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OPTIMIZATION OF ANEMIA PREVENTION IMPROVEMENT AMONG TRIMESTER II PREGNANT WOMEN THROUGH EDUCATIONAL VIDEOS AT SALEMBARAN JAYA HEALTH CENTRE TANGERANG REGENCY

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Abstract

Background: Anemia is a condition in which the number of red blood cells or the capacity of red blood cells to carry oxygen is insufficient to meet physiological needs. Anemia pregnant women are pregnant women with Hb levels <11.0 g/dl who are examined at the first visit (K1). Pregnant women with anemia have a higher risk of giving birth to babies with iron deficiency anemia which can last throughout the child's early years and inhibit the growth of the child's brain cells and other body cells, resulting in delayed growth and development.
Purpose: To determine the average value and influence on the knowledge and attitudes of second trimester pregnant women before and after being given educational video counselling.
Methods: This quasi-experimental study used a one group pretest-posttest design. The sample in the study was 58 pregnant women. The sampling technique used purposive sampling. The research instrument consists of a questionnaire about questions aimed at respondents regarding anemia causes, characteristics, impact, prevention, how to overcome, treatment, good habits to prevent anemia.
Result: The results showed that there was a significant effect on the average value before and after being given educational video counselling to second trimester pregnant women at the Salembaran Jaya Health Center, Tangerang Regency.
Conclusions: Health education for pregnant women is very important so that pregnant women are expected to participate in every counselling activity to increase knowledge and attitudes to prevent anemia. characteristics, impact, prevention, how to overcome, treatment, good habits to prevent anemia.

Keywords: Anemia, Anemia in Second Trimester Pregnant Women, Educational Video

Introduction

Pregnancy is a physiological process that occurs in women as a result of fertilization between male sex cells and female sex cells. In other words, pregnancy is the fertilization of

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the ovum by spermatozoa, so that it undergoes nidation in the uterus and develops until the birth of the fetus.[1]

Pregnancy usually lasts 40 weeks or 280 days, from the first day of the last menstrual period. Pregnancy that passes 294 days or 42 weeks is a postdate pregnancy, a diagnosis of gestational age of more than 42 weeks is obtained from calculations such as the Neagle formula or with the height of the uterine fundus. Post term pregnancy has an influence on fetal development until fetal death. There are babies whose weight continues to increase at 42 weeks or more, some do not increase, some are born with less weight than they should, or die in the womb due to lack of food or oxygen. Post term pregnancy has a close relationship with mortality, perinatal morbidity, or macrosomia. Meanwhile, the risk for post term mothers can be in the form of postpartum haemorrhage or increased obstetrical procedures.[2]

Most women experience anemia during pregnancy, both in developed and developing countries. The World Health Organization (WHO) estimates that 35-75% of pregnant women in developing countries and 18% of pregnant women in developed countries experience anemia. However, many of them have anemia at the time of conception, with an estimated prevalence of 43% in non-pregnant women in developing countries and 12% in more developed countries.[3]

Anemia is a condition in which the number of red blood cells or the capacity of red blood cells to carry oxygen is insufficient to meet physiological needs. Anemia pregnant women are pregnant women with Hb levels <11.0 g/dl who are examined at the first visit (K1). Pregnant women with anemia have a higher risk of giving birth to babies with iron deficiency anemia which can last throughout the child's early age and inhibit the growth of the child's brain cells and other body cells, resulting in delayed growth and development.[4]

The impact of pregnant women who are not compliant in consuming Fe tablets and experience anemia, the impacts that can be caused include decreased immune function, increased risk of infection, decreased quality of life so that it will have an impact on miscarriage/abortion, bleeding which can result in maternal death, premature birth from 9 months, babies are born with low body weight (BB<2500gr) and short (PB<48 cm), and if the mother is in a state of severe anemia, the baby is at risk of experiencing stillbirth.

World Health Organization (WHO) the prevalence of anemia in pregnancy globally reaches 38.8% or 32 million pregnant women experience anemia and the prevalence of anemia during pregnancy in Southeast Asia reaches 48.2%. The prevalence of anemia in pregnant women in Indonesia is based on Riskesdas data for 2018, with the proportion of anemia in pregnant women in Indonesia reported at 48.9%.[4] Data from the World Health Organization (WHO) estimates that around 33% of people in the world suffer from anemia, with iron deficiency considered as the main cause, and anemia accounts for nearly 9% year to year with disability problems. It is also estimated that around the world 32 million pregnant women are anemic and 496 million non-pregnant women are anemic.

In Indonesia it is estimated that the prevalence of anemia in pregnant women is 37.1% and the proportion is almost the same between urban areas (36.4%) and rural areas (37.8%) Then the prevalence of anemia in pregnant women increased by 48.9% and the proportion was almost the same between urban (48.3%) and rural areas (49.5%).[4] Data from the Salembaran Jaya Health Center, the prevalence of anemia in pregnant women in January 2022 was 1.44%,

then it increased in the next 6 months to 4.03% and during the year the incidence of anemia in pregnant women was 4.22%.[5]

Based on the above data, efforts that can be made to increase pregnant women's knowledge about anemia are through the provision of information or health education from health workers. One of the factors that influence the health education process is the tools or media used to convey information. Media information that is conveyed in an interesting way can help recipients of the information easily receive and learn the message conveyed so that they adopt positive behavior. This states that interesting media will provide confidence, so that cognitive affective and psychomotor changes can be accelerated.[12]

Audiovisual media is a health education media that combines 2 elements, namely audio and visual. This media is a learning medium that is varied and creative so that it can increase motivation and make it more interesting to use as a media for health education. In addition, video media has a significant influence on increasing the knowledge of pregnant women. This is because pregnant women find it easier to grasp the information provided by using these 2 elements, namely audio and visual elements.[6]

Study data found that pregnant women in the Puskesmas area did not know what anemia was, the causes and signs and symptoms of anemia during pregnancy. Bearing in mind, the impact of anemia during pregnancy is one of the indirect causes of maternal death and previous research data shows that pregnant women's knowledge about anemia is still low. The results of a research reported that students were very interested in using videos by 52.08% compared to using leaflets by 41.67%, because the videos contained many pictures compared to using leaflets. Health education using video media is more effective in increasing health knowledge than using flip chart media.[11]

Methods

1. *Research design*

The research design used a quasi-experiment with the one group pre post test approach.

2. *Setting and samples*

This research was conducted at the Salembaran Jaya Health Center, Tangerang Regency in December-January 2023. The sample in this study were 58 pregnant women in the second trimester who were selected by purposive sampling with the criteria of being willing to become suspects, second trimester pregnant women who checked their pregnancies at the Salembaran Jaya Health Center.

3. *Intervention)*

The samples will be given educational video counselling.

4. *Measurement and data collection*

The data were collected using a questionnaire to assess changes in knowledge and attitudes of pregnant women consuming blood supplement tablets.

5. Data analysis;

Data analysis using univariate analysis, t test and Wilcoxon test.

Results

Table 1.
Frequency distribution of age from respondents

Variables	Videos	
	frequency	Percentage (%)
age		
20-35 Years	50	80.6
< 20 and > 35 years	12	19,4
Total	62	100

Table 2.
Frequency distribution of education characteristics of respondents

Variables	Videos	
	frequency	Percentage (%)
Education		
Low	38	61.3
High	24	38,7
Total	62	100

Table 3.
Frequency distribution of respondents' knowledge characteristics before and after being given video media

Knowledge Variables	frequency		Percentage (%)	
	Pretest	Posttest	Pretest	Posttest
Not enough	40	8	64.5	12,9
Enough	13	19	21	30,6
Good	9	35	14.5	56.5
Total	62	62	100.0	100.0

Table 4.
Frequency distribution of respondents' attitude characteristics before and after being given video media

Attitude Variables	frequency		Percentage (%)	
	Pretest	Posttest	Pretest	Posttest
Negatives < 30	53	9	85.5	14.5
Positives > 30	9	53	14.5	85.5
Total	62	62	100	100

Table 5.
The average value of knowledge and attitudes of pregnant women before and after being given counseling with video media

Variables	test	N	MeanValue	Different Means
Knowledge	Pretest	62	7.35	**3.54**
	Posttest	62	10.89	
attitude	Pretest	62	25.94	**8,27**
	Posttest	62	34,21	

Table 6.
Results of the normality test for the knowledge variable

Variables	N	mark Kolmogorov Smirnov	Asymp sig (2-tailed)
Knowledge	62	**0.094**	**0.200**

Table 7.
The average value of increasing knowledge of pregnant women before and after being given video media

Variables	test	Means	Sig (2-tailed)
Knowledge	Pretest Posttest	**-3,532**	**0.000**

Table 8.
Normality test results on the attitude variable

Variables	N	mark *Kolmogorov Smirnov*	*Asymp sig (2-tailed)*
attitude	62	**0.141**	**0.004**

Table 9.
The average value of attitude improvement in pregnant women before and after being given video media

Variables	N	Wilcoxon results Z-values	Asymp sig (2-tailed)
Attitude	62	**-6,533**	**0.000**

Discussion

Univariate Analysis

Based on univariate analysis table 1 and 2 the characteristics of the age respondents are known as the frequency the most age is 20-35 years with a total of 50 people (80.6%). Meanwhile, based on univariate analysis, it is known that the educational characteristics of the respondents are known to have a low level of education (SD-SMP) with a total of 38 (61.3%).

Age is very important in relation to a person's level of knowledge. The older a person is, the more experience he has, and vice versa. Age can also affect a person's memory and memory. The older a person is, the more knowledge will be obtained.[7]

The education level of the mother is related to the mother's knowledge and ability to understand the health information that the mother gets so that the mother can implement healthy behaviors during pregnancy.[8] The education of a person lives has an influence on increasing the ability to think, where a person with a higher education will be able to make more rational decisions, generally open to accept changes or new things compared to individuals with a lower education. The higher the education, the easier it is to live independently, creatively and sustainably.[9]

According to the researchers, the factors that influence the incidence of anemia in pregnancy are education, environmental and social factors, increasing client health professional interactions, knowledge, age, family support. In terms of trust, people who are more mature will be trusted more than people who are not mature enough. Lack of experience causes limited knowledge that the mother has. The relationship between the age of pregnant women and adherence. This is as a result of the experience and maturity of his soul. The more mature a person is, the way of thinking is more mature to make changes in behavior.

Education will influence pregnant women in choosing, evaluating and deciding something that is good for their own health and pregnancy. Sensing someone through sight and hearing will produce a knowledge. Higher education will affect a person's knowledge and tend to get easier information about health during pregnancy and its benefits so that pregnant women are more quickly motivated to improve health during pregnancy.

Based on table 3 The results obtained from 62 respondents obtained the frequency of pretest knowledge before being given video media, the level of knowledge was less than 40 pregnant women (64.5%), the level of knowledge was sufficient, 13 pregnant women (21%) and the level of knowledge was lacking, 9 pregnant women (14.5%). Meanwhile, the frequency of posttest knowledge after being given video media, the level of knowledge was lacking 8 pregnant women (12.9%), the level of knowledge was sufficient 19 pregnant women (30.6%) and the level of good knowledge was 35 pregnant women (56.5%).

In line with the theory of Notoatmodjo, which explains a person's cognitive processes to gain a sense of knowing in remembering information will be obtained from the activities carried out and it takes approximately several days to be calculated after obtaining the information. The cognitive process dimension consists of remembering, understanding, applying, analyzing, evaluating and creating. The dimensions of remembering and understanding can be obtained by memorizing more efficiently in certain circumstances. Media is a tool for education which is a channel for conveying health information.[12]

According to the researchers, learning media provides great benefits in the learning process for both instructors and respondents. Learning media functions and is useful for clarifying teaching materials, making it easier for instructors to convey and present material in a systematic, varied and structured manner, as well as providing a fun and not boring experience.

Based on table 4 The results obtained from 62 respondents obtained that the frequency of pretest attitudes before being given video media had a negative attitude of 53 pregnant

women (85.5%) and a positive attitude of 9 pregnant women (14.5%). Meanwhile, the frequency of posttest attitudes increased after being given video media had a negative attitude of 9 pregnant women (14.5%) and a positive attitude of 53 pregnant women (85.5%).

This is in line with the results of research on 2021 in South Africa that video media has the potential to be an effective health promotion tool. This provides an opportunity to enhance health promotion programs due to its low cost, ability to have virtual communities and ease of access that removes geographic barriers. This allows information to spread much more quickly and regardless of the credibility of the information source.[10]

According to researchers that attitude can be formed or learned throughout development and related to the object. In this study, the attitude of pregnant women to identify and prevent anemia in pregnancy can be influenced by the video media that has been given.

Analysis Bivariate

The results of the analysis are based on table 5 with N = 62 data it can be seen that the Kolmogorov-Smirnov value is 0.094. The Kolmogorov-Smirnov significance value shows a value of 0.200, which means that the data is normally distributed, because the significance value is > 0.05. Thus, the requirements or assumptions of normality in using the paired sample t test are met.

The results of the analysis are based on table 6 the results of the paired sample t test are determined by the significance value. The significance value (2-tailed) < 0.05 indicates a significant difference between the initial variable and the final variable. It can be concluded that there is an increase in the level of pretest knowledge before being given video media and posttest after being given video media with a mean value of -3.532 so that the result is a significant value (2-tailed) 0.000 <0.05 indicate a significant difference.

This result is in line with the previous research that reportedstudents were very interested in using a video of 52.08% compared to using a leaflet of 41.67%, because the video contains a lot of pictures compared to using a leaflet. The results of research report that health education using video media is more effective in increasing health knowledge than using flip chart media.[11]

Audiovisual media is a health education media that combines 2 elements, namely audio and visual. This media is a learning medium that is varied and creative so that it can increase motivation and make it more interesting to use as a media for health education. In addition, video media has a significant influence on increasing the knowledge of pregnant women. This is because pregnant women more easily capture the information provided by using these 2 elements, namely audio and visual elements.[6]

According to the researcher, providing counseling with video media about anemia significantly increases knowledge of pregnant women, increased knowledge can be seen from the results of the posttest after being given video media compared to the pretest before being given video media, this shows that providing health education using video media is better for understanding and understood.

The results of the analysis are based on table 7 with N = 62 data it can be seen that the Kolmogorov-Smirnov value is 0.141. The Kolmogorov-Smirnov significance value shows a value of 0.004 which means that the data is not normally distributed, because the significance

value is <0.05. Thus, the requirements or assumptions of normality in using the paired sample t test cannot be fulfilled, so the test is carried out using the Wilcoxon statistical test. In table 4.6. The results of the Wilcoxon test analysis on maternal attitudes are presented pretest before being given video media and posttest after being given video media.

The results of the analysis are based on table 8 the results of the attitude pretest before giving video media and posttest attitudes after giving video media, obtained a value of z = -6.533 and p-value = 0.000 which means "Ha is accepted" then video media is found to be effective in influencing health counseling to pregnant women about anemia at the Salembaran Health Center Jaya Tangerang Regency.

The value of Asymp.Sig (2-tailed) < 0.05, namely 0.015, that Ha is accepted, and Ho is rejected so it can be concluded that there is an increase in knowledge by counseling using video media and leaflets, where in the video media group showed better results on knowledge.

According to the researcher, it can be seen from the results of the analysis that attitudes can be formed or learned throughout development and related to the object. In this study, the attitude of pregnant women to know and prevent anemia in pregnancy can be influenced by video media that have given pregnant women more easily to understand and understand.

Limitation

Researchers realize there are limitations in the implementation of this research. The limitations of this research are the short research time and the time in filling out the questionnaire is also less efficient because the respondents are sometimes busy with their activities so that answering questions is faster so there is a possibility of bias in filling out the questionnaire.

This study used direct counseling with video media in which researchers had to collect samples from each posyandu, in this case the researchers had difficulty collecting samples because at the time of the research it required a considerable distance so with the help of the village midwife team at the Salembaran Jaya Health Center, Tangerang Regency who collects samples so that researchers can conduct counseling.

Researchers adopted the previous research questionnaire, because they had not been able to make a validated questionnaire because it required a long time. Researchers used previous research media so that there were slight differences in material such as fulfillment in order to avoid anemia having to consume fruits and vegetables. There were slight differences in what fruits and vegetables should be consumed.

Conclusion

In the results of the frequency distribution of the characteristics of the age and education of the respondents. The highest frequency of ages 20-35 years is 80.6%, while the frequency of low education is 61.3%. The pretest knowledge before being given educational videos with less knowledge was 64.5%, while the posttest knowledge score with good knowledge was 56.5%. The results of the attitude pretest before being given the educational video had a negative attitude of 85.5%, while the posttest attitude results had a positive attitude of 85.5%. The average value of pretest and posttest knowledge before and after being given an educational video was 3.54. The average value of pretest and posttest attitudes before and after

being given an educational video was 8.27. There is a significant effect of providing educational videos on the knowledge and attitudes of second trimester pregnant women.

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