

ORIGINAL RESEARCH

The correlation between knowledge and intention with self-efficacy of pregnant women to attend antenatal care at healthcare

Nina Mardiana *, Grace C. Sipasulta, Meitty Albertina

Health Polytechnic East Kalimantan, Indonesia

Received: September 12, 2016

Accepted: February 22, 2017

Online Published: April 12, 2017

DOI: 10.5430/jnep.v7n5p131

URL: <https://doi.org/10.5430/jnep.v7n5p131>

ABSTRACT

In Indonesia, the utilization of antenatal care at healthcare professionals was only 66%, and this figure dropped during a delivery. As much as 46% of pregnant women who attend antenatal care at healthcare professionals did not carry birth in healthcare facility. This study aims to explain the correlation between knowledge and intention with self-efficacy of pregnant women to get antenatal care. This was a quasi-experimental research with pre and post one group study. The samples included pregnant women in Balikpapan city, who had entered the second trimester of pregnancy. Sampling was carried out using simple random sampling technique by using a random number generator program is research randomizer to determine the group. Total sample was 20 pregnant women. The results showed that: 1) There was a significant correlation between knowledge and self-efficacy ($p = .001$); 2) There was a significant correlation between intentions and self-efficacy ($p = .017$). This study concluded that self-efficacy of pregnant women was high, the majority of pregnant women were not in the age of risk, pregnant women with high and average level of parity had a high knowledge. There were pregnant women who had high knowledge but did not get antenatal care from healthcare professionals. Most pregnant women had intention to attend antenatal care at healthcare professionals, but there were still pregnant women who attended antenatal care less than the prescribed standards that is at least four times during pregnancy.

Key Words: Knowledge, Intention, Self efficacy

1. INTRODUCTION

In Indonesia, maternal health, especially for the pregnant women still needs attention because maternal mortality rate remains high. It is closely related with inadequate coverage and quality of antenatal care. Actually, maternal mortality rate was much decreased until 228/100,000 live births from 359/100,000 live births in 2003. It was seen from the increase of childbirth that provided by healthcare professionals, however that increase still far from The Millennium Development Goals (MDGs) target in 2015 which was 102/100,000 live births.^[1]

The main causes of maternal mortality are hypertension in pregnancy and post partum hemorrhage. These causes can be minimized if the quality of antenatal care is well.^[2] It require enhancement of maternal and child welfare services, both in terms of scope and quality.

Scope and quality of maternal and child healthcare that inequable, which is related to affordability of health service location that is hard to reach, cause the lack of pregnant women access to healthcare facility. The type and quality of services that inadequate may cause the lack of pregnant

*Correspondence: Nina Mardiana; Email: ninadisertasi@gmail.com; Address: Health Polytechnic East Kalimantan, Indonesia.

women access to the quality health services. Furthermore, the affordability to less information also cause the lack of healthcare utilization that available.^[2]

One of the pregnancy care aspect as stated by the World Health Organization (WHO) is attending antenatal care at least 4 times during pregnancy. So far, the utilization of antenatal care services in developing countries was less (65%) than developed countries (97%).^[3] In Indonesia, utilization of antenatal care in healthcare professionals was just 61.4%.^[4]

Factors that influence the utilization of antenatal care are the kind of residence area (city or rural), age, the number of births or parity, education level, and wealth or economic status.^[5] The results the study conducted by Ike (2009) explain that most of the pregnant women were in the middle down level of education, and there is a significant correlation between education level with antenatal care attendance.^[6] The study that had been conducted by Mardiana et al. (2014) also has the same result that there was 68% of pregnant women in Balikpapan city who were at the middle down level of education.^[7]

The lowness of pregnant women education level may impact on the low knowledge. It can cause pregnant women have not confidence in their ability to attend antenatal care services. Marullyta and Widodo (2013) claimed that pregnant women with high education and knowledge level, will get informations more easily in comparison to women with low educational levels. The knowledge of pregnant women and their tendency to maintain their health increase with the more information they get.^[8]

The study results by Droomers et al. (2004) supported that self efficacy will increase as much as the increase of the education level.^[9] Self efficacy is related to personal confidence in making decisions to get involved or not and declining a positive or behavior or not. The confidence or ability of pregnant women to do some job or activity that will be affect their life is called self efficacy.^[10]

In East Kalimantan, the rate of antenatal care first visiting healthcare professionals was high enough, but it was not sustained in the next visits. According to The Health Profile of East Kalimantan Province in 2013, percentage of antenatal care first visit was 97.4%, but that percentage decreased to 85% at the fourth visit.^[11]

Based on these problems, this study discusses the correlation between knowledge and intention with self efficacy of pregnant women to attend antenatal care by healthcare professionals in Balikpapan City.

Literature review

Self Efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave. Such beliefs produce these diverse effects through four major processes, that include cognitive, motivational, affective and selection processes.^[12]

Knowledge is a familiarity, awareness or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. Knowledge can refer to a theoretical or practical understanding of a subject. It can be implicit (as with practical skill or expertise) or explicit (as with the theoretical understanding of a subject); it can be more or less formal or systematic. Drucker (1998) define knowledge as information that converts something or someone. This is because the information become the foundation someone to act, where this knowledge will enable a person or institutions to take action different or more action important than the act of one who has no knowledge.^[13]

2. METHOD

This study used Quasi Experiment Design with pre-and post-one group study. In this design, the respondent was given an intervention in form of elucidation about antenatal care that was equipped with pre- and post-test. Knowledge and intention were independent variables and self efficacy was dependent variable.

The sample in this study included pregnant women in Balikpapan city who were entering the second trimester of pregnancy (4 months) and visited Community Health Center in June–July, 2015. Sampling was carried out using simple random sampling technique by using a random number generator program is research randomizer to determine the group. The size of sample that was classified as experiment group was 20 women.

The location of this study was in Balikpapan city, East Kalimantan Province. Data collection technique in this study was done by asking questions to the respondents used instrument in form of questionnaire that had already prepared. The questionnaire includes: a) self-efficacy, knowledge, intention and b) antenatal services.

Data were analyzed using Statistical. Twenty questionnaires were distributed and they were all returned because the researcher personally distributed and collected them. The researcher used frequency, distributions to describe the knowledge and intention with self-efficacy of pregnant women to attend antenatal care at healthcare professionals. Bivariate

was analyzed using *t*-test of paired. Statistical significance was set at .05.

Before being asked the questions, respondents were given an explanation of what will be done and whether the respondent is willing to become informants in this study, they can reject and will not affect the services offered in the next, if willing the respondents were asked to sign an informed concern. Voluntary participation was not used in this study.

3. RESULT

3.1 Respondent characteristics

The results in Table 1 show that the youngest respondent was 17 years old and the oldest respondent was 38 years

old. The average age of respondents was 24.95 years old. The most children are 6 people and at least is 1 child. If it is compared based on the level of education, most of the respondents finished Senior High School (35%) and Bachelor Degree (35%). But, there are quite a lot of respondents who unfinished Elementary School (20%). Based on the educational level of respondent's husband, most of the respondent's husband finished Senior High School (65%), but there are any of respondent's husband who unfinished Elementary School (5%). If it is seen from the job aspect, most of the respondents were unemployed (75%). Whereas for the job of respondent's husband, most of them had a job in private sector (80%) and there are any of respondent's husband who were unemployed (5%).

Table 1. Respondent characteristics based on age and paritas, education level of respondents and their husband, job of respondents and their husband

	Statistic	Paritas
Age of Respondent		
Maximum	38	6
Minimum	17	1
Mean	24.95	2.50
Median	25	2.25
SD	5.176	1.357
Education Level		
	Respondent	Husband
Unfinished Elementary School	4 (20%)	1 (5%)
Junior High School	1 (5%)	0 (0%)
Senior High School	7 (35%)	13 (65%)
Diploma	1 (5%)	3 (15%)
Bachelor Degree	7 (35%)	3 (15%)
Job		
	Respondent	Husband
Unemployed	15 (75%)	1 (5%)
Private Sector	4 (20%)	16 (80%)
Entrepreneur	0 (0%)	1 (5%)
Government Employee (PNS, ABRI)	1 (5%)	2 (10%)
Total	20 (100%)	20 (100%)

3.2 Univariate analysis

Table 2 shows the frequency distribution of respondents' knowledge and intention where in pre-test 60% of 20 respondents already had high level of knowledge. This knowledge increased into 70% in the post-test. In the pre-test, 70% of the respondents had the intention to get examined during their pregnancy. This percentage increased into 80% in the post test.

Table 3 shows the increase of the means of expecting mothers' knowledge in the post test. Paired samples *t*-test resulted in the value of *p* at .001 with the value of correlation at .158

(weak). Similarly, the value of *p* of intention was .017 with the value of correlation at .118 (weak). The results indicated that there were significant differences between knowledge and intention prior to intervention (pre-test) and after the intervention (post-test).

Table 4 shows the percentage of the increase in knowledge and intention of expectant mothers' self-efficacy in receiving antenatal care. The data show the increased of knowledge at 48.28% in the case group after the intervention in the form of material regarding self-efficacy in the post test. Similarly, the intention of expectant mothers to receive antenatal care

increased to 3.32% in the post test. It can be concluded that the knowledge is more effective to increase the self-efficacy of expectant mothers in receiving antenatal care when compared to intention.

Table 2. Frequency distribution of respondents' knowledge and intention on expectant mother's self efficacy in receiving antenatal care

Indicators	Pre-Test	Post-Test
	N (%)	N (%)
Knowledge		
High Level	12 (60)	14 (70)
Lower Level	8 (40)	6 (30)
Intention		
Yes	14 (70)	16 (80)
No	6 (30)	4 (20)
Total	20 (100)	20 (100)

3.3 Bivariate analysis

Table 3. Paired sample *t*-test on knowledge and intention of case group toward self efficacy in receiving antenatal care

Indicators	Pre-Test	Post-Test	Correlation	<i>p</i>
Knowledge	4.35 ± 2.346	6.45 ± 1.395	0.158	.001
Intention	3.65 ± 1.461	4.65 ± 0.745	0.118	.017

Table 4. The percentage of the increase of knowledge and intention in pre test and post test of case group toward self-efficacy in receiving antenatal care

Indicators	Pre-Test	Post-Test	Increase	%
Knowledge	4.35	6.45	2.100	48.28
Intention	3.65	4.65	0.118	3.23

4. DISCUSSION

The high level of knowledge of the expectant mothers as respondents in this study is also due to individual learning factors in the family and surroundings who had received antenatal care. These expectant mothers followed the good behaviors carried out by others around them and received proper antenatal care according to the standards. This is supported by the educational background of the respondents as most respondents (75%) went to secondary school and above. Higher education and higher level of knowledge allow respondents to absorb information and analyze it.^[14]

Knowledge itself emphasizes on mental processes in appropriately recalling and restating information that has been obtained. An expectant woman is required to have not only any technical knowledge about the pregnancy, but also good and strong self-efficacy to be able to achieve outcomes as expected. Self-efficacy here is defined as beliefs and expecta-

tations regarding the ability to engage in activities during pregnancy. Self-efficacy is the experience to gain achievements in the past. Achievements or knowledge in the past contribute to one's knowledge improvement.^[15]

According to Bandura in Masraroh (2012), one of the process of self-efficacy is the cognitive, which corresponds to knowledge. The action taken by one comes out of his thought. The thought then directs the action. The high level of knowledge, education, and occupational position contribute to the high level of self-efficacy which is inseparable from the affecting factors such as individual's previous experience, others' similar experience, social persuasion and physiological and emotional state.^[16]

The results of this study showed no difference in the average of expectant mothers' knowledge toward self-efficacy in receiving antenatal care before and after the intervention in the form of material regarding self-efficacy at 4.35. This was because the respondents wanted their baby to be safe and healthy. Therefore, the respondents followed the advice of health workers. Efforts had been made to achieve safe and healthy birth, such as taking vitamins, receiving antenatal health at least 4 times during pregnancy in accordance with the recommendation of the Ministry of Health ministry^[17] including: 1) Having the weight measured in each visit. Normal weight gain during pregnancy is 0.5 kg per week starting from the second trimester, 2) Having the blood pressure measured. Normal blood pressure is 110/80-140/90 mmHg. When the blood pressure is exceeding 140/90 mmHg, expectant mother should be aware of preeclampsia, 3) Having the height of the uterine fundus measured, 4) Taking Fe tablet as many as 90 tablets during pregnancy, 5) Tetanus toxoid immunization, 6) Having the level of Hemoglobin measured, 7) Taking VDRL examination, 8) Breast care, breast exercise and breast massage, 9) Maintaining fitness/carrying out antenatal gym, 10) Having a discussion in preparation for referral, 11) Having the examination of urine protein on indications, 12) Having the examination of urine reduction on indications, 13) Taking iodine capsule therapy for expectant mothers in goiter endemic areas, and 14) Taking anti-malarial therapy for expectant mothers in malaria-endemic areas.

The results of this study indicated that knowledge is one of the factors of the process of self-efficacy. Knowledge is the basis for individual to determine attitudes and behavior. Knowledge itself is influenced by education, occupation, age, experience, and information. In-depth information on self-efficacy in antenatal care is essential to improve the respondents' knowledge.

The results of this study are consistent with the research conducted by Purwati, Herawati & Teguh (2015) which proved

that the higher the level of knowledge, the higher individual's motivation to take efforts to be safe and healthy.^[18] Self-efficacy has three aspects: outcome expectancy, efficacy expectancy, and outcome value.^[15] An expectant mother definitely has high efficacy expectancy that she may receive antenatal care as she has the knowledge about self-efficacy and danger symptoms of pregnancy. However, the outcome expectancy may be low because the outcomes achieved may not meet the expectations due to external factors such as lack of transportation funds to pay a visit to health care even if the examination fee is borne by the national health insurance of Indonesia. With high outcome value, expectant mothers may not be distressed when the results do not meet the expectation because they are already aware of the consequences of not receiving antenatal care. Pregnancy is physiological but it may turn out to be pathological if it is not managed properly.

Intention is the best predictor of behavior. If you want to know one is going to do, the best way is to know the intentions of that person. Intention is one's intention to act or behave. If you want to know whether an expectant mother may receive antenatal care, look at her intention because intention is the best predictor of behavior.

An individual will take an act if the individual perceives such action as a positive one and believes that others want them to do it.^[19] An expectant mother may have antenatal care if she perceives the antenatal care as positive and she believes that other expectant mothers also want to have antenatal care. This is consistent with the results of the study conducted by Kanani et al. showing that intention was associated with self-efficacy for natural vaginal birth. This means that expectant mothers believe that they can perform certain health behaviors including antenatal care. Achievements and positive experience in the past reinforce multiparous women to

have higher self-efficacy to have antenatal care compared to those who are pregnant for the first time.

5. CONCLUSION

Based on this study, it can be concluded that the knowledge increased at 48.28% and the intention increased at 3.23% toward self-efficacy in receiving antenatal care. Expectant mothers' knowledge was very effective to improve self-efficacy in receiving antenatal care. We recommend further research to include demographic characteristics, in addition to self-efficacy, that can influence the selection of antenatal care in population in which traditional midwives exist.

This study is the lesson, because in this era of decentralization in health centers as technical implementation unit tends to business institutions for customer focused. Public Health Center required managerial ability to foster health workers in the role as a health care executive in health centers through system of career who the far-sighted provide counseling to pregnant women have self efficacy in attend to health care.

ACKNOWLEDGEMENTS

I am very thankful to the head of Balikpapan City Health Department who have given permission to conduct research in the work of area. Cadres Integrated Health Centre and all respondents who have helped researchers in obtaining research data so that the discovery of research results. I am very grateful to the director of health polytechnic of East Kalimantan which has helped in the provision of funds so that the implementation of this research.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

REFERENCES

- [1] Moeloek NF. Health Development Towards Healthy Indonesia. In: Working Meeting of the National Health Central Regional. 2015. PMID:26170498
- [2] Ministry of Health. Decision Minister of Health of the Republic of Indonesia On Strategic Plan of the Ministry of Health Year 2015-2019. 2015.
- [3] Dairo M, Owoyokun KE. Factors affecting the utilization of antenatal care services in Ibadan, Nigeria. 2010.
- [4] Central Bureau of Statistics and Macro International. Indonesia Demographic and Health Survey 2007. 2008.
- [5] WHO & UNICEF. Antenatal Care in Developing Countries: Promise, Achievements, and Missed Opportunities. An Analysis of Trends, Levels and Differentials, 1990-2001. 2003.
- [6] Ike R. Factors Associated With Pregnancy Visits Examination In the Work Area Health centers Margorejo Pati Regency. 2009.
- [7] Mardiana N, Wibowo A, Supriyanto S. Predisposing Factors of The Utilization of Antenatal Care (ANC) and Delivery Based on Customer Driven. Sciknow Publ. Ltd Heal. Care. 2014. <https://doi.org/10.12966/hc.11.01.2014>
- [8] Marullyta A, Pudjiraharjo WJ. Purchase Decision K4 By Pregnant Women in the Work Area Health centers. Indones. Heal. Adm. 2013.
- [9] Droomers M, Carola TM, et al. Educational Differences in the Intention to Stop Smoking, Explanations Based on the Theory of Planned Behaviour. Eur. J. Public Health. 2004. PMID:15230509 <https://doi.org/10.1093/eurpub/14.2.194>
- [10] Bandura A. Self Efficacy in Changing Societi. Cmbridge University Press; 1995. PMID:8576397 <https://doi.org/10.1017/CB09780511527692>

- [11] East Kalimantan Provincial Health. East Kalimantan Provincial Health Profile 2013. Samarinda: East Kaliman Provincial Health Office. 2014.
- [12] Bandura A. Self-efficacy mechanism in physiological activation and health-promoting behavior. In J. Madden, *Neurobiology of learning, emotion and affect*. 1991.
- [13] Drucker PF. 'The Coming of The New Organization' Harvard Business Review On Knowledge Management. 1998.
- [14] Notoatmodjo S. *Public Health Science and Art*. 2007.
- [15] Bandura A. Guide for constructing self-efficacy scales. *Self-efficacy beliefs Adolesc*. 2006. <https://doi.org/10.1017/CB09781107415324.004>
- [16] Masraroh L. The effectiveness of group counseling Modeling Techniques to Improve Student Academic Self-Efficacy. 2012.
- [17] Ministry of Health. *Strategic Plan 2005-2009*. 2005.
- [18] Purwanti OS, Herawati E, Teguh S. Relationship between knowledge and self-efficacy in patients with pulmonary tuberculosis large hall lung health community surakarta. *Publikasi Ilmiah*; 2015.
- [19] Azwar S. *Human behavior: theory and measurement*. 2007.
- [20] Kanani S, Allahverdipour H, AsghariJafarabadi M. Modeling the intention to choose natural vaginal delivery: using reasoned action and social cognitive theories. *Heal. Promot. Perspect*. 2015. PMID:26000243 <https://doi.org/10.15171/hpp.2015.004>