

Original Research Article

ANALYSIS OF DETERMINANT FACTORS OF AFFECTING FAMILY ABILITY IN HIGH-RISK PREGNANCY

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Abstract

Background: The ability of pregnant women to deal with early response to high risks is still below the average, which is one of the causes of complications that can indicate the welfare of the mother and her fetus.

Objectives: The aim of this study was to look at the determinants that influence early detection of high-risk pregnancies.

Methods: This study used an analytic design with a cross sectional design. The sample size of 112 from a population of 155 was obtained by simple random sampling. The independent variables are individual factors, interpersonal influence, filial value and commitment, while the dependent variable is the family's ability to detect high risk of pregnancy for 3 months, namely August-October 2020 at PMB Ika Mardiyanti. This study uses a questionnaire. Data collection in the form of a questionnaire. Data analysis using SEM-PLS.

Results: The results of the significance test concluded that all the path coefficients and the T statistical value of personal factors on interpersonal (0.453; 6.612), interpersonal on filial values (0.753; 7.267), filial value for commitment (0.851; 17.048), filial value for ability (0.667 ; 4,679), commitment to ability (0.358; 2.356) is significant. Because all have a T-statistic value that is more than the T-table 1.96.

Conclusion: The determinant factors that contribute to the ability of families to detect high risk of pregnancy need to be considered so that families are independent and have efforts to maintain the health of pregnant women in their families. In further research, it is necessary to involve other factors to improve family capacity, especially in the ability of families to detect high-risk pregnancies early.

Keywords: *Ability, family, high-risk.*

INTRODUCTION

Pregnancy and childbirth are a physiological process that a woman experiences, but sometimes she experiences complications (Holness, 2018). Complications in pregnant women and childbirth are complex problems, because these pregnancy

complications can cause immediate death. The ability of pregnant women and their families to detect complications or risky conditions early is still minimal, so they can cause emergencies that can endanger the welfare of the mother and fetus (Lee, Ayers, & Holden, 2016).

Surabaya City is one of the cities in East Java with pregnant women experiencing obstetric complications of 9,496 out of 47,480 pregnant women in 2016 (East Java Provincial Health Office, 2017). The number of high-risk pregnant women in 2015-2017 continued to increase, in 2015 there were 17,656 pregnant women, in 2016 there were 17,928 pregnant women, and in 2017 there were 19,698 pregnant women (Health Office of Surabaya, 2017).

The family is the smallest unit of society and the closest people to pregnant women are less empowered to help recognize any danger signs or problems they are experiencing, so they can participate in providing care during pregnancy (Chou et al., 2018). The inability of pregnant women and their families to recognize the condition of pregnancy, as well as the lack of knowledge in recognizing danger signs of pregnancy can result in underutilization of health care facilities, and delays in access to health services which lead to complications and death of mothers and babies (Joyce, Tully, Kirkham, Dicker, & Breathnach, 2018).

Family Empowerment to increase the ability of families to participate in the care of pregnant women requires the ability to recognize the high risk of pregnancy, as well as important aspects of providing care for pregnant women. In this study, the determinants that affect the ability of the family to detect high risk of pregnancy will be analyzed so that it is expected to increase the positive outcome of the family on the ability to detect high risk of pregnancy early.

The Purpose of this study was to determine the factors that affect the ability of families in early detection of high-risk pregnancies. Meanwhile, the special objective is to identify the factors that affect the family's ability to detect high-risk pregnancies early. Analyzing the factors that most influence the family's ability to detect high-risk pregnancies.

METHODS

Study Design

This study used an analytic design with a cross sectional design.

Setting

This research was conducted in PMB Ika Mardiyanti in August-October 2020.

Research Subject

The population in this study were all families who have pregnant women. The sample is that some families who have pregnant women with inclusion criteria are families who live in the local area within the last 3 months, and families whose pregnant women are in the second and third trimesters. The sample size of 112 from a population of 155 was obtained by simple random sampling. The independent variables are individual factors, interpersonal influence, filial value and commitment, while the dependent variable is the family's ability to detect high risk of pregnancy early. Data collection is done using google form.

Instruments

The instrument uses a questionnaire. The questionnaire was developed by researches from several theories, including the caregiver empowerment model (CEM), Health promotion model and family centered nursing. Data were collected using a questionnaire that was tested for reliability and validity. Statistical reliability of Cronbach's Alpha (0.332) > table R value (0.1857) which means the instrument is reliable. Validity test using Pearson correlation, with item value for each question < 0.05 which means all items are valid.

Data Analysis

Data analysis using SEM-PLS through CFA (Confirmatory Factor Analysis).

Ethical Consideration

Ethical clearance has been issued by the Ethics Team of Faculty of Nursing, Airlangga University with No. 1752-KEPK in August 2019.

RESULTS

Characteristics of Respondents by Individual Factors

Table 1. Distribution of Frequency of Respondents by Individual Factors in the PMB Ika Mardiyanti on August-October 2020 (n = 112).

Indicator	Sub Indicator	Frequency	Percentage (%)
Age (Years)	17-25	19	17.0
	26-35	59	52.7
	36-45	20	17.9
	46-55	10	8.9
	56-65	3	2.7
	>65	1	0.9
	Total	112	100.0
Education	Basic	30	26.8
	Intermediate	70	62.5
	High	12	10.7
	Total	112	100.0
Profession	Housewife	15	13.4
	Private entrepreneur	84	75
	Civil servants	11	9.8
		2	1.8
	Total	146	100.0
Self esteem	Less	7	6.3
	Enough	41	36.6
	Good	64	57.1
	Total	112	100.0
Self-motivation	Less	11	9.8
	Enough	59	52.7
	Good	42	37.5
	Total	112	100.0
Previous behavior	Less	3	2.7
	Enough	53	47.3
	good	56	50
	Total	112	100.0

Sources: Primary Data of Questionnaire, 2020.

Table 1 showed that the age of the respondents is spread across all groups. Where

the most age group is the age group 26-35 years at 52.7%, education spreads at all levels, with the highest level of education being secondary education as much as 62.5% and the respondents' occupation is mostly private (75%), the respondents' self-esteem mostly good (57.1%), self-motivation was mostly sufficient (52.7%) and the previous behavior was in the sufficient category, namely 47.3%.

Characteristics of Respondents by Interpersonal Influences

Table 2. Distribution of Frequency of Respondents by Interpersonal Influences in the PMB Ika Mardiyanti on August-October 2020 (n = 112).

Indicator	Sub Indicator	Frequency	Percentage (%)
Family support	Less	3	2.7
	Enough	57	50.9
	Good	52	46.4
	Total	112	100.0
Support from Midwives	Less	1	.9
	Enough	47	42.0
	Good	64	57.1
	Total	112	100.0

Sources: Primary Data of Questionnaire, 2020.

Table 2 related to interpersonal variables with indicators of family support, namely that most (50.9%) were sufficient and support from midwives (57.1%) was good.

Characteristics of Respondents based on the Filial Value Variables

Filial value by family members in carrying out family duties in early detection of high risk of pregnancy, it is known that the responsibility is half well done, most of the attention and care given are sufficient. The data can be seen in table 3.

Table 3. Distribution of Frequency of Respondents based on the Filial Value Variables in the PMB Ika Mardiyanti on August-October 2020 (n = 112).

Indicator	Sub Indicator	Frequency	Percentage (%)
Responsible	Less	1	.9
	Enough	55	49.1
	Good	56	50.0
	Total	112	100.0
Attention	Enough	63	56.3
	Good	49	43.8
	Total	112	100.0
Care	Less	2	1.8
	Enough	63	56.3
	Good	47	42.0
	Total	112	100.0

Sources: Primary Data of Questionnaire, 2020.

Characteristics of Respondents based on the Commitment Variables

Table 4. Distribution of Frequency of Respondents based on the Commitment Variables in the PMB Ika Mardiyanti on August-October 2020 (n = 112).

Indicator	Sub Indicator	Frequency	Percentage (%)
Affective	Enough	89	79.5
	Good	23	20.5
	Total	112	100.0
Continuance	Enough	88	78.6
	Good	24	21.4
	Total	112	100.0
Normative	Less	1	0.9
	Enough	97	86.6
	Good	14	12.5
	Total	112	100.0

Sources: Primary Data of Questionnaire, 2020.

Commitment by family members in carrying out family tasks in early detection of high-risk pregnancy, it is known that almost all of them are affective, continuance and normative in the sufficient category.

Analysis of Measurement Models

The measurement model analysis process is carried out by testing the validity and reliability of the factor variables. The criterion for the indicator variable is concluded that it is valid to measure the factor variable, if the factor loading value has a t-statistical value \geq t-table or if the t-statistics value of the influence weight \geq t-table = $t(n-1; 5\% / 2) = t(92; 0.025) = 1.96$. Meanwhile, it is concluded that it is not valid if the factor loading value and the influence weight value both have a t-statistic value < 1.96 . Furthermore, testing the consistency / reliability of the factor variables using the composite reliability value and Alpha Cronbach. The criterion that the factors are concluded to be reliable is explained by the indicator variable, if the composite value is > 0.7 then the consistency of the factors is good, and if the value is 0.6 to 0.7 it is still acceptable.

SEM-PLS statistical analysis, through CFA, it was found that individual factors were 1.999, interpersonal influence factors were 13.78, filial value were 10.23 and commitment was 13.78, on family abilities. The value of the influence of individual factors (0.102), the value of the interpersonal influence (0.754), the filial value (0.201), the value of commitment (0.102). R2 value (0.63) and Q2 value of 0.65.

DISCUSSION

In this study, almost half of them were in the 26-35 years age group of 52.7%. For family members who are old enough, the level of maturity and family strength will be more mature in thinking and acting. This can be seen from the experience and maturity of his soul. Age is one of the factors that influence a person's health behavior (Lin, 2018).

Most family education is secondary education (SD-SMP) 62.5%. Lack of community participation in early detection of high risk of pregnancy is due to low levels of education and knowledge, low income which results in unsupportive behavior. Education is one way for families to receive knowledge about antenatal care, with high education and good knowledge it will make families easy to receive information and carry out early

detection of high-risk pregnancies (Mehta, 2019).

Most of the respondents' occupations are private (75%). This income is very influential on family behavior, including pregnant women. A good income level allows family members to get better fulfillment of needs, for example in the fields of education, health, career development and so on. Health care professionals should carefully assess the state of family empowerment of younger primary caregivers and those with low education, low household income, high childcare burdens, and fragile bonds between family members. Thus, home visits and institutional services for the provision of care and services are well coordinated (Wakimizu, 2018).

The previous behavior in this case was the experience of respondents from the results of the study, most of them (47.3%) were sufficient in getting counseling about risky pregnancies. In addition, most respondents considered themselves to have experienced previous child pregnancies and based on the experiences of other people who have been pregnant and given birth. A collaborative education model with a multi-disciplinary approach to patient education will be very important for providing information related to the counseling provided to minimize maternal mortality and morbidity (Jain, 2017).

Family behavior in early detection of high-risk pregnancies is influenced by one's health beliefs in the HBM (Health Belief Model) theory. HBM (Health Belief Model) is used to identify several important priority factors that have an impact on behavior (Huang, 2020).

Human behavior occurs through a stimulus-organism-response process. The behavior in question is family behavior in early detection of high-risk pregnancy, where the behavior is related to factors of age, education, income, knowledge, experience and media exposure. In fact, the role of husband and family also influences pregnant women in supporting the behavior or actions of pregnant women in utilizing health services (Chou, 2018).

A person's health behavior is determined, among other things, by the presence or absence of support from their surroundings (social support) in this case midwives are the main health care providers during pregnancy, they ideally emphasize the availability of questions during antenatal examinations (Baron, 2017). People who live in an environment that upholds the health aspects will be more enthusiastic in maintaining their health (Yeh, 2016). Maternal and child health needs to be improved, so in an effort to improve it needs an approach that is carried out holistically and intensively, which is not only limited to the medical health sector, but also economics, education and social affairs.

CONCLUSION

The determinant factors that play a role in the ability of families to detect high-risk pregnancies need to be considered so that families, especially husbands, can have independence and the ability to maintain the health of pregnant women, especially in early detection of signs and symptoms of risky pregnancies. There needs to be full support from other family members and in carrying out their roles, especially in increasing the capacity of families in early detection of high-risk pregnancies.

SUGGESTIONS

The limitation in this study is that there are other variables that also influence families in early detection of high-risk pregnancies.

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DECLARATION OF CONFLICTING INTEREST

There is no conflict of interest.

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AUTHOR CONTRIBUTION

Ika Mardiyanti: Compile and device review measuring tools, coordination and management of permits, coordination of the data collection, analysis data, and writing manuscript.

Yasi Anggasari: Coordinate all activities, data collection and analysis, compiling reports, writing manuscript.

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