

# Analysis of Knowledge and Perception of Pregnant Women about Field Massage as an Effort to Prevent Hyperbilirubin in Newborns

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## ABSTRACT

Hyperbilirubinemia is a clinical phenomenon in 80% of premature babies and 60% of aterm babies in the first week of life (Lei et al., 2018). Field massage is a massage in babies that focuses on stimulating the chest and abdomen area. Field massage is a supporting therapy that can increase the excretion of bilirubin. A good knowledge of field massage can change people's perceptions and perspectives on holistic care in newborns. This study aims to determine the level of knowledge and public perception of field massage. This study used a survey method with a questionnaire. The subjects of the study were pregnant women as many as 62 respondents. The results of the bivariate analysis obtained a significant value of 0.002 which showed that there was a relationship between the level of knowledge and the perception of pregnant women about field massage as an effort to prevent hyperbilirubin in newborns.

**Keywords:** field massage, knowledge level, perception

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## BACKGROUND

Hyperbilirubinemia is one of the most common clinical phenomena found in 80% of premature babies and 60% of aterm babies in the first week of life (Lei et al., 2018). Babies with hyperbilirubinemia appear yellow due to the accumulation of yellow bilirubin pigment on the sclera and skin. This state is called neonatal jaundice. An excessive increase in bilirubin can potentially become toxic and lead to death (M Ahmadpour-Kacho, 2014). Based on data reported to the Directorate of Family Health through [komdat.kesga.kemkes.go.id](http://komdat.kesga.kemkes.go.id), in 2019, of the 29,322 deaths of toddlers, 69% (20,244 deaths) of them occurred during the neonatal period. Of all the reported neonatal deaths, 80% (16,156 deaths) occurred in the first six-day period of life. One of the causes of mortality in neonates is bilirubin encephalopathy (better known as kernikterus). In addition to having a high mortality rate, it can also cause sequelae in the form of cerebral palsy, high-pitched deafness, paralysis and dental dysplasia which greatly affects the quality of life.

Several studies were conducted to find alternative supporting therapies that can be used to effectively reduce bilirubin levels in addition to the provision of phototherapy, one of which is the provision of field massage. Research by Novianti et al., 2017 stated that there was a significant difference between babies who received field massage compared to the control group who only received phototherapy with a p value of 0.001. Mojtaba Kianmehr, et.al. (2014) also stated that field massage had a significant effect in reducing the level of bilirubin of babies who were photographed ( $p=0.001$ ). The massage field method is a massage in babies or neonates that focuses on providing stimulation to the chest and abdomen area. Field massage is an alternative supporting therapy that is thought to increase the excretion of infant bilirubin during phototherapy (M Ahmadpour-Kacho, 2014).

Novianti et al (2018) stated that field massage as an adjuvant therapy can reduce serum bilirubin levels effectively. Mojtaba Kianmehr, et al (2014) in their research added, massage with the field method can reduce excess bilirubin levels in neonatus. This is because the stimulation can stimulate metabolism so that toxins in the body can be easily decomposed and released through phases and urine, 2 increasing the work of digestive organs and the swallowing process in neonates so that there is an increase in metabolism in the body. The dose or movement of stimulation used refers to the research of Mojtaba Kianmehr et al (2014), he explained that the difference between massage and the field method with massage in general is in the area given stimulation. The massage field provides more stimulation to the face, abdomen and chest areas. It aims to activate nervus vagus for increased metabolism so that the functioning of the digestive organs can work better. Knowledge about field massage and hyperbilirubin is very necessary for mothers, both pregnant women and mothers who have a baby.

The importance of maternal and community knowledge about hyperbilirubin, which often occurs in the first 1 week of birth, can prevent complications that result in pain and death of the baby by recognizing the early signs of hyperbilirubin and being able to apply field massage in baby care. A good knowledge of field massage can change people's perceptions and perspectives on holistic care in newborns. Perception is a process by which individuals organize and interpret their sensory impressions to give meaning to their environment (Dwi Ari Astanti, 2018).

Based on a preliminary study conducted from 10 respondents, 8 respondents (80%) replied that they had never heard of field massage, 2 respondents (20%) had heard but did not know the purpose of field massage. Based on this background, researchers are interested in taking the research theme about the level of knowledge and public perception of field massage.

## METHODS

This type of research is quantitative research with analytical survey methods. The study used is a correlation study, which is a study or study of the relationship between two variables in a situation or a group of subjects. This is done to see the relationship between one symptom and another, or one variable with another variable (Notoatmodjo, 2012). The research was conducted in the DIY area from July 2021 to December 2021. The population in this study were pregnant women of all trimesters. The sampling technique in this study used a predetermined sampling quota of simana jumalh samples. The total sample in this study was 62 respondents. Data collection in this study was carried out using questionnaires, respondents were asked to answer questions in the questionnaire. Researchers use construct validity testing, which is a validity test based on the opinions of experts (judgment experts). Research instruments will be measured on the basis of certain theories, then consulted with experts, experts are asked for their opinions on the instruments that have been compiled. The analysis of the study consists of two analyses, namely descriptive and inferential. A descriptive analysis is performed to present through the frequency distribution data table. Inferential analysis is used to test hypotheses. Hypotheses are carried out to find out whether the data obtained in the study can support the hypothesis proposed. Bivariate analysis using chi squared and coefficient contingency to determine the evenness of the relationship.

## RESULTS

From the results of the study conducted for 6 months, a sample of 62 respondents was obtained. In the study, several data images from respondents were obtained which are presented in table 1 about the characteristics of respondents. Based on the table above, it can be concluded that the respondents in this study were mostly aged 20 to 35 years, namely with a percentage of 91.9%, and had a gestational age Most of them were in the 3rd trimester with a percentage of 83.87% with an Education level, most of whom were high school equivalent to a percentage of 45.16% and as many as 53.22% of respondents were not working.

From the results of the study referring to table 2 about the level of knowledge of respondents obtained the level of knowledge of respondents about field massage, most of whom had a sufficient level of knowledge as many as 40 respondents with a percentage of 64.51%, followed by good knowledge as many as 21 respondents with a percentage of 33.87% then the level of knowledge was less as much as 1 respondent with a percentage of 1.6%. The results of the study on the perception of pregnant women about field massage as an effort to prevent hyperbilirubin in newborns presented in table 3 concluded that as many as 33 respondents with a percentage of 53.22% had a positive perception, followed by 29 respondents with a process of 46.77% had a negative perception.

The results of the study in table 4 on the cross-table of knowledge levels with the perception of pregnant women about field massage as an effort to prevent hyperbilirubin in newborns concluded that respondents who had a positive perception of field massage as an effort to prevent hyperbilirubin in newborns had a good level of knowledge of 38.7% and respondents who had negative perceptions Most had a sufficient level of knowledge of 32.26%.

The results of the statistical test with chi square obtained a p value of 0.002 thus it can be concluded that there is a relationship between the level of knowledge and the perception of pregnant women about field massage as an effort to prevent hyperbilirubin in newborns.

**Table 1.** Table of Respondent Characteristics

Variable	f	%
<b>Mother's Age</b>		
- <20 years	1	1,6
- 20-35 years	57	91,9
- >35 years	4	6,46
<b>Gestational Age</b>		
- 1st Trimester	1	1,6
- 2nd Trimester	9	14,5
- 3rd Trimester	52	83,87
<b>Education Level</b>		
- Sd	5	8,06
- Junior	15	24,19
- Sma	28	45,16
- Diploma	10	1,61
- S1	4	6,45
<b>Work</b>		
- Not Working	33	53,22
- Work	29	32,25

**Table 2.** Table of Knowledge Levels of Pregnant Women about Field Massage

Level of Knowledge	f	%
- Good	21	33,87
- Enough	40	64,51
- Less	1	1,6
<b>Sum</b>	<b>62</b>	<b>100</b>

**Table 3.** Table of Perceptions of Pregnant Women about Field Massage

Level of Knowledge	f	%
- Positive	33	53,22
- Negative	29	46,77
<b>Sum</b>	<b>62</b>	<b>100</b>

**Table 4.** Cross-table of knowledge levels with Pregnant Women's Perceptions of Field Massage as an effort to prevent hyperbilirubin in newborns

Perception	Level of Knowledge						JML	
	Good		Enough		Less		f	%
	f	%	f	%	f	%		
Positive	24	38,7	9	14,51	0	0	33	53,22
Negative	8	12,9	20	32,26	1	1,6	29	46,77
<b>SUM</b>	<b>32</b>	<b>51,6</b>	<b>29</b>	<b>46,77</b>	<b>1</b>	<b>1,6</b>	<b>62</b>	<b>100</b>

**Table 5.** Chi square test table of knowledge level with pregnant women's perception of field massage as an effort to prevent hyperbilirubin in newborns

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	12,968 <sup>a</sup>	2	.002
Likelihood Ratio	13.779	2	.001
Linear-by-Linear Association	12.703	1	.000
N of Valid Cases	62		

## DISCUSSION

The study was conducted on 62 respondents through filling in the questionnaire of the level of knowledge and perception of field massage with different characteristics. The characteristics traced include: mother's age, gestational age, education level and occupation. All of these characteristics are variables that can affect pregnant women's perceptions of field massage so that different perceptions appear in each individual. Based on the results of the study, it is known that most respondents (64.51%) have a sufficient level of knowledge about field massage with the majority aged 20-35 years (91.9%). Yusra's research results say that usia also affects a person's grasp and mindset. As he gets older, the more his grasp and mindset will develop, so that the knowledge he gains will be better, with a mature age, a person will play a more active role in society and social life. In addition, those with a mature age will use more time to read (Darma Yusra et al., 2016).

Knowledge is the result of knowing and occurs after people have sensed an object. According to Martina et al in her book Health Promotion and Health behavior says that Most human knowledge is obtained through the eyes and ears (Martina et al., 2021). Some factors that affect a person's level of knowledge include experience, level of education, information, socio-culture and economic status. Most of the respondents had a high school education level of 45.16%. According to YB Mantra cit Notoatmojo in 2012 said that education can affect a person including a person's behavior of life patterns, especially in motivating them to behave, play a role. The higher the level of education a person eats, the easier it will be to receive information (Notoatmodjo, 2012).

From the results of collecting data, it was obtained that most of the respondents, namely 46.16%, had a high school education level, diploma and Bachelor's education as much as 8.06%. Maternal education is the basic thing to be able to receive information well. The level of education of the respondents is closely related to the ease with which the mother receives any information about pregnancy, as well as the preparation to become a parent in carrying out care for the baby. The research presented by (Lailatul & Ni'mah., 2015) says that mothers with higher levels of education will be more receptive to information from outside, compared to mothers who have a lower level of education.

The results of the study on the perception of pregnant women about field massage are known to 52.33% of respondents have a positive perception of field massage to prevent hyperbilirubin of infants. Perception is formulated as a process of acceptance, selection, organization and giving meaning to the excitatory received. This perception is a process of information in us to recognize or make us become aware and understand the things we are facing. A person may make mistaken or different perceptions between one another, thus causing difficulties for the person concerned. Perception can also help us in dealing with the different kinds of situations that we encounter in everyday life. Because actually in man there is a strong need to recognize and obtain certainty about the things encountered or faced. Self-perception is the perception of an individual to perceive oneself as well as to assess it, as well as the perception of his experience of a particular situation (Research & Mudawaroch, 2019).

According to Rahmadani *cit* (Kamaruddin et al., 2019) said that everyone has their own perception of what is thought, seen, and felt. This also means that perception determines what a person will do to fulfill various interests both for oneself, family, and the environment of the community in which they interact. It is this perception that distinguishes a person from another.

The results of the bivariate analysis showed that a significant value of 0.002 which showed that there was a relationship or relationship between the level of knowledge and the perception of pregnant women about field massage as an effort to prevent hyperbilirubin in newborns. This is due to the belief in oneself to give the best for the baby in particular preventing the occurrence of serious complications of the newborn baby. Knowledge and

perception support each other's decision to do field massage as an effort to prevent hyperbilirubin which results in the death of the baby. The limited knowledge of a person about an information will make the person have limited abilities and tend to find it difficult to accept new ideas related to field massage to prevent hyperbilirubin in newborns. The process of suppressing perception is influenced by several factors including experience, socialization and level of knowledge (Siti & Siregar, 2013). In addition, according to Gunadarma cit siti in 2013, a person's perception can also be influenced by three other factors, namely: the person who forms the perception itself (needs, fatigue, attitudes, interests, motivation, experience, the second is a stimulus in the form of an object, and the last is the stimulus where the perception is formed (Siti & Siregar, 2013).

## CONCLUSION

From the results of the research and data analysis carried out, the following conclusions can be drawn:

1. The results of the study showed that some respondents had a sufficient level of knowledge about field massage with a percentage of 64.51%.
2. Some respondents had a positive perception of field massage as an effort to prevent hyperbilirubin in newborns with a percentage of 53.22%.
3. The results of the statistical test with chi square obtained a p value of 0.002 thus it can be concluded that there is a relationship between the level of knowledge and the perception of pregnant women about field massage as an effort to prevent hyperbilirubin in newborns.

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