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Level of Knowledge, Attitude, and Behavior of Pregnant Women in Giving Stimulation to the Fetus

Ika Novita Sari^{1*}, Andita Nugrahani²

¹Nursing Science Study Program, Faculty of Medicine, Universitas Batam, Batam, Indonesia

²Psychology Study Program, Universitas Mercu Buana, Yogyakarta, Indonesia

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*Corresponding author:

Ika Novita Sari

E-mail address:

ikanovitasari@univbatam.ac.id

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ABSTRACT

Educating children as early as possible must start from the time the child is in the womb. Biologically human life begins at the time of conception or fertilization as well as human biological development. This study aims to determine the knowledge, attitudes, and behavior of pregnant women in providing stimulation to the fetus. This research is an observational study with a cross-sectional design. The population is pregnant women more than 20 weeks who check their pregnancy at the Baloi Permai Health Center in September-November 2021. The sampling technique uses purposive sampling with a sample of 48 people. Collecting data using a questionnaire and analyzing it using the chi-square test. The results showed that there was no relationship between knowledge and behavior of giving stimulation to the fetus ($p=0.563$); Likewise, there was no relationship between attitude and behavior in giving stimulation to the fetus ($p=1.00$). This study concludes that there is no relationship between knowledge and attitudes regarding the behavior of pregnant women in providing stimulation to the fetus.

1. Introduction

Pregnancy is an investment in the future for all parents to produce healthy, intelligent, and moral. The first thousand days of life are a golden period for the growth and development of children. The period of the first 1000 days consists of 270 days in the womb and a period of 730 days after birth. Good growth and development of the fetus since pregnancy will produce a generation that is healthy, intelligent, and has character. Good fetal growth and development are supported by several factors such as adequate nutrition, hormonal factors, and the environment around the fetus. Physical abilities, intelligence, and behavior are regulated by certain parts of the brain. The formation and development of the brain begin

early in pregnancy. The development and growth of certain fetal brain cells occur at the age of 10-20 weeks. Neurosensory development occurs at about 16-20 weeks of age.

The brain is made up of brain cells called neurons. Brain cells are connected to form a network (network). Any appropriate and adequate stimulation of the brain will trigger the formation of connections and integration of neuron cells. The more connections, the more complex and integrated brain cells are associated with better intelligence, social and emotional abilities. Various studies have shown that the formation, growth, and development of fetal brain cells and tissues can be optimized in the womb. In addition to

good nutrition, of course, a good and warm fetal environment through some external stimulation will support good fetal brain growth.¹

Prenatal stimulation is a process to encourage the learning process in the fetus to optimize the physical, sensory, and mental development of the fetus through external stimulation. The learning process in the fetus will be optimal if it is done regularly and repeatedly. Various studies show the development of vision, hearing, linguistic, motoric, learning power, intelligence, and creativity levels is better. Prenatal stimulation can be done as early as the second trimester of pregnancy.²

Stimulation of the fetus in the womb is done by inviting talking, chatting, singing songs, reading prayers, and religious songs while stroking the mother's belly. You can also listen to songs through a radio cassette that is attached to the mother's stomach. Stimulation should be done every day, at any time the mother can interact with her fetus, for example, while bathing, cooking, washing clothes, gardening, reading newspapers/magazines, watching TV, in the vehicle, in the office, in the market, anywhere can provide stimulation.²

According to previous research, the important role of a mother's womb and the influence of events that occur in the womb on intelligence are three times greater than care after the baby is born.³ However, there are still pregnant women who do not understand and ultimately do not do or do not stimulate the fetus. Research conducted by Yulita et al. stated that 54.2% of mothers had low knowledge of fetal stimulation and 54.2% of mothers did not stimulate the fetus in the womb.⁴

Children's education should start as early as possible. Educating children as early as possible must begin since the child is in the womb, since the fetus. Biologically human life begins at the time of conception or fertilization as well as human biological

development. In the womb, the fetus can learn, feel and know the difference between light and dark, be able to pay attention to the voice of the mother, father, brother, grandparents or hear the sound of music, and feel the touch of the mother's stomach, even feel the changes in the mother's emotions.⁵ This study aims to determine the knowledge, attitudes, and behavior of pregnant women in providing stimulation to the fetus.

2. Methods

This research is an observational study with a cross-sectional design. The population in this study were pregnant women who were more than 20 weeks pregnant and had their pregnancy checked at the Balo Permai Health Center in September-November 2021. This study received ethical approval from the ethical committee of the Faculty of Medicine, Universitas Batam. The sampling technique used purposive sampling with a sample of 48 people. The data collection technique in this study used a questionnaire, the analysis used univariate analysis, which was carried out to explain the characteristics of each variable studied by using a frequency distribution in percentage size and bivariate to assess the relationship between variables with the chi-square test, at a 95% confidence level.

3. Results and Discussion

Based on table 1, it was found that the knowledge of pregnant women about intelligence stimulation in the fetus was less than 28 respondents (58.3%). This study is in line with previous research, where the majority of respondents had low knowledge of 26 respondents (54.2%).⁴ From the results of the study, pregnant women have equally positive and negative attitudes toward providing fetal stimulation. Of the 48 respondents, most of the respondents did stimulation to the fetus, namely 45 respondents (93.8%).

Table 1. Distribution of the frequency of the level of knowledge of pregnant women about the stimulation of fetus intelligence

Variable	Frequency	%
Level of knowledge		
Less	28	58,3
Good	20	41,7
The attitude of pregnant women		
Negative	24	50,0
Positive	24	50,0
The behavior of pregnant women		
Not doing	3	6,2
Doing	45	93,8

Table 2. The relationship between knowledge and behavior of pregnant women provides intelligence stimulation to the fetus

Knowledge of Pregnant Women	The behavior of pregnant women				Total		p-Value
	Not Doing		Doing		n	%	
	n	%	n	%			
Less	1	2,1	27	56,2	28	58,3	0.563
Good	2	4,2	18	37,5	20	41,7	
Total	3	6,3	45	93,7	48	100	

Table 3. The relationship between attitudes and behavior of pregnant women provides intelligence stimulation to the fetus

The attitude of pregnant women	The behavior of pregnant women				Total		p-Value
	Not Doing		Doing		n	%	
	n	%	n	%			
Negative	1	2.1	23	47.9	24	50	1,000
Positive	2	4.2	22	48.8	24	50	
Total	3	6.3	45	96.7	48	100	

Based on the calculation of analysis with Chi-test Square it is known that the p-value is 0.563. So it can be concluded that there is no relationship between knowledge and the behavior of the mother providing stimulation to the fetus. Likewise, the relationship between the attitudes of pregnant women and the behavior of giving stimulation to the fetus is based on the results of the Chi-Square. test It is known that the p-value is 1,000 because the p-value is greater than 0.05 ($1,000 > 0.05$), so there is no relationship between them.

Good knowledge about fetal development will affect the mother in caring for the fetus during pregnancy. In general, respondents in this study understand fetal development such as having to take good care of the body, eating nutritious food, not being stressed, and

not being too tired. This knowledge is obtained from messages and learning from their parents.

Knowledge is the result of the use of the five senses based on intuition or chance, authority and authority, tradition, and public opinion.⁶ Children in the womb can feel all the activities and psychics of the mother. The level of health, habits, and good or bad behavior of the mother affects the condition of the fetus in the womb because the fetus is still very vulnerable to the influence of its environment.⁷

Behavior is all human activities or activities, both of which can be observed directly or cannot be observed by outsiders. Human behavior is an activity that arises because of the stimulus and response and can be observed directly or indirectly. Human behavior is very complex and has a very broad scope. Benyamin

Bloom and Notoatmodjo (2003) divide the behavior into domains (regions). This division is carried out for educational purposes, namely to develop or improve the three behavioral domains, which consist of the cognitive domain, affective domain, and psychomotor domain.⁶

In adults the formation of new behavior begins in the cognitive domain, meaning that the subject knows in advance about things that are a stimulus. After acquiring new knowledge, there is a mental response to the known object. The object that has been known and fully realized will cause a new response, namely action against the stimulus or object. An attitude is not automatically manifested in an action and to manifest an attitude into real action, a supporting factor or a possible condition is needed, including facilities and support factors from other parties.⁶

One of the social psychologists, Newcomb, stated that attitude is a readiness or willingness to act, and is not the implementation of certain motives. Attitude is not an action (open reaction) or activity but is a predisposition to behavior (action) based on closed reactions.⁸ Pregnant women who have a negative attitude but still stimulate the fetus may be due to the effects of inherent customs and culture. Even though they don't believe it, they still tend to do what they are told and stay away from what their parents forbid.

Educating or providing stimulation to the fetus has developed since the time of the ancestors through the culture that is applied in everyday life for pregnant women. Culture in Indonesia so highly values the prenatal period. Every culture in Indonesia has its ways and rituals to appreciate pregnancy. During pregnancy, many mothers get advice from mothers or grandmothers, that pregnancy many taboos must be obeyed and many suggestions that we must run. For example, in Java, there is a saying that says "if you are pregnant, you have to be patient, so that your child will be patient. If the mother is impatient, then our child will have to be impatient." The indirectly binding culture makes pregnant women do these tips which is also a stimulation of the fetus even though pregnant women do not have good knowledge about stimulation

of the fetus and have a positive attitude.⁵

4. Conclusion

There is no relationship between knowledge and behavior of giving stimulation to the fetus; Likewise, there is no relationship between attitudes and behavior in providing stimulation to the fetus. It is necessary to increase knowledge for mothers about the importance and how to stimulate the fetus to produce a positive attitude and stimulate the fetus well and happily without coercion and restraint.

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