



**FACTORS OF PREGNANT WOMEN ON ENVIRONMENTAL HEALTH IN
SEMARANG, INDONESIA**

Aryani, Lenci¹, Fitria, Wulandari²

^{1,2}*Environmental Health Study Program, Faculty of Health Sciences Dian Nuswantoro University,
Semarang Indonesia
lenci.aryani@dsn.dinus.ac.id*

ABSTRACT

Pregnancy are still high in developing countries despite national and international efforts to redress this problem. This study was conducted to investigate pregnancy in this area who knowledge and attitudes environmental health the risk factors that affect abau pregnancy outcomes in Semarang. The study with process to observation in area was conducted among 40 pregant women attending antenatal clinics from their all trimesters to term. The subject research is wastewater disposal site, prevention of disease transmission, state of the room with lighting, floor, humidity and the type of water. Results showed that, majority pregnant women (> 75%, n= 40) were aware of the risk factors that could adversely affect the pregnancy outcomes, however they did not know the exact mechanisms by which risk factors acted to the environmental health this effects to woman pregnancy. Occurrence of risk factors among with waswater disposal site all pregnant have the waswater, prevention disease with mosquito net (35%) and the lowest prevention with mosquito racket (2,5%), bedroom lighting is enough (60%), floor with ceramics (65%) soil (2,5%) the lowest in floor, the humidity (62,5%) and the type water with drink water gallon (77,5%) and cooking (50%) and personal hygiene water tank (60%). It was concluded from this study that, although most woman were aware of the pregnancy factors, they lacked the knowledge on how the factors affected the pregnancy outcome. The pregnancy was outcame were good to examination from government. It is recommended that women pregnancy to begin their clinic early prevention of environmental disease.

Keywords: pregnancy, woman, environmental health

INTRODUCTION

Most women and their families, giving birth should be a time for celebration but for more than half a milion women each year or one women every minute pregnancy and childbirth end in death and mourning. The most causes of maternal death worldwide because are the rapid elevation of blood pressure durung prgenancy. The World Health Organization (WHO) estimates that at least 16% of maternal death in developing countries result from these conditions. This approximately 63.000 pregnant women die every year because associated with a higher risk of newborn deaths. Poor people are most affected by environmental conditions such as unsae drinking water, poor air quality and exposure to dangerous¹. Pregnant women the complex nature in asocial structure, structuralist and social stucture, structuralist and structurationist approach and furthermore. The health care service for pregnant women are highly influenced by significant other or head of the household and the capacity of health services. The consequences of such domination have direct negative effects on the poor people in rural areas especially pregnant women. However, the access to modern health facilities is limited to the urban areas even though large proportion of the population resides in rural areas. This describe that the rural areas basically lacks health facilities in terms of infrastructure, modern medical equipment and resources. health seeking behavior opens for the wide spectrum for pluralist health care delivery that means pregnant women will highly seeking assistance from untrained traditional birth attendant. This pluralist health care delivery leads to increase home birth under the assistance of untrained traditional attendant that is dangerous to mother and child especially if there is complication². The complexity of factors that cause undernutrition, especially lack of access to water and sanitation and poor hygiene not single intervention alone will achievee effective or lasting results.



Effectively and sustainably improving nutrition outcomes requires a coordinated, multisectoral approach among the health, water, sanitation and hygiene and agricultural sectors and strong community engagement. The total diseases burden in developing countries may be associated with environmental risk factors. The disease burden in poor countries is about twice that of richer countries form environmental risk is 10 times greater in developing countries. Poor people are most affected by environmental conditions such as unsafe drinking water, poor air quality and exposure to dangerous substances example pesticides, mercury form illegal mining. Research has shown that poor women are aware of how poor environmental conditions affects both their well being and their ability to move out of poverty. Improving environmental conditions is a luxury that requires a certain minimal level of economic growth. Environmental conditions wil reduce the incidences of disease, maintain a healthy workforce and allow people to contribute to society, health care and treating the symptoms rather than the cause³.

METHODS

Semarang city is the capital of Central Java Province is one of the biggest cities in Indonesia. The large number of population proves the increasing number of pregnant women in the city. this research is located in three health centres with location criteria, many pregnant women with slum environmental factors and the puskesmas are in the middle of the city. The municipality has three hospitals goverment, twenty seven health centres. The most slum among the only three health centres and the tendency of pregnant women to be less responsive to environmental health. A longitudinal study involving pregnant women was conducted over a period of of six months from december 2017 through Mei 2018. Inclusion criteria: all pregnant women attending antenatal in three health centres that has been determined in Semarang city.Exclusion criteria: all pregnant women who had chronic illness such as TB, HIV/AIDS, circle cell disease, diabetes, hypertension and diabetes were excluded from the study. Using random sampling procedure, three health centres (Bandarharjo, Genuk and Tambak Aji health centres) were randomly selected out twenty seven health centres in the muicipality with all the criteria include. Pregnant women were thereafter selected all the pregnant women from the identified health facilities until the desired number of subjects was reached. The sample size was estimated based on all the prenant this three area in the health centres. Research design using descriptive observation directly to the respondent's place. Research time in September 2017 to February 2018. The purpose of the study was to see what environmental factors affect pregnant women in terms of environmental health. variables related to environmental health, against disease transmission, equipment for disease prevention, house humidity, house floors, bedroom lighting, type of floor, the humidity, type of water and personal hygiene. 40 pregant women attending antenatal clinics from their all trimesters to term. Research sample is pregnant women every trimester.

RESULTS

Table 1. Prevention Of Disease Transmission

Type of Transmission	No of Respondent	Percent
Lotion	8	20
Mosquito coils	6	15
Mosquito net	14	35
Racket	1	2,5
Mosquito spray	5	12,5
Electric	4	10
Do not use	2	5



Based on the above table it can be concluded that the prevention applied by respondents is the most mosquito net usage by 35% while the lowest usage in the racket is 2.5% because the principle of using racquet is very expensive and tends to not understand how to use it.

Table 2. Observation In The Home About Environmental Health

Place of observation	Response	No.of Respondents	Percent
Lighting in the main bedroom	Bright	13	32,5
	enoug	24	60
	Dark	3	7,5
The main bedroom floor	plester	8	20
	ceramics	26	65
	kayu	5	12,5
	Land	1	2,5

From the table data above can be generated that for the use of the main bedroom lamp can most be continued with enough of 60% and For the most used ceramic tiles on the floor by 65% then the smallest on the ground is 2.5% due to people's thinking the important thing is healthy and the use of the main bedroom is the most in ceramics which is 26% and the least in the small tanag by 2,5%.

Table 3. Water Quality Usage Level

Type	Respons	No.of Respondent	Percent
Drinking water	bottled water	2	5
	water gallon	31	77,5
	water tank	3	7,5
	artesian water	4	10
Cook	water gallon	20	50
	water tank	13	32,5
Personal hygiene	artesian water	7	17,5
	bottled water	2	5
	Water tank	24	60
	Artesia water	12	30
	Air sumur	2	5

Based on the above table for the highest usage with the use of gallon water as large as 77,5% the use of water gallons is very easy and tends to be worth drinking

DISCUSSION

The widespread can be expected to reduce allcause child mortality in malaria endemic areas by about 20%. The immunisation against common childhood diseases and oral rehydration therapy as a revolutionary intervention that has the potential to dramatically improve child health and contribute to overall development. The technology now exists to produce a mosquito net which is treated with insecticide at manufacture and which will retain its effective mosquito repelling properties for at least four years. The need to periodically re-treat conventional nets by dipping them in insecticide is widely agreed to be a major impediment in implementing effective and sustainable programmes. Pregnant women are also an important target group for malaria control interventions. The protective immunity that adults develop in areas of high or moderate transmission is impaired during pregnancy In such areas, pregnant women with symptomatic malaria often have severe anaemia, and low birth weight is a common outcome. In areas of low transmission where adults do not develop protective immunity. Infection in pregnancy is associated with severe disease and high maternal and perinatal mortality. The poor are often at



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greater risk of infection and of severe disease, because of lack of information about what causes malaria and about how to prevent and treat it, and because measures to prevent and treat malaria are not financially or physically accessible. In addition, the poor have lower immunity because of disease and poor nutrition, and higher exposure because of inadequate housing and drainage. The nets that people use may be the type they prefer, or the best of the available options, or the only type available. In some settings, lack of choice or dislike of the type of nets available may be one reason why people do not own or use a net⁴. Floor and ground surrounding the house can be a source of contamination by objects in their mouths or directly consuming dirt or soil of areas where young children play and on the hand. Safe disposal of faeces the foundation for reducing pathogens in the environmental and protecting human health with household access to hygienic sanitation facilities. Sanitation option with different health outcomes. As a household moves away from open defecation towards improved sanitation and ultimately safely managed sewerage systems⁵.

Maternal sanitation behaviour during pregnancy for birth outcomes remain unclear. Poor sanitation practise can promote infection and induce stress during pregnancy and may contribute to adverse pregnancy outcomes. We aimed to assess whether poor sanitation practices were associated with increased risk such as preterm birth weight in population-based study in rural India⁵.

The quality of water can have an impact on the pregnant woman. Water quality refers to both its microbiological and chemical. The impact of increasing saline intrusion during the dry season in shallow groundwater aquifers and ponds in coastal areas. Water quality and health mentioned earlier there are a small number of studies on water quality and neonatal survival. Fertilizers are applied early in the growing season and residues may subsequently seep into water through soil run-off, the concentrations of agricultural chemicals in water vary seasonally⁶. Another risk posed by poor sanitation is associated with ectopic pregnancy, anaemia and undernutrition all of which place pregnant women at greater risk of poor maternal health outcomes. Effect of poor sanitation on pregnant maternal health include the increased risk such as delayed relief or reduced water or food intake associated with lack of safe access to facilities. The sanitation were three times more likely to die from maternal causes than those with adequate sanitation access, the systematic review found no experimental studies the observational studies identified show a strong association between water and sanitation⁶. The effect of water, sanitation and hygiene on maternal mortality is greatly under-researched. In research Rolien (2011) through a survey of current literature from the water, sanitation and hygiene as well as the maternal health women pregnant. In Africa the richest 20% of African women are three times more likely to have skilled attendants at birth compared to the poorest quintile⁹.

Access to an improved drinking-water source and an estimated 1.9 billion people rely on drinking water that is faecally contaminated. Improved water sources that are not operated or maintained properly may deliver water that is microbiologically contaminated. In water drinking sometimes microbial recontamination often occurs during collection of water at the source, transport and storage within the home¹⁰. Pregnancy risk factors are all the aspects that endanger the life of the mother and the baby. These factors may include poor nutrition of the woman, child spacing, maternal age (over 35 years). Poor nutritional status during pregnancy has been associated with irreversible damage to the infant brain and central nervous system leading to poor brain development and intelligence. Adverse pregnancy outcomes that were associated with drug use included, poor health status, small babies, miscarriage, preterm delivery, brain damage, stillbirth, deformities of the child, mental retardation and reduced weight.¹¹.

Poor sanitation alongside unsafe drinking water and hygiene are responsible for a considerable proportion of the global burden of disease. Facility that hygienically separates human excreta from human contact, such as a flush toilet, piped sewer system, septic tank, flush/pour flush to pit latrine, ventilated improved pit latrine with slab or composting toilet. The programme



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to improve sanitation example India lead to health gains in children these finding were the low levels of improved sanitation use among the population⁵. About the importance of water, hygiene and sanitation for health in general. It has been estimated that globally about 2 million deaths could be prevented annually if everyone practiced appropriate hygiene and had access to safe, reliable drinking water and sanitation. In global coverage somewhat less than two thirds of improved sanitation at home with basic hygienic latrine or a flush toilet and estimated that more than one third still rely on dirty unsafe toilets or defecate in the open⁶.

CONCLUSIONS

1. Prevention of transmission of the largest disease, namely the use of mosquito nets (35%)
2. Lighting for the master bedroom is quite bright (60%)
3. Use for ceramic floors (65%)
4. Use of water for drinking water in gallon water (77.5)
5. Use of water to cook using 50% gallon water
6. Use of water for the problem of hygiene in municipal water (60%)

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