



## The Effectiveness of Video Education on the Knowledge of Pregnant Women about Neonatal Danger Signs

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### ABSTRACT

**Background:** The neonatal danger signs are a group of symptom presented in sick neonates that can. The Infant Mortality Rate (IMR) is calculated from the number of infant deaths  $0 \leq 12$  months per 1000 live births in an area in one year. The IMR in Banjarnegara Regency in 2018 was 14.1/1000 live births. Hence, the parents should know these signs to anticipate them early. These dangers signs are including: the inability of the baby to feed or vomiting, convulsion, weakness, shortness of breath, navel, fever, low body temperature, purulent eyes, diarrhea, jaundice. To increase the pregnant women's knowledge about the neonatal danger signs, we conducted education through Video Media. The purpose of this study was to determine the effectiveness of video education on the knowledge of pregnant women about the neonatal danger signs at the Mandiraja 2 Health Center.

**Methods:** This is a quasi experimental study with one group pre-test and post-test design. The sampling technique used was the total sampling method. Univariate analysis was used to find the frequency distribution in each variable. The bivariate test was conducted using the spearman rank test.

**Results:** The results of this study showed the influence of audio visual media on the level of knowledge in pregnant women about the neonatal danger signs with a value of P-value of 0.000 ( $< 0.05$ ).

**Conclusion:** The results showed that education using video was an effective approach to increase the knowledge of pregnant women about neonatal danger signs

Keyword : neonatal danger signs, pregnant women knowledge, video education

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**Background.** Neonates are babies aged 0 days (neonate) up to the age of 28 days (Fatimah & Nuryaningsih, 2017). Babies up to the age of one month are the age group that has the highest risk of health problems. Various health problems can arise, and without proper treatment, it can be fatal. Several health efforts were made to control the risk in this group, including efforts to make deliveries with the help of health workers in health facilities and ensuring the availability of health services according to standards at neonate visits (Kemenkes RI, 2019).

The results of the 2015 Intercensal Population Survey (SUPAS) show that the family planning program is 22.23 per 1000 live births, which means that the 2015 SDGs

(Sustainable Development Goals) target of 23 per 1000 live births has been achieved. The 2015 SUPAS result was 26.29 per 1000 live births, also meeting the 2015 MDG target of 32 per 1000 live births. The Infant Mortality Rate (IMR) is calculated from the number of infant  $\leq 12$  months deaths per 1000 live births in an area in one year (BPS, 2016). The IMR in Banjarnegara Regency in 2018 was 14.1/1000 live births which in absolute terms was calculated from the number of infant deaths of 216 with live births of 15,317. The IMR in 2018 was increased compared to 2017 which was only 13.37/1000 live births with the number of deaths 204 cases out of 15,255 live births (Dinkes Banjarnegara, 2020).

The neonatal danger signs are a group of symptoms that can threaten the neonate health, and can even lead to their death. Therefore, the parents should know the danger signs of their baby so that they can anticipate it early. The neonatal danger signs are including: the inability of baby to breastfeed or vomits, weakness, seizures, shortness of breath, fussiness, inflamed navel, fever, lowbody temperature, purulent eyes, diarrhea, and jaundice (Arfiana & Lusiana, 2016).

The selection and use of media is one of the important components in the delivery of information to the public. Media has a great influence in influencing a person's knowledge and attitude. Video media is a teaching aid that has the form of images and emits sounds. The advantage of using video media is that it provides a more real picture and improves memory retention because it is more interesting and easy to remember. Maria Ulfa (2020) in her research counseling with video media effectively increases maternal knowledge in caring for babies (Ulfa, 2020).

In interviews with officers, they have provided counseling to pregnant women about the neonatal danger signs. They used the MCH Handbook as the media used for counseling. A survey has not been conducted on the level of knowledge of pregnant women about the neonatal danger signs. Based on a preliminary study conducted on 10 pregnant women in the Puskesmas Mandiraja 2, the results showed that 6 pregnant women did not know about the neonatal danger signs, 3 pregnant women knew the neonatal danger signs by reading the MCH book but could not yet state for sure and did not know the follow-up plan if the baby is found to have a moderate danger sign. 1 pregnant woman knew about the neonatal danger signs and said she would immediately come to a health care facility if she found any danger signs. From the results of interviews and preliminary studies conducted, researchers are interested in using video media as a media for counseling to increase respondents understanding. According to Susilowati (2016), out of the five senses that

transmit knowledge to the brain eyes are the biggest contributor (approximately 75%-87%), while 13% to 25% of human knowledge is obtained and distributed through the other four senses (Susilowati, 2016).

**Methods.** This study is a quasi-experimental study with a one group pretest posttest design using a total sampling of 40 third trimester pregnant women. The intervention in this study was education using video media about the neonatal danger signs. The assessment instrument uses a questionnaire about knowledge of neonatal danger signs. Data analysis using Rank Spearman formula.

## Result and Discussion.

### 1. Knowledge Before Education with Video Media

Tabel 1. Knowledge before education.

Knowledge	Amount	Percent
Good	3	7.5
Enough	25	62.5
Less	12	30.0
Total	40	100

Based on the results of the study, there are three people with good knowledge categories (7.5%), 25 people with enough knowledge (62.5%), and 12 people with low of knowledge (30%). Therefore, before the education was carried out, most subjects were in the sufficient categories with a total number of 25 (62.5%).

This is in line with Hidayah's research (2016) with the title Analysis of postpartum mother's knowledge of the neonatal danger signs (Hidayah & Wulandari, 2016). Based on the results of the study, 34 respondents were in the sufficient category (58.65%). This is in line with Veftisia's research (2019) based on the results of the study, 37 respondents were in the sufficient category (48,7%) (Veftisia, 2019). This indicates that most postpartum mothers have sufficient knowledge of the neonatal danger signs. Factors that can affect the respondents' level of knowledge to only be sufficient is due to the lack of curiosity of pregnant women about the neonatal danger

signs either through asking in the environment where they live or from print media and others.

## 2. Knowledge After Education with Video Media

Tabel 2. Knowledge after education.

Knowledge	Amount	Percent
Good	28	70.0
Enough	12	30.0
Less	0	0
Total	40	100

After receiving education, there are 28 (70%) people with good knowledge categories, 12 (30%) people with enough knowledge (30%), and zero (0%) people with less knowledge. From the results of the study, it was found that after education, the most knowledge results were good categories with a total of 28 (70%).

This is in line with Maria Ulfa's research (2020) with the title of counseling with video media effectively increasing the ability of postpartum mothers in the taking hold phase in how to bathe (Ulfa, 2020). The results of the study showed a change in knowledge of 75%. This shows that most postpartum mothers have good knowledge of the Taking Hold Phase in how to bathe their neonates. Changes in the level of knowledge of pregnant women about the neonatal danger signs are caused by the counseling provided and the media used in providing counseling to pregnant women. This has the expected effect of increasing knowledge of pregnant women after being given counseling about the neonatal danger signs.

## 3. Effectiveness of video education on the knowledge of pregnant women about neonatal danger signs

Tabel 3. Effect of video education on pregnant women about neonatal danger signs

	Pre-test		Post-test	
	F	Presentation	F	presentation
Less	12	30.0	0	0
Enough	25	62.5	12	30.0
Good	3	7.5	28	70.0
Total	40	100	42	100
P-Value	0.00			

Based on the results of the research from the Rank Spearman test the p value was 0.000 ( $\leq 0.05$ ). It can be concluded that there is an effect of educational videos on knowledge of pregnant women about neonatal danger signs.

This is in line with Jusmiyati's research (2020) entitled the effectiveness of health education using audiovisual media on the level of knowledge and ability of mothers to care for neonate (Jusmiati, 2020). The results of the study with the T-test obtained p value of 0.000 ( $\leq 0.05$ ) can be concluded that there is an increase in the knowledge and ability of mothers to care for neonate. Changes in the level of knowledge and caring for neonate are caused by counseling activities given to mothers and the media used in counseling.

According to Bloom's theory (Notoatmodjo, 2018) in the process of health education there are three domains that want to be changed, namely cognitive, affective and psychomotor. Some learning principles include that health education is an integral process not merely oriented to changes in knowledge aspects but on all human aspects. Health education is an active activity that involves all the senses and performs expressions such as active listening, visualization, deciding and demonstrating or doing (Notoatmodjo, 2018).

This is as stated by Nurmala (2018) that one's belief is obtained from knowledge, educational background, and past experiences. Cognitive abilities will shape a person's way of thinking, including the ability to understand related factors and use this knowledge to solve problems (Nurmala, 2018).

The selection and use of media is an important component in delivering information to the public. The media has a big influence in forming people's opinions and beliefs, therefore, the selection of the right information media can affect the knowledge and attitudes of postpartum mothers (Azwar, 2015). The audiovisual media was chosen because at the time of conducting the study, this media is relatively new, that the most of the respondents have great curiosity about it (Wawan & Dewi, 2020).

According to Cahyadi (2018), audiovisual media are teaching aids that have the form of images and sound. Audiovisual media displays image and sound elements simultaneously when consuming messages or information. The advantage of using audiovisual media is, it provides a more real picture and increases memory retention because it is more interesting and easier to remember (Cahyadi, 2018).

Based on the analysis of the researcher, the level of knowledge of the respondents about the neonatal danger signs is quite good, this shows that the respondents understand the video material presented. The impact of the mother's ignorance about the neonatal danger signs is that the mother would not aware these signs, hence they would not come to the health worker or health service. Consequently, it lead to pain, complications and even death. Therefore, health education about the neonatal danger signs from an early age is very important for pregnant women so that mothers can make an early detection.

**Conclusion and Suggestions.** The level of knowledge of pregnant women before education with video media about the neonatal danger signs is good category knowledge.

The level of knowledge of pregnant women after education with video media about the neonatal danger signs is 28 (70%) people with a good category. There is a significant increase in pregnant women knowledge about the neonatal danger signs after getting educational video with a p-value of 0.000 (<0.05).

The impact of the mother's ignorance about the neonatal danger signs is that the mother would not aware these signs, hence they would not come to the health worker or health service. Consequently, it lead to pain, complications and even death. Therefore, health education about the neonatal danger signs from an early age is very important for pregnant women so that mothers can make an early detection.

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