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Factors of Need for Antenatal Care and its relation to Mother's Participation in Antenatal Education; Study in Semarang City, Indonesia

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Abstract

The low utilization of antenatal care routinely has an impact on the increasing difficulty of detecting potential risk of pregnancy complications resulting in maternal deaths. Knowledge constraints are the cause of the low utilization of antenatal services. Through the Antenatal Education (AE) class, it is hoped that mother's knowledge and attitudes can be improved. AE class is not effective because of low participation of mothers. The purpose of study was to analyze the relationship need factors for ANC and their participation in AE class. It was a quantitative survey with cross-sectional design. Sample was 140 pregnant women that selected using purposive sampling based on characteristics of PHC.

The study showed no relationship between history of illness and pregnancy, perception of pregnancy, level of pregnancy complaints and perceived level of danger pregnancy for maternal participation in AE class. In a composite analysis it is proven that the need factors of pregnant women for antenatal care is related to the mothers participation in AE class. Mother's perception of pregnancy is a key factor to increasing the taste and value of her needs. Increasing the sense of need can be done through improvement of women's access and roles in the family and community about maternal health services. Continuous efforts need to be made as encouragement as well as support for AE class through structured and integrated socialization to every pregnant woman.

***Keywords*:** *Need factors, Antenatal Education, Antenatal Care, PHC, Semarang.*

Introduction

Routine antenatal care is an effective strategy to detecting high risk of pregnancy.[1] If the risk factors are known early, the prevention and management efforts could more adequate. As in other developing countries, the continuity of antenatal care by mothers cannot be guaranteed. The use of ANC is also not optimal. Some influencing factors include limited access to health facilities, resources, demographic factors, socio-economic conditions, and health related factors,[2,3] especially aspects of availability, accessibility and quality of service.[4]The level of knowledge and attitudes of mothers to care for her pregnancy affects the low utilization of ANC.[5–7]"Supply side factors" have an important influence on ANC attendance, the design of ANC and particularly how to deal with the needs and concerns of mothers.[1] Non-compliance with standard ANC examinations has an impact on the higher risk factors for failure to detect complications which ultimately lead to the increased risk of maternal death.

The lower knowledge and attitudes of mothers have an impact on lower understanding and awareness of utilizing antenatal care according to WHO standards.[7,8]

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Knowledge is a predictor of both attendance at ANC, in addition to socio-economic, parity and age.[8] Education and antenatal care(ANC) is significantly related. It was suggesting that the higher level of education, the likelihood of receiving ANC during pregnancy is higher too, because educated women tend more aware about the importance of ANC during pregnancy.[5] Limited knowledge is an obstacle in increasing utilization of health services, especially in developing countries, including Indonesia.

Antenatal education (AE) class is solution to overcome the constraints of knowledge related to pregnancy and complications risks. The impact orientation to increase maternal compliance in routine antenatal care visits, at least 4 times during the pregnancy period. AE class also has a community empowerment principles because it involves the role and participation of mothers. The success of AE class is determined by how much mothers as participants attend regularly and involved actively in various activities.

Organizing a antenatal education in several countries has proven success meeting the expectations of participants. Most participants in Sweden considered the AE class increase feelings of safety as parents and labor preparation. Antenatal education in Laos improve an average of 10% of knowledge and understanding of basic care for newborns.Study of Nolan et al shows that the existence of antenatal classes is very helpful in increasing self-confidence to become parents, establishing friendships [9] and creating new social networks.[10] Women in Iran have a higher level of happiness and satisfaction in their overall quality of life and health, especially in the postpartum period.[11]

Adopting Andersen's health service utilization model in behavioral changes, the need factor is one of the important factors that influence service utilization, including antenatal care. In some cases, women do not feel the need to seek professional care while pregnant.[5,8] Mothers are reluctant to check their pregnancies because of perception that pregnant is a natural process. Mother often feels her pregnancy status is healthy, does not feel painful complaints and feels unsure about the competence and abilities of midwives.

Method

This is a quantitative survey with cross-sectional design. Research location in Semarang City, Indonesia, the city of second largest maternal mortality in Central Java Province, with 28,758 pregnant women in 2017. The number of AE class held was 271 classes. The proportion of mothers participating in AE Class is very small compared to its population which less of 10%.

Population is all pregnant women in Semarang City. Sample was selected using purposive sampling based on characteristics of PHC, which represented the area, distance variations to the city center and had the most, the least and without cases of maternal deaths in the last three years. PHC of Gayamsari, Purwoyoso and Rowosari were chosen. Total sample 140 mothers with determined accidentally and proportional.

Primary data was collected through interviews with structured questionnaires that have been tested for validity and reliability. Descriptive analysis and statistics using Chi-Square to test the relationship of needs factors and participation of AE class.

Findings: Based on study, the average age of mothers was 28 years old (SD 4.7), and 67.1% were in the best age range for pregnancy, ie 21-30 years old and parity ≤ 2 children are 93.6%. Most mothers have secondary education level (77.9%) and are housewives (73.6%). There are 93.4% of mothers having health insurance, especially government health insurance or BPJS (92.4%). Regarding monthly income, most of them have met the Semarang minimum wage standard of Rp. 2,300,000 per month. If differentiated between groups of AE class and Non AE class, the characteristics relatively similar.

Mothers with high socioeconomic status tend to not following AE class because easily access to health facilities. Another reason be caused of limited time and busy work. Similar to study of Liu et al (2014) that mothers with low socio-economic status are likely take less advantage of antenatal care and better wealth status was associated with increased maternal health services utilization.[12] Study of Kisuule et al (2013) shows that busy working mothers make them late in the first antenatal care visit.[13] Job busyness has an impact on the low attention and intensity of utilization of health services needed, including in AE class.

The results showed only 54.3% of mothers participated in AE class. Generally the participation in AE class is not routine because most of them only take 1-2 activities (standard 4 times per period). The most fun activity is pregnancy exercise. The majority reasoned because they did not know, were busy with domestic

work, the schedule did not fit the working hours, the perception that the pregnancy status was healthy and safe, and no one was delivering them. Socio economic and demographic factors increase maternal participation in utilizing various maternal care programs.[1–5]

All respondents have a history of illness and pregnancy which can affect their pregnancy status. The most cases suffered history of infectious diseasesat about 40.7%, followed by hypertension and a history of congenital defects. As many as 26.4% of mothers had a history of anemia and 15% of mothers had a previous history of labor. Based on its category, there were 52.5% of mothers had a history of disease and history of pregnancy with a heavy category.

In its perception of pregnancy, 62.1% admitted that her current pregnancy status was not good. Mothers with severe complaints about pregnancy also had a greater percentage (61.4%). Although have many complaints, 59.3% of mothers considered their pregnancy be harmless. This is very interesting and becomes a contradiction because even though diagnosed it appears that most mothers have problematic pregnancies, but they tend to perceive the pregnancy to be harmless and safe. The perception aspect is the key to maternal management practices by mothers. Furthermore, based on the composite of need factors variable, it is known that 61.4% of mothers have a high level of need, especially in advanced pregnancy examinations, because statistically mothers have a high risk factor for the occurrence of the danger of pregnancy or complications. Descriptively, about 60% of mothers feel that their pregnancy is dangerous. Mothers who consider their pregnancies harmless and safe tend to not following AE class even though they have severe history of illness and pregnancy. The perception of dangerous level of pregnancy is related to maternal participation in AE class.Similar to Al-Ateeq et al's study that maternal perceptions and beliefs influence antenatal visits in Saudi Arabia.[14]

Most pregnant women, especially in Semarang and generally in Indonesia have values and beliefs that pregnancy is natural event because it is a God blessings. Therefore mothers do not be afraid of facing pregnancy or childbirth. Some people have values that routine ANC is not be needed, because as long as the mother is healthy, her pregnancy is also healthy and safe. However, it is also acknowledged that the fear of childbirth is still felt by some pregnant women so they try seeking antenatal care in hoping that their pregnancy is detected and monitored routinely. According to them, a healthy and safe pregnancy must also be pursued entirely by every pregnant woman.

Compliance with ANC and advice from health professionals can provide security and protection during labor. As many as 50% mothers stated that participation in AE class does not guarantee the safety of their pregnancies. When pregnant women assume there are no definite guarantees regarding the health status and safety of the pregnancy process, they tend to ignore it. It is recognized that women are more likely to use feelings in dealing with every problem. It could be caused by culture, values, habits or parenting patterns that affect a person's personality.

Table 1: Relationship analysis of needs variables and mothers participation in AE class at Semarang City

No.	Variables	Categories	Participation in AE class			Sign.
			No (%)	Yes (%)	Amount (%)	
1	History of illness and pregnancy	Dangerous	53.4	46.6	52.1	0.056
		Secure	37.3	62.7	47.9	
2	Perception of pregnancy	Poor	50.6	49.4	62.1	0.192
		Good	37.7	62.3	37.9	
3	Pregnancy complaints	Many complaints	48.8	51.2	61.4	0.446
		Few complaints	40.7	59.3	38.6	
4	Perceived level of danger pregnancy	Less	50.6	49.4	59.3	0.219
		High	38.6	61.4	40.7	
5	Level of need	Less	33.3	66.7	38.6	**0.031***
		High	53.5	46.5	61.4	

* Significancy at p-value ≤ 0.05

Table 1 showed that more pregnant women of AE class who had a history of dangerous diseases and pregnancies (53.4%), whereas mothers who participated in AE class have a secure history of illness and pregnancy (62.7%). The p value=0.056 which only slightly exceeded of the threshold value for the hypothesis was rejected or accepted. There is no relationship between history of illness and pregnancy with the participation of AE class.Participants of AE class who perceive their pregnancies in good condition have a higher percentage (62.3%), while those who do not participate in AE class perceive pregnancy to be less good (50.6%). There is no correlation between perceptions of pregnancy and AE class participation (p=0.192). Mothers who experienced many complaints turned out to be mothers of AE class. No correlation between pregnancy complaints and participation of AE class with p value=0.446. Through composite analysis for looking at the factor level of maternal needs for antenatal care, it appears that more mothers from the Non AE class group have high level of need for antenatal care. In contrast, in class AE group, mothers actually had a low level of need (66.7% compared to 46.5%). Statistical tests prove significant relationship between the level of antenatal care needs and participation in AE class with p value = 0.031.

Maternal perception has a major contribution to participation of AE class. Perception directs the practice of pregnant women, where women who consider their pregnancy be safe and harmless tend to attend AE class despite having complaints during pregnancy. Conversely, mothers who consider their pregnancies are not good choose not to joint the AE class. This result is contrary to the previous descriptive analysis which illustrates the tendency of mothers who attend AE class have history of illness and pregnancy in bad status. Even though they know and have a history of illness and pregnancy, but when mother considers her pregnancy to be "no problem", she tends to participate the AE class. Even though the mother does not have a history of severe illness and pregnancy, but when considering her condition as "problematic", the mother will not participate in the AE class activities.

The context of understanding social cultural values contributes to practices and activities related to maternal health services. Culture and value are still upheld, which gives rise to unethical, disrespectful feelings and reluctance of mothers to honestly and openly share all her pregnancy problems with others, even though the person is a health worker or even a fellow pregnant woman herself. There is a perception and belief that pregnancy is a natural process. It is natural if mothers have experience and feel certain complaints. They tend to stay at home without seeking treatment because of the assumption that complaints will disappear when gestational age increases.

Conclusion

Needs are psychological aspects that move individuals in various activities. Perception of the level of need is influenced by the power of supporting and motivation. Mother's perception of pregnancy is a key factor to increasing the taste and value of her needs. Although by diagnostic, pregnant women have a history of severe illness and high complaints of pregnancy, but when mothers perceive as "not a problem", they tend to ignore routine ANC examinations. Increasing the sense of need can be done through improvement of women's access and roles in the family and community about maternal health services. How the strategy to encourage mothers raise awareness about the importance of ANC services are essential. Continuous efforts need to be made as encouragement as well as support for AE class through structured and integrated socialization to every pregnant woman.

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