



THE EFFECT OF VIDEO EDUCATION AND ANEMIA SCREENING ON PRECONCEPTIVE TREATMENT ATTITUDE OF ADOLESCENT WOMEN

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ABSTRACT

Background: Adolescent women and women of childbearing age are prospective mothers who are responsible for the quality of the babies born. In fact, most of them have poor preconception health quality because they are prone to anemia. Anemia screening is an effort to determine the Hb levels of them so that they can make efforts to prevent and treat anemia as early as possible as a form of treatment during the preconception period. Good knowledge will form good attitudes and behavior in individuals regarding the dangers of anemia and the importance of health care during the preconception period. Video is an educational medium that can increase individual knowledge and attitudes. The objective of this study is to determine the effect of video education and anemia screening on preconception care attitudes for adolescent women

Methods: This type of research is a quasi-experimental before and after with control. The study was conducted on female students at SMA 1 Al Islam Surakarta. Data analysis used statistical test dependent T-test, independent T-test, Mc Nemar, and Chi-Square with the help of SPSS.

Result: The research results show that there is a significant difference between the two groups after education with a p value = 0.021. Respondents who were given education with video and anemia screening had the opportunity to increase their attitude by 1.4 times.

Conclusion: The conclusion of this study is that video education and anemia screening are effective in improving the attitude of preconception care for adolescent women.

Keywords: Attitude, adolescent women, video, preconception

INTRODUCTION

Preconception health refers to an individual's health and lifestyle before becoming pregnant. The care received during this period plays an important role in determining the health of the mother, baby and family in the future. Preconception care is a set of interventions given before pregnancy (conception) to identify and modify biomedical, behavioral, and psychosocial

risks that affect a woman's health or pregnancy outcomes through prevention and management^[1]. Preconception care can be started when a woman has entered the fertile period which is marked by the occurrence of menarche so that she is ready to become a mother regardless of her marital status^[2].

Unfortunately, there are many data showing that most women of childbearing age had poor health and

lifestyle in the preconception period. The World Health Organization (WHO) conveys several facts, including 4 out of 10 women reported that their pregnancy was unplanned so that they were delayed in receiving essential health care in early pregnancy and 20% of maternal deaths worldwide were caused by malnutrition and iron deficiency anemia in women^[3]. Riskesdas 2018 data shows that 17.3% of women of childbearing age (WCA)'s with Chronic Energy Deficiency (CED) are not pregnant, 14.5% WCAs are pregnant, 21.8% WCAs are >18 years old obese, 32% are anemic adolescents, 48.9% are pregnant with anemia. , 9.1% of the population aged 10-18 years smoked, 28.8% of the population 18 years smoked, and 62.9% of men and 4.8% of women aged 15 years had the habit of consuming tobacco^[4].

Anemia is a health problem that often appears in the preconception period. Anemia is a condition in which the number of red blood cells is not sufficient for the body's physiological needs or a condition in which the amount of hemoglobin is deficient. Adolescent women (AW) and WCA are groups that are prone to anemia and are at risk of developing anemia during their pregnancy^[3].

Iron deficiency is known as the most common cause of anemia in rheumatism and WCA. This is due to the large amount of iron lost during menstruation, which is exacerbated by the lack of iron intake in Rheumatology and WCA, whereas during pregnancy, the body requires three times more iron to meet the needs of the placenta and growing fetus^{[5][3]}.

Screening or early detection is a way to identify an individual who is still asymptomatic suffering from a disease or not. Screening allows an individual to know his health condition as early as possible so that treatment for poor health conditions can also be provided as early as possible. Screening is one source of

information for an individual. Notoatmodjo (2012) stated that a person's knowledge is influenced by the information he or she obtains. An individual's knowledge will affect the attitude and behavior^[6].

Health education is an effort that can be used to shape a person's knowledge, attitudes, and individual behavior. Media plays an important role in determining the success of a health education. Educational media must be able to provide information according to the level of target acceptance. More memory retention is produced when the media used involves more of the five senses, for example videos that involve the senses of sight and hearing together^[6]. This study aims to determine the effect of video education and anemia screening on attitudes towards preconception care for Adolescent Women.

METHOD

This study is a quantitative study with a quasi-experimental design before and after with control involving two groups, namely the intervention group and the control group. The intervention group was the group that was provided video education and anemia screening, while the control group was the group that was provided education with booklets and anemia screening. The study began by distributing pretest questionnaires to both groups, followed by anemia screening, the results of which would be submitted to both groups. Then, respondents were provided education with videos (intervention group) and booklets (control group). Education was provided one (1) time each with the assistance of the research team in each group.

This research was conducted at SMA 1 Al Islam Surakarta in September 2020-August 2021. The study population was all AW in Surakarta. This research was conducted on 60 students of class IX SMA 1 Al Islam Surakarta which were divided into two groups, namely the

intervention group (30 students) and the control group (30 students). The research groups and subjects were selected using a simple random sampling technique. The instruments used in this study were the Hb strip, easy touch CGHb, and attitude questionnaire. Hb strips and easy touch CGHb were used to obtain data on respondents' Hb levels. An attitude questionnaire was used to determine the attitude of adolescent women and WCA about anemia in preconception health which was established using a Likert scale with four answer choices. This questionnaire was formulated by the researcher himself based on the WHO preconception care guidelines^[7] and WHO preconception care related to anemia^[3].

Validity and reliability tests were performed on the attitude questionnaire before the research was conducted with the results that there were 15 valid attitude items with a reliability value of 0.86. This research has received approval from the Health Research Ethics Committee of Universitas Kusuma Husada Surakarta with number 038/ UKH.L.02/EC/IX/2020.

The data were analyzed by using the dependent T-test to determine the difference in attitudes before and after the intervention because the data were normally distributed. Meanwhile, differences in attitudes between groups were analyzed using the dependent T-test because the data were normally distributed. The magnitude of the effect of screening and video education on improving respondents' preconception care attitudes is identified through the Chi Square test.

RESULT

Table 1. Attitudes Before Intervention

Variable (Score 100)	Group		Score p
	Interventi on	Control	
	n = 30	n = 30	
Attitude			0,267*
Mean	70,94	68,94	
SD	7,4	6,38	

Information: *) Uji Independent T-Test

Table 1 shows that the attitude of preconception care between the two groups before education did not show a significant difference with a p value > 0.05, meaning that the research subjects were homogeneous and deserved to be compared.

Table 2. Attitude Before and After Education

Attitude (Score 100)	Group	
	Intervention n = 30	Control n = 30
Before Education		
Mean	47,67	44,67
SD	18,7	16,9
After Education		
Mean	89,06	71,00
SD	6,68	14,7
Score p	0,000*	0,000*

Information: *) Dependent T Test

Table 2 shows that there was a significant increase in attitude before and after education in both groups with p-values in the intervention and control groups respectively 0.000 and 0.000.

Table 3. Improved Attitude After Education between The Two Groups

Sikap (Skor 100)	Kelompok		Nilai p*
	Intervensi n = 30	Kontrol N = 30	
Before Education			
Mean	47,67	44,67	
SD	18,7	16,9	
After Education			
Mean	89,06	71,00	
SD	6,68	14,7	0,000*
Rank (%)	89,36	57,7	0,014*

Information: *) Independent T-Test

Based on table 3, it is identified that there is a significant difference in attitude improvement between the two groups with p value = 0.014. In the intervention group, there was an increase in attitude of 89.36%, while in the control group there was an increase of 57.7%.

Table 4 Effect of Video on Respondents' Attitudes After Education

Attitude	Group		Nilai p*	RR (95%CI)
	Intervention n = 30 (%)	Control n = 30 (%)		
Before Education				
Good	14 (46,7)	8(26,7)	0,021	Less: 0,200 (0,048–0,837)
Less	16 (53,3)	22 (73,3)		
After Education				
Good	28 (93,3)	20 (66,7)	0,021	Good: 1,400 (1,068 – 1,835)
Less	2 (6,7)	10 (33,3)		

Information: *) Uji Chi-Square

Based on table 4, it is known that there is a significant difference between the two groups after education with a p value = 0.021. Respondents who were given anemia screening and education with video had the opportunity to increase their attitude by 1.4 times compared to respondents who were given anemia screening and education with booklets.

DISCUSSION

1. Attitude of Preconception Care Before Intervention

Table 1 shows that the attitude of preconception care before education between the intervention group and the control group has a p value > 0.05, meaning that the research subjects are homogeneous and worth comparing.

Nuryadi (2017) explained that homogeneous data is a collection of data that has the same characteristic conditions at the beginning of the study, meaning that a collection of data comes from a population in conditions which diversity is not much different [8]. The results of the analysis in table 1 explain that before the intervention was given, the attitude of preconception

care between the two groups was in the same class.

In this study, the attitude of preconception care that was measured was the attitude of preconception care in an effort to prevent and treat anemia, including attitudes towards the time of starting preconception care and attitudes towards efforts to prevent and treat anemia.

2. Attitude Before and After Education

Preconception care is a series of interventions given before pregnancy (conception)[1]. Preconception care is related to women's perception and acceptance of preconception results[9]. Perception will affect individual attitudes and behavior[10]. Attitude is an individual's tendency to react to an object in a certain way[11]. Attitude is obtained by an individual based on experience/knowledge gained after involving the five senses[6].

The results of the analysis in table 2 show a significant increase in positive attitudes before and after education in the intervention group and control group with p = 0.000 and p = 0.000, respectively. Before being provided education, the average positive attitude in each intervention and control group was 47.67. Meanwhile, after being provided education, the average positive attitude in the intervention and control groups increased to 89.06 and 71.00 respectively.

This is in accordance with Mareta's research (2019) which states that video education can increase WCA knowledge and attitudes about preconception health[12]. Research conducted by Sarahlawrence (2017) also asserted that videos are considered effective in educating patients and improving patient attitudes towards cfDNA prenatal screening[13].

Video is one of the audiovisual media. About 75-87% of knowledge is

mostly obtained through the senses of the eye^[6]. The intervention group in this study was the group that was provided anemia screening and education with video media, while the control group was the group that was provided anemia screening and education with booklets.

3. Improved Attitude After Education Between The Two Groups

The results of the Independent T-Test in table 3 show that there is a significant difference in attitude improvement between the two groups with p value = 0.014. In the intervention group, there was an increase in attitude of 89.36%, while in the control group, there was an increase of 57.7%. It is in accordance with research by Muyassaroh (2020) which explained that there is a significant difference in the attitude of premarital anemia between the group that was provided education with video and the group that was given booklets with a p value of 0.005. Audiovisual media is one of the health education media that contains elements of sound and images that can be seen by users, for example video^[6].

The use of video media in this study allowed respondents to receive information by involving more senses than the control group, which was only given education through booklets. An individual has the ability to remember 10% of what he reads, 30% of what he sees, and 50% of what he sees and hears^[6]. It can be proven through table 5.3 which shows that although there was an increase in positive attitudes in both groups, the increase in attitudes that occurred in the intervention group was greater (89.36%) than the control group (57,7%.).

4. Effect of Screening and Video on Respondents' Attitude After Education

Video is one of the audiovisual educational media that allows users to see objects that normally cannot be seen, describe an object in detail, and allow users to watch information given repeatedly^[14].

The results of the analysis in table 4 display that there is a significant difference between the two groups after education with a p value = 0.021. Respondents who were provided screening and education with video had the opportunity to experience an increase in attitude by 1.4 times compared to respondents who were provided screening and education with booklets. It is in accordance with Natalansyah's research (2020) which shows that there are significant differences in attitudes after education between the Video and booklet groups with a p value of 0.038. In the study, it was stated that the group that was provided education with Wondershare Video had a 3.05 times chance of having a positive attitude towards Jumantik compared to the group that was provided education with booklets^[15]. P Another study conducted by Kapti (2013) also stated that counseling performed with audiovisual media was more effective than leaflets in improving mothers' attitudes about healing diarrhea with p value = 0.036^[16].

The use of video media in this study makes the delivery of information during education more interesting. In this video, information is provided by displaying motion, sound, and images so that the information can be received better by the respondents. In Muyassaroh's research (2020), it is stated that video media has several advantages, which are it can be repeated, messages are delivered faster and clearer, easier to remember, and

able to encourage and increase user motivation to keep watching because it is more interesting^[17].

The use of booklets in this study also led to an increase in preconception care attitudes in respondents. However, the increase in attitude caused is less effective when compared to Video. As one of the media for health education, booklets have several advantages, which is that they can be studied repeatedly, are interesting, and contain more information, but booklets only involve one (1) sense of sight, which is the sense of sight, compared to videos that are able to involve many senses, that are the senses of sight and hearing in their use so that according to the theory that in this study, the change in attitude caused in the group provided booklet education was lower than the group provided video education. Notoatmodjo (2012) stated that an individual will be able to remember 10% of what he reads, 30% of what he sees, and 50% of what he sees and hears^[6].

Furthermore, the provision of anemia screening in both groups in this study also provided additional information for respondents regarding anemia. Respondents become aware of their health status, so it is hoped that they can improve their attitudes towards preconception care. It is in accordance with Yulivantina's research (2020) which revealed that preconception screening can reduce risk and promote a healthy lifestyle to prepare for a healthy pregnancy^[18]. Dean et al (2014) asserted that preconception screening provides information to WCA and health workers about the physical and emotional health status of the WCA so that it can be the basis for the importance of changing attitudes and preconception behavior in the WCA^[7].

CONCLUSION

Conclusions in this study include:

- a. There was an increase in preconception care attitudes after video education and anemia screening on Adolescent Women (AW) at SMA 1 Al Islam Surakarta.
- b. There is an effect of video education and anemia screening on the attitude of preconception care for Adolescent Women (AW) at SMA 1 Al Islam Surakarta.
- c. Respondents who were provided education with video and anemia screening had the opportunity to experience an increase in attitude by 1.4 times compared to respondents who were provided anemia screening and education with booklets.

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