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Video as an Educational Medium for Preparation for Childbirth in Primigravida in the Archipelago

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ABSTRACT

Pregnancy and childbirth for primigravida mothers are very special and are very much awaited. A pregnant woman must obtain much information about preparation for childbirth when checking her pregnancy at a health facility. However, due to limited access, pregnant women in the archipelago region do not get information about preparation for childbirth. One of the innovations so pregnant women in the islands can reach that information on childbirth preparation is providing information through video. This delivery preparation video can be accessed by primigravida mothers with their families at home so that they are expected to be physically and mentally ready to face the labor process. This study aimed to determine the effect of childbirth preparation videos on readiness for childbirth in primigravida pregnant women in the third trimester. This research was quasi-experimental with a nonequivalent control group design. The research was conducted at one of the Public Health in Tanjungpinang. The population was primigravida pregnant women in the third trimester, consisting of 60 respondents with the purposive sampling technique. The sample was divided into 2 groups; 30 respondents in the treatment group and 30 respondents in the control group. The results showed differences in the post-test readiness scores of the treatment and control groups with a p-value <0.000. The delivery preparation video is hoped to be developed as alternative information in midwifery services in archipelagic communities, especially for pregnant women preparing for childbirth.

Keywords: preparation for labor; primigravida; islands; video

INTRODUCTION

The Maternal Mortality Rate (MMR) in the Riau Islands Province in 2019 was 98 per 100,000 live births (41 maternal deaths/41,689 live births multiplied by a constant 100,000). The MMR achievement in 2019 was better than in 2018, which was 120 per 100,000 live births. Based on the number of maternal deaths, there was also a decrease from 51 cases in 2018 to 41 cases in 2019. Meanwhile, the infant mortality rate (IMR) was 6.4 per 1,000 live births. These numbers are considered very low compared to National IMR data based on the 2017 Indonesian Demographic and Health Survey (IDHS), which is 32 per 1,000.(1)

Health workers must handle the causes of maternal and infant mortality from a medical aspect. Meanwhile, non-medical causes in archipelagic areas require cross-sectoral involvement in their handling, including geographical, socio-cultural, educational, transportation, economic, and so on. The most significant causes of maternal death include bleeding, eclampsia, infection, prolonged labor, and miscarriage. Infant mortality is mostly caused by low birth weight (LBW), breath difficulty at birth, and infection, which occurs during the newborn period with an age range of 0-28 days.(2)

The government is promoting a program to decrease MMR and IMR by increasing the coverage of deliveries assisted by health workers and handling maternal and neonatal emergencies based on standards and on time, which can be assessed through the Maternal Perinatal Audit (AMP). Furthermore, the efforts to accelerate the reduction of maternal and infant mortality can be done by increasing the coverage and quality of maternal and child health services, such as empowering families or communities to increase their knowledge and independence by births planning.(1) Health workers play an essential role in providing health education to pregnant women to be able to maintain their pregnancy and prepare for delivery so that they can anticipate early the maternal and neonatal emergencies that may occur.(3) All pregnant women must know and understand the knowledge of childbirth preparation, especially primigravida. Most primigravida mothers have a low level of knowledge about childbirth because they do not have sufficient experience. Lack of knowledge of primigravida mothers about preparation for childbirth will have a dangerous impact on the mother and fetus. In this case, as the community's front liner of health services, midwives are expected to provide as much information as possible to pregnant women, especially primigravida.(4)

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The pregnant women in the island area are less informed about preparation for childbirth due to limited access.[1] One of the innovations to make pregnant women in the archipelago reach the information on childbirth preparation is providing information through video. This delivery preparation video can be accessed by primigravida mothers with their families at home so that they are expected to be physically and mentally ready to face the labor process.[5]

From the conditions above, the researcher is interested in making a video of childbirth preparation for primigravida mothers to make it easier for them to understand what childbirth preparation is. It is online so that it can be accessed anytime and anywhere. It is hoped that this delivery preparation video can help mothers reduce maternal confusion during delivery and increase the likelihood that mothers will receive standardized care.

METHODS

This quantitative study used a descriptive correlational design with a quasi-experimental approach 6. The population in this study were all third-trimester pregnant women (28 to 42 weeks gestation) who had their pregnancy checked Melayu Kota Piring Health Center. Sampling using the purposive technique with certain considerations and criteria that were applied based on the research objectives. The sample was divided into 2 groups; 30 respondents in the treatment group and 30 in the control group. The instrument used in this study was a questionnaire on respondents' characteristics and readiness to face childbirth. The data analysis technique used the normality test. The statistical analysis using the Wilcoxon and Mann-Whitney Test.

RESULTS

Respondent's Characteristics

This study was conducted on 60 third-trimester primigravida mothers at the Melayu Kota Piring Health Center, which were divided into 2 groups that met the criteria. The treatment group was given the delivery preparation videos, and the control group was not given the video. The comparison included age, occupation, and education.

Table 1. Characteristics of respondents

Characteristics	Group			
	Treatment		Control	
	n=30	%	n=30	%
Age				
<20 years	3	10	1	3.3
20-35 years old	22	73.3	22	73.3
>35 years old	5	16.7	7	3.3
Work				
Doesn't work	10	66.7	7	23.3
Working	20	33.3	23	76.7
Education				
Elementary school	1	3.3	6	20
Junior high school	15	50	13	43.3
Senior high school	4	13.3	3	10
College	10	33.3	8	26.7

Table 1 shows that most of the ages of the treatment group and the control group were in the range of 20-35 years old (73.3 %). The employment status in the treatment group was mostly working (66.7%), and the highest educational status in the treatment group was junior high school graduate (50%). For the control group, the work status was more dominant in working mothers (76.7%), and for the education status in the control group, the highest was Junior Highschool graduates (43.3%).

Differences in Readiness Scores for Pretest and Posttest Labor in the Treatment Group

The different results in the readiness to face childbirth in the treatment group are presented in the table 2. Table 2 shows that the negative difference between the pre-test and post-test readiness scores was 0, so there was no decrease in readiness from pre-test to post-test scores. There were 30 positive data, which means that 30 respondents in the treatment group experienced an increase in their readiness to face childbirth. The mean rank or the average increase was 16.5, while the number of positive ranks was 475.00. Based on the results of the

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Wilcoxon Test, it was known that the p-value was 0.000 (<0.05), so there was a difference between the pre-test and post-test values in the treatment group. It can be concluded that there was a difference between the pre-test and post-test values in the treatment group.

Table 2. Differences in treatment group scores

	n	Mean rank	Sum of rank	p
Negative rank	0 [a]	0	0	*0.000
Positive rank	30 [b]	16.5	475.00	
Ties	0 [c]			
Total	30			

a. Posttest < Pretest
b. Posttest > Pretest
c. Posttest = Pretest
* Wilcoxon test

Differences in Readiness Scores for Pretest and Posttest in the Control Group

The different results in the readiness to face childbirth in the control group are presented in the table 3.

Table 3. Differences in control group score

	n	Mean rank	Sum of rank	p
Negative Rank	0 [a]	0	0	*0.000
Positive Rank	27 [b]	15.5	415.00	
Ties	3 [c]			
Total	30			

a. Posttest < Pretest
b. Posttest > Pretest
c. Posttest = Pretest
* Wilcoxon test

Table 3 shows that the negative difference between the pre-test and post-test readiness scores is 0, so there is no decrease in readiness from pre-test to post-test scores. There are 27 positive data, which means that 27 respondents in the treatment group experienced an increase in their readiness to face childbirth. The mean rank or the average increase is 15.5, while the number of positive ratings is 415.00. Based on the results of the Wilcoxon test, the p-value is 0.000 (<0.05), so there is a difference between the pre-test and post-test values in the control group. It can be concluded that there is a difference between the pre-test and post-test values in the control group.

Differences in Posttest Scores for Readiness to Face Labor between the Treatment Group and the Control Group

The different results in the post-test scores for readiness to face childbirth in the treatment group and the control group is presented in the table 4.

Table 4. Differences in Post Test Scores in the Treatment Group and the Control Group

Group	n	Average posttest score	p
Treatment	30	43.07	*0.000
Control	30	16.93	
Total	60		

* Mann Whitney Test

Table 4 shows that the average post-test score for the treatment group was greater than the control group, which was 43.07. From the output of the Mann-Whitney test, the p-value is 0.000 or less than the probability value of 0.05. Thus it can be concluded that video preparation for childbirth affects readiness for childbirth in third-trimester pregnant women. Improving delivery readiness is an action plan made by mothers, family members, and health service providers to improve maternal and fetal health. Efforts to improve maternal readiness for childbirth are critical both physically and psychologically so that delivery runs smoothly; therefore, mother and baby are safe.

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DISCUSSION

Age factors are very influential on the readiness of pregnant mothers to face childbirth. The younger the mother's age, the less attention and pregnancy experience they have because of the mother's unpreparedness to accept a pregnancy. Data on the characteristics of respondents showed that most of the treatment group and control group were in the range of 20-35 years (73.3%). The ideal age for motherhood is 20-35 years old because the risk of facing medical complications is lowest in this period of a woman's life. If a woman decides to get pregnant outside this age range, she is vulnerable to experiencing a high-risk pregnancy, both physically and psychologically. Pregnancy over the age of 35 years will pose a greater risk. [7]

Pregnant women who work will have time to prepare for childbirth, especially if the mother works outside the home; it will take up much time it will affect her delivery readiness. [7] The work status in the treatment group mainly was working (66.7%) as well as in the control group, most of them were working (76.7%); from the data pf respondent' charactheristic on work, pregnant women have higher chances in getting information about preparation for childbirth through digital media, or information from outsiders.

The higher a person's education, the better his knowledge; the mother's education level also determines whether someone quickly absorbs and understands the knowledge they gain. Most of the education in the treatment group graduated from junior high school (50%), and in the control group, most graduated from junior high school (43.3%). The results of the data on the respondent's education indicate that the level of education plays a vital role in a person's ability to obtain information, including information related to preparation for childbirth.

Factors that cause readiness to face childbirth are the lack of knowledge of pregnant women. It is suggested for pregnant women, especially in the first pregnancy, to seek and explore information related to physical and mental health during pregnancy, childbirth, postpartum, and baby care. [8] This information should be provided by professional and experienced personnel so that the information is obtained correctly. One of the innovations that can be done to gain this information is using video related to delivery preparation which includes preparation of the estimated delivery date, birth attendants, sites, funds, vehicles, donors, and equipment for mother and baby. Thus the delivery of messages can be better captured and understood by pregnant women wherever and whenever it can be accessed. This is in line with the results of this study; 30 positive data, which means that 30 respondents in the treatment group who were given health education through childbirth preparation videos experienced an increase in their readiness to face childbirth, with the average value of the increase being 16.5. [9]

Health education is an activity to convey health messages to the public, groups, or individuals to gain knowledge about good health 6. However, in the control group, the researchers did not provide information related to childbirth preparation via video but were allowed to seek information about childbirth preparation through other media, such as the Maternal and Child Health book (KIA) or called "the pink book". There are 27 positive data, which means that 27 respondents in the control group experienced an increase in their readiness to face childbirth with an average increase of 15.5. This value is lower than the treatment group who received education on childbirth preparation through video, with an average score of 16.5. Thus the treatment group was better prepared to face childbirth. Media education plays an essential role in increasing knowledge and sources of information. With the modification of media in the form of videos, will further increase the level of knowledge and is expected to reduce maternal and infant morbidity and mortality. [9]

Planning for labor preparation is expected to reduce maternal anxiety and fear when facing labor and increase mothers' possibility of receiving appropriate and on-time care. [8] One of the effective media used to convey educational messages is audio-visual media such as video. This audio-visual method provides real experience to the mothers because they can see and hear directly the things they learn. Video will help provide information to mothers because health messages can be conveyed more clearly so that pregnant women will better understand what processes they will experience. [10]

Based on previous research, health education affects third-trimester primigravida mothers regarding childbirth with videos of facing childbirth anxiety. Educational media about childbirth can be varied to increase understanding and affect the anxiety of third-trimester pregnant women who will go through the labor process 9. This study is in line with another study that examined the readiness of primigravida pregnant women in the third trimester for childbirth as measured using a readiness questionnaire for childbirth. The results showed that there were differences in the readiness for labor in the treatment group who were given birth preparation education using video, and the control group was allowed to learn about childbirth preparation from the MCH handbook or find information on their own. The average post-test score in the treatment group was greater than the control group (43.07) with a p-value of 0.000 (<0.05), thus it can be concluded that there is an effect of providing educational media for childbirth preparation videos on readiness to face labor in third trimester primigravida pregnant women.

The use of video as the latest educational tool that began to be developed along with technological advances. Education through video media has advantages in providing good visualization to facilitate the process of absorbing knowledge in pregnant women by improving the quality of maternal and child health.

CONCLUSION

There is an effect of video preparation for childbirth on readiness to face labor in third-trimester primigravida pregnant women. In future research, it is recommended that educational media for childbirth preparation can be developed using applications that can be accessed online by pregnant women anywhere, including pregnant women in the archipelago.

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