

## Differences in the Knowledge of Pregnant Women About Nutrition During the Covid-19 Pandemic with Leaflet Media Video Media at the Meureubo Health Center, Meureubo District, West Aceh Regency

<sup>1</sup>Yushida, <sup>2</sup>Gustiana, <sup>3</sup>Cut Nurhasanah

<sup>1</sup>Department of Midwifery, Politeknik Kesehatan, Kementerian Kesehatan, Meulaboh 23611, Indonesia

<sup>2,3</sup>Department of Midwifery, Politeknik Kesehatan, Kementerian Kesehatan, Aceh 23231, Indonesia

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### ABSTRACT

The Coronavirus pandemic has impacted the health sector, including the nutritional status of pregnant women. The low level of knowledge of pregnant women about nutrition is one of the causes of malnutrition. The nutritional status of pregnant women before and during pregnancy can affect the growth of the fetus being conceived. This study aimed to determine the knowledge of pregnant women about nutrition during the Covid-19 period using the leaflet and video method at the Meureubo Health Center, Meureubo District, West Aceh Regency. Research design The study design was cross-sectional. The sample of this study was 72 people who were taken using the accidental sampling technique. The analysis was used in the univariate analysis and bivariate analysis. The results showed that the video media and leaflet media influenced the knowledge of pregnant women about nutrition during the covid 19 pandemics at the Meureubo Health Center.

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#### E-mail:

[yushida@poltekkesaceh.ac.id](mailto:yushida@poltekkesaceh.ac.id)  
[gustiana@gmail.com](mailto:gustiana@gmail.com)  
[nurhasanah.cut@gmail.com](mailto:nurhasanah.cut@gmail.com)

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## 1. Introduction

The 2019 Coronavirus Disease (COVID-19) pandemic has shocked world health authorities resulting in a global health crisis [1]. The entry of the coronavirus in Indonesia has had a significant impact on people's lives, starting in the economic, social, religious life and the world of health. Indonesia first reported a positive case of COVID-19 on March 2, 2020 [2]. Indonesia is one of the countries that has been exposed to the Covid-19 virus very quickly, causing the number of positive COVID-19 patients to continue to increase. The Indonesian government has made policies to reduce the spread of the virus, one of which is reducing interactions between individuals by limiting a distance of 1 meter for each individual. Coronavirus disease (COVID-19) is caused by the SARS-CoV-2 virus. Most people who contract COVID-19 will experience mild to moderate symptoms and recover without special treatment. However, some people will become seriously ill and require medical assistance. COVID-19 has increased anxiety, insecurity, and stress levels among women during pregnancy and after delivery [3]. After the COVID-19 outbreak, pregnant women are reported to experience anxiety often because reports of confirmed cases of COVID-19 are increasing every day [4].

Several studies have shown that pregnant women are more susceptible to SARS-CoV-2 infection than the general population of pregnant women [5]. Scientists have also shown that pregnant women with COVID-19 symptoms are more likely to experience spontaneous preterm birth than healthy women [6]. Anxiety levels are higher in women during the first trimester of pregnancy compared to the second and third trimesters [7]. Pregnancy is a period of growth and

development of the fetus towards the time of birth, so nutritional disorders that occur during pregnancy will significantly impact the health of the mother and fetus. Good nutrition and nutrition during pregnancy help pregnant women and fetuses stay healthy. Most pregnant women report adverse lifestyle changes during the COVID-19 pandemic. Interventions during a pandemic to optimize health behavior in pregnant women, especially pregnant women with pregnancy complications, must address economic weaknesses and social support [8].

A low level of nutrition knowledge is one of the causes of malnutrition during pregnancy. The nutrition of pregnant women is an important thing that must be met during pregnancy. Good nutrition and nutrition during pregnancy help pregnant women and fetuses stay healthy. Most pregnant women report adverse lifestyle changes during the COVID-19 pandemic. Malnutrition in pregnancy causes health problems for the mother and baby in infants, including falling, getting sick quickly, being susceptible to infection, and eye and bone disorders. While in the mother can cause anemia and decreased milk production [9]. Efforts to prevent disease by improving nutrition can be made by providing food with balanced nutrition to pregnant women. One method of socialization in increasing nutritional knowledge during pregnancy is video media. Multimedia, especially video, has audiovisual elements, which are very effective tools in the teaching and learning process. The use of proportional multimedia video can be a solution for a simultaneous, effective and efficient learning process in the context of socializing the increase in knowledge of pregnant women. Health education through video media is effectively used to increase one's knowledge [10]. The use of audiovisual media is effective because there is an increase in the knowledge and attitudes of mothers after being given treatment by providing health education through video media [11].

The selection of this video media is considered appropriate because the message conveyed is in the form of images and audio, making it easier for the subject to receive the message. The behavioral changes expected from this social marketing activity are indeed not easy. Therefore the message conveyed must be easily understood by the audience. The concept of video content to be made is that the target adopter or audience exposed to this message is expected to have changes in cognition and belief so that they can determine attitudes. Based on an initial survey conducted by researchers on eight pregnant women visiting the Meureubo Health Center, 6 of the pregnant women admitted that they did not know about nutrition in pregnant women during the covid 19 pandemic. Based on the explanation above, this study's purpose was to analyze pregnant women's knowledge about nutrition during the Covid -19 period using the leaflet and video method at the Meureubo Health Center, Meureubo District, West Aceh Regency.

## 2. Methods

This research is an experimental type of research in the form of a proper experimental design to know the differences in knowledge of pregnant women about nutrition during the covid 19 pandemic by using leaflets and video media in Meureubo District, West Aceh Regency in 2020. The design of this study was Posttest only. Control group design is an experimental design carried out on two different groups that receive treatment using different media. The first group received health education treatment using leaflet media, and the second group was given health education treatment using video. Sampling in this study is accidental sampling, done by taking respondents who happen to be there or available when conducting research, namely in June. Roscoe's (1974) theory provides guidelines for determining the sample size. Quantitative is a minimum sample of 30; each sample is selected based on accidental sampling. The number of samples obtained from the calculation is 72 people. The sampling method is using accidental sampling. Data analysis was carried out using univariate analysis; the data was collected in the form of a frequency distribution which includes the frequency distribution of knowledge of pregnant women about nutrition during the covid 19 period using leaflet media. Bivariate analysis was conducted to determine differences in knowledge of pregnant women about nutrition by using leaflets and video media. Before the statistical test was carried out, the data normality test was carried out. The normality test of this data using the Shapiro Wilk test was adjusted for a small research sample. Testing the difference in knowledge of pregnant women about nutrition using leaflet media and video media, if the data obtained with expected results on the normality test, then proceed with using the Paired Sample T-Test and independent sample t-test, but if the results of the normality test data are not distributed normally, then the test is carried out further using the Wilcoxon and Mann Whitney test, namely to

determine the difference between the two variables.

### 3. Results and Discussion

#### 3.1 Result

The research was conducted at the Meureubo Public Health Center Meureubo District, West Aceh Regency, for two weeks, from February to March 2021. The sample of this study was 72 respondents consisting of pregnant women in the first, second and third trimesters who were willing to sign an informed consent. The results obtained were then processed using the SPSS program to obtain univariate and bivariate analyses.

**TABLE 1.**

DISTRIBUTION OF LEAFLET MEDIA FREQUENCY IN PREGNANT WOMEN

No	Media Leaflet	F	%
1	Well	12	33.3
2	Enough	18	50
3	Not enough	6	16.7
	Total	36	100

**TABLE 2.**

FREQUENCY DISTRIBUTION OF VIDEO MEDIA IN PREGNANT WOMEN

No	Video Media	f	%
1	Well	26	72.2
2	Enough	7	19.4
3	Not enough	3	8.4
	Total	36	100

#### a. Bivariate Analysis

**TABLE 3.**

SHAPIRO-WILK MEDIA LEAFLET NORMALITY TEST FOR PREGNANT WOMEN

Media Leaflet	Shapiro-Wilk		
	Statistics	df	Sig
Media Leaflet	0.891	36	0.002

The normality test of this data uses the Shapiro Wilk test because it is adjusted for a small research sample. Based on the normality test in table 4. 3, the distribution of leaflet media data on pregnant women at the Meureubo Health Center obtained a significance value of 0.002. Because the significance value is less than 0.05, the data is considered not normally distributed.

**TABLE 4.**

SHAPIRO-WILK NORMALITY TEST FOR VIDEO MEDIA ON PREGNANT WOMEN

Video Media	Shapiro-Wilk		
	Statistics	df	Sig
Video Media	0.847	36	0.000

Based on the normality test on the distribution of video media data, a significance value of 0.000 was obtained. Because the significance value is less than 0.05, the data is considered to be not normally distributed. If the data obtained are typically distributed, the test to assess the level of knowledge of the *pretest* and *Posttest* uses the *Paired Sample T-Test*, and to determine the difference between leaflet media and video media using the *Independent t-Test test*. However, if the data distribution is not normally distributed, the *Wilcoxon* test is used to test the *pretest* and *posttest* values. Moreover, the Mann-Whitney test was used to differentiate the value of leaflet media from video media. The normality test results of leaflet media and video media in this study obtained that the data were not normally distributed; therefore, the

following difference test used the *Mann Whitney Test*.

**TABLE 5.**  
PRETEST AND POST-TEST OF LEAFLET MEDIA ON MOTHER'S KNOWLEDGE PREGNANT

Mean Rank Knowledge of Pregnant Women Using Leaflet Media		Z	Sig. (2- tailed )
Pretest	Posttest		
10.61	9.50	- 3,522 b	0.000

Table 5 above shows that the *pretest* and *posttest values* of leaflet media on knowledge of pregnant women at the Meureubo Health Center have a significance value of  $p = 0.000$  or  $p < 0.05$ , so it can be concluded that there is a significant difference in knowledge of pregnant women about nutrition during the covid 19 pandemic before and after counseling, using Leaflet media for pregnant women at the Meureubo Health Center.

**TABLE 6**  
PRETEST AND POST-TEST OF VIDEO MEDIA ON MOTHER'S KNOWLEDGE PREGNANT

Mean Knowledge of Pregnant Women Using Video Media		Z	Sig. (2- tailed )
Pretest	Posttest		
10.61	9.50	- 3,522 b	0.000

Based on table 6 above shows that the *pretest* and *post-test values* of Media Video on knowledge of pregnant women at the Meureubo Health Center have a significance value of  $p < 0.05$ , namely  $p = 0.000$ , it can be concluded that there is a significant difference in knowledge of pregnant women about nutrition during the covid 19 pandemic before and after counseling using video media for pregnant women at the Meureubo Health Center.

**TABLE 7**  
DIFFERENCES IN VIDEO MEDIA AND LEAFLET MEDIA ON KNOWLEDGE OF PREGNANT WOMEN

Mann Whitney				
Knowledge of Pregnant Women	df	Mean Ranks	Sum of Ranks	asympt. Sig. (2- tailed )
Media Leaflet	36	29.67	1068	0.002
Video Media	36	43.33	1560	

Table 7 shows the difference values leaflet media and video media for pregnant women at the Meureubo Health Center have a significance value of 0.002, or  $p < 0.05$ , so it can be concluded that there is a significant difference in the knowledge of pregnant women about nutrition during the COVID-19 pandemic by using leaflets and video media. Based on the results of the research above, the *pretest* and *post-test values* of Leaflet Media on knowledge of pregnant women at the Meureubo Health Center have a significance value of  $p = 0.000$  or  $p < 0.05$ ; it can be concluded that there is a significant difference in knowledge of pregnant women about nutrition during the covid 19 pandemic before and after counseling using Leaflet media to pregnant women at the Meureubo Health Center. Based on the results of the research above, it shows that the *pretest* and *post-test values* of Media Video on knowledge of pregnant women at the Meureubo Health Center have a significance value of  $p < 0.05$ , namely  $p = 0.000$ , it can be concluded that there is a significant difference in knowledge of pregnant women about nutrition during the covid 19 pandemic before and after counseling using video media for pregnant women at the Meureubo Health Center. Mann Whitney Test performed shows the value of the difference between leaflet media and video media for pregnant women at the Meureubo Health Center has a significance value of 0.002, or  $p < 0.05$ , so it can be concluded that there is a significant difference in the knowledge of pregnant women about nutrition

during the COVID-19 pandemic by using leaflets and video media.

### 3.2 Discussion

Based on the research results above, there are differences in knowledge of pregnant women about nutrition during the covid 19 pandemic before and after counseling using leaflet media for pregnant women at the Meureubo Health Center. Leaflet media can be an essential vehicle for providing information to raise awareness regarding pregnancy during the COVID-19 pandemic. Several factors, including education, influence knowledge.

The higher a person's education, the easier it is for them to receive information, and in the end, the knowledge they have will be more and more. Media Leaflets provide public awareness of obstetrics and malnutrition danger signs, including reducing maternal mortality [12]. Public reliance on media (radio, television, social networking sites) offers a unique tool for conveying health-related information and raising health awareness [ 13]. Therefore, the mass media can play an essential role in informing the public about obstetric danger signs and possible actions, including suggesting the right place to manage these danger signs during the COVID-19 pandemic. The study results also found that there were differences in knowledge of pregnant women about nutrition during the covid 19 pandemic before and after counseling using video media for pregnant women at the Meureubo Health Center. The use of video media in education about anemia among pregnant women is one of the health promotions to increase compliance. Health education is the application or application of education in the health sector. A video is an educational tool that aims to convey health messages by stimulating the senses of sight and hearing.

The use of video media in providing health education is considered very appropriate to convey health messages to pregnant women regarding nutritional balance during pregnancy. In addition, the ability of video to paint vivid images and sound gives it its charm. Videos can present information, explain the process, explain complex concepts, and teach skills regarding early health treatment during pregnancy. In several developed countries, e-health applications for pregnancy consultation have been implemented. Optimal use of e-health and e-consultation and virtual ANC can reduce pregnancy-related complications, thereby improving the health of mothers and babies during the COVID-19 outbreak [14]. During the stress of this pandemic, additional support for the mental health of pregnant women should be an essential component. The involvement of family and friends should be encouraged, with adequate precautions to reduce the risk of COVID-19. The availability of leaflets and educational videos provides psychological support to pregnant women to reduce fear, anxiety, and depression.

### 4. Conclusion

Video media and leaflet media influence the knowledge of pregnant women about nutrition during the covid 19 pandemic at the Meureubo Health Center.

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