveness of the Center for Information and Counseling of Reproductive Health in improving self-efficacy in positive social behavior among university students Madiun.
Subjects and Method: This was an analytic observational study with cohort retrospective design. This study was conducted at Bhakti Husada Mulya School of Health Sciences, Madiun, East Java. A sample of 105 university students were selected for this study using fixed exposure sampling. This sample consisted of 35 students who participated and 70 students who did not participate in the Center for Information and Counseling of Reproductive Health. The purpose of this center was to develop positive sexual behavior among university students. The dependent variable was self-efficacy in sexual behavior. The independent variable was participation in the Center for Information and Counseling of Reproductive Health. The data were collected using questionnaire and analyzed using t-test.
Results: Self-efficacy in sexual behavior among students who participated in the center was higher (mean= 49.69; SD= 6.66) than those who did not participate in the center (mean = 44.41; SD= 10.09), and it was statistically significant (p= 0.006).
Conclusion: Participation in the Center for Information and Counseling of Reproductive Health can enhance self-efficacy in positive sexual behavior among students.

Keywords: sexual behavior, self efficacy, Center for Information and Counseling of Reproductive Health, student

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THEORY OF PLANNED BEHAVIOR ON THE FACTORS ASSOCIATED WITH OF CLEAN AND HEALTHY BEHAVIOR IN IMOGIRI MARKET COMMUNITY

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ABSTRACT

Background: Achievement of Clean and Healthy Behavior (PHBS) in public places in Bantul Regency, Yogyakarta was only 54.55% in 2015. This figure decreased as low as 50.91% in 2016. The purpose of this study was to determine the factors associated with clean and healthy behavior in market community using Theory of Planned Behavior.
Subjects and Method: This was an analytic observational study using cross sectional design. This study was carried out in Imogiri traditional market, Bantul, Yogyakarta. A sample a 165 people from Imogiri market community (buyers, sellers, managers, parking attendants) were selected for this study by accidental sampling. The dependent variable was clean and healthy behaviors. The independent variables were attitude, subjective norm, and perceived behavior control. The data were collected by questionnaires and observation sheets. The data were analyzed using path analysis.
Results: Clean and healthy behavior was directly and positively influenced by positive attitude (OR= 2.41, p= 0.016), favorable subjective norm (OR= 2.37, p= 0.018), strong perceived behavior control (OR= 2.13; = 0.033), and strong intention (OR= 2.12; p= 0.034). Intention to have clean healthy behavior was positively associated with attitude (OR= 2.17; p= 0.030), subjective norm (OR= 2.52; p= 0.012), and perceived behavior control (OR= 2.55; p= 0.011).
Conclusion: Clean and healthy behavior is influence by positive attitude, favorable subjective norm, strong perceived behavior control, and strong intention.

Keywords: clean and healthy behavior, attitude, subjective norm, behavior, control, intention

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SOCIAL MARKETING ON DENGUE HEMORRHAGIC FEVER AND TUBERCULOSIS PREVENTION AND CONTROL PROGRAM IN PATI, CENTRAL JAVA

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ABSTRACT

Background: Dengue Hemorrhagic Fever (DHF) and Tuberculosis (TB) are two major infectious diseases of public health importance. The increasing incidence of these diseases was related to unhealthy behaviors among community members. Social marketing, the use of marketing to design and implement programs to promote socially beneficial behavior change, has grown in popularity and usage within the public health community. Despite this growth, many public health professionals have an incomplete understanding of the field. The purpose of this study was to determine the effectiveness of social marketing in the prevention and control of DHF and TB.
Subjects and Method: This was a sequential mixed method study with qualitative study preceding the quantitative study. This study was conducted in Pati District, Central Java. A sample of 55 participants were selected for this study consisting of 40 members of community and 15 health personnel. The dependent variable was knowledge in social marketing, DHF, and tuberculosis. The independent variables was social marketing training. The data were collected by in-depth interview and survey. The qualitative data were analyzed by content analysis. The quantitative data were analyzed by paired t-test to look at changes in the outcome variable before and after social marketing.
Results: Training in social marketing was held with 30 health cadres as participants. The social marketing target group was community leaders. The expected behavior change included vector control using mosquito impregnated bednet and tuberculosis case finding. Knowledge on the use of social marketing method to promote DHF and tuberculosis prevention and control among health cadres increased significantly after training ($p<0.001$).
Conclusion: Social marketing can be used to promote DHF and tuberculosis prevention and control through health cadres, with community leaders as the primary marketing target group.

Keywords: social marketing, dengue hemorrhagic fever, tuberculosis, prevention, control, health cadres

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COMMUNITY EMPOWERMENT-BASED INTEGRATED SERVICE POST TO ESTABLISH A CHILD FRIENDLY VILLAGE THROUGH CORPORATE SOCIAL RESPONSIBILITY IN BADRAN YOGYAKARTA

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ABSTRACT

Background: Badran is a dirty slum area near Winingo river in Yogyakarta. Some children were malnourished due to unhealthy food and environment. This situation has driven the community to establish a healthy village for children. In collaboration with a private agency, namely PT. Sari Husada, the community empowered the Integrated Health Posts to improve their health services for children under-five. The purpose of this study was to investigate a community empowerement initiative involving collaboration between community and private agency.
Subjects and Method: This was a qualitative study conducted in Badran, Yogyakarta. Some key informants were selected for this study consisting of health cadres, community members, community leaders, PT Sari Husada corporate responsibility manager. The data were collected by in-depth interview, participant observation, and focus group discussion. Source triangulation was used to validate data. Data analysis consisted of data reduction and data display.
Results: Integrated Service Posts in Badran village, namely Hause of Srikandi, had been established as the result of collaboration between community and PT. Sari Husada CSR. The Integrated Service Posts was operated by health cadres from Badran village. PT. Sari Husada nutritionists trained mothers who had children under-five on how to process healthy and nutritious food. PT. Sari Husada provided milk for children under-five at the Integrated Service Posts. Upon completion of the CSR program, community members started to contribute 500 rupiahs a month to cover the operational cost of the Integrated Service Posts.
Conclusion: Community members and private agency have successfully collaborated in a community empowerement initiative namely the House of Srikandi. The initiative has empowered community and created independence in operating better Integrated Service Posts for child health.

Keywords: Integrated Service Posts, corporate social responsibility, children under-five

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ASSOCIATION BETWEEN KNOWLEDGE, ATTITUDE, NORM, AND FREE SEX BEHAVIOR AMONG UNIVERSITY STUDENTS IN SRAGEN, CENTRAL JAVA

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ABSTRACT

Background: Premarital sex contradicts with religious values and social norms in Indonesia. Premarital sex is a major concern since it may lead to unwanted pregnancy and unsafe abortion, transmission of sexual transmitted disease and HIV/AIDS, and ultimately death. This study aimed to determine association between knowledge, attitude, norm, and free sex behavior among university students in Sragen, Central Java.
Subjects and Method: This was cross-sectional study, conducted at academies of nursing, midwifery, and health polytechnics, in Sragen, Central Java. A sample of 142 students were selected for this study at random. The dependent variable was free sex. The independent variables were knowledge, attitude, and social norm. The data were collected using questionnaire and analyzed by multiple logistic regression.
Results: Good knowledge in free sex (OR= 0.37; 95% CI = 0.18 to 0.77; p= 0.008), positive attitude (OR= 0.02; 95% CI <0.01 to 0.07; p<0.001), and adherence to norm (OR= 0.15; 95% CI = 0.07 to 0.34; p<0.001) were associated with lower risk of practicing free sex among students.
Conclusion: Good knowledge in free sex, positive attitude, and adherence to norm are associated with lower risk of practicing free sex among students.

Keywords: free sex, knowledge, attitude, norm

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FACTORS INFLUENCING THE RISK OF HIV/ AIDS TRANSMISSION IN LESBIAN, GAY, BISEXUAL AND TRANSGENDER GROUP IN MADIUN

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ABSTRACT

Background: Incidence of Human Immunodeficiency Virus (HIV)/ Acquired Immune Deficiency Syndrome (AIDS) has been increasing for the last ten years in Indonesia, including Madiun, East Java. The purpose of this study was to determine factors influencing the risk of HIV/ AIDS transmission in lesbian, gay, bisexual and transgender (LGBT) group in Madiun, East Java.
Subjects and Method: This was an analytical cross-sectional study, with study population being LGBT in Madiun, East Java. A sample of 64 LGBTs were selected for this study by random sampling. The dependent variable was HIV infection. The independent variables were age, sex, education, sexual behavior, sex workers status, income level, and knowledge. The data were collected by questionnaire and analyzed by multiple logistic regression.
Results: The risk of HIV infection decreased among LGBTs who were aged 17-25 years (OR= 0.01; 95% CI = 2.45 to 4.57; p = 0.001), had good knowledge (OR= 0.01; 95% CI = 4.19 to 387.02; p = 0.032), and safe sexual behavior (OR= 0.12; CI 95% = 0.03 to 0.21; p = 0.022). The risk of HIV infection increased among LGBTs who were male (OR = 6.40; CI (OR = 2.70; 95% CI <0.01 to 13.25; p = 0.004), worked as sex worker (OR = 0.03; 95% CI = 9.45 to 782.69; p = 0.008), and had low income (OR = 0.01; 95% CI = 9.45 to 782.69; p = 0.010).
Conclusion: The risk of HIV infection decreased among LGBTs, who were aged 17-25 years, had good knowledge, and safe sexual behavior. The risk of HIV infection increased among LGBTs who were male, worked as sex worker, and had low income.

Keywords: HIV, LGBT (Lesbian, Gay, Bisexual and Transgender)

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PERCEPTION AND DETERMINANTS OF VASECTOMY ACCEPTANCE AMONG COUPLES OF CHILDBEARING AGE IN MOJOKERTO, EAST JAVA

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ABSTRACT

Background: Indonesia is a country with the fourth largest population in the world. Its population growth rate is 1.49% per year. Acceptors of the family planning program among women of childbearing age is 60%. However, male participants in using contraceptive, especially vasectomy, is low. Lack of knowledge and information on vasectomy may have caused fear, anxiety, and false perception. This study aimed to investigate the perception and determinants of vasectomy acceptance among couples of childbearing age in Mojokerto, East Java.
Subjects and Method: This was a qualitative study using grounded theory approach. A sample of 10 informants was selected for this study consisting of couples of childbearing age who were vasectomy acceptors and community members. Data were collected by in-dept interview and analyzed by Colaizzi method.
Results: Reasons for vasectomy acceptance included social responsibility, pity feeling for wife, and concern on future child welfare. There were no notable changes in physical appearance among the vasectomy acceptors. Sexual potency after vasectomy surgery did not weaken. However, social perceptions on vasectomy varied. Most community members believed that having children was an important issue and yet having prosperous family was equally important.
Conclusion: Vasectomy acceptors do not experience changes in physical appearance. Sexual potency and sexual life are not affected by vasectomy. The main reason for vasectomy is responsibility for future family welfare.

Keywords: vasectomy, acceptance, perception, determinant, couple of childbearing, community

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ASSOCIATION BETWEEN PARENTING STYLE AND HOMOSEXUAL ORIENTATION IN ADOLESCENTS, KEDIRI, EAST JAVA

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ABSTRACT

Background: Homosexuality is a sexual orientation towards the same sex. Parenting style may had an important role in in shaping homosexual behavior. Many theories of homosexual causation focus on childhood experiences, especially those within the family. One viewpoint states that male homosexuality is an emotional/mental disorder caused by poor father-son relationships. This study aimed to test the hypothesis that authoritarian parenting style was associated with an increased risk of forming homosexually oriented adolescents.
Subjects and Method: This was an analytic cross-sectional study conducted in Kediri, East Java. A sample of 67 adolescents were selected for this study by purposive sampling. The dependent variable was homosexual orientation. The independent variable was parenting style, dichotomizing authoritarian parenting style vs. democratic or permissive parenting style . The data were collected by questionnaire and analyzed by Odds ratio and Chi Square Fisher exact test.
Results: Among 67 adolescents studied, 58 (86.6%) were found to have homosexual orientation, 9 (13.4%) were found to not have homosexual orientation. Among those who had homosexual orientation, 42 (72.4%) were raised by authoritarian parenting style. Among those who did not have homosexual orietation, 2 (22.2%) were raised by authoritarian parenting style. Authoritarian parenting style was associated with an increased risk of homosexually oriented adolescents (OR=8.85; 95% CI=1.76 to 67.77; p=0.012).
Conclusion: Authoritarian parenting style is associated with an increased risk of forming homosexually oriented adolescents.

Keywords: homosexual orientation, parenting style

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PSYCHOLOGICAL-BIOLOGICAL IMPACTS OF SEXUAL HARASSMENT AND APPROACH TO COPE WITH THE TRAUMA IN FEMALE ADOLESCENT VICTIMS IN SURAKARTA

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ABSTRACT

Background: The effects of experiencing sexual harassment can be profound, and can range from uncomfortable to devastating. They may last a short or long time, and can even generate a "ripple effect" of negative symptoms in the affected workplace or living environment. This study aimed to describe psychological and biological impacts of sexual harassment and approach to cope with the trauma in female adolescent victims in Surakarta.
Subjects and Method: This was a qualitative study conducted in Surakarta, Central Java. The informants were social workers working at Yayasan KAKAK, a non-government organization dealing with sexual harassment issues. The data were collected by in-depth interview. The informants provided information about psychological and biological impacts of sexual harassment as well as approach to cope with the trauma in female adolescent victims in Surakarta.
Results: The psychological impacts of sexual harassment included anger, fear, self-consciousness or embarrassment, difficulty sleeping, loss of appetite. According to the information provided by the informants, the victim's life turned into a misery, and school became a place to be avoided. The sexual attacks led to feelings of demoralization and humiliation, causing loss of self confidence and self esteem. The victims were reported as having trouble studying or paying attention, less able to perform well, participating less, no longer going to study group, thinking about dropping a class, or even leaving the school. Victims experienced symptoms such as headaches, stomach aches, nightmares and anxiety attacks. Yayasan KAKAK assisted victims by supporting and guiding about steps to be taken to protect victims and to cope with the aftermath.
Conclusion: Sexual harassment has serious emotional and biological effects on adolescent victims. According to this research finding, one of the greatest mitigating factors to trauma is the acknowledgment that it is happening. Victims of sexual harassment should be assisted to find support and guidance about what steps can be taken to protect themselves and how to cope with the aftermath.

Keywords: sexual harassment, female adolescent, coping with

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THEORY OF PLANNED BEHAVIOR ON THE PSYCHO-SOCIAL DETERMINANTS OF DRUG USE AMONG ADOLESCENTS IN SAMARINDA, EAST KALIMANTAN

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ABSTRACT

Background: Drug abuse is serious global health problem. Drug users aged 10-59 years in Indonesia has been increasing steadily. According to data from National Board for Drug Abuse (Badan Narkotika Nasional, BNN), the prevalence of drug users in East Kalimantan was 59,195 (3.07%) of population aged 10-59 years of 1,930,936 people. This study aimed to investigate the psycho-social determinants of drug use among adolescents in Samarinda, East Kalimantan, using Theory of Planned Behavior.
Subjects and Method: This was an analytical observational study with cross-sectional design. The study was carried out at Badan Rehabilitasi Tanah Merah, Samarinda, East Kalimantan, from July to August, 2017. A sample of 150 adolescents were selected for this study by fixed disease sampling, including 50 adolescent drug users, and 100 adolescent non drug users. The dependent variable was drug use. The independent variables were intention, attitude, subjective norm, perceived behavior control, peer group, parenting style, and family harmony. The data were collected by pre-tested questionnaire and analyzed using path analysis.
Results: Drug use was directly determined by strong intention (b= 2.18; 95% CI= 1.22 to 3.14; p<0.001), negative attitude (b= 1.79; 95% CI= 0.76 to 2.82; p=0.001), low subjective norm (b= 1.13; 95% CI= 0.09 to 2.17; p= 0.034), and weak perceived behavior control (b= 2.83; 95% CI= 1.48 to 4.19; p<0.001). Intention was determined by weak perceived behavior control (b= 1.18; 95% CI = 0.14 to 2.22; p<0.001). Subjective norm was determined by family harmony (b= 2.03; 95% CI= 0.96 to 3.09; p<0.001), authoritarian parenting style (b= 1.25; 95% CI= 0.15 to 2.36; p=0.026), and peer group (b= 1.46; 95% CI= 0.37 to 2.54; p=0.009).
Conclusion: Drug use is directly determined by intention, attitude, subjective norm, and perceived behavior control. Family harmony, authoritarian parenting style, and peer group affect drug use indirectly.

Keywords: drug use, Theory of Planned Behavior, path analysis

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FACTORS ASSOCIATED WITH CADRE ACTIVITIES IN JEMBER, EAST JAVA

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ABSTRACT

Background: Since reform era in 1998, the activities of the integrated health service post (posyandu) have been declining. In order to revitalize posyandu activities, revitalization strategy was introduced. The purpose of this study was to examine factors associated with posyandu cadre actitivities in Jember, East Java, including the effectiveness revitalization strategy.
Subjects and Method: This was an analytic a cross-sectional study, conducted in Jember, East Java. A sample of 80 integrated health service post (posyandu) cadres were selected for this study. The dependent variable was cadre activity. The independent variables were age, knowledge, education, employment, duration, training, and revitalization strategy. Questionnaire was used to measure variables. Logistic regression was used to analyze data.
Results: Duration ≥10 years (OR= 1.53; 95% CI = 0.42 to 5.61; p= 0.524), educatioan ≥high school (OR= 2.35; 95% CI = 0.47 to 11.76; p= 0.299), housewife (OR= 9.58; 95% CI = 1.60 to 57.21; p= 0.013), ever had training (OR= 4.38; 95% CI = 1.21 to 15.77 p= 0.024), good revitalization strategy (OR= 3.71; 95% CI = 1.03 to 13.36; p= 0.045) were associated with increased cadre activity. Age 26-45 years old (OR= 0.35 ; 95% CI = 0.01 to 17.81 p= 0.604), age ≥46 years old (OR= 0.18; 95% CI = 0.01 to 3.66; p= 0.262), low knowledge (OR= 0.80; 95% CI = 0.16 to 4.02; p= 0.786), poor knowledge (OR= 0.40; 95% CI = 0.06 to 2.89; p= 0.367) were associated with decreased cadre activity.
Conclusion: Housewife, ever had training, and good revitalization strategy are factors that increase cadre activity, and they are statistically significant. Age 26-45 years old, age ≥46 years old, low knowledge, poor knowledge are associated with decreased cadre activity, but they are not statistically significant.

Keywords: cadre acivity, cadre characterictic, integrated health service post, revitalization strategy

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FACTORS INFLUENCING THE EXISTENCE TINUTUAN CULINARY IN EATING PATTERN AMONG FAMILIES IN MANADO, NORTH SULAWESI

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ABSTRACT

Background: Tinutuan (Manado porridge) culinary has developed and changed over decades from its original food mix. But its nutritional value did not change and its beneficial effect on health continued to increase. With the influence of globalization that introduced fast food eating pattern among families, tinituan culinary did not lose its identity and remained to exist as an urban consumption life style. This study aimed to determine factors influencing the existence of tinutuan culinary eating pattern among families in Manado, North Sulawesi.
Subjects and Method: This was a qualitative study conducted in Manado, North Sulawesi. A number of informants were selected purposively. The data were collected by direct observation, in-depth interview, and literature review. Cultural studies theories were used for data analysis.
Results: Health value, religious custom, socio-economic status, and taste factors influenced the existence of tinutuan culinary. There was an image that made tinutuan culinary eating pattern had not been presented as the party menu in all social strata.
Conclusion: The existence of traditional tinutuan culinary is affected by health value, religious custom, social-economic status, and taste factors. It is recommended that inherited tinutuan culinary eating pattern within the families be maintained to develop.

Keywords: tinutuan culinary, eating pattern, health value, religious custom

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COMMUNITY DEVELOPMENT FOR MATERNAL HEALTH TROUGH PREGNANT MOTHER CLASS PROGRAM IN KLATEN, CENTRAL JAVA

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ABSTRACT

Background: Pregnant women class (Kelas Ibu Hamil, KIH) activities have been implemented since 2009. It aims to improve maternal and child health, by providing a forum for health education and sharing information on maternal and child health. However, participation in KIH in Klaten, Central Java, was as low as 30%. The purpose of this study was to evaluate the implementation of KIH program, by identifying problems and potential resources available within and outside the community, that can be used to develop a community development model to help support the development and improvement of KIH program.
Subjects and Method: This was a qualitative study with some complementary quantitative information. The study was carried out in North Klaten Subdistrict, Klaten, Central Java. The informants for this study were selected to include pregnant mothers, health cadres, village midwifes, midwife coordinators, health personnel at community health center, KIH programmers at district health office, and village community leaders. The data were collected by in-depth interview, direct observation, focus group discussion (FGD), and document review.
Results: Program implementation of KIH proceeded along the managerial steps, which included planning, implementation, monitoring, evaluation, and sustainability of program. The KIH program involved pregnant mothers, health cadres, village midwives, and midwife coordinators, which were under the control and reponisibility of the community health center, i.e. North Klaten health center. KIH meetings were funded by several budget sources, including Operational Health Assistance/ Bantuan Operasional Kesehatan (BOK), Revenue and Expenditure Budget of Provincial Government (APBD I), and for the last one year Village Fund Alocation (ADD). Implementation of KIH, however, was still midwife oriented. Pregnant mother participation was only 36.30%. KIH activities were held at posyandu, sub health center, and village office, mostly in the morning for 2 hour duration. Implementation of KIH faced some problems, which stemmed from social, economic, cultural, human resource, technical, and policy problems. The problems that had inhibited the progress of KIH included the lack of facilitator creativity, absence of former KIH participation involvement, shortage of community understanding on the importance of participation, inaccurate use of village fund allocation budget, irregular monitoring and evaluation.
Conclusion: Some initiatives are suggested to be taken in order to correct problems and to improve implementation of KIH.

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Keywords: community development, pregnant women class, participation

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FACTORS ASSOCIATED WITH SMOKING HABIT AMONG HIGH SCHOOL STUDENTS IN SOE, SOUTH TIMOR TENGAH, EAST NUSA TENGGARA

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ABSTRACT

Background: Many adolescents start smoking at an early age because of curiosity and venturesomeness. Early start of smoking makes it difficult to quit smoking. Adolescents' habitual smoking not only becomes an entry point to all kinds of substance abuse but also causes various health problems including upper respiratory infection, immature lung development, reduced maximum vital capacity, and lung cancer. The purpose of this study was to examine factors associated with smoking habit in high school students in Soe, South Timor Tengah, East Nusa Tenggara.
Subjects and Method: This was a crosssectional study conducted at 3 Junior High Schools in Soe, South Timor Tengah, East Nusa Tenggara. A sample of 107 students was selected for this study by stratified random sampling. The dependent varible was smoking status. The independent variables were gender and smoking peer group. The data were collected by questionnaire and analyzed by logistic regression.
Results: Male students (OR= 223.73; CI 95%= 13.78 to 3,631.59; p<0.001) and attachment with smoking peer group (OR= 33.33; CI 95%= 3.57 to 100.00; p= 0.002) were associated with increased risk of smoking among high school students.
Conclusion: Male and attachment with smoking peer group are associated with increased risk of smoking among high school students.

Keywords: smoking, adolescent, gender, peer group

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TOPIC III:

MATERNAL AND CHILD HEALTH

PATH ANALYSIS ON GESTATIONAL SOCIO-ECONOMIC DETERMINANTS OF NUTRITIONAL STATUS IN CHILDREN UNDER FIVE IN PURWOREJO REGENCY, CENTRAL JAVA

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ABSTRACT

Background: Undernutrition by height-for-age standard starts during pregnancy and continues to the first two years of life. Linear growth disorders among children under five years are associated with morbidity, mortality, loss of physical growth potential, reduced neurological development, reduced cognitive functions, and increased risks of adulthood chronic diseases. In 2015, the number of undernourished children under five (height-for-age) reached 156 million globally. Purworejo regency was an area with the second highest undernutrition cases in Central Java in 2014. This study aimed to analyze the life-course epidemiology perspectives on the socio-economic factors contributing to the nutritional status of the children aged two to five years in Purworejo regency, Central Java.
Subjects and Method: This was an observational analytical study with case control design. This study was conducted in Purworejo, Kaligesing, and Bruno sub-districts, Purworejo Regency, Central Java in February to March 2017. A total sample 160 children aged two to five years and their mothers were selected by fixed disease sampling. There were 37 children in the case groups, and 113 children in the control groups. The independent variables included family income, maternal age, maternal nutritional status (mid upper arm circumference), birth length, exclusive breastfeeding and the children's history of illness. The dependent variable was the children's nutritional status (height-for-age/HAZ). Data on the children's height were collected using microtoise. Other data were collected by maternal and children health (MCH) books and a set of questionnaires. The data were analyzed using path analysis.
Results: Nutritional status of children under five (height-for-age/HAZ) was affected by family income (x Rp 100,000) (b= 0.03; SE= 0.24; p<0.001), maternal age (years) (b= 0.02; SE= 0.02; p= 0.160), maternal nutritional status/MUAC (cm) (b= 0.08; SE= 0.05; p= 0.066), birth length (cm) (b= 0.22; SE= 0.05; p<0.001), exclusive breastfeeding (b= 0.03; SE= 0.16; p= 0.080), and the absence of illness (b= 0.39; SE= 0.14; p= 0.007).
Conclusion: Nutritional status of the children under five (height-for-age/HAZ) is affected by family income, birth length, exclusive breastfeeding, maternal age, maternal nutritional status, and the absence of illness.

Keywords: nutritional status, children under five, life-course epidemiology, socio-economic

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EFFECT OF PREMATURITY, BIRTHWEIGHT, MATERNAL STRESS, SOCIO-ECONOMIC STATUS, AND MOTHER-CHILD INTIMACY ON THE DEVELOPMENT OF PRESCHOOL CHILDREN IN SURAKARTA

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ABSTRACT

Background: Monitoring child development is an important step to prepare healthy children from the earliest age, both physically, spiritually, and socially. Monitoring child development can be done in the kindergarten. Some kindergartens in Surakarta, however, have not implemented child development monitoring program. This study aims to determine the effect of prematurity, birthweight, maternal stress, socio-economic status, and mother-child intimacy, on the development of preschool children.
Subjects and Method: This was an analytical observational study using case control design. The study was carried out at 7 kindergartens (TK) in Surakarta, Central Java: TK Negeri Pembina, TK Gaya Baru III, TK Kristen Ngasinan, TK Islam Bakti 6, TK Advent, TK Warga and TK Kanisius Imakulata, from May to June 2017. A sample of 120 children aged 5-6 years old attending kindergartens were selected for this study by fixed exposure sampling, i.e. selection based on prematurity status. The dependent variable was child development. The independent variables were prematurity, birthweight, maternal stress, maternal employment status, maternal education, family income, parenting time, and mother-child intimacy. The data were collected by a set of pre-tested questionnaire. Child development was measured by development pre-screening questionnaire (KPSP). Nutritional status was obtained from maternal and child health recording book. Path analysis was employed for data analysis.
Results: Child development was directly affected by prematurity (b= 0.29; SE= 0.07; p<0.001), birthweight (b= 0.04; SE= 0.18; p= 0.007), maternal employment (b= 0.46; SE= 0.20; p= 0.020), maternal education (b= 0.65; SE= 0.21; p= 0.002), family income (b= 0.01; SE= 0.01; p= 0.015), and mother-child intimacy (b= 0.26; SE= 0.05; p<0.001). Family income was affected by maternal employment (b= 23.37; SE= 5.52; p<0.001) and maternal education (b= 23.50; SE= 5.79; p<0.001). Mother-child intimacy was affected by maternal stress (b= 0.01; SE= 0.01; p= 0.052) and parenting time (b= 0.56; SE= 0.05; p<0.001).
Conclusion: Child development is directly affected by prematurity, birthweight, maternal employment, maternal education, family income, and mother-child intimacy.

Keywords: child development, prematurity, birthweight, socio-economic status, maternal stress, mother-child intimacy

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PATH ANALYSIS RISK FACTORS THAT INFLUENCE MATERNAL MORTALITY IN DISTRICT OF BREBES

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ABSTRACT

Background: Maternal mortality is one of health indicators of a country. Based on demographic and health survey in Indonesia in 2012, the data presented the fact that there was a significant increase on maternal mortality which was 359 maternal mortality in every 100,000 live births. Maternal mortality rate indicated a decrease to 305 maternal mortality in every 100,000 live births which was stated as a finding in Intercensal Population Survey in 2015. District of Brebes was one of the districts in the province of Central Java which had the highest maternal mortality in 2016 which was 54 maternal mortality. This study aimed to reveal the risk factors that influence maternal mortality.
Subjects and Method: This was an analytic observational study with case control design. This study was conducted in Brebes District, Central Java, from February to March 2017. A sample of 162 subjects, consisting of 54 cases of all mothers who died as part of Maternal Mortality Rate in District of Brebes during 2016, and were recorded in District of Brebes' Health Institutions, Central Java and 108 controls subjects were taken from cohort registry and verbal autopsy documents at the Community Health Centre whereby a case of maternal mortality existed, were selected in this study by fixed disease sampling. The dependent variables were maternal mortality, and the independent variables were maternal education, maternal job, numbers of visits to Antenatal Clinic (ANC), birth attendant, place of delivering babies, high-risk pregnancy, obstetric complications. The data were analyzed by path analysis model.
Results: The results of this research indicated that the risk factors which directly influenced maternal mortality were the amount of visits to ANC< 4 times (b= 0.25; 95% CI= 0.07 to 0.42; p= 0.006) and obstretical complications (b= 1.78; 95% CI= 1.85 to 0.14; p= 0.013). High level of education (b= -0.63; 95% CI= -0.91 to 0.34; p= 0.001) and maternal jobs (b= 1.00; 95% CI= 0.34 to 1.67; p= 0.003) were influenced their numbers of visits to ANC.
Conclusion: Amount of visits to ANC< 4 times and obstretical complications are influenced maternal mortality. High level of education and maternal jobs are influenced their numbers of visits to ANC.

Keywords: maternal mortality, risk factors, case control, path analysis

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EFFECT OF SOFT DRINK, ELECTRONIC MEDIA EXPOSURE, FAMILY INCOME, POCKET MONEY, AND NUTRITIONAL STATUS, ON AGE AT MENARCHE AMONG ADOLESCENTS IN SURAKARTA

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ABSTRACT

Background: Age at menarche has become earlier for the last 100 years. This situation poses worrying problem as it may be lead to an increased risk of premarital sex, teenage pregnancy, mental unpreparedness, and increased risk of malignant diseases such as ovarial cancer and breast cancer. This study aimed to determine the effect of soft drink, electronic media exposure, family income, pocket money, and nutritional status, on age at menarche among adolescents in Surakarta.
Subjects and Method: This was an analytic observational study with cross-sectional design. The study was conducted in Surakarta, Central Java, from February to March, 2017. A sample of 100 female adolescents was selected by simple random sampling from several Junior High Schools in Surakarta. The exogenous variables were nutritional status, family income, and electronic media exposure. The endogenous variables were age at menarche, soft drink consumption, and pocket money. The data were collected by a set of questionnaire, and analyzed by path analysis.
Results: Age at menarche was affected by electronic media exposure (b=-0.65; SE= 0.25; p= 0.010), pocket money (b= -7.48; SE= 1.52, p<0.001), soft drink (b= -3.43; SE= 1.11; p= 0.002), and nutritional status (b= -1.31; SE= -0.59; p= 0.025). Nutritional status was affected by family income (b<0.01, SE <0.01, p= 0.323) and pocket money (b= 0.24; SE= 0.29; p= 0.401). Electronic media exposure was affected by pocket money (b= 0.69; SE= 0.58; p= 0.234). Soft drink was affected by pocket money (b= 0.23; SE= 0.13; p= 0.074). Pocket money was affected by family income (b<0.01; SE<0.01; p<0.001).
Conclusion: Age at menarche is directly affected by electronic media exposure, pocket money, soft drink, and nutritional status. Age at menarche is indirectly affected by family income, pocket money, and electronic media exposure.

Keywords: path analysis, menarche, soft drink, reproduction health

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THE EFFECT OF SOCIO-DEMOGRAPHIC AND OBSTETRIC FACTORS ON EARLY INITIATION OF BREASTFEEDING IN TEGAL DISTRICT, CENTRAL JAVA

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ABSTRACT

Background: It is estimated that approximately 10 million children die every year worldwide. Forty five percent of those deaths are caused by malnutrition either directly or indirectly. Studies have shown that breastfeeding in the first hour can reduce neonatal death to 22%. However, breastfeeding practice in the first hour of life reaches only 43% of the newborns in the world. In South Asia, early initiation of breastfeeding is only 41% of the newborn, while in Indonesia it is only 34.5%. This study aimed to determine the effect of socio-demographic and obstetric factors on early initiation of breastfeeding in Tegal District, Central Java.
Subjects and Method: This was an analytic observational study with cross-sectional design. This study was conducted at 4 Community Health Centers (Puskesmas Pagiyanten, Puskesmas Pagerbarang, Puskesmas Bumijawa, Puskesmas Jatinegara) and Dr. Soeselo hospital, Tegal District, Central Java, from February to March 2017. A sample of 121 post partum mothers were selected for this study by exhaustive sampling. The dependent variable was time from birth delivery to breastfeeding. The independent variables were maternal education, maternal employment status, maternal knowledge, family income, parity, antenatal care (ANC) visit, and health provider support. The data were collected by questionnaire and were analyzed by multiple logistic regression.
Results: Early initiation of breastfeeding was positively affected by maternal education ≥High School (OR= 3.90; 95% CI= 1.14 to 13.37; p= 0.030), maternal work outside the house (OR= 7.93; 95% CI= 1.68 to 37.52; p= 0.009), ANC ≥ 4 times (OR= 3.48; 95% CI= 0.82 to 14.81; p= 0.092), and strong health provider support (OR= 12.58; 95% CI= 4.30 to 36.77; p<0.001)
Conclusion: Early initiation of breastfeeding is positively affected by maternal education ≥ High School, maternal work outside the house, ANC ≥ 4 times, and strong health provider support.

Keywords: Socio demographic, obstetric factor, early initiation breastfeeding

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THE EFFECT OF COMBINED ORAL CONTRACEPTIVES ON SEXUAL FUNCTION AMONG WOMEN OF REPRODUCTIVE AGE IN JOMBANG DISTRICT, EAST JAVA

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ABSTRACT

Background: Sexuality is an important and inseparable part of a woman's life. Mood and sexual related side-effects are frequently expressed problems by women of reproductive age who use hormonal contraceptives. This study aimed to analyze the effect of combined oral contraceptives on sexual function among women of reproductive age in Jombang District, East Java.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was conducted at 5 community health centers (Mojoagung, Mojowarno, Jogoloyo, Jelak Ombo and Perak), Jombang District, East Java, from February to March 2017. A sample 120 women of reproductive age who use combined oral contraceptives was selected for this study. The dependent variable was female sexual function. The independent variables were combined oral contraceptives use, age, parity, menstrual cycle, depression, and body mass index. The data on depression was measured by Hamilton Depression Rating Scale. Body mass index was measured by anthropometry. Female sexual function was measured by female sexual function index. The data were analyzed by path analysis.
Results: Female sexual function was negatively influenced by age (b= -0.21; SE= 0.05; p<0.001), depression (b= -0.44; SE= 0.12; p= 0.010), body mass index (b= -0.16; SE= 0.09; p= 0.063), and duration of oral contraceptive use (b= -0.20; SE= 0.13; p= 0.121). Depression was influenced by body mass index (b= 0.14; SE= 0.07; p= 0.037), duration of oral contraceptive use (b= 0.30; SE= 0.10; p= 0.003), and age (b= 0.09; SE= 0.04; p= 0.018). Body mass index was influenced by age (b= 0.10; SE= 0.05; p= 0.036), and duration of oral contraceptive use (b= 0.48; SE= 0.13; p<0.001). Menstrual cycle was influenced by duration of oral contraceptive use (b= -0.05; SE= 0.13; p< 0.007), age (b= -0.02; SE= 0.01; p= 0.002), and body mass index (b= -0.05; SE= 0.11; p<0.001).
Conclusion: Female sexual function is negatively influenced by age, depression, body mass index, and duration of oral contraceptive use.

Keywords: bio-psychosocial factor, oral contraceptive, female sexual function

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EFFECT OF CONTRACEPTIVE USE, PARITY, AND SOCIAL ECONOMIC FACTORS ON AGE AT MENOPAUSE AT BENDO COMMUNITY HEALTH CENTER, KEDIRI, EAST JAVA

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ABSTRACT

Background: Menopause is the natural cessation of menstruation that usually occurs between the ages of 45 and 55. Menopause women may experience some undesirable effects, such as sleep disturbance, prone to pain, increased susceptibility to sexually transmitted disease (STD), and thinner hair. It is hypothesized that age at menopause is affected by genetic factor, as well as psychosocial factors. This study aimed to the effect of contraceptive use, parity, and social economic factors on age at menopause.
Subjects and Method: This study was an analytic observatioanal study using case control design. The study was conducted in Bendo Village, Bendo Village, Sumberbendo Village, Pelem Village, Darungan Village, and Sambirejo Village in Community Health Center Bendo, Kediri, East Java, from 8-31 March 2017. A sample of 120 menopausal women was selected for this study by fixed disease sampling. The dependent variable was age at menopause. The independent variables were hormonal contraceptive use, duration of contraceptive use, parity, education level, and family income. The data were collected by questionnaire, and analyzed by path analysis.
Results: Menopausal age was affected by duration of hormonal contraceptive use (b= 0.29; SE= 0.12; p= 0.014), parity (b= 1.98; SE= 0.49; p= 0.001), and family income (b= 2.29; SE= 0.88; p= 0.009). Duration of hormonal contraceptive use was affected by hormonal contraceptive use (b= 5.23; SE= 0.57; p= 0.001) and parity (b= 1.22; SE= 0.27; p= 0.001). Family income was affected by parity (b= 0.14; SE= 0.05; p= 0.002) and education level (b= 0.10; SE= 0.11; p= 0.361).
Conclusion: Menopausal age is directly affected by duration of hormonal contraceptive use, parity, and family income. Menopausal age is indirectly affected by hormonal contraceptive use, parity, and education level.

Keywords: menopausal age, hormonal contraceptive, parity, social economic factors, path analysis

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EFFECT OF MENOPAUSE DURATION AND BIOPSYCHOSOCIAL FACTORS ON QUALITY OF LIFE OF WOMEN IN KEDIRI DISTRICT, EAST JAVA

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ABSTRACT

Background: Menopause is defined as the point in time when menstrual cycles permanently cease due to the natural depletion of ovarian oocytes from aging. Studies have shown, menopause causes decrease in quality of life and a positive correlation between menopausal symptoms and quality of live. This study aimed to determine the effect of menopause duration and biopsychosocial factors on quality of life of women.
Subjects and Method: This study was an analytic study using cross-sectional design. The study was conducted in Bendo Community Health Center, Kediri District, East Java, from 8–31 March 2017. A sample was of 105 menopausal women were selected for this study by proportionate random sampling. The dependent variable was quality of life. Quality of life encompassed several constructs including physical, functional, emotional, social, and cognitive variables. The independent variables were duration of menopause, Body Mass Index (BMI), education, family support, and family income. The data were collected by pre-tested questionnaire, and analyzed by path analysis.
Results: Quality of life was affected by menopause duration (b= 2.19; SE= 0.38; p<0.001), education (b= 6.72; SE= 1.72; p<0.001), family support (b= 0.42; SE= 0.17; p= 0.011), BMI (b= 0.71; SE= 0.27; p= 0.010), and family income (b= 0.13; SE= 1.60; p= 0.936). BMI was affected by education (b= 1.87; SE= 0.50; p<0.001).
Conclusion: Quality of life is directly affected by menopause duration, education, family support, BMI, and family income. Quality of life is indirectly affected by education.

Keywords: menopause duration, biopsychosocial factors, quality of life, path analysis

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ANALYSIS OF FACTORS INFLUENCING FEMALE INFERTILITY

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ABSTRACT

Background: Female infertility is one of important public health problems worldwide. According to the World Health Organization, the incidence of infertile cases is increasing each year. Likewise, according to the Central Bureau of Statistics, infertile incidence in Indonesia has been increasing. Dr. Moewardi Hospital Surakarta is one of the hospitals in Central Java Province with increasing number of infertile patients visits. This study aimed to analyze risk factors influencing female infertility.
Subjects and Method: This was an analytic observational study with case control design. The study was conducted at Sekar Clinic Dr. Moewardi Hospital, Surakarta from February to March, 2017. A sample of 105 fertile women, consisting of 35 infertile women and 70 fertile women, were selected for this study. The dependent variable was infertility. The independent variables were age, maternal employment status, level of stress, body mass index, abnormal reproductive organ. The data were collected by medical record and questionnaires. The data were analyzed by logistic regression.
Results: Female infertility was affected by aged ≥35 years old (OR= 4.45; 95% CI= 1.27 to 15.54; p=0.019), career women (OR= 3.91; 95% CI= 1.14 to 13.38; p= 0.043), high level of stress (OR= 3.89; 95% CI= 1.04 to 14.46; p= 0.046), body mass index (OR= 4.37; 95% CI= 1.03 to 18.61; p<0.001), abnormal reproductive organ (OR= 11.67; 95% CI= 2.80 to 48.54; p= 0.030).
Conclusion: female infertility is affected by aged ≥35 years old, carrer women, high level of stress, body mass index, and abnormal reproductive organ.

Keywords: female infertility, age, level of stress, employment status, body mass index

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OPTIMIZING THE COMBINATION OF OXYTOCIN MASSAGE AND HYPNOBREASTFEEDING FOR BREAST MILK PRODUCTION AMONG POST-PARTUM MOTHERS

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ABSTRACT

Background: The incidence of post-partum blues both in Indonesia and abroad has been quite high; the stress that post-partum mothers experience will inhibit breast milk production and, as a result, breastfeeding process should be stopped earlier. Hypnobreastfeeding relaxation and oxytocin massage have been a combination of therapy that might decrease the rate of Adenocorticotropic Hormon (ACTH). This study aimed to analyze the optimization of the combination of oxytocin massage and hypnobreastfeeding in order to decrease anxiety and to improve breast milk production among post-partum mothers.
Subjects and Method: This was an analytic experimental study with Randomized Control Trial (RCT) design. This study was conducted at Dr. Suradji Tirtonegoro Central General Hospital, Klaten, from January 25th, 2017 until March 9th, 2017. The population in this study was 200 post-partum mothers. A sample of 60 post-partum mothers was selected for this study and allocated into the intervention group (n1= 30) and the control group (n2= 30). The intervention group would be treated by the combination of oxytocin massage and hypnobreastfeeding. The dependent variables were anxiety and breast milk production. The independent variables were oxytocin massage and hypnobreastfeeding. The anxiety was measured by STAI scale. The breast milk production process was measured by checklist questionnaire. The breast milk production amount was measured by milking cups. The breast milk production between the two groups was tested by Mann-Whitney.
Results: The anxiety scale in the intervention group was better and lower than that of the control group. The differences in terms of anxiety scale between the intervention group (median= 24.00; SD= 4.45) and the control group (median= 34.00; SD= 6.93) were statistically significant ($p<0.001$). Then, the differences in terms of breast milk production process between the intervention group (median= 9.00; SD= 1.66) and the control group (median= 8.00; SD= 1.56) were nearly significant ($p<0.145$). Furthermore, the differences in terms of breast milk production amount between the intervention group (median= 10.00; SD= 10.36) and the control group (median= 4.50; SD= 4.21) were statistically significant ($p<0.001$).
Conclusion: Combination of oxytocin massage and hypnobreastfeeding can effectively decreasing anxiety and increasing breast milk production for post-partum mothers.

Keywords: oxytocin massage, hypnobreastfeeding, breast milk production, post-partum

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FACTORS ASSOCIATED WITH EXCLUSIVE BREASTFEEDING: APPLICATION OF PRECEDE-PROCEED MODEL AND THEORY OF PLANNED BEHAVIOR

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ABSTRACT

Background: Exclusive breastfeeding (EBF) is an ideal food for infants aged 0-6 months. EBF is useful for infants, but it is under-implemented. A non profit organization, namely Indonesian Association of Lactating Mothers (AIMI), has been established recently, with an objective to disseminate knowledge and information on breastfeeding and to increase breastfeeding practice in Indonesia. This study aimed to examine factors associated with exclusive breastfeeeding using PRECEDE-PROCEED model and Theory of Planned Behavior.
Subjects and Method: This was an analytic observational study with retrospective cohort design. This study was conducted at Pajang Community Health Center, Surakarta, Central Java, from January to March, 2017. A total sample of 20 lactating mothers were selected for this study by simple random sampling. The dependent variable was exclusive breastfeeding. The independent variables were maternal education, maternal employment status, participationin AIMI, knowledge, attitude, family support, perceived behavior control, and intention. The data were collected by a set of questionnaire and analyzed by path analysis.
Results: Exclusive breastfeeding were positively associated with maternal education ≥senior high school (b= -0.13; SE= 0.22; p= 0.572), participation in AIMI (b= 0.45, SE= 0.26, p= 0.085), maternal employment status (b= -0.63; SE= 0.20; p= 0.002), attitude (b= 0.05; SE= 0.03; p= 0.172), family support (b= 0.06; SE= 0.03; p= 0.039), perceived behavior control (b= 0.04; SE= 0.03; p= 0.164), and intention (b= 0.09; SE= 0.05; p= 0.045). EBF intention were positively associated with maternal education ≥senior high school (b= 1.44; SE=0.42; p<0.001), participation in AIMI (b= 0.55; SE= 0.46; p= 0.229), attitude (b= 0.11; SE= 0.06; p= 0.046) and perceived behavior control (b= 0.38; SE= 0.05; p <0.001).
Conclusion: Exclusive breastfeeding are positively associated with maternal education ≥senior high school, participation in AIMI, maternal employment status, attitude, family support, perceived behavior control, and intention. EBF intention are positively associated with maternal education ≥senior high school, participation in AIMI, attitude and perceived behavior control.

Keywords: PRECEDE-PROCEED, theory of planned behavior, AIMI, exclusive breastfeeding

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PATH ANALYSIS ON THE EFFECT OF BIRTHWEIGHT, MATERNAL EDUCATION, STIMULATION, EXCLUSIVE BREASTFEEDING, AND NUTRITIONAL STATUS ON MOTORIC DEVELOPMENT IN CHILDREN AGED 6-24 MONTHS IN BANYUMAS DISTRICT, CENTRAL JAVA

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ABSTRACT

Background: The first two years of childhood is a sensitive period for growth and development. Motoric skill is one of essential elements in child development. Good command of motoric control helps children to explore their environment and to improve development. This study aimed to determine the effect of birthweight, maternal education, stimulation, exclusive breastfeeding, and nutritional status on motoric development in children aged 6-24 months in Banyumas district, Central Java, using path analysis.
Subjects and Method: This was an analytic observational study with retrospective cohort design. This study was conducted at 4 sub-districts (Kembaran, Somagede, Cilongok, and Sumpiuh), Banyumas District, Central Java. A sample of 120 children aged 6-24 months, consisting of 40 children with low birthweight and 80 children with normal birthweight, were selected by fixed exposure sampling. The exogenous variables included birthweight, exclusivebreastfeeding, maternal education, and stimulation. The endogenous variable was nutritional status and motoric development. The data on motoric development was collected by SDIDTK test, while some other variables were collected by questionnaire. The data were analyzed by path analysis.
Results: Motoric development was directly affected by nutritional status (b= 0.12; SE= 0.04; p= 0.006), frequency of stimulation (b= 0.04; SE= 0.01; p= 0.005), birthweight (b= 0.33; SE= 0.06; p<0.001), and maternal education (b= 0.02; SE= 0.07; p= 0.719). Nutritional status was affected by exclusive breastfeeding (b= 0.10; SE= 0.15; p= 0.507), maternal education (b= 0.23; SE= 0.13; p= 0.078), and birthweight (b= 0.38; SE= 0.12; p= 0.002).
Conclusion: Motoric development was directly affected by nutritional status, frequency of stimulation, birthweight, and maternal education. Motoric development was indirectly affected by exclusive breastfeeding, maternal education, and birthweight.

Keywords: birthweight, exclusive breastfeeding, stimulation, maternal education, nutritional status, motoric development

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ANALYSIS OF MATERNAL MORTALITY DETERMINANTS IN BONDOWOSO DISTRICT, EAST JAVA

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ABSTRACT

Background: Data from Population Inter-Census Survey (Survei Penduduk Antar Sensus, SUPAS) 2015 showed that maternal mortality ratio was 305 per 100,000 live-births in Indonesia. Sustainable Development Goals (SDGs) set 70 per 100,000 live-births as the target for maternal mortality ratio to be achived by 2030. This study aimed to analyze the determinants of maternal mortality in Bondowoso district, East Java.
Subjects and Method: This was an analytic observational study with case-control design. This study was carried out at 17 Community Health Centers, in Bondowoso, East Java from February to March 2017. A sample of 117 study subjects, consisting of 39 cases of maternal death and 78 control, was selected for this study by fixed disease sampling. The dependent variable was incidence of maternal death. The independent variables were maternal education, maternal employment status, antenatal care visit, complication, late model, and other pregnancy risk factors. The data were collected from the obstetric and medical record, as well as a set of questionnaire. The data were analyzed by path analysis
Results: Determinants of maternal death included late decision making (b= 2.37; 95% CI= 0.81 to 3.93; p= 0.003), late transfer to the hospital (b= 2.35; 95% CI= -0.21 to 4.91; to p= 0.072), late handling at the hospital (b= 2.36; 95% CI= -0.19 to 4.91; p= 0.069), and complication (b= 2.5; 95% CI= 1.41 to 3.62; p<0.001). Complication was determined by completeness of antenatal visits (b= -1.01; 95% CI= -1.94 to -0.09; p= 0.032), and existence of pregnancy risk factor (b= 1.90; 95% CI= 1.01 to 2.78; p= <0.001). Pregnancy risk factors was determined by completeness of antenatal visit (b= -1.09; 95% CI = -1.99 to -0.19; p= 0.018), maternal education (b= -0.47; 95% CI= -0.85 to -0.07; p= 0.020), and maternal employment status (b= 0.14; 95% CI= -0.17 to 0.45; p= 0.369). Antenatal visit was determined by maternal education (b= 0.54; 95% CI= 0.10 to 0.99; p= 0.017) and maternal employment status (b= 0.08; 95% CI= -0.29 to 0.45; p= 0.683).
Conclusion: The direct determinants of maternal death include late decision making, late transfer to the hospital, late handling at the hospital, and complication. The indirect determinants of maternal death include completeness of antenatal visits, existence of pregnancy risk factor, maternal education, and maternal employment status.

Keywords: determinant, delay, complication, antenatal care, maternal death

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ANALYSIS OF LIFE-COURSE FACTORS INFLUENCING GROWTH AND DEVELOPMENT IN CHILDREN UNDER 3 YEARS OLD OF EARLY MARRIAGE WOMEN IN KEDIRI

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ABSTRACT

Background: Children is the future pillar of our nation. As such, children need is important to be fulfilled. Physical, mental, and emotional conditions of mothers during gestation period play an important role in growth and development of children. This study aimed to determine life-course factors influencing growth and development in children under 3 years old of early marriage women.
Subjects and Method: This was an analytic observational study with retrospective cohort design. This study was conducted at Sukorame and Campurejo Health Center, Kediri, East Java, on March, 2017. A sample of 120 children under 3 years old were selected for this study by fixed exposure sampling. The dependent variable was child growth (weight for age) and development. The independent variables were marital age, maternal mid upper arm circumference (MUAC) during pregnancy, gestational age of birth delivery, family stimulation, maternal education, and family income. The data of child weight were measured by scales and recorded in maternal and child health book. The data of other variables were measured by a set of questionnaire. The data were analyzed by path analysis.
Results: Child growth (weight for age) was affected by birthweight (b= 0.07; SE= 0.02; p< 0.001) and family income (b= 0.04; SE= 0.02; p= 0.070). Birthweight was affected by maternal education (b= 2.11; SE= 1.83; p= 0.248), gestational age of birth (b= 0.67; SE= 0.22; p= 0.002), maternal MUAC (b= 1.46; SE= 0.24; p= 0.002), and family income (b= 0.22; SE= 0.09, p= 0.012). Family income was affected by marital age (b= 0.68; SE= 0.07; p<0.001). Maternal MUAC during pregnancy was affected by marital age (b= 0.12; SE= 0.03; p<0.001). Maternal education was affected by marital age (b=0.01; SE <0.01; p= 0.002). Family stimulation was affected by family income (b= 0.75; SE= 0.26; p= 0.003). Child development was affected by marital age (b= 0.07; SE= 0.02; p= 0.001), family stimulation (b= 0.02; SE= 0.01; p<0.001), and birthweight (b<0.01; SE<0.01; p= 0.373).
Conclusion: Child growth of under 3 years old (weight for age) is directly affected by birthweight and family income, and indirectly affected by some other factors. Child development is directly affected by marital age, family stimulation, and birthweight, and indirectly affected by some other factors.

Keywords: life-course, growth, development, children under 3 years old

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RISK FACTORS OF POSTPARTUM HEMORRHAGE IN BONDOWOSO DISTRICT, EAST JAVA

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ABSTRACT

Background: Postpartum hemorrhage is the leading cause of the maternal death worldwide. Postpartum hemorrhage accounted 20% of all causes of maternal death in Bondowoso, East Java. This study aimed to examine the risk factors of postpartum hemorrhage.
Subjects and Method: This was an analytic observational study using case control design. The study was carried out at 5 community health centers, Bondowoso District, East Java, from March to May 2017. A sample of 120 study subjects were selected for this study by fixed disease sampling, consisting of 40 postpartum women with hemorrhage and 80 postpartum women without hemorrhage. The dependent variable was postpartum hemorrhage. The independent variables were family income, birth space, type of delivery, mother's middle upper arm circumference (MUAC), antenatal visit, and high-risk score card. The data were collected by a set of pre-tested questionnaire. Path analysis was employed for data analysis.
Results: Post partum bleeding was directly affected by birth space <2 years or > 10 years (b= 3.03; 95% CI= 1.52 to 4.55; p< 0.001), antenatal visit ≥ 4 times (b= 3.35; 95% CI= 1.82 to 4.87; p< 0.001), High risk score <2 (b= 2.18; 95% CI= 0.92 to 3.44; p= 0.001), type of delivery (b= 1.63; 95% CI= 0.39 to 2.87; p= 0.010). High-risk score card was affected by birth space <2 years or > 10 years (b= 0.80; 95% CI= 0.32 to 1.57; p= 0.041), family income < Rp 1,417,000 (b= 0.72; 95% CI= -0.57 to 1.49; p= 0.070), and antenatal visit ≥ 4 (b= 0.70; 95% CI= -0.07 to 1.48; p= 0.076). MUAC was affected by family income ≥ Rp 1,417,000 (b= 0.67; 95% CI= -0.08 to 1.44; p= 0.083). Type of delivery (assisted) was affected by high-risk score card <2 (b= 1.00; 95% CI= 0.22 to 1.77; p= 0.011) and mother's MUAC <23.5 cm (b= 1.04; 95% CI= 0.20 to 1.88; p= 0.015).
Conclusion: Post partum bleeding was directly affected by birth space, antenatal visit, high risk score, type of delivery. High-risk score card was affected by birth space, family income, and antenatal visit. MUAC was affected by family income. Type of delivery (assisted) was affected by high-risk score card and mother's MUAC.

Keywords: postpartum hemorrhage, risk factor

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THE RELATIONSHIP BETWEEN PARENTAL SOCIO-ECONOMIC STATUS, BIRTHWEIGHT, AND DEVELOPMENT IN CHILDREN AGED 1-5 YEARS IN SURAKARTA

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ABSTRACT

Background: Health report by The Ministry of Health in 2006 revealed that 16% of children under five had mild to severe development problem. About 5-10% of children under five had mental retardation. The current study hypotesized that parental socio-economic status such as family income and maternal education affect child development. The purpose of this study was to analyze the relationshipbetween parental socio-economic status, birthweight, and development in children aged 1-5 years in Surakarta.
Subjects and Method: This was an analytic observational study with case control design. This study was conducted at Ngoresan Health Center, Surakarta, from December, 2016 to January, 2017. The study population was children under five living within the area of Ngoresan Health Center. A total of 100 children under five was selected by fixed disease sampling, consisting of 25 cases and 75 controls. The dependent variable was child development, measured by Ministry of Health's KPSP. The independent variables were family income, maternal education, and birthweight. The data were analyzed by chi-square and multiple logistic regression.
Results: Therewere positive and statistically signifcant relationships between maternal education ≥ high school (OR= 1.61; 95% CI= 1.5 to 15.7; p= 0.046), family income ≥minimum regional wage (OR= 5.1; 95% CI= 1.1 to 22.8; p= 0.032), and normal birthweight (OR= 8.5; 95% CI= 2.4 to 30.1; p= 0.001) and child development.
Conclusion: There are positiverelationships between highfamily income, high maternal education, normal birthweight, and normal development in children aged 1-5 years.

Keywords: parental socio-economic status, birthweight, child development

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PATH ANALYSIS ON THE EFFECT OF BREASTFEEDING COMPLEMENTARY FOOD PATTERN, MATERNAL SCHOOLING, FAMILY INCOME, AND BIRTHWEIGHT, ON NUTRITIONAL STATUS IN CHILDREN UNDERFIVE

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ABSTRACT

Background: Indonesia is one among the 17 countries with the highest prevalence of stunting, wasting, and overweight in children under five. In 2013, the prevalence of moderate undernutrition and severe undernutrition was 13.9% and 5.7%, respectively, in children under five. The prevalence of stunting was 19.2%. The period from birth to 2 years is so called as a sensitive period when the deleterious exposure and inadequate food intake can result in negative impact on the quality of the future generation.This study aimed to analyze the effect of breastfeeding complementary food pattern, maternal schooling, family income, and birthweight, on nutritional status in children underfive.
Subjects and Method: This was an analytic observational with cross sectional design. This study was carried out in Klaten, Central Java from December 2016 to January 2017. A total sample of 120 out of 1236 mothers who had children aged 6-24 months wereselected for this study by multi-stage sampling. The dependent variable was nutritional status measured in weight for age. The independent variables were breastfeeding complementary food pattern, maternal schooling, family income, and birthweight. The data were collected by a set of questionnaire and analyzed with path analysis model on IBM SPSS AMOS 22.
Results: The path model showed goodness of fit with CMIN= 1.18; p= 0.002; GFI= 0.99; NFI= 0.98; CFI= 1.00; RMSEA<0.001. Breastfeeding complementary food pattern (b= 0.27; p= 0.002) and birthweight (b= 0.25; p= 0.004) showed direct positive and statistically significant effect on weight fo age score. Family income <Rp.1,400,000 (b= 0.06; p= 0.481) showed direct positive but statistically non significant effect on weight for age score. Maternal education showed positive and statistically significant effect on family income (b= 0.28; p= 0.001).
Conclusion: Breastfeeding complementary food pattern and birthweight are important determinant of nutritional status as measured in weight for age in children under five. Maternal education has a positive effect on family income. Family income does not show its effect on nutritional status in this study.

Keywords: breastfeeding complementary food pattern, nutritional status, children under five

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THE RELATIONSHIP BETWEEN CHILD NURTURING PATTERN, FAMILY SUPPORT, AND LANGUAGE COMPETENCE IN CHILDREN AGED 5-6 YEARS WITH AUDITORY DISORDER

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ABSTRACT

Background: Hearing is one of the important senses for human that functions as a communication tool and education. Lack of hearing ability in children may hinder development and lead to problem in language and speaking ability. In turn it may affect academic achievement. Hearing disorder therefore needs to be detected early. This study aimed to determine the relationship between child nurturing pattern, family support, and language competence in children aged 5-6 years with auditory disorder.
Subjects and Method: This study was analytic and observational with cross sectional design. It was carried out at “Jala Puspa” Children Observation Garden (Taman Observasi Anak “Jala Puspa”) Dr. Ramelan Navy Hospital, Surabaya, East Java. A total sample of 40 children aged 5-6 years with their parents were selected for this study by simple random sampling. The dependent variable was language competence. The independent variables were child nurturing pattern and family support. The data were collected by a set of questionnaire, and were analyzed by logistic regression.
Results: There were positive relationship between nurturing pattern (OR= 10.05; 95% CI= 1.85 to 54.73; p= 0.008), family support (OR= 6.76; 95% CI= 1.36 to 33.51; p= 0.019), and language competence.
Conclusion: Nurturing pattern and family support have positive relationship with language competence.

Keywords: child nurturing pattern, family support, language competence, auditory disorder

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EFFECT OF BIRTHWEIGHT, ILLNESS HISTORY, AND DIETARY PATTERN, ON THE INCIDENCE OF ANEMIA IN CHILDREN UNDER-FIVE AT TASIKMADU HEALTH CENTER, KARANGANYAR, CENTRAL JAVA

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ABSTRACT

Background: The first five years of life is often regarded as "golden age period" of development. During this period physical, motor, intellectual, emotional, language, and social development proceed rapidly in children. Brain tissues grow fast to reach 80% of adult brain weight. Anemia occuring during this period can affect health, as well as cognitive and physical development in children. This study aimed to determine the effects of birthweight, illness history, dietary pattern, maternal education, and family income on the incidence of anemia in children under-five years of age.
Subjects and Method: This was an analytic observational study using case control design. The study was carried out at Karanganyar District, Central Java, from February to April 2017. A sample of 110 subjects was selected for this study, consisting of 35 children under-five years of age with anemia and 75 children of the same age without anemia. The independent variables were birthweight, illness history, dietary pattern, maternal education, and family income. The dependent variable was anemia. The data were collected by a set of questionnaire. Hemoglobin concentration was measured by Hb meter. The data were analyzed by path analysis on Stata 13.
Results: Anemia in children under-five was directly affected by illness history (b= 2.50; 95% CI= 1.06 to 3.95; p= 0.001;), dietary pattern (b= -1.89; 95% CI= -3.39 to -0.39; p= 0.013;), and birthweight (b= -0.97; 95% CI= -2.07 to 0.13; p= 0.083). Anemia in children under-five was indirectly affected by maternal educational (b= 1.09; 95% CI= 0.14 – 2.04; p= 0.024) and family income (b= -0.90; 95% CI= -1.78 to 0.02; p= 0.044).
Conclusion: Anemia in children under-five is directly affected by illness history, dietary pattern, and birthweight. It is indirectly affected by maternal educational and family income.

Keywords: anemia, birthweight, illness history, dietary pattern, children under-five

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INFLUENCE OF PSYCHO-SOCIO-ECONOMIC FACTORS, PARENTING STYLE, AND SIBLING RIVALRY, ON MENTAL AND EMOTIONAL DEVELOPMENT OF PRESCHOOL CHILDREN IN SIDOARJO DISTRICT

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ABSTRACT

Background: Preschool development is an influential basic stage for further development. Parents and siblings have an important role for a child's development. Parenting may be the best tool for the development of complete and integrated childhood personality. This study aimed to examine the influence of psycho-socio-economic factors, parenting style, and sibling rivalry, on mental and emotional development of preschool children.
Subjects and Method: This was an analytic observational study using cross sectional design. The study was conducted at 4 Community Health Centers, Sidoarjo District, East Java, from March to May 2017. A sample of 120 preschool children were selected for this study by multistage random sampling. The dependent variable was mental and emotional development. The independent variables were maternal education, family income, number of children, belief of child value, parenting style, and sibling rivalry. The data were collected by a set of questionnaire. Path analysis was employed for data analysis.
Results: Mental and emotional development was directly affected by authoritative parenting style (b= 4.81; 95% CI 3.05 to 6.56; p= <0.001) and sibling rivalry (b= 2.45; 95% CI= 0.92 to 3.99; p= 0.002). Authoritative parenting style was positively affected by maternal education ≥ senior high school (b= 2.14; 95% CI 0.03 to 4.24; p= 0.046), family income ≥ minimum regional wage (b= 1.41; 95% CI 0.07 to 2.75; p= 0.038) and positive belief of child value (b= 1.34; 95% CI <0.01 to 2.68; p= 0.049). Family income was affected by maternal education ≥ senior high school (b= 2.84; 95% CI 1.85 to 3.83; p= <0.001). Sibling rivalry was affected by number of children ≥ 2 (b= 1.85; 95% CI 1.06 to 2.65; p= <0.001). Number of children ≥ 2 was affected by positive belief of child value (b= 3.77; 95% CI 2.27 to 5.27; p= <0.001).
Conclusion: Mental and emotional development is directly affected by parenting style and sibling rivalry. It is indirectly affected by maternal education, family income, belief of child value, and number of children.

Keywords: parenting style, sibling rivalry, mental and emotional development, preschool children

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FACTORS AFFECTING THE OCCURRENCE OF MENTAL DISABILITY IN PONOROGO DISTRICT, EAST JAVA

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ABSTRACT

Background: Children with mental disability show below average intellectual abilities and social behavior adaptability. Living with a disabled child can have profound effects on the entire family–parents, siblings, and extended family members. Meeting the needs of children with disabilities can be challenging for schools and families. However, effective support for children's mental health and wellbeing involves efforts to meet the social, emotional and learning needs of all children. This study aimed to investigate factors affecting the occurrence of mental disability in children aged 6 to 15 years old.
Subjects and Method: This was an analytic observational study using case control design. The study was conducted in Ponorogo District, East Java, from March to April 2017. A sample of 150 children aged 6 to 15 years old, consisting of 50 children with mental disability and 100 children without mental disability, were selected for this study by fixed disease sampling. The exogenous variables were prematurity, maternal age during pregnancy, maternal stress during pregnancy, hereditary history, family income, parental education, and environmental exposure. The endogenous variables were maternal nutritional status, low birthweight, and mental disability. The data were collected by a questionnaire, and analyzed by path analysis.
Results: Mental disability was directly affected by maternal age (b= 2.52, 95% CI= 1.23 to 3.81, p<0.001), low birthweight (b= 2.32, 95% CI= 1.11 to 3.54, p<0.001), hereditary history (b= 2.54, 95% CI= 1.34 to 3.74, p<0.001). Mental disability was indirectly affected by maternal nutritional status, maternal stress, maternal education, family income, and environmental exposure.
Conclusion: Maternal age, low birthweight, and hereditary history, directly affect mental disability. Maternal nutritional status, maternal stress, maternal education, family income, and environmental exposure, indirectly affect mental disability.

Keywords: mental disability, children aged 6 to 15 years old

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BIOPSYCHOSOCIAL FACTORS, LIFE COURSE PERSPECTIVE, AND THEIR INFLUENCES ON LANGUAGE DEVELOPMENT IN CHILDREN

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ABSTRACT

Background: Speech and language disorder if untreated may cause deficiency in reading, verbal, psychosocial, behavioral, and academic abilities. Studies have shown that birthweight, body length at birth, maternal education, parenting style, maternal stress, income at pregnancy, and current income can influence child development. This study aimed to determine the biopsychosocial factors, life course perspective, and their influences on language development in children.
Subjects and Method: This was an analytic observational study using case control design. The study was conducted in Surakarta, Central Java, from February to May 2017. A sample of 140 children aged 2 to 5 years old were selected for this study by fixed disease sampling with 1:3 ratio between case (children with speech and language disorder) and control (children without such disorder). The dependent variable was child speech and language development. The independent variables were birthweight, body length at birth, maternal education, maternal stress, parenting style, family income at pregnancy, and current family income. The data were collected by a set of questionnaire and medical record. The data on speech and language ability was measured by Denver II questionnaire. Path analysis was employed for data analysis.
Results: Language development was directly and positively affected by democratic parenting style (b= 0.46; SE= 0.08; p<0.001), permissive parenting style (b= 0.10; SE= 0.11; p= 0.020), birthweight (b= 0.12; SE= 0.02; p= 0.002), maternal education (b= 0.11; SE= 0.31; p= 0.007), maternal stress (b= -0.13; SE= 0.04; p= 0.013). Language development directly and negatively affected by autoritarian parenting style (b= -0.37; SE= 0.09; p<0.001). Language development was indirectly affected by body length at birth, family income at pregnancy, and current family income.
Conclusion: Language development is directly affected by parenting style, birthweight, maternal education, maternal stress.

Keywords: biopsychosocial, life course, language development, children 2 to 5 years old, path analysis

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FACTORS AFFECTING INFANT FORMULA FEEDING IN INFANTS AGED 0-6 MONTHS IN SUKOHARJO, CENTRAL JAVA

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ABSTRACT

Background: Formula feeding in infants aged 0-6 months may increase the risk of morbidity and mortality. Formula feeding in Indonesia continues to increase from 15% in 2003 to 79.8% in 2013. To the best of the authors' knowledge no studies have been done that analyzed the effects of constructs in Theory of Planned Behavior (TPB) on formula feeding practice. This study aimed to analyze the factors influencing formula feeding practice among lactating mothers for their infants aged 0-6 months, using TPB constructs.
Subjects and Method: This study was an analytic observational with cross-sectional approach. It was carried out in Sukoharjo District, Central Java, from April to May 2017. A sample of 150 lactating mothers were selected for this study by cluster random sampling. The exogenous variables were the role of health workers, the role of mass media, subjective norm, and maternal education. The endogenous variables were attitudes toward formula feeding, perceived behavioral control, intention, family income, maternal employment status, and formula feeding practice. The data were collected by a set of questionnaire and analyzed by path analysis.
Results: Infant formula feeding was directly affected by maternal intention (b= 1.96; 95% CI= 0.59 to 3.34; p= 0.005), perceived behavior control (b= 2.24; 95% CI= 0.79 to 3.68; p= 0.002), family income (b= 1.99; 95% CI= 0.39 to 3.59; p= 0.014), and maternal employment status (b= -2.01; 95% CI= -3.82 to -0.21; p= 0.029). Mother's intention was influenced by her attitude (b= 1.85; 95% CI= 0.58 to 3.12; p= 0.004), subjective norm (b= 2.98; 95% CI= -0.07 to 6.04; p= 0.056), perceived behavior control (b= 1.53; 95% CI= 0.44 to 2.62; p= 0.006), and mass media (b= 2.01; 95% CI= 0.35 to 3.68; p= 0.018). Maternal employment status was influenced by maternal education (b= 2.68; 95% CI= 1.81 to 3.55; p<0.001). Family income was affected by maternal employment status (b= 2.10; 95% CI= 1.24 to 2.97; p<0.001). Maternal attitude was influenced by the role of health personnel (b= 2.73; 95% CI= 0.68 to 4.78; p= 0.009). Likewise, maternal perceived behavior control was influenced by the role of health personnel (b= 1.03; 95% CI= 0.22 to 1.84; p= 0.013).
Conclusion: Infant formula feeding is directly affected by maternal intention, perceived behavior control, family income, and maternal employment status. Infant formula feeding is indirectly affected by attitude, subjective norm, and the role of health personnel.

Keywords: formula feeding, theory of planned behavior, infant

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EFFECTS OF MATERNAL NUTRITION STATUS, MATERNAL EDUCATION, MATERNAL STRESS, AND FAMILY INCOME ON BIRTHWEIGHT AND BODY LENGTH AT BIRTH IN KLATEN, CENTRAL JAVA

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ABSTRACT

Background: Birthweight and body length at birth are predictors of morbidity and mortality in children under five years old and adult age. Low birthweight increases the risk of morbidity and mortality in children under five. This study aimed to examine the effects of maternal nutrition status, maternal education, maternal stress, and family income, on birthweight and body length at birth in Klaten, Central Java.
Subjects and Method: This was an observational analytic study with case control design. The study was conducted at Manisrenggo and Bayat community health centers, Klaten District, Central Java, in April 2017. A total sample of 120 children aged 0 to 6 months and their mothers were selected for this study using fixed disease sampling. The dependent variables were birthweight and body length and birth. The independent variables were maternal nutrition status, maternal education, maternal stress, and family income. The data were collected by a set of questionnaire. Maternal nutrition status at pregnancy was measured by mid-upper arm circumference (MUAC). Data on birthweight and body length at birth were taken from mother and child health monitoring book. The data was analyzed using path analysis.
Results: Birthweight was directly and positively affected by maternal MUAC at pregnancy (b= 0.50; SE= 0.13; p<0.001), family income (b= 0.11; SE= 0.04; p= 0.004), and maternal education (b= 2.14; SE= 0.88; p= 0.016). Birthweight was directly and negatively affected by maternal stress (b= -1.81; SE= 0.81; p= 0.025). Body length at birth was directly and positively affected by maternal MUAC at pregnancy (b= 0.16; SE= 0.64; p= 0.011) and family income (b= 0.05; SE= 0.18; p= 0.005). Maternal MUAC at pregnancy was affected by maternal education (b= 1.41; SE= 0.58; p= 0.014). Likewise, family income was affected by maternal education (b= 5.28; SE= 2.11; p= 0.012).
Conclussion: Maternal MUAC at pregnancy, family income, and maternal education positively and directly affect birthweight. Maternal stress directly and negatively affects birthweight. Body length at birth is directly and positively affected by maternal MUAC at pregnancy and family income.

Keywords: birthweight, body length at birth, MUAC, maternal stress

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HEALTH BELIEF MODEL AND LABELLING THEORY IN THE ANALYSIS OF PREVENTIVE BEHAVIORS TO ADDRESS BIOPSYCHOSOCIAL IMPACTS OF SEXUAL VIOLENCE AMONG STREET CHILDREN IN YOGYAKARTA

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ABSTRACT

Background: Street children are at high risk of sexual violence. Necessary measures should be undertaken to address deleterious biopsychosocial impacts of sexual violence. This study aimed to analyze the preventive behaviors to address biopsychosocial impacts of sexual violence among street children in Yogyakarta using Health Belief Model and Labelling Theory.
Subjects and Method: This study was qualitative descriptive with phenomenology approach. The key informants for this study included Head of Rumah Impian Indonesia Foundation (a social non-government organization) and Director of PKBI, Yogyakarta. The main informants were the street children with assistance from Rumah Impian Indonesia Foundation. Supporting informants were health personnels of Jetis community health center and the street children's brothers.
Results: Street children who had experienced sexual violence were taken care by Rumah Impian Indonesia Foundation. The biopsychosocial effects of sexual violence included anxiety, anger, shock, trauma, fear, feelings of revenge, irritation, emotion, stress, unwillingness to eat, bad mood, and staying alone in the room. Preventive behaviour to overcome biopsychosocial impacts of sexual violence included forgetting, letting it go, not mentioning the problem again. Label or negative stigma given by the community to street children included marred children, dirty children, and social garbage.
Conclusion: Sexual violence experienced by street children cause various psychologic impacts, which calls for appropiate preventive behaviors to minimize the deleterious impacts of sexual violence. The social impacts of sexual violence in street children include labelling and negative stigma.

Keywords: Health Belief Model, Labelling Theory, sexual violence, biopsychosocial, preventive behavior, street children.

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EFFECTS OF MATERNAL EDUCATION, PSYCHOSOCIAL STRESS, NUTRITIONAL STATUS AT PREGNANCY, AND FAMILY INCOME, ON BIRTHWEIGHT IN NGANJUK, EAST JAVA

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ABSTRACT

Background: Low birthweight (LBW) is one of the primary causes of infant mortality. It shares 27% of infant mortality rate (IMR). The Indonesian Demographic and Health Survey in 2007 reported that the IMR was 34 deaths per 1,000 live births. As much as 30.3% of this rate was accounted by LBW. As such LBW is an important global public health issue. Countries arround the world have committed to overcome this problem. This study aimed to investigate the effects of maternal education, psychosocial stress, nutritional status at pregnancy, and family income, on birthweight.
Subjects and Method: This was an observational analytic study with case control design. The study was conducted in Ngetos community health center, Nganjuk, East Java, from May to June, 2017. A total sample of 120 were selected for this study by fixed disease sampling, compresing 40 infants with low birthweight and 80 infants with normal birthweight. The dependent variable was birthweight. The independent variables were maternal education, psychosocial stress, nutritional status at pregnancy (middle-upper arm circumference, MUAC), maternal anemia, and family income. MUAC was measured by MUAC measuring tape. Hemoglobin concetration was measured by Sahli meter. Psychosocial stress was measured by Holmes and Rahe stress scale. The other variables were measured by a set of questionnaire. Path analysis was used for data analysis.
Results: MUAC ≥23.5 cm (b= -0.80, SE= 0.57; p= 0.064), hemoglobin concetration ≥11 g/dL (b= -120.16, SE= 45.14, p= 0.008), and low psychosocial stress (b= -0.80, SE= 0.57, p= 0.164) directly and negatively affected low birthweight. Maternal education ≥Senior High School (b= 1.28, SE= 0.056, p= 0.022), psychosocial stress (b= -0.001, SE<0.001, p= 0.097), and family income (b= 0.97, SE= 0.46, p= 0.036) positively affected MUAC. MUAC ≥23.5 cm positively affected hemoglobin concentration ≥11 g/dL (b= 0.19, SE= 20.84, p<0.001).
Conclusion: MUAC, hemoglobin concetration, and low psychosocial stress directly and negatively affect low birthweight.

Keywords: low birthweight, MUAC, maternal anemia, psychosocial stress, family income

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DANCING IN THE RAIN: LIFE EXPERIENCE OF PREGNANT WOMEN WITH HIV INFECTION

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ABSTRACT

Background: Pregnant women with HIV infection often face stigma, compromised health, and endangered lives of their babies. They need more attention physically, psychologically, and socially from surrounding people. On the other hand, there is a need for the women to have more self understanding about ways to struggle and survive. This study aimed to investigate life experience of pregnant women with HIV infection.
Subjects and Method: The researcher utilized qualitative study with phenomenology approach. Guided by a grand tour question, seven pregnant women who were HIV positive from Central Java, Yogyakarta and Jakarta, Indonesia, were interviewed. The themes emerged from the data were analyzed using Colaizzi method of data analysis.
Results: There were 121 formulated meanings captured by narration from the participants. These meanings were grouped based on their similarity. Three themes emerged from the analysis using Colaizzi analysis of qualitative data: 1) heavy burden, 2) source of strength and happiness, 3) readiness to rock the world.
Conclusion: Dancing in the rain emerged to be the main essence of life experience of pregnant women with HIV infection. Despite life with ambivalent feelings and unstoppable difficulties, they have to continue with their pregnancies and their lives. One of meaningful recommendations arising from this study is asking the community and government for collaboration to prevent stigmatization and discrimination against pregnant women with HIV infection.

Keywords: HIV infection, life experience, pregnant women, phenomenology.

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SOCIAL DEVELOPMENT OF CHILDREN UNDER-FIVE AS THE IMPACT OF EXTRAMARITAL PREGNANCY

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ABSTRACT

Background: Teenagers have a great curiosity of something have never been experienced before. This characteristic affect their sexual and dating behaviors. This eventually may lead to unwantted pregnancy, unsafe abortion, sexual transmitted disease (STD) infection, and even mortality. This study aimed to determine the social development of children under-five as the impact of extramarital pregnancy.
Subjects and Method: This was an explorative qualitative study. It was carried out in Jaten Subdistrict, Karanganyar District, Central Java. The key informants in this study included Head of the Office of Marital Affairs, Jaten Subdistrict, Karanganyar District. Other key informants included extramarital offsprings, their parents and grandparents.
Results: Couples with extramarital pregnancy experience hard life. They tend to refuse the extramarital pregnancy and atempt to abort it. This situation affects parenting pattern. Social support system had an important role in parenting pattern. Couples lacking in social support system were not able to nurture the offsprings optimally. The offsprings received minimal stimuli required for the social development. In effect, their offsprings became shy and fearful.
Conclusion: Social support system has an important role in parenting pattern. It is required for the extramarital couples to raise their offsprings normally.

Keywords: extramarital pregnancy, offsprings, social development, parenting pattern

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EFFECT OF PLAY GROUP AND BIOPSYCHOSOCIAL FACTORS ON THE INDEPENDENCE DEVELOPMENT OF PRESCHOOL CHILDREN IN SURAKARTA

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ABSTRACT

Background: The development of children's independence is important for their future competitiveness in the rapidly increasing social changes. Disturbance in the development of children's independence may have a negative future impact in adult life and children become dependent individuals. Efforts are needed to help children develop optimally. Some play groups have been introduced to meet this need in Surakarta, but no studies have been carried out to evaluate its effectiveness. This study aimed to determine the effect of play group on the independence development of preschool children while controlling for the effect of biopsychosocial factors.
Subjects and Method: This was an analytic observational study using case control design. The study was conducted at 3 kindergartens in Surakarta, Central Java, from February to April 2017. A sample of 120 kindergarten pupils were selected for this study by purposive sampling and random sampling. The dependent variable was independence development. The independent variables were play group participation status, parenting style (autoritarian, democratic, and permissive), parental education, and child age. The data were collected by a set of questionnaire and analyzed by path analysis.
Results: Maternal education ≥Senior High School (b= 8.77; CI 95%= 1.89 to 15.66; p= 0.012), paternal education ≥Senior High School (b= 9.82; 95% CI= 2.70 to 16.93; p= 0.007), child age ≥5 years old (b= 5.59; 95% CI= 1.50 to 9.68; p= 0.007), participation in play group (b= 9.45; 95% CI= 2.20 to 16.71; p= 0.011), and democratic parenting style (b= 0.12; 95% CI= 0.02 to 0.23; p= 0.018) increased child independence. Autoritarian parenting style (b= -0.15; 95% CI= -0.26 to -0.45; p= 0.006) and permissive parenting style (b= -0.92; 95% CI= -0.20 to 0.01; p= 0.092) decreased child independence. Participation in play group was determined by democratic parenting style (b<0.01; 95% CI <0.01 to <0.01; p= 0.039), permissive parenting style (b= 0.01; 95% CI -<0.01 to <0.01; p= 0.131), paternal education ≥Senior High School (b= 0.25; 95% CI= 0.10 to 0.40; p= 0.001), and child age ≥5 years old (b= 0.18; 95% CI= 0.09 to 0.28; p <0.001).
Conclusion: Maternal education ≥Senior High School, paternal education ≥Senior High School, child age ≥5 years old, participation in play group, and democratic parenting style, positively and directly affect child independence. Autoritarian parenting style and permissive parenting style negatively and directly affect child independence.

Keywords: play group, parenting style, biopsychosocial factor, independence, development, preschool children

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SIBLING ROLE, PARENTING PATTERN, MATERNAL EDUCATION AND KNOWLEDGE, AND THEIR ASSOCIATIONS WITH SPEECH-LANGUAGE ABILITY OF CHILDREN AGED 3-5 YEARS OLD IN KARANGANYAR, CENTRAL JAVA

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ABSTRACT

Background: Speech-language ability is one of several developmental abilities that must be masters by children under-five. Data from the Central Biro of Statistics showed that in 2014 there were 131 children under-five with speech-language ability problem. This study aims to determine the associations between sibling role, parenting pattern, maternal education and knowledge, and speech-language ability of children 3-5 years old.
Subjects and Method: This was an analytic observational study using cross sectional design. The study was carried out in Gondangrejo Sub-District, Karanganyar District, Central Java. A sample of 80 children aged 3-5 years old were selected for this study by random sampling. The dependent variable was speech–language ability. The independent variables were sibling role, parenting pattern, maternal education and knowledge. The data were collected by a set of pre-tested questionnaire. Logistic regression was employed for data analysis.
Results: Sibling role (OR= 13.23; 95% CI= 2.42 to 72.45; p= 0.003), parenting pattern (OR= 7.58; 95% CI= 1.47 to 38.96; p= 0.015), maternal knowledge (OR= 9.64; 95% CI= 2.10 to 44.17; p= 0.004), and maternal education (OR= 7.84; 95% CI= 1.47 to 41.96; p= 0.016) were associated with speech-language ability.
Conclusion: Sibling role, parenting pattern, maternal knowledge, and maternal education are associated with speech-language ability

Keywords: sibling, parenting pattern, education, speech-language

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ASSOCIATIONS BETWEEN KNOWLEDGE IN ANTENATAL NUTRITION, FAMILY INCOME, PLACENTA WIDTH, AND FETAL WEIGHT, AT MOTHER AND CHILD HOSPITAL ARVITA BUNDA, SLEMAN, YOGYAKARTA

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ABSTRACT

Background: Fetal growth and development are influnced by many factors, including maternal knowledge in nutrition intake. The nutrients obtained from maternal food intake are transferred to the fetus through placenta, thereby affecting placental width. This study aimed to investigate the associations between knowledge in antenatal nutrition, family income, placental width, and fetal weight.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was carrried out at Maternal and Child Health Hospital Arvita Bunda, Sleman, Yogyakarta, from 20 November to 20 Desember 2016. A sample of 48 pregnant women were selected for this study by purposive sampling. The independent variables were maternal knowledge in antenatal nutrition, family income, and placental width. The dependent variable was fetal weight. The data on placental width and fetal weight were obtained by Ultrasonography (USG). The other data were collected by a set of pre-tested questionnaire. Logistic regression was employed for data analysis.
Results: Placental width (OR= 4.18; 95% CI= 0.24 to 13.02; p= 0.573), maternal knowledge in antenatal nutrition (OR= 1.77; 95% CI= 0.24 to 13.02; p= 0.573), and family income (OR= 1.61; 95% CI= 0.31 to 8.27; p= 0.568) were associated with fetal weight.
Conclusion: Fetal weight is associated with placental width, maternal knowledge in antenatal nutrition, and family income.

Keywords: maternal knowledge in antenatal nutrition, family income, width of placenta

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HUSBANDS' ROLE TO SUPPORT FOR WIVES WITH PREGNANCY ANEMIA AT DI CENTRO DE SAUDE COMORO MUNICIPIO DILI, TIMOR LESTE

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ABSTRACT

Background: Anemia in pregnancy affects the health and well-being of pregnant women. It increases the risk of poor outcomes in pregnant mothers and offspring. The prevalence of anemia in pregnant women in Timor-Leste was 28 percent. This study was conducted to explore the role of husbands in accompanying wives with pregnancy anemia at the Centro de Saude Comoro Municipio in Dili, Timor Leste.
Subjects and Method: This was a descriptive qualitative with ethnography approach. This study was carried out at the Centro de Saude Comoro Municipio in Dili, Timor Leste. A sample of 38 people, consisting of husbands and wives, were selected for this study. The main informants were pregnant women with hemoglobin level less than 11g/ dL. The data were collected by in-depth interveiw, and focus group discussion and analyzed using descriptive analysis technique.
Results: The role of husband in accompanying wife with pregnancy anemia was limited due to the lack of husbands' knowledge about anemia, its causes, and ways of handling. According to husbands' knowledge, pregnant women were not allowed to work too much, were advised not to drink coffee or tea. Husbands were supposed to provide wives with healthy food, help wives to cook and wash clothes, and to take wives for a walk as to relieve stress.
Conclusion: There is a need to strengthen the role of husband in accompanying pregnant wives with anemia. Their knowledge about anemia, its causes, and ways to handling it, should be enhanced.

Keywords: role, support, husband, knowledge, anemia, pregnancy

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FACTORS ASSOCIATED WITH DEVELOPMENT DISORDER IN CHILDREN 4-5 YEARS OF AGE

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ABSTRACT

Background: Child development disorder can have long-term deleterious impacts in future. The purpose of this study was to examine factors associated with child development disorder.

Subjects and Method: This was an analytic observational study using case control design. The study was conducted at Bantengan Village Playing Group, Madiun, East Java, in May 2017. A sample of 32 children aged 4-5 years and their mothers were selected for this study by purposive sampling. Cases were children with development disorder. Controls was children with normal development. The dependent variable was development status, including fine and coarse, language, and social development. The independent variables were maternal age, maternal education, and number of children. The data were collected by questionnaire and analyzed by multiple logistic regression.

Results: Child development disorder was associated with maternal age ≥35 or <20 years (OR= 51.55; 95% CI= 1.37 to 193.93; p= 0.033), low maternal education (OR= 19.88; 95% CI= 1.01 to 390.58; p= 0.049), and number of children >2 (OR: 24.49; 95% CI= 1.37 to 438.04; p= 0.030).

Conclusion: Child development disorder is associated with maternal age ≥35 or <20 years, low maternal education, and number of children >2.

Keywords: development disorder, risk factors, children

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ASSOCIATIONS BETWEEN PARENTAL SOCIO-ECONOMIC STATUS AND QUALITY OF BREAKFAST AMONG PRIMARY SCHOOL CHILDREN IN KUPANG

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ABSTRACT

Background: Child consumption pattern determines eating habits in adulthood. Of particular importance is breakfast. Studies have shown that the proportion of primary school children who have breakfast in Kupang is 68.8% to 80%. This study aimed to analyze the associations between parental socio-economic status and quality of breakfast among primary school children in Kupang, East Nusa Tenggara.
Subjects and Method: This was an analytic observational study using cross-sectional design. This study was carried out in Kupang, East Nusa Tenggara. A total of 900 primary school students in Kupang were selected for this study using multistage random sampling technique. The dependent variable was breakfast quality. The independent variables were maternal education, maternal employment, parental income, and child nutritional status. Data were collected using questionnaires, weight scale, and microtoise. The data were analyzed by multiple logistic regression.
Results: Breakfast quality was asssociated with maternal education (OR= 62.15; 95% CI= 60.29 to 64.01; p= 0.001), maternal employment (OR= 23.81; 95% CI= 21.95 to 25.67; p= 0.001), parental income (OR= 15.74; 95% CI= 13.88 to 17.70; p= 0.001), and child nutritional status (OR= 46.84; 95% CI= 44.98 to 48.70; p= 0.001).
Conclusion: Breakfast quality is asssociated with maternal education, maternal employment, parental income, and child nutritional status.

Keywords: maternal education, maternal employment, parental income, breakfast quality

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ASSOCIATIONS BETWEEN PARITY, NUTRITION STATUS, LEVEL OF STRESS, AND DELAYED MENOPAUSE IN TANGERANG, WEST JAVA

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ABSTRACT

Background: Decreasing number of ovarian follicles triggers the occurrence of menopause. Menopause is a natural phenomenon in reproductive health. However, delayed menopause can increase the number of cancer-triggering hormones. Deceleration of menopause can be affected by an increase in the number of pregnancy and birth that stimulate the prose-up regulating for anti-Mullerian hormone (AMH). The hormone may indicate an increase in the number of follicles. Nutritional status and decreased cortisol level in a person experiencing stress are also suspected to affect the deceleration of menopause. This study aimed to determine the associations between parity, nutrition status, level of stress, and delayed menopause in Tangerang, West Java.
Subjects and Method: This was an analytic observational study using case control design. This study was carried out at Elderly Clinic, Sukamulya sub-district, Tangerang, West Java. A sample of 150 women were selected for this study consisting 101 women experiencing late menopause (case) and 41 women experiencing normal menopause (control) using purposive sampling. The dependent variable was age of menopause. The independent variables were parity, nutritional status, and psychological stress. The data on parity were obtained from medical record. Stress level was measured by questionnaire, including data on physical, task, role, and interpersonal demands. Nutritional status was measured by body mass index (BMI). The data were analyzed by multiple logistic regression.
Results: Delayed menopause was associated with increased parity (OR= 3.49; 95% CI= 1.56 to 7.81; p=0.002), higher BMI (OR= 1.79; 95% CI= 0.79 to 4.06; p= 0.160), and lower stress (OR= 0.15; 95% CI= 0.06 to 0.34; p<0.001).
Conclusion: Delayed menopause is associated with increased parity, higher BMI, and lower stress.

Keywords: delayed menopause, parity, BMI, stress

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ROLE OF BIOPSYCHOSOCIAL FACTORS ON THE RISK OF PNEUMONIA IN CHILDREN UNDER-FIVE YEARS OLD AT DR. MOEWARDI HOSPITAL, SURAKARTA

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ABSTRACT

Background: It is estimated that the worldwide annual incidence of child pneumonia is approximately 156 million cases. Sixty-one million new cases occure in Southeast Asia with death rate of 3.1 million deaths per year. Prevalence of infant pneumonia in Indonesia is high at 1.8% in 2013 with mortality of 0.16% in 2015. This study aimed to determine the role of bio-psychosocial factors on the risk of pneumonia in children under-five years old.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was conducted at Dr. Moewardi Hospital, Surakarta, from April to May 2017. A sample 120 children under five years old, consisting of 30 children with pneumonia and 90 children without pneumonia, were selected for this study by fixed disease sampling. The dependent variable was incidence of pneumonia. The independent variables were nutritional status, exclusive breastfeeding, low birthweight, maternal stress, maternal education, maternal employment, family income, and home environment. Nutritional status was measured by anthropometry, while other variables were collected by questionnaire. Path analysis was employed to analyze data.
Results: Pneumonia in children under-five was directly affected by nutritional status (b= -1.23; 95% CI= -2.45 to -0.02; p= 0.047), exclusive breastfeeding (b= -1.09; 95% CI= -2.26 to 0.07; p= 0.065), maternal stress (b= 1.70; 95% CI= 0.36 to 3.04; p= 0.013), maternal education (b= -1.96; 95% CI= -3.31 to -0.61; p= 0.004), and home environment (b= -1.83; 95% CI= -3.02 to -0.64; p= 0.002). Nutritional status was affected by maternal education (b= 3.48; 95% CI= 1.79 to 5.17; p<0.001), maternal stress (b= -2.55; 95% CI= -4.06 to -1.04; p= 0.001), family income (b= 3.26; 95% CI= 1.67 to 4.84; p<0.001), and low birthweight (b= -1.84; 95% CI= -3.12 to -0.57; p= 0.005). Exclusive breastfeeding was affected by maternal education (b= 0.97; 95% CI= 0.09 to 1.86; p= 0.031), maternal stress (b= -0.74; 95% CI= -1.69 to 0.19; p= 0.112), family income (b= 1.39; 95% CI= 0.54 to 2.23; p= 0.001), and maternal employment (b= -1.29; 95% CI= -2.14 to -0.45; p= 0.003). Maternal stress was affected by home environment (b= -1.12; 95% CI= -1.96 to -0.29; p=0.009 Home environment was affected by maternal education (b= 0.76; 95% CI= -0.03 to 1.54; p= 0.059). Low birthweight was affected by maternal education (b= -1.21; 95% CI= -2.08 to -0.35; p= 0.006) and family income (b= -1.50; 95% CI= -2.35 to -0.66; p<0.001).

Conclusion: Pneumonia in children under-five is directly affected by nutritional status children, exclusive breastfeeding, maternal education, maternal stress, and home environment.

Keywords: pneumonia, biopsychosocial factors

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ASSOCIATIONS BETWEEN EXCLUSIVE BREASTFEEDING, DIARRHEA, AND RISK OF STUNTING AMONG CHILDREN WITH LOW BIRTHWEIGHT

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ABSTRACT

Background: Stunting is a serious public health problem among children in Indonesia, because it can determine their quality in later life. There are some known risk factors for stunting, among others is low birthweight. The purpose of this study was to determine the associations between exclusive breastfeeding, diarrhea, and stunting in children aged 12-24 months with low birthweight.

Subjects and Method: This was an analytic cross-sectional study. It was carried out in 2 subdistricts in Surakarta, Central Java. A sample of 98 children aged 12-24 months with low birthweight were selected for this study using purposive sampling. The dependent variable was stunting. The independent variables were exclusive breastfeeding and diarrhea. Stunting was measured by anthropometry. The other data were collected by questionnaire and analyzed using multiple logistic regression.

Results: Exclusive breastfeeding (OR= 0.67; 95% CI= 0.30 to 1.47; p= 0.318) and no history of diarrhea (OR= 0.49; 95% CI= 0.23 to 1.07; p= 0.074) were associated with reduced risk of stunting.

Conclusion: Exclusive breastfeeding and and no history of diarrhea is associated with reduced risk of stunting.

Keywords: stunting, exclusive breastfeeding, diarrhea

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FACTORS ASSOCIATED WITH MOTIVATION OF EXCLUSIVE BREASTFEEDING

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ABSTRACT

Background: In Indonesia coverage of exclusive breastfeeding was still as low as 29.5% in 2016, which was far below the target set at 80%. One of the factors affecting exclusive breastfeeding is motivation. The purpose of this study was to determine factors associated with motivation of exclusive breastfeeding.

Subjects and Method: This was a cross-sectional study conducted in Surakarta, Central Java. A sample of 150 postpartum mothers were selected for this study. The dependent variable was maternal motivation of providing exclusive breastfeeding. The independent variable were maternal knowledge, exposure to information, family support, and health personnel support. Data were collected by questionnaire and analyzed by multiple linear regression.

Results: Good motivation of providing exclusive breastfeeding was associated with bettter maternal knowledge (b= 0.23; p = 0.001), condusive culture (b= 0.29; p <0.001), exposure to information (b= 0.29; p<0.001), family support (b= 0.13; p= 0.13), and health personnel support (b= 0.20; p= 0.001).

Conclusion: Good motivation of exclusive breastfeeding is associated with bettter knowledge, condusive culture, exposure to information, family support, and health personnel.

Keywords: exclusive breastfeeding, knowledge, family support, culture, exposure to information, health personnel

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EFFECT OF AMBON BANANA (MUSA ACUMINATA COLLA) ON EMESIS GRAVIDARUM

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ABSTRACT

Background: Emesis gravidarum is a common symptom of first trimester pregnancy. Emesis (vomiting) usually occurs in the morning, so it is often known as morning sickness. But emesis gravidarum can occur at anytime and at night. A survey showed about 70% of first trimester pregnant women experience emesis gravidarum. This study aimed to determine the effect of Ambon banana (musa acuminata colla) on emesis gravidarum.
Subjects and Method: This was a quasi experiment, using before and after intervention with no comparison group. This study was conducted at Aura Syifa Hospital, Kediri, East Java. A sample of 16 pregnant women of first trimester were selected for this study. The dependent variable was frequency of vomiting. The indepedent variable was Ambon banana (musa acuminata colla). The data was collected by questionnaire and observation. Frequency of vomiting before and after intervention were tested by paired t-test.
Results: Frequency of vomiting before consumption of Ambon banana decreased from mean=2.81 to mean=1.75 after consumption of Ambon banana, and it was statistically significant (p=0.001).
Conclusion: Ambon banana is effective to reduce emesis gravidarum in pregnant women of first trimester.

Keywords: Ambon banana, emesis gravidarum, pregnant women, first trimester

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EFFECT OF PEANUT EXTRACT CONSUMPTION ON THE FLUENCY OF BREASTMILK PRODUCTION AMONG LACTATING WOMEN IN KEDIRI

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ABSTRACT

Background: Efforts can be made to regulate and increase breastmilk production by providing nutritious food to lactating women. This study aimed to determine the effect of peanut extract consumption on the fluency of breastmilk production among lactating women.
Subjects and Method: This was a quasi experiment using before and after intervention with no control design. This study was conducted at Balowerti Health Center, Kediri, East Java. A subject 16 postpartum feeding mothers selected for this study. The dependent variable was fluency of milk production. The independent variable was provision of peanut extract to lactating women. Changes in percent of breastmilk production fluency before and after provision of peanut extract were analyzed by Chi square.
Results: Percent of lactating women who experienced rough milk production decreased from 50% before intervention to 43.8% after intervention, it was statistically significant (p=0.002).
Conclusion: Consumption of peanut extract by lactating women can effectively increase fluency of breastmilk production.

Keywords: peanuts, breastmilk, fluency, milk production

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ASSOCIATION BETWEEN OVARIAL CYST AND INFERTILITY IN WOMEN OF CHILDBEARING AGE

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ABSTRACT

Background: Infertility is one of public health importance. One of the conditions that may cause infertility is ovarial cyst. Generally couples do not know if their partners have infertility and causes of infertility. One of the causes of infertile women is the presence of ovarian cysts. This study aimed to determine the relationship between ovarian cysts with infertile incidence in women of childbearing age in RS Aura Syifa Kediri, East Java.
Subjects and Method: This was a cross sectional method. A subject of 234 people selected for this study by simple random sampling. The dependent variable was infertile incidence. The independent variable was ovarian cyst. The data was collected by checklist sheet. The infertility data and history of ovarian cysts were collected from medical records data at RS Aura Syifa Kediri. The data was analyzed by Chi Square.
Results: Study subjects who suffered from ovarian cysts were 101 people (43.2%) and those with infertility were 109 people (46.6%), and it was statistically significant ($p < 0.001$). The results showed a strong and positive relationship between ovarian cyst and infertile incidence in women of childbearing age.
Conclusion: There is a positive relationship between ovarian cyst with infertile incidence in women of childbearing age.

Keywords: infertility, ovarian cyst, women of childbearing age

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ASSOCIATION BETWEEN PARENTAL INCOME AT PREGNANCY, PARENTING TIME, AND NUTRITIONAL STATUS IN CHILDREN AGED 7-12 MONTHS IN KUPANG, EAST NUSA TENGGARA

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ABSTRACT

Background: Nutritional status in children can be affected by various factors such as exclusive breastfeeding, food intake, parental income, parenting time, and maternal working status. This study aimed to investigate association between parental income at pregnancy, parenting time, nutritional status in children aged 7-12 months in Kupang, East Nusa Tenggara.
Subjects and Method: This was an analytic abservational study with case control desgin. The study was conducted in Kelapa Lima sub district, Kupang, East Nusa Tenggara, from April to June, 2017. A sample of 116 children age 7-12 months was selected using fixed disease sampling. The dependent variable was nutrition status (weight for height). The independent variables were parenting time and parental income at pregnancy. The data were collected using weight scale, microtoise, and questionnaire. The data was analyzed using multiple logistic regression.
Results: High parental income at pregnancy (OR= 2.37; 95% CI = 1.08 to 5.19; p= 0.031) and parenting time (OR= 3.91; 95% CI = 1.62 to 9.44; p= 0.002) were associated with better nutritional status (weight for height) in children aged 7-12 months.
Conclusion: Parental income at pregnancy and parenting time are associated with nutritional status in children aged 7-12 months.

Keywords: nutritional status, weight for height, children aged 7-12 months, parental income, parenting time, pregnancy

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EMPLOYMENT STATUS, FAMILY INCOME, CONTRACEPTIVE AVAILABILITY, AND THEIR EFFECTS ON THE USE OF LONG TERM CONTRACEPTIVES IN SUKOHARJO, CENTRAL JAVA

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ABSTRACT

Background: Rapid population growthcause population burden on earth and imbalance population distribution. This situation in turn make cause public health and social problems. One of the methods that can be used to control population growth is long term contraceptive use. The Indonesian Demographic and Health Survey (SDKI) showed that employed mothers were more likely to use long term contraceptive than unemployed mothers. Contraceptives are available for free at Family Planning Clinic (KKB). This study aimed to analyze the effect of employment status, family income, and contraceptive availability, on the use of long term contraceptive among women and men of reproductive age in Sukoharjo, Central Java.
Subjects and Method: This was a qualitativeanalytic and descriptive study with phenomenology approach. This study was conducted in Weru, Kartasura, Polokarto, and Tawangsari subdistricts, Sukoharjo, Central Java. The key informants included acceptors of implant, IntraUterine Device (IUD), Female Surgical Method(MOW), and Male Surgical Method(MOP). The data were collected by in-depth interview, Focus Group Discussion (FGD), observation, document review. The data were alayze by interactive analysis. The data were verified by triangulation of data sources.
Results: Two informants reported they chose IUD because they had to work outside the house, undesirable side effects of using oral contraceptive, injection contraceptive, and contraceptive use by their mothers and grandmothers. Some other informants have used implant because of undesirable side effect of using injection contraceptive, such as irregular menstruation and increased body weight. Two other informants have used female surgical method (MOW) because they already have three children and do not want to be pregnant again. Onemale informant reported that hehas used male surgical method (MOP) because already has four children, and he followed the methods his father has used. Most of the long term contaceptive users work outside the house and their incomes were lower than the minimum regional standard wage. Most of the long term contraceptive users receive free contraceptive and additional reward (e.g. free rice). The remaining long term contraceptive users buy contraceptives at the health center and hospital. The contraceptives were supplied by the National Coordinating Board of Population and Family Planning (Badan Kependudukan dan Keluarga Berencana Nasional, BKKBN) at province level. Village midwives did not receive free contraceptive because their practices have not been classified as Family Planning Clinics(KKB).

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Conclusion: Availability of contraceptive is a necessary condition for long term contraceptive use. Working outside the house is an additional factor for most women to realize long term contraceptive use.

Keywords: Employment status, family income, availability, long term contraceptive

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EFFECT OF NURTURING AT CHILD CARE CENTER ON GROSS AND FINE MOTORIC, LANGUAGE AND SOCIAL DEVELOPMENT IN CHILDREN AGED UNDER FIVE YEARS IN UNGARAN BARAT SUBDISTRICT, UNGARAN

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ABSTRACT

Background: Child development is influenced by several factors including parenting style, active learning, and physical need fulfillment. It is generally recommended that nurturing is provided by parents, namely parenting. Because of some constraints, however, some parents are not able to nurture. Child care center (Taman Pengasuhan Anak) is an alternative way of child nurturing. This study aimed to analize the effect of parenting style, active learning, and need fulfillment on gross and fine motoric development, as well as language and social development at child care center.
Subjects and Method: This was an analytic observational study with retrospective cohort design. This study was conducted in Ungaran Barat Subdistrict, Ungaran, Central Java. A sample of 138 children under five years old with their mothers was selected by fixed exposured sampling for this study. The exogenous variables included parenting style, active learning, and need fulfillment. The endogenous variable was child development, including gross and fine motoric development, language and social development. The parenting style was measured by questionnaire. An observation sheet was used to observe and document child's active learning at child care center. Denver Development Screening Test (DDST) was used to measure child development. The data was analyzed by path analysis model.
Results: Fulfillment of need had positive effect on child development, and it was marginally significant (b= 1.38; 95% CI= -0.15 to 2.91; p=0.077). Children who were raised by democratic parenting style were more able to learn actively than those raised by non democratic parenting style, and it was statistically significant (b= 1.12; 95% CI= 0.14 to 2.11; p=0.025). Children who were raised by democratic parenting style were more able to fulfill their need than those raised by non democratic parenting style, and it was statistically significant (b= 1.16; 95% CI= 0.002 to 2.33; p=0.050). Children who actively learned were more able to fulfill their need than those who did not actively learn, and it was statistically significant (b= 1.81; 95% CI= 0.61 to 3.01; p=0.003).
Conclusion: There are effects of parenting style, active learning, and need fulfillment on child development, including gross and fine motoric development, as well as language and social development.

Keywords: parenting style, active learning, need fulfillment, child, development

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FACTORS AFFECTING MATERNAL MORTALITY IN AN ALERT VILLAGE IN SOUTH TIMOR TENGAH, EAST NUSA TENGGARA

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ABSTRACT

Background: Maternal mortality may be attributable to direct or indirect causes, such as social, cultural, economic, and geographical factors. The purpose of this study was to determine factors affecting the risk of maternal mortality in an alert village in South Timor Tengah, East Nusa Tenggara.
Subjects and Method: This was a case control study conducted at a Community Health Center, in an alert village, South Timor Tengah, East Nusa Tenggara. A sample of 167 postpartum women, consisting of 35 dead postpartum women (represented by their families) and 132 alive postpartum women, were selected for this study. The independent variables were age, antenatal care visit, unskilled birth attendant, access transportation, and social support. The dependent variable was maternal death. The data were collected from medical and obstetric record and questionnaire. The data were analysis by multiple logistic regression.
Results: Risk of maternal mortality increased by birth delivery at home (OR = 18.00; 95% CI= 5.00 to 74.00; p = 0.001), unskilled birth attendant (OR = 43.50; 95% CI= 4.40 to 363.50; p=0.001), antenatal care visit <4 (OR = 50.09; 95% CI = 5.96 to 420.40; p = 0.001), maternal age <20 years or ≥35 years (OR = 3.29; 95% CI = 1.10 to 9.05; p = 0.032), poor access to transportation (OR= 4.50; 95% CI= 1.10 to 18.50; p=0.028), weak familly support (OR = 3.05, 95% CI = 1.05 to 8.84, p = 0.037), and weak emotional support (OR = 11.00; 95% CI = 3.2 to 36.70; p = 0.001).
Conclusion: Risk of maternal mortality increased by birth delivery at home, unskilled birth attendant, antenatal care visit <4, maternal age <20 years or ≥35 years, poor access to transportation, weak familly support, and weak emotional support.

Keywords: Maternal mortality, unskilled birth attendant, antenatal care, maternal age, transportation, familly support, emotional support

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FACTORS ASSOCIATED WITH EXCLUSIVE BREASTFEEDING AMONG MOTHERS IN BANJARMASIN, SOUTH KALIMANTAN

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ABSTRACT

Background: Exclusive breastfeeding is recomended food for infants until the age of 6 months. After 6 months years old a complementary food is recomended until 2 years of age. However, percent of mothers practicing exclusive breastfeeeding is still low. This study aimed to determine factors associated with exclusive breastfeeding among mothers in Banjarmasin, South Kalimantan.
Subjects and Method: This was a quantitative-qualitative study conducted in Banjarmasin, South Kalimantan from June to December 2015. A sample of 258 lactating mothers, consisting of 136 mothers who exclusively breastfed and 122 mothers who did not exclusively breastfeed, were selected for this study by random sampling. The dependent variable was exclusive breastfeeding. The independent variables were maternal age, education, knowledge of exclusive breastfeeding, maternal health condition, maternal work status, and family support. Data were collected by pre-tested questionnaire and interview. Data were analyzed by logistic regression.
Results: Low maternal education (OR = 0.54; 95% CI = 0.87 to 1.82; p = 0.005), low maternal knowledge (OR = 0.32; 95% CI =; p = 0.001), poor maternal health condition (OR = 0.23 , 95% CI = 0.08 to 3.93, p = 0.082), and low family support (OR = 0.93; 95% CI = 0.02 to 8.93; p = 0.328) were associated with decreased chance of exclusive breastfeeding. Maternal age 20-29 years (OR = 1.76; 95% CI = 0.18 to 6.74; p = 0.062) and housewife (OR = 1.24; 95% CI = 1.00 to 8.29; p = 0.123) were associated with increased chance of exclusive breastfeeding. Qualitative study showed that lack of maternal knowledge on the utility of exclusive breastfeeding was a strong predictor for not practicing exclusive breastfeeding. Most of the mothers interviewed believed that providing food in addition to breastmilk could accelerate the growth of their children.
Conclusion: Low maternal education, low maternal knowledge, poor maternal health condition, and low family support are associated with decreased chance of exclusive breastfeeding. Maternal age 20-29 years and housewife are associated with increased chance of exclusive breastfeeding.

Keywords: exclusive breastfeeding, age, education, knowledge, maternal health condition, maternal working status, family support

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TOPIC IV:

HEALTH POLICY AND MANAGEMENT

THE INFLUENCE OF PERSONAL FACTORS OF THE PATIENT, DOCTOR, PAYMENT METHOD AND TYPE OF CLASS TO THE QUALITY AND SATISFACTION OF INPATIENT CARE SERVICES IN DR. MOEWARDI HOSPITAL SURAKARTA

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ABSTRACT

Background: The quality of hospital care is an important element in the implementation of healthcare service. The quality which is perceived is an assessment and a form of evaluation of healthcare users. Improvement on healthcare service is continually conducted to enhance the quality of service and patients' satisfaction. The study aimed to explain the influence of patients' personal factors, doctors, payment methods and types of class toward the quality and satisfaction of inpatient care.
Subjects and Method: This was an analytic observational study with cross-sectional design. This study was conducted at Dr. Moewardi Hospital, Surakarta, from March to April 2017. A total of 144 subjects were selected by stratified random sampling. Exogenous variables in this study were family income, level of education, length of stay, doctor's salary, the surgeon, type of insurance, and type of class. Endogenous variables were patient's satisfaction and quality of service. The data were collected by a set of questionnaires and secondary data of doctor's working period and salary. Data analyzed by path analysis.
Results: Patient's satisfaction were affected by family income (b= -0.08; SE= 0.48; p= 0.093), level of education (b= -0.44; SE= 0.27; p= 0.102), length of stay (b= 0.19; SE= 0.99; p= 0.059), doctor's salary (b= 0.02; SE= 0.01; p= 0.060), doctor's working period (b= 0.99; SE= 0.44; p= 0.024), type of insurance (b= 0.72; SE= 0.32; p= 0.027), type of class (b= 2.11; SE= 0.38; p<0.001), and quality of health services (b= 0.16; SE= 0.51; p= 0.002). Quality of health services were affected by family income (b= -0.15; SE= 0.07; p= 0.039), length of stay (b= 0.37; SE= 0.15; p= 0.017), doctor's working period (b= 0.13; SE= 0.68; p= 0.056), insurance types (b= 1.04; SE= 0.50; p= 0.036), and type of class (b= 2.24; SE= 0.59; p<0.001).
Conclusion: Patient's satisfaction are affected by family income, level of education, length of stay, doctor's salary, doctor's working period, type of insurance, type of class and quality of health services. Quality of health services are affected by family income, length of stay, doctor's working period, insurance types, and type of class.

Keywords: quality of health services, patient's satisfaction, path analysis

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THE ASSSOCIATIONS BETWEEN ACCREDITATION STATUS, PATIENT SOCIO-ECONOMIC FACTORS, INSURANCE TYPE, PATIENT PERCEIVED QUALITY OF SERVICE, AND SATISFACTION AT COMMUNITY HEALTH CENTER

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ABSTRACT

Background: Being one of the most important elements in healthcare system, Community Health Center has been promoted to improve its quality and capacity of services. Accreditation is a method that can be used to improve and measure the quality of health service. Quality service improvement is expected to enhance patient satisfaction. This study aimed to investigate the asssociations between accreditation status, patient socio-economic factors, insurance type, patient perceived quality of service, and satisfaction at Community Health Center.
Subjects and Method: This was an analytic observational study with cross-sectional design. This study was conducted at Community Health Center in Surakarta, Central Java from June to July 2017. A total of 8 Community Health Centers with different accreditation status (not accredited, lowest, medium, and highest) were selected for this study. A sample of 200 patients were selected from the 8 Comunity Health Centers by proportional random sampling. The independent variables were accreditation status, patient education level, family income, and insurance type. The dependent variables were perceived quality of service and patient satisfaction. The data were collected by a set of pre-tested questionnaires. Accreditation status was identified from the record at District Health Office. Data were analyzed by path analysis.
Results: Patient satisfaction was associated with Commuity Health Center acrreditation status (b= 0.39; SE= 0.22; p= 0.069), perceived quality of service (b= 0.05; SE= 0.02; p= 0.022), patient education level (b= -1.16; SE= 0.48; p= 0.017), and insurance type (b= 0.61; SE= 0.31; p= 0.044). Perceived quality of health services was associated by accreditation status (b= 2.22; SE= 0.74; p= 0.003), patient education level(b= -4.51; SE= 1.68; p= 0.007), and insurance type (b= 2.79; SE= 1.06; p= 0.008). Family income did not show statistically significant association with perceived quality of health service (b= -0.17; SE= 0.11; p= 0.123).
Conclusion: Patient satisfaction is associated with Commuity Health Center acrreditation status, perceived quality of service, patient education level, and insurance type. Perceived quality of health services is associated with accreditation status, patient education level, and insurance type.

Keywords: patient satisfaction, perceived quality of service, accreditation status, Commuity Health Center

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SOCIAL ECONOMIC EQUITY IN THE UTILIZATION OF HEMODIALYSIS AMONG PATIENTS WITH CHRONIC RENAL FAILURE UNDER NATIONAL HEALTH INSURANCE PLAN AT DR. MOEWARDI HOSPITAL, SURAKARTA

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ABSTRACT

Background: The health care reform promulgated by World Health Organization (WHO), namely Universal Health Coverage (UHC), aims to ensure that every citizen has access to affordable and equitable health care they need with good quality. The Indonesian National Health Insurance Plan has been implemented since January 1, 2014. However, anecdotal evidence indicates that there are some inequity concerns on the use of expensive medical care, such as renal hemodialysis. This study aimed to examine social economic equity in the utilization of hemodialysis among patients with chronic renal failure under the National Health Insurance (NHI, JKN) plan.
Subjects and Method: This study was analytic observational using cross-sectional design. This study was conducted at Dr. Moewardi Hospital, Surakarta, from March to April 2017. A sample of 120 patients with chronic renal failure was selected for this study by simple random sampling. The dependent variable was frequency of hemodialysis use. The independent variables were educational status, location of residence, family income, employment status (formal vs. informal), and membership status (beneficiary vs. non-beneficiary of government subsidy). The data were collected by questionnaire and were analyzed by path analysis.
Results: Higher frequency of hemodialysis use was directly associated with higher family income (b= 5.04; SE= 2.36; p= 0.033), distance < 20 km (b=-1.10; SE= 2.15; p= 0.610), working in informal sector (b= 3.84; SE= 3.05; p= 0.305), beneficiary of government subsidy (b= -3.68; SE= 2.81; p= 0.190), longer duration of hemodialysis (b= 0.39; SE= 0.08; p<0.001), severe condition of illness (b= 46.11; SE= 2.42; p<0.001), and living in urban area (b= 3.34; SE= 0.31; p= 0.147).
Conclusion: Higher frequency of hemodialysis use is directly affected by higher family income, distance < 20 km, working in informal sector, beneficiary of government subsidy, longer duration of hemodialysis, severe condition of illness, and living in urban area.

Keywords: National Health Insurance, membership, hemodialysis, inequity

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EFFECT OF SOCIO-DEMOGRAPHIC FACTOR AND DEMOCRATIC LEADERSHIP ON VILLAGE MIDWIFE PERFORMANCE IN IUD CONTRACEPTIVE SERVICE IN JOMBANG DISTRICT, EAST JAVA

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ABSTRACT

Background: The threat of population explosion in Indonesia is real. Long-term contraception program is an alternative strategy for controlling population growth rate. The slowering achievement of IUD contraceptive target for the last two years has become a central concern at the District Health Office Jombang, East Java. Sub-optimal quality of IUD contraceptive service, high drop-out rate, high unmet-need, and unsystematic family planning reporting and recording, are assumed to be the causes of the under-achievement. This study aimed to examine the effect of socio-demographic factor and democratic leadership on village midwife performance in IUD contraceptive service in Jombang District, East Java.
Subjects and Method: This was an analytic observational study with cross-sectional design. It was conducted in 12 community health centers in Jombang District, East Java, from March to May 2017. A sample of 120 women of reproductive age was selected for this study by simple random sampling. The dependent variable was village midwife performance. The independent variables were knowledge, self-efficacy, compensation, democratic leadership, and work motivation. The data were collected by a pre-tested questionnaire, and were analyzed by path analysis model.
Results: Midwife performance was positively affected by higher education (b= 5.19; SE= 0.53; p<0.001), stronger work motivation (b= 0.48; SE= 0.07; p<0.001), better knowledge (b= 0.21; SE= 0.08; p= 0.006), stronger self-efficacy (b= 0.18; SE= 0.08; p= 0.023), and democratic leadership (b= 0.14; SE= 0.05; p= 0.008). Self-efficacy was affected by education (b= 1.16; SE= 0.62; p= 0.063), knowledge (b= 0.35; SE= 0.08; p<0.001), democratic leadership (b= 0.23; SE= 0.04; p<0.001). Work motivation was affected by compensation (b= 0.65; SE= 0.16; p<0.001), democratic leadership (b= 0.31; SE= 0.07; p<0.001), knowledge (b= 0.29; SE= 0.09; p<0.001), and self-efficacy (b= 0.17; SE= 0.09; p= 0.058).
Conclusion: Midwife performance was positively affected by education, work motivation, education, self efficacy, and democratic leadership.

Keywords: midwife performance, socio-demographic factor, democratic leadership, IUD contra-ceptive, family planning

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EFFECT OF DOCTOR'S PERSONALITY, JOB CHARACTERISTIC, PAYMENT METHOD, FACILITY, ON PERFORMANCE AND QUALITY OF DOCTOR SERVICE

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ABSTRACT

Background: Doctors generally do not work permanently at hospitals. Doctors are expected to deliver quality medical service at the hospitals. However, hospitals often find it difficult to exercise efective managerial control over the quality of medical services. This study aimed to investigate the effect of doctor's personality, job characteristic, payment method, facility, on performance and quality of doctor service.
Subjects and Method: This was an analytic observational study using cross-sectional design. The study was carried out at Dr. Moewardi Hospital and PKU Muhammadiyah Hospital, Surakarta, from March to May 2017. A sample 182 study subjects consisting of 26 doctors, 26 nurses, and 130 patients, were selected for this study by simple random sampling. The dependent variable was quality of doctor service. The independent variables were doctor's personality (extrovert vs. introvert), doctor's carefulness, proactive attitude, self-efficacy, autonomy, performance feedback, supervisor support, payment method, work site (private vs. public), and performance. Questionnaire was used to collect data. Path analysis was employed to analyze the data.
Results: Good quality of doctor service was directly affected by good performance (b= 0.64; SE= 0.11; p<0.001), private work site (b= 2.85; SE= 0.66; p<0.001), and strong self-efficacy (b= 0.21; SE= 0.07; p= 0.006). Good work performance was affected by extrovert personality (b= 0.08; SE= 0.06; p= 0.186), careful attitude (b= 0.30; SE= 0.09; p= 0.001), proactive personality (b= −0.17; SE= 0.05; p= 0.001), strong self-efficacy (b= 0.27; SE= 0.07; p<0.001), autonomy (b= 0.16; SE= 0.06; p= 0.015), performance feedback (b= 0.43; SE= 0.13; p<0.001), supervisor support (b= 0.14; SE= 0.06; p= 0.018), payment method (INA CBGs) (b= −2.29; SE= 0.66; p<0.001), and private work site (b= -0.26; SE= 0.68; p= 0.696).
Conclusion: Good quality of doctor service is directly affected by good performance, private work site, and strong self-efficacy.

Keywords: quality, doctor's service, performance, path analysis

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QUALITATIVE STUDY ON THE IMPLEMENTATION OF PUBLIC HEALTH NURSING: OBJECTIVE, RESOURCES, AND WORK PROCEDURE ON HOME CARE PATIENTS IN SURAKARTA

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ABSTRACT

Background: Dynamic changes of disease development call for improvement in health care. In light of this context, public health nursing with home care has an increasing role in the management of diseases. Comprehensive public health nursing requires partnership between healthcare providers, patients, and their environment. In Indonesia the focus of nursing remains on hospital care, while rarely on home care that fulfils the need of the community. This study aimed to examine the implementation of public health nursing, encompassing its objective, resources, and work procedure, on home care patients.
Subjects and Method: This was a qualitative study with case study approach. This study was carried out at PKU Muhammadiyah Hospital, Surakarta, from February to March 2017. The key informants of this study included nurses, home care coordinator, doctors, dieticians, and physiotherapists. Methods of data collection included interview, observation, and archival review. Data were analyzed in stages normally employed in case study.
Results: The objectives of home care have generally been understood by most health providers. On the other hand the objectives of home care have not well-understood by the families of the patients, leading to inconsistency with the objective. There is a need to increase resources necessary for the nurses, particularly improvement in competency, as well as case selection, review, planning, coordinating, and evaluation. Likewise, collaboration between health care provider, patients, and their families, need to be improved in order to maximize home care.
Conclusion: There is a need to strenghten commitment of all parties involved in home care. The objectives of home care need to be understood by all parties. Hospitals are expected to have stronger responsibility with both work procedure in order to deliver optimal health care. By doing so, the public health nursing with home care will be able to fulfil the need of the community.

Keywords: home care, objective, resources, work procedure

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EFFECTS OF PATIENT AND PHYSIOTERAPIST CHARACTERISTICS ON PERCEIVED QUALITY OF PHYSIOTHERAPY CARE AT DR. MOEWARDI HOSPITAL, SURAKARTA

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Background: Nowadays patients demand quality and safe hospital care. Quality of care depends on the roles of the government as quality of care regulator, hospital management, health care providers, patients, and the community. The study aimed to examine the effects of patient and physioterapist characteristics on perceived quality of physiotherapy care.
Subjects and Method: This was an observational analytic study with cross-sectional design. The study was conducted at Dr. Moewardi Hospital, Surakarta, Central Java, from June to July, 2017. A total sample of 122 physiotherapy patients were selected for this study using exhaustive sampling. The dependent variable was quality of physiotherapy care. The independent variables were patient's education and income, duration of treatment, insurance status, years of services, physiotherapist training, and salary. The data were collected using a set of questionnaire and analyzed by multiple linier regression.
Results: The quality of physiotherapist care was affected by patient's income (b= -0.18; 95% CI= -0.35 to 0.001; p= 0.052), patients education (b= -3.32; 95% CI= -6.59 to 0.04; p= 0.047), duration of treatment (b= -0.07; 95% CI= -0.14 to -0.01; p= 0.020), insurance status (b= 3.41; 95% CI= 0.15 to 6.68; p= 0.041), years of services (b= 0.55; 95% CI= 0.15 to 0.97; p= 0.010), physiotherapist training (b= 0.90; 95% CI= 0.09 to 1.71; p= 0.030), and salary (b= 0.38; 95% CI= -0.12 to 0.77; p= 0.061).
Conclusion: Quality of physiotherapist care is affected by patient's income, patients education, duration of treatment, insurance status, years of services, physiotherapist training, and salary.

Keywords: quality of care, physiotherapy, insurance status, duration of treatment, years of services

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COMPARISON BETWEEN HOSPITAL INPATIENT COST AND INA-CBGS TARIFF OF INPATIENT CARE IN THE NATIONAL HEALTH INSURANCE SCHEME IN SOLO, BOYOLALI AND KARANGANYAR DISTRICTS, CENTRAL JAVA

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ABSTRACT

Background: Hospital has an important referral system role in the implementation on the National Health Insurance (NHI) Scheme. BPJS Kesehatan (NHI Implementing Agency) pays hospitals by Indonesian Case Based Groups (INA-CBGs) method. This payment method may potentially cause loss or profit to the hospital, when there is discrepancy between hospital inpatient cost and INA-CBGs tariff of inpatient care. This study aimed at investigating the discrepancy between hospital inpatient cost and INA-CBGs tarif of inpatient care and the determinants of hospital inpatient cost.
Subjects and Method: This was an analytic and observational study cross sectional approach. This study was conducted in 2 publichospitals and 2 private hospitals, from October to December 2016. A total sample of 100 inpatients was selected at random for this study. The dependent variables were hospital inpatient cost and INA-CBGs tariff. The independent variables included hospital type, inpatients class, disease severity, use of ICU, and length of stay. The data were analyzed by a multiple linear regression model.
Results: Averagehospital inpatient cost (mean= Rp. 2,280,000; SD= 1,690,000) was lower than average INA-CBGs (mean= Rp. 3,060,000). There were negative relationships between hospital type, inpatient class, disease severity, and hospital inpatient cost. Private hospital inpatient cost (b= -5.66; 95% CI= -1.20 to 0.06; p= 0.078) was lower than public hospital inpatient cost. Class 2 inpatient care (b= -0.34; 95% CI= -1.09 to 0.41, p= 0.371), class 3 inpatient care (b= -0.50; 95% CI= -1.23 to 0.23, p= 0.177), had lower hospital inpatient cost than class 1 inpatient care.Severe disease (b= -0.12; 95% CI= -1.95 to 1.71; p= 0.894) had lower hospital inpatient cost than mild disease, although it was not statistically significant. There were positive relationships between use of ICU, disease severity, length of stay, and hospital inpatient cost. Using ICU (b= 1.58; 95% CI= 0.76 to 2.4; p= <0.001) had higher hospital inpatient cost than not using ICU. Moderate disease severity (b= 0.55; 95% CI= -0.20 to 1.30; p= 0.150) had higher hospital inpatient cost than mild disease. Longer stay (b= 0.27; 95% CI= 0.08 to 0.45; p= 0.005) had higher hospital inpatient cost than shorter stay.
Conclusion: Average hospital inpatient cost was lower than average INA-CBGs tariff. Hospital type, use of ICU, and length of stay, are important determinants of hospital inpatient cost.

Keywords: hospital inpatient cost, INA-CBGs tariff, determinant

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THE ROLE OF NON-GOVERNMENTAL ORGANIZATION IN SANITATION VILLAGE PROGRAM IN SEMANGGI VILLAGE, SURAKARTA

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ABSTRACT

Background: Sanitation Village Program is one of notable community-based water supply and sanitation development models in Indonesia. A Non-Governmental Organization (NGO) namely Community Self-Reliant Group had been established in Semanggi Village Surakarta, to manage Sanitation Village Program. This study aimed to examine the role of non-governmental organization in sanitation village program in Semanggi Village, Surakarta.
Subjects and Method: This was an analytical qualitative study with phenomenology approach. The study was carried out in Semanggi Village, Surakarta, Central Java, in June 2017. The informants were selected consisting of 12 community members and 3 community leaders. The data were collected by in-depth interview and focus group discussion. The data were analyze using content analysis.
Results: A Community Self-Reliant Group had been established in Semanggi Village, Surakarta, to manage Sanitation Village Program. This group had the responsibility to manage maintenance of water and sanitation facilities, including checking septic communal tanks, checking water facilities and latrines at resident houses, as well as repairing damaged water and sanitation facilities. In addition, the Community Self-Reliant Group had a financial management responsibility role, including financial accounting of sanitation maintenance costs. The group also acted as communication intermediary between community member, community leaders, and external agents such as Public Agency of Water Supply, to solve water and sanitation-related problems.
Conclusion: Community Self-Reliant Group has an important role in managing various maintenance activities of water and sanitation facilities, including checking septic communal tanks, checking water facilities and latrines at resident houses, as well as repairing damaged water and sanitation facilities. Community Self-Reliant Group can serve as a role model of community empowerment in achieving populations health.

Keywords: community self-reliant group, sanitation village program, environmental health

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PATIENT CHARACTERISTICS, FINANCING TYPE, ACCREDITATION STATUS, AND QUALITY OF HEALTH SERVICES AT COMMUNITY HEALTH CENTER, SURAKARTA

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ABSTRACT

Background: An indicator of quality health service is the extent of patient expectation fulfilment. Perceived quality of health services may be influenced by various factors such as patient socio-demographic factors, financing type, and accreditation status. As statistics have shown, the number of patient visits at Surakarta Community Health Center has been decresing for the last few years. This study aimed to determine the associations between patient characteristics, financing type, accreditation status, and the quality of health services at community health center.
Subjects and Method: This was a quantitative study with cross-sectional design. It was conducted at Community Health Center, Surakarta, Central Java, from May to July 2017. A sample of 120 patients were selected for this study from 2 Community Health Centers selected at random from all 17 Community Health Centers existing in Surakarta. The independent variables were patient characteristics, financing type, and accreditation status of the Community Health Centers selected. The dependent variable was quality of health service. The data were collected using a set of questionnaire and analyzed using multiple logistic regression.
Results: Quality of service was negatively associated with patient education (OR= 0.27 ; 95% CI= 0.08 to 0.90; p= 0.033), being employed (OR= 0.15 ; 95% CI= 0.04 to 0.48; p= 0.002), higher patient income (OR= 0.28 ; 95% CI= 0.08 to 0.94; p= 0.039), being insured (OR= 3.06 ; 95% CI= 0.81 to 11.52; p= 0.099), and higher accreditation status of Community Health Care (OR= 2.96 ; 95% CI= 1.03-8.50; p= 0.044).
Conclusion: Quality of service at Community Health Care is negatively associated with patient education, being employed, higher patient income, being insured, and higher accreditation status.

Keywords: patient characteristic, financing type, accreditation status, quality of services

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IMPLEMENTATION OF THE REFERRAL SYSTEM POLICY IN THE NATIONAL HEALTH INSURANCE SCHEME AT COMMUNITY HEALTH CENTERS, NGAWI DISTRICT, EAST JAVA

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ABSTRACT

Background: It has been reported that there are some obstacles in the implementation of the National Health Insurance, one of which is its referral system. Community Health Center is expected to serve as a gatekeeper, such that most of the health problems can be tackled at the Community Health Center. However, anecdotal evidences had shown that the referral system did not run as expected. This study aimed to examine the implementation of the referral system in the National Health Insurance scheme with special attention on the policy context and resources availability at Community Health Centers in Ngawi, East Java.
Subjects and Method: This was a qualitative study conducted in Ngawi, East Java. The institutions under study included 3 Community Health Centers of different strata Geminggar Community Health Center (highest strata), Ngawi Community Health Center (medium strata), Kasreman Community Health center (lowest strata). The other institution under study was Ngawi District Health Office. The informants for this study included 24 patients of various categories at Community Health Center: subsidy recipients, class I, class II, and class III. The other informants included 1 staff from District Health Office and 6 staff from Community Health Center. The data were collected by in-depth interview, observation, and document review. The data were analyzed by data reduction, presentation, and verification.
Results: The policy on the referral system of the National Health Insurance (NHI) was good but its implementation was poor. Outpatient referral was still high because of community ignorance regarding referral system. It was often the case the referral was based on patient request. The referral system problem also stemmed from the shortage of medical doctors and health equipment at the Community Health Center. Nevertheless, the availability of medicine and funding at Community Health Center were sufficient. The sources of funding included General Allocation Fund (DAU), Special Allocation Fund (DAK), Special Allocation Fund for Operational Affairs (BOK), and capitation. Community Health Center only managed capitation and BOK.
Conclusion: There is a need for socialization to the community regarding the current referral system of the National Health Insurance either through the media or the BPJS representative at the Community Health Center. In addition, there is a need for recruitment of doctors with a clear salary regulation, and health equipment upgrade at Community Health Center.

Keywords: Referral system, resources, National Health Insurance sistem rujukan, sumberdaya, Jaminan Kesehatan Nasional

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ANALYSIS FACTORS OF QUALITY MANAGEMENT AT SAMUEL J. MOEDA NAVAL HOSPITAL, KUPANG

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ABSTRACT

Background: Quality management is an important part in improving health services at hospitals. One way to measure the readiness of health facilities in ensuring the quality offered is to observe the fulfillment of hospital accreditation criteria. The study aimed to analyze factors associated with quality management at Samuel J. Moeda Naval Hospital, Kupang.
Subjects and Method: This study was descriptive qualitative. It was conducted at Samuel J. Moeda Naval Hospital, Kupang, Nusa Tenggara Timur. Informants for this study included 15 hospital personnels from the leadership level to the first line level. Data collection used in-depth interviews, observation, and document review. The data were analyzed using Miles and Huberman technique.
Results: Hospital quality management was not equipped with licensing documents and not all health workers have practice licenses. It did not have office room with sufficient space and adequate facility. Hospital quality management did not have operational cars. It also did not have solid wate treatment facility. Hospital quality management was short of health personnels (including specialist doctors, general practitioners, pharmacists, and midwives). The hospital had not serve patients under the National Health Insurance scheme. Drug system management was not well-performed.
Conclusion: Determinants of quality management at Samuel J. Moeda Navy Hospital, Kupang are hospital licensing, practice licencing of health personnel, lack of service facilities, lack of transportation facilities, solid waste treatment facilities, and utilization of information facilities. There was a lack of professional health workers. The hospital has not implemented the National Health Insurance Program.

Keywords: quality, management, hospital

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MONITORING AND EVALUATION OF THE NATIONAL HEALTH INSURANCE PARTICIPATION IN SURAKARTA, CENTRAL JAVA

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ABSTRACT

Background: Based on 1945 Constitution, the Indonesian government has the obligation to assure that every citizen gets constitutional right of health services. The government is obliged to establish an integrated health system and management under the National Social Security (Jaminan Sosial Nasional, JSN) program. The National Social Security program in health care is implemented in the National Health Insurance program (Jaminan Kesehatan Nasional, JKN). The JKN is administered by the Implementing Body of Social Security in Health (Badan Penyelenggara Jaminan Sosial Kesehatan, BPJS). Participation in the National Health Insurance is mandatory for all Indonesian citizens and foreigners who have stayed in Indonesia for at least 6 months. The JKN participants consist of premium assistance beneficiaries (PBI) and non-premiun assistance beneficiaries (non-PBI). The JKN started in January 1, 2014 and continues to register new participants by January 1, 2019. Data from BPJS Surakarta showed that by July 2017 the number of registered JKN participants was 448,812 (80.33%) out of the total population of 558,698. There are 109.886 people have yet to be registered as JKN participants. This study aimed to describe the current status of JKN participation coverage and to provide solution to the implementation of JKN in Surakarta.
Subjects and Method: This was a normative legal study with statute approach. This study was conducted in Surakarta, Central Java. The sources of secondary data included legislation, legal document, court decision, law review, legal records, and literature pertinent to law. Primary data were used to complement so as to sharpen analysis.
Results: Participant coverage has been realized by socialization, visit, telemarketing, and supervision. Participation coverage has also been increased by circulating registration letters, enacting local regulation, and developing donation program. The main obstacles of JKN implementation included: (1) Unregistered enterprises; (2) Low number of individual participants; (3) Sub-optimal dropbox registration. The suggested solutions to the obstacles are as follows: (1) Supervision; (2) Re-registration; (3) Socialization; (4) Human resource development forum; (5) Registration by mobile BPJS; (6) Development of JKN cadres; (7) Centralized data; (8) New registration outlets; (9) Colaboration with village heads and trade office.
Conclusion: Approximately 20% of population in Surakarta have yet to be registered in JKN. Some measures are suggested to increase JKN participation (1) Socialization; (2) Education to the public on the importance of JKN.

Keywords: National Health Insurance, monitoring, evaluation, participation

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CONTEXT, INPUT, PROCESS, PRODUCT ANALYSIS IN THE IMPLEMENTATION OF IRON SUPPLEMENTATION PROGRAM IN BANYUMAS, CENTRAL JAVA

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ABSTRACT

Background: Iron supplementation program has been implemented in Banyumas, District, Central Java, but the prevalence of anemia in pregnant women remains as high as 55.37%. The Banyumas District Health Office has launched an ad hoc (temporary) iron supplementation program, namely Hemafort, in order to reduce anemia prevalence. This study aimed to investigate the factors that determine the effectiveness of the iron supplementation program for pregnant women in Banyumas, Central Java.
Subjects and Method: This was a qualitative study with case study approach, and CIPP (context, input, process, product) framework. This study was conducted Wangon II and South Purwokerto Health Centers from October to November 2016. Informants were selected by purposive sampling including midwives, nutritional program managers, pharmacists, head of nutrition section, and pregnant women. The data were collected by in-depth interview, observation, and archival review. The data were analyzed by a multiple case study. The data were validated by data source triangulation.
Results: The iron tablets coverage for pregnant women reached 94.88% and 89.26% in 2014 and 2015, respectively, in Banyumas. The minimal target of iron coverage for pregnant women was 90%. There was no local government policy or standard operating procedure (SOP) that regulated the efforts to tackle anemia problems in pregnant women. The number of health personnel in charge of nutrition and their competence were sufficient. But reliable budget to tackle anemia problem did not exist. Spending district budget was an exit strategy to take when there was deficiency in central budget allocation. The number of iron supplementation tablets was not guaranteed.
Conclusion: The effectiveness of iron supplementation program for pregnant women depends on the existence of relevant policy, SOP, allocation of sufficient and reliable budget, as well as adequate supply of iron tablets.

Keywords: iron supplementation tablets, pregnant women, local government, budget

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ROADMAP OF HEALTH DEVELOPMENT IN WEST MANGGARAI DISTRICT, EAST NUSA TENGGARA 2016-2021

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ABSTRACT

Background: West Manggarai is one of districts in East Nusa Tenggara with population health indicators lagged behind: (1) High infant mortality rate; (2) High maternal mortality ratio; (3) High prevalence of severe or moderate child malnutrition; (4) High incidence of low birth weight infants; (5) High incidence of HIV infection, tuberculosis, diarrhea, and fever; (6) Low participation of couples of childbearing age in family planning program; (7) Low life expectancy at birth; (8) High poverty; (9) Low competitiveness of the population to enter the global life. The purpose of this study was to provide a summary of the health development roadmap in West Manggarai, East Nusa Tenggara, 2016-2021.
Subject and Method: This was a qualitative-quantitative descriptive study conducted in West Manggarai, East Nusa Tenggara. The data were collected by in-depth interview, focus group discussion (FGD), and document review. Data sources included Central Bureau Statistic (Biro Pusat Statistik, BPS), health profile of District Health Office. The FGD participants comprised of 35 participants.
Results: With reference to National Health System, West Manggarai District Health Development policies had been formulated to include some key objectives as follows: (1) Community development for healthy behavior; (2) Quality improvement in primary health services and referral services; (3) Quality improvement in maternal, child, adolescent, and elderly health services; (4) Community nutrition improvement; (5) Improvement in disease control and environmental health; (6) Increase in number of medical doctors and paramedics; (7) Improvement in availability and distribution of pharmaceuticals, medical equipments, food and drink; (8) Expansion of BPJS health financing coverage; (9) Upgraded status of Labuan Bajo Hospital from Type-C to BLUD; (10) Formulation of local regulation on local health system and regency regulation on local health sub-system; (11) Decline in total fertility rate.
Conclusion: Based on problem identification, analysis of local resources potential, and conforming to the National Health System, West Manggarai Roadmap of Health Development 2016-2021 has been formulated to address and overcome important population health problems in the district.

Keywords: Roadmap of health development, population health problems

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PRIVATE HEALTH INSURANCE PARTICIPATION FOR UNIVERSAL COVERAGE IN THE NATIONAL HEALTH INSURANCE ERA IN DENPASAR, BALI

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ABSTRACT

Background: National health insurance is a government program that aims at fulfilling the basic needs of the citizens, particularly health. It aims at achieving universal coverage in Indonesia. In order to speed the attainment of the universal coverage and to enhance the service capacity, the Implementation Body of Social Insurance (BPJS) have collaborated with private health insurance agencies. The purpose of this study was to investigate the participation of private health insurance agency in the attainment of universal coverage in the national health insurance era.
Subjects and Method: This was a qualitative study carried out in Bali, in July 2015. As many as 22 informants were recruited for this study, consisting of managers and agents of some private health insurance agencies. Data were collected by in-depth interview and analyzed by thematic analysis.
Results: Most of the informants were keen in establishing good collaboration with BPJS. Private health insurance agencies were enthusiastic in collaborating for the attainment of universal health coverage through the so-called Coordination of Benefit (CoB). One of the common readily available advantageous feature in this collaboration was that health insurance agency and BPJS operate the similar system of health service delivery-that is managed care. This collaboration was expected to increase the number of participants, as it allows the participants to use the various health benefit products provided by the private health insurance agencies that have collaborated with BPJS. An obstacle being faced by private health insurance was that the CoB participants did not follow the service delivery pathway as implemented by the private health insurance. Consequently the benefits provided by the private health agencies had not been uptaken optimally. The health insurance agencies do not feel threatened, since they have separate segments of participant different from the national health insurance.
Conclusion: Private health insurance agencies support the existence of national health insurance. In addition, they do not feel threatened, since they have separate segments of participant different from the national health insurance. They are optimistic that they will grow with BPJS along with the increasing public awareness on the importance of health insurance.

Keywords: private health insurance, national health insurance, universal coverage, coordination of benefit

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MANAGEMENT SYSTEM OF THE YOUTH INFORMATION AND COUNSELING CENTER IN KUPANG

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ABSTRACT

Background: Youth Information and Counseling Center (PIK) in Kota Kupang has been established since 2009. In its development, only 31% of the total PIK Teenagers enrolled in the KBKS Office of Kupang City were identified as active. Most are still at the "growing" stage. The purpose of this study was to evaluate the management system of the Youth Information and Counseling Center in Kupang.
Subjects and Method: This was a mixed qualitative-quantitative study. The study was conducted at Youth Information and Counseling Center in Kupang. A sample of 6 informants from PIK were selected for this study, consisting of 6 PIK teenagers and head of subdivision of adolescent reproductive health. Qualitative data were collected by in-depth interview and observation. The data collected included availability of human resource managers, infrastructure support, funding support, management process, and teenage user coverage. Quantitative data were collected by questionnaires from 340 respondents. The dependent variables for the quantitative study were knowledge and attitude towards adolescent reproductive health. Qualitative analysis was performed by descriptive analysis. Evaluation of managemen system employed context, input, process, and product (CIPP) framework.
Results: PIK was lacking in input, i.e. infrastructure and equipment. Management process was also lacking. Especially there were no working standard, job description, and monitoring by related agencies. The output (product) side of PIK was low. PIK only covered 42% of total number of adolescents in Kupang. Quantitative study showed low knowledge and low in positive attitude towards adolescent reproductive health. Nevertheless, adolescents who were active in PIK had better knowledge in reproductive health than "growing" adolescents or other junior high school students.
Conclusion: Youth information and counceling center in Kupang did not well perform. There is a need to provide reproduction health education for adolescents since earliest age.

Keywords: youth, information and counseling center, reproductive health, management system

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PATIENT SATISFACTION OF HEALTH SERVICES PROVIDED AFTER ISO 9001 IMPLEMENTATION AT COMMUNITY HEALTH CENTERS IN YOGYAKARTA

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ABSTRACT

Background: ISO 9001 sets out the criteria for a quality management system and is the only standard in the family that can be certified to. This standard is based on a number of quality management principles including a strong customer focus, the motivation and implication of top management, the process approach and continual improvement. It can be used by any organization, large or small, regardless of its field of activity. Some community health centers in Yogyakarta have implemented ISO 9001 with an objective to improve quality of health services provided and patient satisfaction. This study aimed to determine difference in patient satisfaction between community health center with ISO 9001 and community health center without ISO 9001.
Subjects and Method: This was an analytic cross sectional study conducted in community health centers with and without ISO 9001 certification in Yogyakarta. A sample of 174 patients was selected for this study consisting of 87 patients from community health center Umbulharjo I with ISO 9001 and 87 patients from community health center Umbulharjo II without ISO 9001. Patients satisfaction was measured based on Servequal with 5 dimensions of quality: reliability, tangible, responsiveness, assurance, and empathy. Difference in percent satisfaction between the 2 groups was tested by chi square.
Results: Patient satisfaction in health center with ISO 9001 certification (85.6%) was higher than that in health center without ISO 9001 certification (79.5%), and it was statistically significant (p=0.002).
Conclusion: ISO 9001 certification improves quality of health service provided at community health centers.

Keywords: patient satisfaction, health centers, ISO, NON-ISO

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TOPIC V: MEDICINE

THE ROLES OF MEDICAL DOCTOR AND FAMILY ON PATIENT HEALTH BEHAVIOR IN CONTROLLING HBA1C LEVEL AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS AT DR. MOEWARDI HOSPITAL

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ABSTRACT

Background: Diabetes Mellitus is one of non-communicable diseases with high prevalence of complication and mortality at productive age. Patients with type 2 DM need to control their blood glucose level to attain optimal blood glucose. Thereby, it is expected to prevent or minimize the incidence of complication. This study aimed to examine the roles of medical doctor and family on patient health behavior in controlling HbA1C level among patients with type 2 diabetes mellitus at Dr. Moewardi Hospital, Surakarta.
Subjects and Method: This was an analytic observational study with case control design. This study was conducted at Dr. Moewardi Hospital, Surakarta, from April to May, 2017. A sample of 50 patients with type 2 Diabetes Mellitus and 100 control group were selected by fixed disease sampling. The dependent variable was HbA1C blood level. The independent variables were roles of medical doctor, roles of family, treatment compliance, physical activity, diet, and duration of illness. HbA1C blood level was measured by clinical laboratory test. The independent variable was measured by a set of questionnaire. The data were analyzed by path analysis.
Results: HbA1C blood level was affected by duration of illness (b= 0.04; SE= 0.01; p<0.001), diet (b= 0.18; SE= 0.09; p= 0.044), and physical activity (b= 0.16; SE= 0.07; p= 0.024). Diet was affected by the role of medical doctor (b= 0.02; SE= 0.07; p= 0.766), the role of family (b= 0.13; SE= 0.07; p= 0.082), duration of illness (b= 0.01; SE= 0.01; p= 0.063), and treatment compliance (b= 0.32; SE= 0.11; p= 0.002). Physical activity was affected by the role of medical doctor (b=0.17; SE= 0.08; p= 0.025), the role of family (b= 0.21; SE= 0.09; p= 0.017), diet (b= 0.27; SE= 0.10; p= 0.005) and duration of illness (b= 0.03; SE= 0.01; p< 0.001). Treatment compliance was affected by the role of medical doctor (b= 0.18; SE= 0.05; p<0.001) and the role of family (b= 0.24; SE= 0.05; p< 0.001).
Conclusion: HbA1C blood level was directly affected by duration of illness, diet, and physical activity. HbA1C blood level was indirectly affected by the role of medical doctor, the role of family, duration of illness, and treatment compliance, and diet.

Keywords: HbA1C level, diabetes mellitus, healthy behavior

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RELATIONSHIP BETWEEN KNOWLEDGE AND FAMILY SUPPORT REGARDING HYPERTENSION WITH BLOOD PRESSURE CONTROL IN ELDERS

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ABSTRACT

Background: Hypertension is one of the degenerative diseases that have frequently been found among the group of elders. If hypertension goes uncontrolled, then it might escalate and cause complication. The level of knowledge for both of patients and their families in terms of preventive actions toward hypertension complication is expected to be able to control blood pressure. Among the hypertension patients, the role of family support is very important in order to maintain and to control that the blood pressure will not increase and to return it to the normal state. In relation to this background, the objective in conducting this study was to analyze the relationship between knowledge and family support regarding hypertension with blood pressure control among the elders with hypertension in the Sangkrah Center of Public Health, City of Surakarta.
Subjects and Method: This was an analytic observational study with cross sectional design. This study was conducted in Sangkrah Community Health Center in the City of Surakarta on November 2016. A total sample of 147 elders were selected for this study by purposive sampling. The dependent variable in this study was blood pressure and was measured by sphygnomanometer. The independent variables were knowledge and family support and were collected by a set of questionnaire. The data analyzed by logistic regression.
Results: Family knowledge (OR= 0.38; 95% CI= 0.13 to 1.08; p= 0.070) increased the likelihood of blood pressure control. Elders who came from family with good knowledge regarding hypertension had 0.4 times better blood pressure control in comparison to those who came from family with poor knowledge regarding hypertension. Family support (OR= 0.43; 95% CI= 0.18 to 1.02; p= 0.046) increased the likelihood of blood pressure control. Elders with good family support had 0.4 times better blood pressure than those who had poor family support.
Conclusion: Family knowledge and family support increase the probability of blood pressure control among elders with hypertension.

Keywords: knowledge, family support, blood pressure control, elders

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THE INFLUENCIAL FACTORS ON COUNSELLING EFFECTIVENESS USING DECISION-MAKING TOOLS IN SELECTING LONG-TERM CONTRACEPTIVE METHODS IN KENDAL DISTRICT

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ABSTRACT

Background: One of the efforts to increase the usage of Long-term Contraceptive Methods is an effective counselling using decision-making tools. This counselling is very important to assist acceptors in making decisions and providing convenience to problem solving, behavior changes or attitudes towards contraception. This study aimed to analyze the counselling effectiveness using decision-making tools in selecting methods of long-active reversible contraception.

Subjects and Method: This was an analytic observational study with case-control design. This study was conducted at District of Kendal, Central Java, from May 18 to August 18, 2016. Population of this study was the entire contraceptive acceptors who were at district of Kendal. The samples were as much as 100 people, 35 contraceptive acceptors in case group and 65 in control group using quota sampling technique. The exogenous variables were counseling on Decision-Making Tools, self-efficacy, subjective norms, behavior of women of reproductive age, ages of women of reproductive age, parity of women of reproductive age, levels of education of women of reproductive age. The endogenous variables were the usage of long-term contraceptive methods. The data were collected by a set of questionnaires and analyzed by path analysis.

Results: Age≥35 years old (b= -2.19; 95% CI= -3.60 to -0.77; p= 0.002), multiparity (b= -2.04; 95% CI= -3.99 to -0.09; p= 0.040). Primary education level(b= -0.55; 95% CI= 0.12 to 1.85; p= 0.359). There was a positive correlation between counselling and behavior (b= 0.98; 95% CI= 0.12 to 1.85; p= 0.025). There was a correlation between counselling and efficacy (b= 1.56; 95% CI= 0.62 to 2.50; p= 0.001). There was a correlation between behavior and participation in the long-term contraceptive methods (b= 4.02; 95% CI= 1.71 to 6.34;p= 0.001). There was a correlation between self-efficacy and participation in the long-term contraceptive methods (b= 3.23; 95% CI= 0.71 to 5.75; p= 0.012). There was a correlation between subjective norms and participation in the long-term contraceptive methods (b= 3.25; 95% CI= 0.92 to 5.59; p= 0.006).

Conclusion: Counselling using decision-making tools influences behavior and self-efficacy in using the long-term contraceptive methods indirectly.

Keywords: long-term contraceptive methods, counselling, decision-making tools

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PATH ANALYSIS ON THE EFFECTS OF BIO-PSYCHOSOCIAL FACTORS AND CALORIE INTAKE IN BLOOD GLUCOSE CONTROL IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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ABSTRACT

Background: Diabetes mellitus (DM) is a serious chronic disease with its tendency to deteriorate. The DM cases worldwide in 2015 was 415 million people and it is estimated to increase as many as 642 million cases in 2040. Indonesia ranked 7 in the world with 10 million cases of DM in 2015, about 90% of which were Type 2 Diabetes Mellitus. This study aimed to determine the effect of biopsychosocial factors and calorie intake on the blood glucose control in patients with Type 2 DM.

Subjects and Method: This was an analytic and observational study with case control design. This study was carried out at Internal Medicine Polyclinic, Department of Endocrinology, Dr. Moewardi Hospital, Surakarta, Central Java, from October to November 2016. A total sample of 135 cases of Type 2 DM were selected for this study by fixed disease sampling. As many as 106 of these study subjects at HbA1c ≥6.5%and 29 cases of Type 2 DM had HbA1c<6.5%. The dependent variable was HbA1c level. The independent variables were educational level, family income, psychological stress, calorie intake, and Body Mass Index (BMI). The data were collected by a set of questionnaire. HbA1c was measured by High Performance Liquid Chromatography (HPLC), which was recorded in the medical record. Calorie intake was measured by 24 hour food recall. Psychological stress was measured by International Physical Activity Questionnaire (IPAQ). The data was analyzed by path analysis on STATA 13.

Results: Psychological stress (b= 0.99, 95% CI= 0.07 to 1.92, p= 0.034), calorie intake (b= 1.84, 95% CI= -0.24 to 3.92, p= 0.083), and BMI (b= 1.15, 95% CI= 0.22 to 2.08, p= 0.016), had positive and statistically significant effect on HbA1c. Calorie intake increased BMI (b= 2.35, 95% CI= 0.31 to 4.39, p= 0.024), education decreased calorie intake (b= -2.26, 95% CI= -3.38 to -1.14, p<0.001), and family income increased calorie intake (b= 1.23, 95% CI= 0.26 to 2.21, p= 0.013).

Conclusion: Calorie intake, BMI, psychologi stress, and family income are associated with increase in HbA1c level. Education decreases HbA1c level via decreased calorie intake. Type 2 DM patients need to pay attention to these biopsychosocial factors and calorie intake in order to control blood sugar.

Keywords: biopsychosocial factors, calorie intake, HbA1c

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PATH ANALYSIS ON THE DETERMINANTS OF NEONATAL ASPHYXIA AT DR. SAIFUL ANWAR HOSPITAL, MALANG

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ABSTRACT

Background: Neonatal asphyxia is one of the main causesof neonatal mortality. Many factors may have caused neonatal mortality. This study aimed to investigate the determinants of neonatal asphyxia at Dr. Saiful Anwar Hospital, Malang.
Subjects and Method: This was an observational analytic study with case control design. The study was conducted at Dr.Saiful Anwar, Malang, East Java, in June 2016. A total of 53 newborn babies with asphyxia (cases) and 159 newborn babies without asphyxia (controls) were selected by fixed disease sampling for this study. There were three exogenous variables: prematurity, maternal age, and parity. The endogenous variables were birthweight and neonatal asphyxia. The data were collected by a checklist. The data were analyzed by path analysis model.
Results: Low birthweight had positive direct effect on the risk of neonatal asphyxia (b= 1.61; 95% CI= 0.86 to 2.37; p<0.001). Prematurity (b= 0.93; 95% CI= 0.13 to 1.74; p<0.023), maternal ages <20 or ≥35 years (b= 0.97; 95%CI= 0.05 to 1.87; p<0.034), and parity primipara or ≥4 parity (b= 1.00; 95% CI= 0.155 to 1.85; p<0.021), had positive indirect effects on the risk of neonatal asphyxia via low birthweight.
Conclusion: Low birthweight had positive direct effect on the risk of neonatal asphyxia. Prematurity, maternal ages <20 years or ≥35 years, and parity primipara or ≥4 parity, had positive indirect effects on the risk of neonatal asphyxia via low birthweight.

Keywords: neonatal asphyxia, low birth weight, prematurity, maternal age, parity

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ASSOCIATION BETWEEN HEMODIALYSIS ADEQUACY, FAMILY SUPPORT, AND QUALITY OF LIFE IN CHRONIC RENAL FAILURE PATIENTS

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ABSTRACT

Background: Hemodialysis is one of renal replacement therapy for patients with chronic renal failure (CRF). The quality of hemodialysis is largely determined by the recommended dose of hemodialysis. Biological and psychological changes are often faced by patients undergoing hemodialysis, which can affect their quality of life. Family support is an important factor that serves as a support system for the patients to face the health problems. This study aimed to determine the association between hemodialysis adequacy, family support, and quality of life in chronic renal failure patients.
Subjects and Method: This was an analitic observational study with cross sectional design. It was conducted at Kasih Ibu Hospital, Surakarta, Central Java. A total sample of 102 patients with chronic renal failure who underwent hemodialysis were selected for this study using random sampling. The dependent variable was quality of life. The independent variables were hemodialysis adequacy and family support. The quality of life was assessed using the WHOQoL questionnaire. The hemodialysis adequacy was measured by Ureum Reduction Rate (URR) formula. Family support was measured by family support questionnaire. The data were analyzed using Chi Square test, Mann Whitney test, and logistic regression
Results: Patients with chronic renal failure had better quality of life if they underwent adequate hemodialysis (OR= 5.34 95% CI= 2.20 to 12.98 p= 0.001) and received strong family support (OR= 7.74; 95% CI= 3.13 to 19.13 p= 0.001).
Conclusion: Quality of life of the patients with chronic renal failure is determined by hemodialysis adequacy and family support.

Keywords: chronic renal failure, hemodialysis, adequacy, family support, quality of life

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THE EFFECTIVENESS OF CHRONIC DISEASE MANAGEMENT PROGRAM IN BLOOD PRESSURE CONTROL AMONG HYPERTENSIVE PATIENTS

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ABSTRACT

Background: The prevention and management of hypertension are major public health challenges for Indonesia and the rest of the world. If the rise in blood pressure with age could be prevented or diminished, much of hypertension, cardiovascular and renal disease, and stroke might be prevented. In Indonesia, the Social Security Administration Agency (BPJS) has administered a government program to control chronic diseases, including hypertension, namely *Prolanis* (chronic disease management program). This study aimed to determine the effectiveness of chronic disease management program in controlling systolic blood pressure in hypertensive patients.
Subjects and Method: This was an analytic observational study with case control design. The study was conducted at Pratama Griya Husada Clinic 2 Tasikmadu, Karanganyar, Central Java, in April 2017. A sample of 120 hypertensive patients, consisting of 60 controlled hypertensive patients and 60 uncontrolled hypertension patients, were selected for this study using fixed disease sampling. The dependent variable was systolic blood pressure. The independent variable was chronic disease management program for systolic blood pressure control, consisting of health status monitoring, reminder, club activity, home visit, dietary education, and physical activity education. Data on diet were collected by Food Frequency Questionnaire (FFQ) based on the DASH eating plan. Physical activity data were collected by short-form International Physical Activity Questionnaire (IPAQ). The other data were collected using questionnaires. Multiple linear regression was used to analyze the data.
Results: Blood pressure of hypertensive patients was reduced by chronic disease management program, including monitoring health status (b= -6.34; 95% CI= -12.42 to -0.26; p= 0.041), reminder (b= -6.22; 95% CI= -13.30 to -0.87; p= 0.085), club activity (b= -3.46; 95% CI= -6.40 to -0.53; p= 0.021), home visit (b= -22.01; 95% CI= -41.85 to -2.17; p= 0.030), dietary education (b= -3.61; 95% CI= -6.66 to -0.57; p = 0.020), and physical activity education (b= -0.40; 95% CI= -0.79 to -0.01; p= 0.001).
Conclusion: Chronic disease management program is effective to control blood pressure of hypertensive patients. The program's components including monitoring health status, reminder, club activity, home visit, dietary education, and physical activity education, are effective in reducing blood pressure in hypertensive patients.

Keywords: hypertension, chronic disease management program

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EFFECTIVENESS OF ACUPUNCTURE AND INFRARED THERAPIES FOR REDUCING MUSCULOSKELETAL PAIN IN THE ELDERLY

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ABSTRACT

Background: According to the World Health Organization, the most frequent health problems experienced by the elderly is musculoskeletal pain. The common treatment for musculoskeletal pain is Non-Steroidal Anti-Inflammatory Drugs (NSAID) drugs. These drugs, however, give undesireable side effects such as disorders in digestion, renal function, and increased blood pressure. Acupuncture and infrared therapies have been widely known as cheap and safe for musculoskeletal pain. However, their relative effectiveness are not yet clear. This study aimed to determine the effectiveness of acupuncture and infrared therapies for reducing musculoskeletal pain in the elderly.
Subjects and Method: This was an experiment study with randomized controlled trials design. The study was conducted at the elderly integrated health post Klodran, Karanganyar, Central Java, in May, 2016. A total sample of 60 elderlies was selected for this study using random sampling technique. This sample was randomized into 4 groups, each consisting of 15 study subjects: (1) acupressure; (2) acupuncture; (3) infrared; (4) acupuncture and infrared. The dependent variable was musculoskeletal pain. The independent variable was type of pain relief therapy. The data was analyzed by Kruskall Wallis Test, and post-hoc test using Mann-Whitney.
Results: Kruskall Wallis Test showed mean differences in the reduction of musculosceletal pain between the four groups, and they were statistically significant, as follows: acupressure (mean= 1.3; SD= 0.5), acupunture (mean= 2.3; SD= 0.5), infrared (mean= 1.6; SD= 0.6), and acupuncture and infrared (mean= 3.9; SD= 0.4). Mann-Whitney test showed the most effective treatment for reducing musculoskeletal pain was acupunture and infrared combination therapy (mean difference= 2.53; $p<0.001$).
Conclusion: Acupunture and infrared combination is the most effective treatment for reducing musculoskeletal pain in the elderly.

Keywords: musculoskeletal pain, acupressure, acupuncture, infrared, elderly

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ASSOCIATIONS BETWEEN ALBUMIN LEVEL, LENGTH OF STAY, AND MORTALITY, IN ELDERLY PATIENTS WITH HEART FAILURE

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ABSTRACT

Background: Heart failure is a medical condition with high mortality. There are some known predictors of mortality among patients with heart failure. This study aimed to determine the associations between albumin level, length of stay, and mortality in elderly patients with heart failure.
Subjects and Method: This was an cohort study conducted at Prof Dr. RD Kandou Hospital, Manado, North Sulawesi. This study was carried out 4 months since April 2016. A sample of elderly patients aged ≥60 years with heart failure were selected for this study. Patients with malignancy, cirrhosis hepatis, chronic kidney disease, and severe anemia, were excluded from this study. The dependent variables were length of stay (LOS) and mortality. The independent variable was albumin level. Associations between variables were measured by correlation coefficient.
Results: Mean level of albumin was 3.21 g/dL, mean of LOS was 7.95 days. LOS was negatively correlated with albumin level (r=-0.42; p=0.004). Mortality was positively correlated with albumin level (r=-0.22; p=0.079).
Conclusion: LOS is negatively correlated with albumin level. Mortality is positively correlated with albumin level among elderly with heart failure.

Keywords: heart failure, albumin, length of stay, mortality

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THE RELATIVE EFFECT OF LOW IMPACT AEROBIC ON THE RISK OF FALLING IN THE ELDERLY AS COMPARED TO TRADITIONAL GYM

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ABSTRACT

Background: Gym is recomended for the elderly to maintain good health. Aerobic is a type of gym which result in high oxygen uptake. However, aerobic can lead to high risk of falling and consequent injury to the elderly. Recently, a new modified aerobic known as low impact aerobic was introduce to the elderly. This study aimed to determine the relative effect of low impact aerobic on the risk of falling in the elderly as compared to traditional gym.
Subjects and Method: This was a randomized control trial (RCT) conducted at the elderly integrated post Kedung Gobyak, Sobokerto, Ngemplak, Boyolali. A sample of 30 elderly people were randomized into two groups: 15 elderly people in the low impact aerobic group and 15 elderly people in the traditional elderly gym. The independent variable was type of gym. The dependent variable was falling risk, which was measure by Tinetti test. Aerobics was performed 3 times a week with 20-30 minutes duration per session for 4 weeks. Difference in mean of falling risk between the two groups was tested by independent t-test.
Results: As a result of randomization, there was no statistically significant difference (p=0.851) in mean of falling risk before gym between low impact aerobic group and elderly group. There was no statistically significant difference (p=0.672) in mean of falling risk after gym between low impact aerobic group (mean= 25.93; SD= 4.57) and elderly group (mean= 25.27; SD= 3.94).
Conclusion: Low impact aerobic can be practiced by the elderly to maintain good health as an alternative to the traditional elderly gym since it does not increase falling risk as compared to the elderly gym.

Kewords: elderly, low impact aerobic, elderly gym, falling risk

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RISK FACTORS OF LEFT VENTRICULAR HYPERTROPHY IN MALE STUDENTS, IN MANADO, NORTH SULAWESI

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ABSTRACT

Background: Left Ventricular Hypertrophy (LVH) is an independent risk factor of heart failure. Previous study reported several cases of LVH in college's students, so it's very important to know the risk factors of LVH in young adults. The aim of this study was to determine the risk factors of LVH in the male students at the Faculty of Medicine, Sam Ratulangi University.
Subjects and Method: This was an analytic observational study with case-control design. The study was conducted in Cardiology Section Prof. Dr. RD Kandou Manado Hospital, from November 2014 to January 2015. A sample of obese male students were selected for this study. The independent variables were central obesity, hypertension, hyperuricemia, smoking, lack of physical activity. The dependent variable was LVH. Odds Ratio and chi square test were used to determine the relationship between hypertension, smoking, central obesity, lack of physical activity, hyperuricemia, and LVH.
Results: Central obesity (OR=11.00; $p<0.001$), hypertension (OR= 7.37; $p<0.001$), hyperuricemia (OR= 3.27; p=0.031), and lack of physical activity (OR= 6.33; p=0.025) were associated with LVH.
Conclusion: Central obesity, hypertension, hyperuricemia, and lack of physical activity are associated with LVH in male obese students.

Keywords: Left Ventricular Hypertrophy, hypertension, central obesity, hyperuricemia, physical activity

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ASSOCIATION BETWEEN ENERGY AND PROTEIN INTAKE, NUTRITIONAL STATUS, SERUM ALBUMIN AND QUALITY OF LIFE IN PATIENTS WITH CHRONIC RENAL FAILURE

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ABSTRACT

Background: Patients with chronic renal failure who have to undergo hemodialysis are at increased risk to have protein depletion and inflamation, which eventually may lead to decreased quality of life. These patients in turn experience uremia syndrome, which causes nausea, vomiting, and loss of appetite, and eventually low protein and energy intake. This study was aimed to determine the association between energy and protein intake, nutritional status, serum albumin and quality of life in patients with chronic renal failure.
Subjects and Method: This was a cross-sectional study, conducted in Dr. Moewardi Hospital, Surakarta, from February to March, 2017. A sample of 142 patients with chronic renal failure who had to undergo hemodialysis were selected for this study. The dependent variable was quality of life. The independent variables were energy intake, protein intake, nutritional status, and serum albumin. Data on sample characteristics were collected by questionnaire and interview. Data on energy and protein intake were collected by 3x24 hour food recall. Nutritional status was measured by Subjective Global Assessment (SGA). Serum albumin and blood speciment were measured at the laboratory. Data on quality of life was measured by WHOQoL-BREF questionnaire. The data was analyzed by multiple logistic regression.
Results: Energy intake (OR= 2.01; p= 0.394), protein intake (OR= 14.7; p= 0.99), nutritional status (OR= 0.01; p= 0.997), serum albumin (OR= 2.28; p= 0.156) were associated with increased quality of life in patient with chronic renal failure, but they were not statistically significant.
Conclusion: Energy intake, protein intake, nutritional status, serum albumin are associated with increased quality of life in patient with chronic renal failure, but they are not statistically significant.

Keywords: energy and protein intake, serum albumin, nutritional status, quality of life, patient, chronic renal failure

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ASSOCIATION BETWEEN KNOWLEDGE, ATTITUDE, AND ADHERENCE TO APPLY CORRECT DRUG INJECTION

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ABSTRACT

Background: Good performance of nurses at hospital is essential for patient safety and prevention of adverse events. It is possible for nurses at work to make unintended error. Error in providing medicine can result in serious problem, ranging from mild injury to severe injury or even death. This study aimed to determine the association between knowledge, attitude, and adherence to apply correct drug injection among nurses at Islamic Hospital, Surakarta.
Subjects and Method: This was a mixed method study, conducted at Islamic Hospital, Surakarta. A sample of 130 nurses were selected for the quantitative study by random sampling. Informants for the qualitative study included nurses and managers who were responsible for drug and administration regulation. The dependent variable was adherence to correct drug injection. The independent variables were knowledge and attitude. The qualitative data were collected by in-depth interview, questionnaire, and observation.
Results: Knowledge and attitude regarding correct drug injection were good enough among nurses at Islamic Hospital, Surakarta. With respect to nurse adherence to correct drug injection, 56.92% showed route correct, 56.15% showed time correct, 50.77% showed document correct, 26.92% showed dose correct, 22.31% showed drug correct. Linear regression analysis showed association between knowledge, attitude, and correct drug injection. Problems identified included suboptimal implementation of standard operating procedure, job duplication between different profesional, lack of supervision and evaluation on the implementation of correct drug injection.
Conclusion: Implementation of correct drug injection is still substandard. There is a need to improve nurse adherence by implementing routine supervision with clear policy on the job description on each profession.

Keywords: correct drug injection, nurse, knowledge, attitude

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EFFECT OF SEVEN JUMP LEARNING METHOD ON THE COMPETENCE TO USE PARTOGRAPH

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ABSTRACT

Background: Problem-based learning (PBL) is a student-centered pedagogy in which students learn about a subject through the experience of solving an open-ended problem found in trigger material. The Maastricht seven-jump process in PBL involves clarifying terms, defining problem(s), brainstorming, structuring and hypothesis, learning objectives, independent study and synthesis. However, there is a like of previous studies that show the effectiveness of seven jump process and improving the competency of using of partograph. This study aimed to determine the effect of seven jump learning method on the competence to use partograph.
Subjects and Method: This was a quasi experiment using before and after intervention with no control design. This study was conducted at Faculty of Health Sciences, Kadiri University, Kediri, East Java. A sample of 35 students were selected for this study. The dependent variable was competence in using partograph. The independent variable was seven jump learning method of PBL. The data on the competence of using partograph was collected by direct observation and checklist. The data were analyzed by mcNemar chi square test.
Results: Number (percent) of students who demonstrated competence of using partograph increased from 19 (54%) before seven jump to 29 (83%) after seven jump, and it was statistically significant (p=0.001).
Conclusion: The seven jump learning method can improve students competance of using partograph.

Keywords: seven jump method, partograph

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EFFECTIVENESS OF RED GINGER IN RELIEVING MENSTRUAL PAIN

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ABSTRACT

Background: The meta-analysis of six studies found that that Ginger effectively reduces menstrual pain. The two studies that compared Ginger to NSAIDs found that Ginger reduced menstruation pain comparably to NSAIDs. These included mefanamic acid (Ponstan) and ibuprofen (Motrin) – both common NSAIDs prescribed for severe menses pain. To the best of the author knowledge there is no studies have been carried out investigating the effectiveness of ginger that is grown in Java in reducing menstrual pain. This study aimed to examine the effectiveness of red ginger in relieving menstrual pain.
Subjects and Method: This was a randomized controlled trial conducted at SMAN 5 high school, Kediri, East Java. A sample of female students with menstrual pain were selected for this study by random sampling. This sample of students were divided into 2 groups by randomization, consisting of 13 students receiving red ginger extract beverage and 13 students receiving mefenamic acid (Ponstan). The dependent variable was intensity of menstrual pain. The independent variable was the provision of ginger extract beverage. Pain intensity was measured by visual analog scale (VAS). Difference in pain score between the 2 gruops was tested by Mann Whitney.
Results: After taking the intervention, the pain score in the red ginger group was slightly higher (mean=2.7; SD= 1.1) than the mefenamic acid group (mean=2.5; SD=1.3), but it was statistically insignificant (p=0.277).
Conclusion: The effectiveness of red ginger extract as a menstrual pain reliever is comparable to mefenamic acid.

Keywords: red ginger, mefanamic acid, intensity, menstrual pain

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EFFECT OF DRAGON FRUIT (HYLOCEREUS) CONSUMPTION ON CHOLESTEROL LEVEL IN WOMEN OF CHILDBEARING AGE, IN KEDIRI

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ABSTRACT

Background: Hypercholesterolemia is widely recognized risk factors of heart disease. The dragon fruit (Hylrocereus), also known as Pitaya, has Vitamin A, between 1.30 to 1.08 Protid, Vitamin C 12-6, lipid, and glucide. It brings about a high level of nutritional value to human body. This study aimed to determine effect of dragon fruit (hylocereus) consumption on cholesterol level in women of childbearing age, in Kediri.
Subjects and Method: This was a quasi experimental study using before and after intervention with no control design. This study was conducted in Ngasem Health Center, Kediri, East Java. A sample of women of childbearing age who had cholesterol level ≥ 200 mg/ dL and who did not consume anti-cholesterol agent, were selected for this study. The dependent variable was cholesterol level. The independent variable was consumption of the dragon fruit. Difference in mean cholesterol levels before and after intervention was tested by Wilcoxon test.
Results: Mean cholesterol level before consumption of dragon fruit (238.75 mg/dL) was reduced after consumption of dragon fruit (187.92 mg/dL), and it was statistically significant (p= 0.002).
Conclusion: Dragon fruit is effective in reducing cholesterol level among women of childbearing age.

Keywords: dragon fruit, women of childbearing age, cholesterol level

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ANTIOXYDANT ACTIVITY OF ANT NEST PLANTS (HYDNOPHYTUM FORMICARUM AND HYDNOPHYTUM PAPUANUM) IN PAPUA

Sarce Makaba

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ABSTRACT

Background: Ant nest plants are common in Papua and have been used by people to cure various diseases, particularly degenerative diseases. Antioxydant in these plants has an important role to maintain good health since it can capture free radical molecules and reactive oxygen species (ROS). As such, it can inhibit oxydative reaction as a cause of degenerative diseases. The purpose of this study was to examine antioxydant activity of ant nest plant (*Hydnophytum formicarum* and *Hydnophytum papuanum*) in Papua.
Subjects and Method: This was a laboratory experiment. Antioxydant activity was tested using 1.1-difenil-2-pikrilhidrazil (α,α-difenil-β pikrilhidrazil) or DPPH.
Results: *Hydnophytum formicarum* showed oxydant activity with IC_{50} = 7.03 μg/mL. *Hydnophytum papuanum* showed oxydant activity with IC_{50} = 6.19 μg/mL.
Conclusion: *Hydnophytum formicarum* and *Hydnophytum papuanum* show oxydant activity.

Keywords: antioxydant activity, *Hydnophytum formicarum, Hydnophytum papuanum*

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VALIDITY OF NUTRITIONAL SCREENING TOOL FOR DIALYSIS PATIENTS

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ABSTRACT

Background: Malnutrition is a common problem in patients with hemodialysis. Prevalence of malnutrition in patients with chronic renal failure who must undertake hemodialysis treatment is still high. Therefore, there is a need to develop a valid screening tool to detect malnutrition early. This study aimed to assess the validity of nutritional screening tool for dialysis patients.
Subjects and Method: This was a cross-sectional study. A sample of 226 patients aged ≥18 years with chronic renal failure who must undertake hemodialysis were selected for this study. Patients who received enteral or parenteral nutritional feeding, had sepsis, shock, coma, malignancy, and multi organ failure, were excluded from this study. Dialysis Malnutrition Score (DMS) and Nutrition Risk Index (NRI) were used as a screening tool for detecting malnutrition. The results were compared with Subjective Global Assessment (SGA) as the reference standard to yield sensitivity and spesificity as validity measures.
Results: Percent of patients with malnutrition as detected by DMS, NRI, and SGA were 98.2%, 65%, and 15.5%, respectively. Sensitivity and specificity of DMS were 81.3% and 71.4% as compared to SGA, respectively. Sensitivity and specificity of NRI were 29.2% and 85.7% as compared to SGA, respectively.
Conclusions: DMS can be used as a screening tool to detect malnutrition, since it has acceptable sensitivity and specificity. In addition, similar to SGA, DMS is easy to apply and does not require biochemical data.

Keywords: malnutrition, chronic renal failure, hemodialysis, DMS, NRI, SGA, screening tool, sensitivity, specificity

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HOLISTIC CARE FOR LEPROSY PATIENTS IN LEMBATA DISTRICT, EAST NUSA TENGGARA

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ABSTRACT

Background: Lembata is a district in East Nusa Tenggara with various infectious and non-infectious diseases, including leprosy. The monthly incidence of leprosy increase by 1-2 new cases of leprosy per village. In Lembata there is Lembata Damian Hospital, a leprosy hospital established in 1959. Lembata District has a population of 157,265 people, most of than have low education level. The local government implemented a new approach of leprosy treatment emphasizing holistic treatment including medical, psychological, social, and spiritual treatment with the objective to cure and to improve the quality of life of leprosy patients. This study aimed to assess the effectiveness of the holistic leprosy treatment in Lembata District, East Nusa Tenggara.

Subjects and Method: This was a qualitative study with problem solving approach. The holistic treatment applied to leprosy patients consisted of some components. In order to develop immune system in the body, the patients received local food nutritional intake, including maize, tubers, papaya fruit and leaf, and kelor leaf. To heal ulcers and wounds, the patients received blended topical herbal treatment, consisting of local papaya leaf, kelor leaf, turmeric tuber, and salt. The psychological component of holistic treatment aimed to prevent stress, feeling of despair, feeling of isolation, and lack of self confidence. The social component of holistic treatment empowered patients to be accepted by the surrounding community members. The spiritual component of holistic treatment attempted to enhance motivation by practicing prayer. The holistic treatment was developed by Porat Antonius. The data were collected by in-depth interview and direct observation.

Results: As many as 76 cases of leprosy cases were identified through laboratory examination conducted at Damian hospital. As many as 33 leprosy cases received the holistic treatment in addition to anti-leprosy medical drugs. 19 of all 33 leprosy patients treated with the holistic treatment were cured. 14 patients refused to participate in the holistic treatment.

Conclusion: Delving in local wisdom, the holistic treatment in complementary with modern anti-leprosy drugs can be used to cure leprosy patients and to improve their quality of life. Further studies, however, need to be carried out to provide rigorous scientific evidence on the effectiveness of the holistic treatment.

Keywords: Leprosy, holistic treatment, herbal medicine, quality of life

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THE EFFECT OF FOOD TEMPERATURE AND WAITING TIME ON DIETARY PROTEIN CONTENT IN FILTERED FOOD AT HOSPITAL

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ABSTRACT

Background: Filtered food is a food transition from solid to liquid. It is usually consumed by patients who have difficulty in chewing and take longer time to eat. The longer waiting time may affect the quality of food. The purpose of this study was to determine the effect of food temperature and waiting time on dietary protein content in filtered food at hospital.
Subjects and Method: This was a cross sectional study conducted at Dr. Saiful Anwar Hospital, Malang, East Java, from February to March 2017. A total of 60 filtered food samples prepare by hospital dietary unit were selected for this study. The dependent variable was protein content. The independent variables were food temperature and waiting time. Waiting time was measured by stopwatch from the time food is place in the container and time consumed by patients. Protein content was measured by Lowry method. Food temperature was measured by thermometer. Data were analyzed using multiple linear regression.
Results: Dietary protein content decreased with increasing food temperature (b = -0.04; p = 0.036) and longer waiting time (b = -3.47; p = 0.001).
Kesimpulan: Dietary protein content decreases with increasing food temperature and longer waiting time.

Keywords: dietary protein content, food temperature, waiting time, filtered food

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COMBINATION OF "BOSE" GRINDED CORN, BROWN RICE, AND LONTAR NATURAL SUGAR AS AN ALTERNATIVE FOOD COMPANION FOR PATIENTS WITH DEGENERATIVE DISEASE

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ABSTRACT

Background: Lifestyle and dietary pattern of society in East Nusa Tenggara (NTT) has experienced nutritional epidemiological transition that invoke unhealthy diet, which eventually increases the risk of degenerative diseases. NTT has some local food biodiversity, but it has not been well utilized by society. The purpose of this study was to combine bose grinded corn, brown rice, and lontar natural sugar as an alternative food companion for patients with degenerative disease.

Subjects and Method: This was a randomized control trial (RCT) conducted at Nutrition Laboratory, School of Health Sciences, Ministry of Health, Kupang, NTT. The study subjects were human and mice. The mice study subjects were randomized into two groups: the experimental group and control group. The independent variables was combination of grinded corn, brown rice, and lontar natural sugar. The dependent variables were macronutrient content, blood sugar level, high density lipoprotein (HDL), low density lipoprotein (LDL), triglyceride level, and product acceptance. Protein content was measured by semi-micro Kjeldahl. Fat was measured by soxhlet extraction method. Carbohydrate was measured by difference and amount of energy. The panelist acceptance rate was assessed using hedonic scale test. Blood sugar, cholesterol, and serum triglyceride level were measured by cobasmira tool. Difference in means between two groups were tested by t-test.

Results: The combination of bose grinded corn, brown rice flour, and lontar natural sugar in lieu of sugar increased macronutrient content of the P11-P33 biscuit formula with an average protein (10.15% to 13.07%), fat (14.42% to 16.78%), and carbohydrate (70.15% to 76.72%). This indicated that the biscuit formula met the SNI: 01-2973-1992 requirement. Hedonic scale test showed that the taste of the tested food was acceptable. The combination improved macronutrient content, lowered blood sugar level, increased HDL level, and lowered triglyceride level, and they were statistically significant.

Conclusion: The combination of bose grinded corn flour, brown rice flour, and lontar mnatural sugar can improve macronutrient content, lower blood sugar level, increase HDL level, and lower triglyceride level in animal blood.

Keywords: bose grinded corn, brown rice, lontar natural sugar

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FACTORS AFFECTING VEGF EXPRESSION IN ENDOMETRIOSIS PATIENTS

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ABSTRACT

Background: Patients with endometriosis have abnormal endometrial receptivity that causes embryonic implantation failure. Some factors play role in endometrial receptivity, one of which is angiogenesis factor. VEGF is an angiogenesis factor that plays an important role in human body as well as in pathological condition of endometriosis. The purpose of this study was to examine the effect of clinical and epidemiological factors on VEGF expression with endometrial receptivity in endometriosis patients.
Subjects and Method: This was a cross sectional study. This study was conducted at Sekar Clinics, Dr. Moewardi Surakarta, and Islamic Hospital, Klaten, Central Java, from January to November 2014. A sample of 60 women undergoing sterilization consisting of 30 patients with infertile endometriosis and 30 patients with no endometriosis who underwent laparoscopy or laparotomy, were selected for this study. The dependent variable was VEGF expression. The independent variables were menstrual disturbance, dysmenorrhea, and illness history. VEGF expression was measured by immunohistochemical (IHC) examination in the secretion phase as endometrial receptive marker. Hysterolaparoscopy was performed in the secretion phase, i.e. the 19th day to the 24th day of the menstrual cycle. Patients with endometriosis underwent biopsy of endometrial tissue during hysterolaparoscopy for IHC examination at Pathology Anatomy Laboratory, Dr. Sardjito Hospital. The data were analyzed by logistic regression.
Results: Menstrual disturbance (OR = 0.18; p = 0.071), dysmenorrhea (OR = 0.22; p = 0.024), and illness history (OR = 0.70; p = 0.685) decreased VEGF expression.
Conclusion: Menstrual disturbance, dysmenorrhea, and illness history, decrease VEGF expression.

Keywords: VEGF, clinical factor, epidemiological factor, endometriosis

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ACCEPTABILITY AND LEVEL OF KNOWLEDGE OF HPV VACCINATION IN WOMEN AT SURAKARTA

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ABSTRACT

Background: The main cause of cervical cancer is infection of Human Papilloma Virus (HPV). Every year there are 20,928 new cases of cervical cancer in Indonesia, with mortality of 9,498 patients. HPV vaccine has been recommended by the Indonesian Pediatric Society (IDAI) since the age of 10. The purpose of this study was to examine the level of knowledge and acceptability of HPV vaccination in women in Surakarta.
Subjects and Method: This was a cross-sectional study conducted in Surakarta in July 2017. A sample of 96 women aged 12-50 years were selected for this study by consecutive sampling. The dependent variables were acceptability and knowledge HPV vaccination. The data were collected by questionnaire.
Results: 43.75% of women had a good knowledge of HPV vaccination and 52.2% were willing to accept HPV vaccination.
Conclusion: Proportions of female adolescents in Surakarta who have good knowledge and willingness to accept HPV vaccination are fair.

Keywords: acceptability, HPV vaccination, knowledge, HPV infection, cervical cancer, human papilomavirus.

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ACCEPTABILITY OF HPV VACCINATION IN FEMALE ADOLESCENTS IN SURAKARTA

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ABSTRACT

Background: Cervical cancer is one of the deadliest cancers in Indonesia. It is important to give girls HPV vaccine at young age to prevent cervical cancer. The aim of this study was to evaluate the acceptability of HPV vaccination in female adolescents in Surakarta.
Subjects and Method: This was a descriptive cross-sectional study conducted in Surakarta, in July 2017. A sample of 92 junior high school female students were enrolled in this study. The dependent variable was acceptability of HPV vaccination. The data were collected by questionnaire. Percentage was used as descriptive summary.
Results: Among 92 female adolescents participated in this study, 47.8% accepted, 6.5% refused, and 45.6% did not decide HPV vaccination. Lack understanding of cervical cancer and HPV infection was the main reason for rejection of vaccination.
Conclusion: Acceptability of HPV vaccination is fair among young female adolescents in Surakarta.

Keywords: human papillomavirus, adolescents, acceptability HPV vaccine

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Best Western Premier Hotel, Solo, Indonesia
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Date : Thursday, September 7, 2017
Room : Oral Presentation

NO.	TIME	EPIDEMIOLOGY AND PUBLIC HEALTH (1)	HEALTH PROMOTION AND BEHAVIOR (2)	MATERNAL AND CHILD HEALTH (3)	HEALTH POLICY AND MANAGEMENT (4)	MEDICINE (5)
1	07.30-07.40	**Name:** Gunawan Cahyo Utomo **Title:** Case Study on Multi-Drug Resistance Tuberculosis in Grobogan, Central Java	**Name:** Ardiansyah Pandayu **Title:** Effect of Personal Factors, Family Support, Pocket Money, and Peer Group, on Smoking Behavior in Adolescents in Surakarta, Central Java	**Name:** Ika Yuli Ayuningrum **Title:** Path Analysis on Gestational Socio-Economic Determinants of Nutritional Status in Children Under Five in Purworejo Regency, Central Java	**Name:** Prima Soultoni A **Title:** The Influence of Personal Factors of The Patient, Doctor, Payment Method, and Type of Class to The Quality and Satisfaction of Inpatient Care Services in Dr. Moewardi Hospital, Surakarta	**Name:** Hosea Puspitasari **Title:** The Roles of Medical Doctor and Family on Patient Health Behavior in Controlling HbA1c Level among Patients with Type 2 Diabetes Mellitus at Dr. Moewardi Hospital
2	07.40-07.50	**Name:** Agustina Dwi U **Title:** The Effect of Dietary Intake and Social Economic Factors on The Risk of Stunting in Primary School Children in Surakarta, Central Java	**Name:** Maria Paula Marla Nahak **Title:** Health Belief Model on Psychosocial Factor that Influence HIV/AIDS Prevention Behavior on Lesbian Community in Surakarta	**Name:** Silfia Angela N Halu **Title**: Effect of Prematurity, birthweight, Maternal Stress, Socio-Economic Status, and Mother-Child Intimacy on The Development of Preschool Children in Surakarta	**Name:** Farahdila M **Title:** The Asssociations Between Accreditation Status, Patient Socio-Economic Factors, Insurance Type, Patient Perceived Quality of Service, and Satisfaction at Community Health Center	**Name:** Iin Kusumawardana **Title:** Relationship Between Knowledge and Family Support Regarding Hypertension with Blood Pressure Control in Elders
3	07.50-08.00	**Name:** Hidayah Nur F **Title:** Effect of Age and Socio Economic Status on the Quality of Life of Patients with Cervical Cancer Undertaking Chemotherapy at Dr. Moewardi Hospital Surakarta	**Name:** Santy Irene Putri **Title:**PRECEDE-PROCEED Theory Regarding Socio-Cultural Aspects That Influence The Treatment of Healthy Reproduction Organs among Senior High School Female Students in Surakarta	**Name:** Masturoh **Title:** Path Analysis Risk Factors that Influence Maternal Mortality in District of Brebes	**Name:** Kukuh Ardian **Title:** Social Economic Equity in the Utilization of Hemodialysis among Patients with Chronic Renal Failure Under National Health Insurance Plan at Dr. Moewardi Hospital, Surakarta	**Name:** Ana Sundari **Title:**The Influencial Factors on Counselling Effectiveness Using Decision-Making Tools in Selecting Long-Term Contraceptive Methods in Kendal District

4	08.00-08.10	**Name:** Mulyanti **Title:** Effect of Locus of Control, Self-Efficacy, and Personality Type on The Quality of Life among Caregivers of Schizophrenia Patient in Godean Sub-District, Yogyakarta	**Name:** Kingkin Adita **Title:** Path Analysis on The Factors Affecting People's Behavior in HIV/AIDS Countermeasure on People Living with HIV/AIDS (PLWHA) in Solo Plus Peer Support Group, Surakarta	**Name:** Mirzawati Latifah **Title:** Effect of Soft Drink, Electronic Media Exposure, Family Income, Pocket Money, and Nutritional Status, on Age at Menarche among Adolescents in Surakarta	**Name:** Ratna Dewi P **Title:** Effect of Socio-Demographic Factor and Democratic Leadership on Village Midwife Performance in IUD Contraceptive Service in Jombang District, East Java	**Name:** Isfaizah **Title:** Path Analysis on The Effects of Bio-Psychosocial Factors and Calorie Intake in Blood Glucose Control in Patients with Type 2 Diabetes Mellitus
5	08.10-08.20	**Name:** Wiwen Indita **Title:** Effect of Biopsychosocial Factors and Environmental Sanitation on Nutritional Status of Children Under Five Years Old in Nganjuk District	**Name:** Hervindita Dinda S **Title:** Biopshychosocial and Economic Determinants of Personal Hygiene in The Prevention of Diarrheal Diseases in Sragen District, Central Java	**Name:** Juhrotun Nisa **Title:** The Effect of Socio-Demographic and Obstetric Factors on Early Initiation of Breastfeeding in Tegal District, Central Java	**Name:** Heni Hastuti **Title:** Effect of Doctor's Personality, Job Characteristic, Payment Method, Facility, on Performance and Quality of Doctor Service	**Name:** Dewy Indah L **Title:** Path Analysis on the Determinants of Neonatal Asphyxia at Dr. Saiful Anwar Hospital, Malang
6	08.20-08.30	**Name:** Ainun Hanifa **Title:** Effect of Socio-Demographic Factors on The Consistency of Condom Use among Female Sex Workers in Tulungagung District, East Java	**Name:** Emita Dewi LAW **Title:** Effects of Fruit and Vegetable Consumption, a Socio-Economic Factor of Adolescent Obesity in Surakarta City	**Name:** Zeny Fatmawati **Title:** The Effect of Combined Oral Contraceptives on Sexual Function among Women of Reproductive Age in Jombang District, East Java	**Name:** Ratih Novitasari **Title:** Qualitative Study on The Implementation of Public Health Nursing: Objective, Resources, and Work Procedure on Home Care Patients in Surakarta	**Name:** Leo Chandra WP **Title:** Association Between Hemodialysis Adequacy, Family Support, and Quality of Life in Chronic Renal Failure Patients
7	08.40-08.50	**Name:** Elisabeth Ria W **Title:** Factors affecting The Success of Multi Drug Resistance (MDR-TB) Tuberculosis Treatment in Residential Surakarta.	**Name:** Rina Widiyawati **Title:** The Influence of Personal Factor, Parental Support, and Perceived Value of Children on Early Marriage in Trowulan Subdistrict Mojokerto Regency	**Name:** Estin Gita M **Title:** Effect of Contraceptive Use, Parity, and Social Economic Factors on Age at Menopause at Bendo Community Health Center, Kediri, East Java	**Name:** Afif Ghufroni **Title:** Effects of Patient and Physioterapist Characteristics on Perceived Quality of Physiotherapy Care at Dr. Moewardi Hospital, Surakarta	**Name:** Frieska Dyanneza **Title:** The Effectiveness of Chronic Disease Management Program in Blood Pressure Control among Hypertensive Patients
8	08.50-09.00	**Name:** Kadarwati **Title:** The Influence of Family Support, Social Capital, Self Efficacy, Education, Employment, Income, and Residential Status on the Quality of Life among the Elderly in Salatiga, Central Java	**Name:** Fransisca Novalia **Title:** Biopsychosocial and Economic Determinants of Condom Use among Gay in Tulungagung District, East Java	**Name:** Nunik Ike Yunia S **Title:** Effect of Menopause Duration and Biopsychosocial Factors on Quality of Life of Women in Kediri District, East Java	**Name:** Indriyati Oktaviano **Title:** Comparison Between Hospital Inpatient Cost and INA-CBGS Tariff of Inpatient Care in The National Health Insurance Scheme in Solo, Boyolali and Karanganyar Districts, Central Java	**Name:** Risna Widowati **Title:** Effectiveness of Acupuncture and Infrared Therapies for Reducing Musculoskeletal Pain in The Elderly

	09.00-09.30	Coffee Break				
9	09.30-09.40	**Name:** Rosi Rizqi N **Title:** Health Belief Model on the Factors Associated with the Use of HPV Vaccine for The Prevention of Cervical Cancer among Women in Kediri, East Java	**Name:** Wida Rahma A **Title:** Biopsychosocial Determinants of Pregnant Women's Behavior in Conducting Human Immunodeficiency Virus/ Acquired	**Name:** Ika Indarwati **Title:** Analysis of Factors Influencing Female Infertility	**Name:** Anak Agung Alit Kirti Estuti Narendra Putri **Title:** The Role of Non-Governmental Organization In Sanitation Village Program in Semanggi Village, Surakarta	**Name:** Frans Wantania **Title:** Associations Between Albumin Level, Length of Stay, and Mortality, in Elderly Patients with Heart Failure
10	09.40-09.50	**Name:** Sobwa Swastika **Title:** Biopsychosocial Determinants of Quality of Life in the Elderly at Tresna Werdha Social Nursing Home, Yogyakarta	**Name:** Yeni Wardhani **Title:** Effect of Sexual Knowledge and Attitude, Exposure to Electronic Media Pornography, Peer Group, and Family Intimacy, on Sexual Behaviors among Adolescents in Surakarta	**Name:** Lutfiana Puspita S **Title:** Optimizing the Combination of Oxytocin Massage and Hypnobreastfeeding for Breast Milk Production among Post-Partum Mothers	**Name:** Yeni Tri Utami **Title:** Patient Characteristics, Financing Type, Accreditation Status, and Quality of Health Services at Community Health Center, Surakarta	**Name:** Ninik Nurhidayah **Title:** The Relative Effect of Low Impact Aerobic on the Risk of Falling in the Elderly as Compared to Traditional Gym
11	09.50-10.00	**Name:** Ike Nurrochmawa **Title:** Biological, Physical, Social, and Environmental Factors Associated with Dengue Hemorrhagic Fever in Nganjuk, East Java	**Name:** Danty Indra P **Title:** The Representation of Social, Economic, Psychological, and Reproductive Health Condition of The Commercial Sex Workers Post-Closing of The Dolly Complex in Surabaya	**Name:** Anggityas A **Title:** Factors Associated with Exclusive Breastfeeding: Application of PRECEDE-PROCEED Model and Theory of Planned Behavior	**Name:** Maria Yeny E **Title:** Implementation of The Referral System Policy in The National Health Insurance Scheme at Community Health Centers, Ngawi District, East Java	**Name:** Ribka L Wowor **Title:** Risk Factors of Left Ventricular Hypertrophy in Male Students, in Manado, North Sulawesi
12	10.00-10.10	**Name:** Nur Jayanti **Title:** Effects of Predisposing, Enabling, and Reinforcing Factors on Completeness of Child Immunization in Pamekasan, Madura	**Name:** Martini Shoim W **Title:** The Influence of Personal Factor, Husband's Support, Health Workers and Peers Toward The Use of IVA Screening among Women of Reproductive Age in the Regency of Karanganyar	**Name:** Inggar Ratna K **Title:** Path Analysis on The Effect of Birthweight, Maternal Education, Stimulation, Exclusive Breastfeeding, and Nutritional Status on Motoric Development in Children Aged 6-24 Months in Banyumas District, Central Java	**Name:** Muhammad Haris **Title:** Analysis Factors of Quality Management at Samuel J. Moeda Naval Hospital, Kupang	**Name:** Risda Sari **Title:** Association Between Energy and Protein Intake, Nutritional Status, Serum Albumin and Quality of Life in Patients with Chronic Renal Failure

13	10.10-10.20	**Name:** Yani Ikawati **Title:** Biopsychosocial Factors Associated With Mental Retardation in Children Aged 6-17 Years in Tulungagung District, East Java	**Name:** Ira Martin P **Title:** PRECEDE-PROCEED Model: Predisposing, Reinforcing, and Enabling Factors Affecting The Selection of Birth Attendant in Bondowoso District	**Name:** Ratna Diana F **Title:** Analysis of Maternal Mortality Determinants in Bondowoso District, East Java	**Name:** Arief Suryono **Title:** Monitoring and Evaluation of The National Health Insurance Participation in Surakarta, Central Java	**Name:** Surya Darmawan **Title:** Association Between Knowledge, Attitude, and Adherence to Apply Correct Drug Injection
14	10.20-10.30	**Name:** Puspitasari **Title:** Effects of Education, Nutrition Status, Treatment Compliance, Family Income, and Family Support, on The Cure of Tuberculosis in Mojokerto, East Java	**Name:** Rumeyda Chitra Puspita **Title**: Health Belief Model for The Analysis of Factors Affecting Hypertension Preventive Behavior among Adolescents in Surakarta	**Name:** Umianita Risca Wulandari **Title:** Analysis of Life-Course Factors Influencing Growth and Development in Children Under 3 Years Old of Early Marriage Women in Kediri	**Name:** Purwati **Title:** Context, Input, Process, Product Analysis in The Implementation of Iron Supplementation Program in Banyumas, Central Java	**Name:** Sutrisni **Title:** Effect of Seven Jump Learning Method on The Competence to Use Partograph
15	10.30-10.40	**Name:** Th. Catur Wulan Setyaningrum **Title:** Biopsychosocial Factors Associated With Child Growth At Ngembal Kulon Community Health Center, Kudus	**Name:** Shinta Nasir **Title:** Path Analysis on The Association Between Predisposing, Enabling, and Reinforcing Factors, and House Sanitation in Bengkulu, Sumatera	**Name:** Ratna Puspitasari **Title:** Risk Factors of Postpartum Hemorrhage in Bondowoso District, East Java	**Name:** Frans Salesman **Title:** Roadmap of Health Development in West Manggarai District, East Nusa Tenggara 2016-2021	**Name:** Miftakhul Mualimah **Title:** Effect of Seven Jump Learning Method on The Competence to Use Partograph
16	10.40-10.50	**Name:** Budi Laksana **Title:** Knowledge, Attitude, Sexual Behavior, Family Support, and Their Associations with HIV/ AIDS Status in Housewives	**Name:** R. Asto Soesyasmoro **Title:** Effect of Knowledge, Peer Group, Family, Cigarette Price, Stipend, Access to Cigarette, and Attitude, on Smoking Behavior	**Name:** Rizka Agnes K **Title:** The Relationship Between Parental Socio-Economic Status, Birthweight, and Development in Children Aged 1-5 Years in Surakarta	**MATERNAL AND CHILD HEALTH** **Name:** Angelina Da Costa **Title:** Husbands' Role To Support for Wives with Pregnancy Anemia at Di Centro De Saude Comoro Municipio Dili, Timor Leste	**Name:** Dina Dewi Anggraini **Title:** Effect of Dragon Fruit (Hylocereus) Consumption on Cholesterol Level in Women of Childbearing Age, in Kediri
17	10.50-11.00	**Name:** Widya Lusi A **Title:** Safe Sexual Behaviors for Early Detection and Prevention of HIV/ AIDS Transmission among Queers in Tulungagung, East Java, Using Theory of Planned Behavior	**Name:** Desi Ekawati **Title:** Biopsychosocial and Institutional Factors Associated with Exclusive Breast feeding among Working Mothers in Klaten, Central Java	**Name:** Ahmitta Laila N **Title:** Path Analysis on The Effect of Breastfeeding Complementary Food Pattern, Maternal Schooling, Family Income, and Birthweight, on Nutritional Status in Children Underfive	**Name:** Eny Qurniyawati **Title:** Factors Associated with Development Disorder in Children 4-5 Years of Age	**Name:** Sarce Makaba **Title:** Antioxydant Activity of Ant Nest Plants (Hydnophytum Formicarum and Hydnophytum Papuanum) in Papua

18	11.00-11.10	**Name:** Nunik Maya H **Title:** Sanitation-Related Behavior,Container Index, and Their Associations with Dengue Hemorrhagic Fever Incidence in Karanganyar, Central Java	**Name:** Linda Harumi **Title:** Effectiveness of Practical Integrative Module in Empowering Family Empowering Family of Children with Cerebral Palsy	**Name:** Dewi Tirtawati **Title:** The Relationship Between Child Nurturing Pattern, Family Support, and Language Competence in Children Aged 5-6 Years with Auditory Disorder	**Name:** Intje Picauly **Title:** Associations Between Parental Socio-Economic Status and Quality of Breakfast among Primary School Children in Kupang	**Name:** Edri Indah Yuliza Nur **Title:** Validity of Nutritional Screening Tool for Dialysis Patients
19	11.10-11.20	**Name:** Anggia Rahmah N **Title:** Social Learning Theory on Factors Associated With Dental Caries Among Mentally Disabled School Children In Surakarta, Central Java	**Name:** Windiarti Dwi P **Title:** Association Between Cigarette Advertisement, Peer Group, Parental Education, Family Income, and Pocket Money with Smoking Behavior among Adolescents In Karanganyar District, Central Java	**Name:** Yeni Anggraini **Title:** Effect of Birthweight, Illness History, and Dietary Pattern, on The Incidence of Anemia in Children Under-Five at Tasikmadu Health Center, Karanganyar, Central Java	**Name:** Ninik Wahyuni **Title:** Associations Between Parity, Nutrition Status, Level of Stress, and Delayed Menopause in Tangerang, West Java	**Name:** Pius Weraman **Title:** Holistic Care For Leprosy Patients in Lembata District, East Nusa Tenggara
20	11.20-11.30	**Name:** Prof. Dr. Waqar Al-Kubais **Title:** Maternal Hepatitis C (HCV) Infection and Anti-D Immunoglobulin Therapy: Study Testing Antibodies, RNA And Genotype of HCV in Baghdad	**Name:** Muhammad Vidi P **Title:** Effects of Predisposing, Enabling, and Reinforcing Factors on The Uptake of Voluntary Counselling and Testing among Female Sex Workers in Grobogan, Central Java	**Name:** Rahma Fauziyah **Title:** Influence of Psycho-Socio-Economic Factors, Parenting Style, and Sibling Rivalry, on Mental and Emotional Development of Preschool Children in Sidoarjo District	**Name:** Nining Lestari **Title:** Role of Biopsychosocial Factors on The Risk of Pneumonia in Children Under-Five Years Old at Dr. Moewardi Hospital, Surakarta	**Name:** Dewi Mariyam Wijaya **Title:** The Effect of Food Temperature and Waiting Time on Dietary Protein Content in Filtered Food at Hospital
21	11.30-11.40	**Name:** Rosyidah Alfitri **Title:** Analysis of Inputs in The Sexually Transmitted Infection Screening with Voluntary Counselling and Testing Program for Female Prisoners at Class II A Jail, in Malang Students in Kudus	**Name:** Katmini **Title:** Health Belief Model and PRECEDE-PROCEED on The Use of Antenatal Care and The Risk of Preeclampsia in Kediri, East Java	**Name:** Risye Endri Purwiyanti **Title:** Factors Affecting the Occurrence of Mental Disability in Ponorogo District, East Java	**Name:** Frienty Sherlla Mareta Lubis **Title:** Associations Between Exclusive Breastfeeding, Diarrhea, and Risk of Stunting among Children with Low Birthweight	**HEALTH PROMOTION AND BEHAVIOR** **Name:** Nugroho Priyo Handoko **Title:** Association Between Knowledge, Attitude, Norm, and Free Sex Behavior among University Students in Sragen, Central Java

22	11.40-11.50	**Name:** Rozita Hod **Title:** A Multisectoral Approach in Dengue Management in Seremban Malaysia: An Ecobiosocial Perspective	**Name:** Putu Erma P **Title:** The Effects of Information,Knowledge,and Attitudes About Reproductive Health on Sexual Behavior among Adolescents in Denpasar, Bali	**Name:** Latifah Safriana **Title:** Biopsychosocial Factors, Life Course Perspective, and Their Influences on Language Development in Children	**Name:** Sri Mulyani **Title:** Factors Associated wtih Motivation of Exclussive Breastfeeding	**Name:** Riska Ratnawati **Title:** Factors Influenceing The Risk of HIV/AIDS Transmission in Lesbian, Gay, Bisexual, and Transgender Group in Madiun
23	11.50-12.00	**Name:** Sekplin AS Sekeon **Title:** Ageing and Weakening Social Cohesion Among Stroke Patients in Manado	**Name:** Sitti Hasnah Ema Abon **Title:** Factors Associated with Use of Voluntary Counseling Testing Service among Lesbian, Gay, Bisexual, Transgender Groups in Kupang	**Name**: Ayunda Yonik Nuralita **Title:** Factors Affecting Infant Formula Feeding in Infants Aged 0-6 Months in Sukoharjo, Central Java	**Name:** Erike Yunicha V **Title:** Effect of Ambon Banana (Musa Acuminata Colla) on Emesis Gravidarum	**Name:** Linda Presti F **Title:** Perception and Determinants of Vasectomy Acceptance among Couples of Childbearing Age in Mojokerto, East Java
24	12.00-12.10	**Name:** Tri Yuniarti **Title:** The Impact of Cempo Final Waste Disposal on Skin Disease in Mojosongo Community, Surakarta	**Name:** Isna Rahmawati Retnaningsih **Title:** Case Study on The Biopsychosocial Impacts and Coping Behaviors among Victims of Female Sexual Violence in Sukoharjo, Central Java	**Name:** Rika Nurmayanti **Title:** Effects of Maternal Nutrition Status, Maternal Education,Maternal Stress, and Family Income on Birthweight and Body Length at Birth in Klaten, Central Java	**Name:** Dewi Kartika Sari **Title:** Effect of Peanut Extract Consumption on The Fluency of Breastmilk Production among Lactating Women in Kediri	**Name:** Lindha Sri Kusumawati **Title:** Association Between Parenting Style and Homosexual Orientation in Adolescents, Kediri, East Java
25	12.10-12.20	**Name:** Seok Mui Wang **Title:** Sociodemographic Characteristics and Their Associations with Knowledge, Attitude, and Practice on Leprosy	**Name:** Liliana Dwi Pranita **Title:** Health Belief Model on Sexual Behavior Issues among Prisoners at Prison in Pekalongan, Central Java	**Name:** Intan Noor K **Title:** Health Belief Model and Labelling Theory in The Analysis of Preventive Behaviors to Address Biopsychosocial Impacts of Sexual Violence among Street Children in Yogyakarta	**Name:** Nara Lintan Mega Puspita **Title:** Association Between Ovarial Cyst and Infertility in Women of Child bearing Age	**Name:** Nila Widya K **Title:** Psychological-Biological Impacts of Sexual Harassment and Approach to Cope with The Trauma in Female Adolescent Victims in Surakarta
26	12.20-12.30	**Name:** Anik Lestari **Title:** Factors Associated with The Quality of Life among The Elderly	**Name:** Sayida Royatun Niswah **Title:** Factors Associated with Overweight and Obesity in Adolescents in Kartasura, Central Java	**Name:** Dhewi Nurahmawati **Title:** Effects of Maternal Education, Psychosocial Stress, Nutritional Status at Pregnancy, and Family	**Name:** Agung Dirgantara Namangboling **Title:** Association Between Parental Income at Pregnancy, Parenting Time, and Nutritional Status in Child-	**Name:** Syukma Rhamadani Faizal Nur **Title:** Theory of Planned Behavior on The Psycho-Social Determinants of Drug Use among Adoles-

				Income, on Birthweight in Nganjuk, East Java	ren Aged 7-12 Months in Kupang, East Nusa Tenggara	cents in Samarinda, East Kalimantan
	12.30-13.30	**Lunch**				
27	13.30-13.40	**Name:** Triagung Yuliyana **Title:** Associations Between Nutrition Attitude and Blood Pressure among The Elderly with Hypertension in Klaten, Central Java	**Name:** Istri Yuliani **Title:** Cadre Empowerment Model for Early Detection and Intervention of Pregnancy Risk in Sleman District, Yogyakarta	**Name:** Anggie Pradana Putri **Title:** Dancing in The Rain: Life Experience of Pregnant Women With HIV Infection	**Name:** Sri Setiyo Ningrum **Title:** Employment Status, Family Income, Contraceptive Availability, and Their Effects on The Use of Long Term Contraceptives in Sukoharjo, Central Java	**Name:** Dewi Nofa W **Title:** Factors Associated with Cadre Activities in Jember, East Java
28	13.40-13.50	**Name:** Putri Winda Lestari **Title:** Association Between Knowledge, Attitude, Behavior, About Home Electrical Safety, and Fire Incident in East Jakarta	**Name:** Nissa Kusariana **Title:** Self-Efficacy in Positive Sexual Behavior among Students Participating in The Center For Information and Counseling of Reproductive Health in Madiun	**Name:** Reni Purbanova **Title:** Social Development of Children Under-Five as The Impact of Extramarital Pregnancy	**EPIDEMIOLOGY AND PUBLIC HEALTH** **Name:** Hasmi **Title:** Lead Poisoning in Gulf of Youtefa, Jayapura, Papua	**Name:** Grace Kerly Lony Langi **Title:** Factors Influencing The Existence Tinutuan Culinary in Eating Pattern among Families in Manado, North Sulawesi
29	13.50-14.00	**Name:** Cicilia Windiyaningsih **Title:** Determinants of Dengue Hemorrhagic Fever Outbreak in Cipayung, East Jakarta	**Name:** Hariza Adnani **Title:** Theory of Planned Behavior on The Factors Associated with of Clean and Healthy Behavior in Imogiri Market Community	**Name:** Iin Tri Marlinawati **Title:** Effect of Play Group and Biopsychosocial Factors on The Independence Development of Preschool Children in Surakarta	**Name:** Erwin Kurniasih **Title:** The Role of Drug-Taking Supervisors and Patient Adolescents to Anti Tuberculosis Treatment at Ngawi Health Center, East Java	**Name:** Sri Panuntun **Title:** Community Development for Maternal Health trough Pregnant Mother Class Program in Klaten, Central Java
30	14.00-14.10	**Name:** Paramita Stella **Title:** Association Between Exclusive Breastfeeding and The Risk of Tonsilitis in Children Under Five in Demak, Central Java	**Name:** Endang Sutisna Sulaeman **Title:** Social Marketing on Dengue Hemorrhagic Fever and Tuberculosis Prevention and Control Program in Pati, Central Java	**Name:** Arif Siswanto **Title:** Sibling Role, Parenting Pattern, Maternal Education and Knowledge, and Their Associations with Speech-Language Ability of Children Aged 3-5 Years Old in Karanganyar, Central Java	**Name:** Sutaryono **Title:** Association Between Exposure to Environmental Tobacco Smoke and The Risk of Uncontrolled Asthma in Children	**Name:** Mia Ashari Kurniasari **Title:** Association Between Participation in HIV/ AIDS Peer Group, Stigma, Discrimination, and Quality Life of People Living

31	14.10-14.20	**Name:** Rahmah Purwaningsih **Title:** Maternal Employment Status, Ethnicity, Food Intake, and Their Effects on Teenage Obesity, in Surakarta	**Name:** Eva Agustinawati **Title:** Community Empowerment-Based Integrated Service Post to Establish A Child Friendly Village Through Corporate Social Responsibility in Badran Yogyakarta	**Name:** Maratusholikhah Nurtyas **Title:** Associations Between Knowledge in Antenatal Nutrition, Family Income, Placenta Width, and Fetal Weight, at Mother and Child Hospital Arvita Bunda, Sleman, Yogyakarta	**Name:** NK Wilmayani **Title:** Prevalence Study of Intestinal Worm in Primary School Children in Kuranji Coastal Area, Lombok, West Nusa Tenggara	

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