

ORIGINAL ARTICLE

Health Literacy and Pre-Eclampsia Knowledge of Pregnant Mother in Primary Health Care in Surabaya

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ABSTRACT

Introduction: Health literacy is defined as individual's ability to gather, communicate, process, and understand basic health information and services to make appropriate health decision. Pre-eclampsia is a hypertensive disorder that occur during pregnancy and proteinuria at least 0.3g in 24 hour urine collection. The purpose of this study was to find the connection between health literacy and knowledge of pre-eclampsia in Surabaya.

Methods: A cross sectional study of second and third semester pregnant mother in Mojo and Pucang Sewu primary health care area in Surabaya. The study used modified SAHL-E test and modified questionnaire for knowledge of pre-eclampsia. Data processing used Chi square.

Results: From the total of 79 participant, most attended high school around 47%, primigravida 54%, have occupation of housewife 53%, husband occupation of private employment 87%, majority of participant have good health literacy 67%, and most of the participant have poor knowledge of pre-eclampsia 59%. There was a significant relationship between health literacy and the knowledge of pre-eclampsia ($p=0.029$).

Conclusion: There was a relationship between health literacy of the participants and their knowledge of Pre-eclampsia. Healthcare provider should have better communication and giving information regarding pregnancy or pre-eclampsia and explain it in a way the patient can understand it well depending on their health literacy.

Introduction

Health literacy is defined as the ability of which an individual able to gather, communicate, process, and understand basic health information and services to make appropriate health decision.¹ The importance of health literacy especially in women is to make information and services to woman's health, chronic disease, and reproductive health more available, able to enhance woman's communication about their health decision, and take the appropriate actions to implement the decision they make about their health.²

Health seeking behaviour is a complex process which has multiple factors that can cause different outcomes. One of the theories that explain health seeking behaviour is using the health belief model. This model is made for the purpose of examining patient response to symptoms and compliance to health treatment. Health belief model constructs six main pillars for health behaviour which are: perceived susceptibility, perceived barriers, perceived benefit, self-efficacy, modifying variables and cues to action.³

In 2017, it is estimated that Indonesia have the total of 261 million people with 130 million are females. According to Central Bureau of Statistics Republic of Indonesia, it was estimated around 3.4 million people are still illiterate in Indonesia. The number of mother with high risk in Surabaya during 2015 are around 6,526 and if left untreated, these mothers can have babies with low birth weight, miscarriage and even maternal death. Maternal mortality ratio in Surabaya in 2015 was around 87 per 100,000 living birth.⁴

From the information above there is still in need for research that looked at the connection between health literacy and health seeking behaviour of pre-eclampsia in Surabaya.

Methods

This was an analytic observational with cross sectional design conducted at two primary health centers, Mojo and Pucang Sewu from August to September 2018. Research subject was pregnant mother in their first and second trimester. The population of the research were 79 pregnant women at their



first and second trimester visited Mojo and Pucang Sewu primary health center and the sampling technique used was accidental sampling. The inclusion criteria were mother in their first and second trimester of pregnancy who visited Mojo and Pucang Sewu primary health center and exclusion criteria was pregnant mother who were already at risk to develop pre-eclampsia.

The research used translated Short Assessment of Health Literacy English (SAHL-E) test for measuring the health literacy⁵. SAHL-E test is a short question that can measure the level of health literacy from the scale of 0 to 18 and if the score is lower than 14 then the participant have low health literacy. Pre-eclampsia questionnaires were used for finding the subjects knowledge about pre-eclampsia. Other characteristics such as age, level of education, number of children, and occupation of the participant and their husband are also used for this study. The research used chi-square and spearman's rho for statistical test on SPSS and the data analysis were described with central tendency and dispersions as well as using appropriate table and $p < 0.05$ was considered to be significant⁶. The research had been approved by ethical committee Medical Faculty Airlangga University (239/EC/KEPK/FKUA/2018).

Results

Of the total 79 subjects, most are at the age of 21-25 years old. The majority of participant graduated from high school around 47%. More than half of participant are primigravida 54%. Majority occupation for the participant are housewife 53% while their husband occupation mostly are private employment 87%. Majority of participant have good health literacy 67% but majority of participants poor knowledge of pre-eclampsia 59%.

Table.1 Age, Education, Number of children, Occupation, Husband occupation, Health literacy test, and Knowledge of pre-eclampsia subject characteristics

Variable	n = 79	%
Age		
21-25	31	39
26-30	23	29
Education		
High school	37	47
Bachelor	30	38
Number of Children		
0	43	54
1	30	38
Mother's Occupation		
Housewife	42	53
Father's Occupation		
Private employment	69	87
Health Literacy test		
Good health literacy	53	67
Poor health literacy	26	33
Knowledge of Pre-eclampsia		
Good knowledge	32	41
Poor knowledge	47	59

After determining participant's health literacy, knowledge of pre-eclampsia and health seeking behavior, then it is time to find the association. From table 2, it show that there was a significant relationship between health literacy and knowledge of pre-eclampsia. On the other hand, there was no significant correlation ($p=0.276$) between health literacy and health seeking behavior.

Table 2. Correlation between health literacy and knowledge of pre-eclampsia.

	Knowledge of Pre-Eclampsia		p value*
	Poor	Good	
Poor Health Literacy	15 (19 %)	11 (14%)	0.029
Good Health Literacy	17 (22%)	36 (46%)	

*Chi-square test, $p < 0.05$ considered as significant

Table 3. Correlation between health literacy and health seeking behaviour

	p value*
Health Literacy and Health Seeking Behaviour	0.276

* Spearman's rho test, $p < 0.05$ considered as significant

Discussion

Based on this study, it shows that the better the health literacy of the mother, then she will have better knowledge of pre-eclampsia and vice versa. A study showed that women with low health literacy can affect their ability to seek healthcare, and adherence to care plans.⁷ While another study showed that women who scored better at question regarding pre-eclampsia are those who have high literacy, multiparty and exposed to information regarding of pre-eclampsia from clinics.⁸ From the two study above, it indicates that women or even health care worker who do not read or informed regarding pre-eclampsia could potentially receive late treatment and subsequently getting complication of pre-eclampsia. Also it can display a theory that the better the literacy of a woman, the more chances she could know information regarding woman's health especially on this case about pre-eclampsia. It is crucial for health care provider to note that it will be easier to informed women with high literacy about health related information rather having low literacy. This also mean that extra care must be used when dealing with women who have lo literacy by using colloquial spoken language, and using a piece of information that easily digest and take home with.

This study shows most of the subjects were at the age of 21-25 years old. Recent study showed that respondent from old age group have more chance to be having low health literacy when compared to younger age group such as those from the age 18 until 34 years old.⁹ The research may not looked into connection between age and health literacy. However, it is important for note that despite low score of knowledge regarding pre-eclampsia, pregnant women at the age of 21-25 years old still have better opportunity to increase their health literacy which then potentially improve their knowledge of pre-eclampsia.

Majority of subjects were high school graduate. A research found that women who have high education tend

to visit antenatal care more often than woman who have low education.¹⁰ This shows the importance of education to individual's conscience regarding their own health. More than half of the woman (54%) are on their first pregnancy. A study shows that there is no significant correlation between knowledge about health between women who were at their first or second pregnancy.¹¹ Based on the study above means that having more experience in pregnancy from having more children, does not guaranteed increase health literacy of a woman for pregnancy. Only more frequent antenatal visit could potentially increase a pregnant woman health literacy.

More than half of participant were housewives. A study shows that large number of housewife are having low health literacy, but that is as the result from them having low education.¹² However, another study shows that female who had good income and high education level would likely have a good health literacy.¹³ Both study shows that women's health literacy is not directly affected by their occupation, rather to their education level. Being a housewife alone should not be a predictor to a woman's health literacy. Majority of participant's husband are private worker. The husband has the decisive vote on deciding whether his wife could go to get health care due to them being the financial support.¹⁴ Health care workers should note that having the support from husband could help pregnant woman to seek health care more often. In addition, a person perspective, values, beliefs, and behaviours regarding health and illness varied depending on their culture. As the result of that, health literacy may varied depending on the culture as an example in western country such as America, the people need more westernised biomedical perspective to understand health literacy.¹⁵ A mother's health literacy can be affected by the culture and thus requiring medical personnel to understand the local culture and use appropriate mean to make the mothers around that culture to understand about health.¹⁵

A study shows the better health literacy of a mother, then the better knowledge she will have about pre-eclampsia. Community health workers who have no formal medical training failed to refer pregnant woman who have symptoms of pre-eclampsia even though they help women in the community to labour.¹⁶ From the study above, it indicates that women or even health care worker who do not read or informed regarding pre-eclampsia could potentially receive late treatment and subsequently getting complication of pre-eclampsia. Also from other studies above, it can display a theory that the better the literacy of a woman, the more chances she could know information regarding woman's health especially on this case about pre-eclampsia. To improve the mother's health literacy, health care provider could use brochures or pamphlet filled by information during pregnancy and pre-eclampsia.

There were some limitations to this study. First, it was only included two primary health centers used and should include all primary health center that have antenatal care. Second, the translated SAHL-E test had not used before on other study. Third, the questionnaires regarding pre-eclampsia not being used before on other study.

Conclusion

In conclusion, there was a correlation between health literacy of the participants and their knowledge of pre-eclampsia. Recommendations for future research are to increase the number of primary health centre included on the research, if possible the whole primary health care in Surabaya is covered, Improve the questions for testing knowledge of pre-eclampsia, and Include other women who are not pregnant who also visit primary health centre to take part answering questionnaire.

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Conflict of Interest

The author declare there is no conflict of interest

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