Communication, Information & Education Online-Based Assisted Booklets in COVID-19 Prevention: Study on Maternals

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***Abstract*---**The adverse impact of the COVID-19 pandemic on maternal and perinatal health is not limited to morbidity and mortality that are directly caused. Careful monitoring of pregnancies with COVID-19 is indispensable. One of the actions taken by the government is to conduct education through various media. This study aims to determine the effectiveness of Booklet-Assisted Online Information & Education Communication in efforts to Prevent COVID-19 in Maternal. This type of research is Quasi Experiment using a pattern of one group of pretest and postest design. Analyze the data using the Wilcoxon Test which in the data that has been tested normally with the Kolmogorov-Smirnov Test. This study was conducted in the city of Batam Riau Islands from April to July. With the number of respondents as many as 63 people who met the sample criteria and were willing to be respondents. The result of the

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significance of p-value of 0.000 < 0.05 then H0 is accepted and Ha is rejected. So that in conclusion there is an influence of online-based KIE assisted by e-books in increasing maternal knowledge in COVID-19. Information communication and education as a medium in increasing public awareness in health protocols and vaccinations is very important because it can affect people's knowledge and attitudes and behavior in normal settings.

Keywords---Communication, Information, Education, Maternal, Booklet, COVID-19.

Introduction

Under normal conditions, maternal death is still a big challenge in Indonesia, especially in disaster situations. Currently, Indonesia is facing the COVID-19 pandemic, which has been designated as a non-natural national disaster. This causes maternal and neonatal health services to be one of the services affected by access and quality. The SARS-CoV-2 pandemic has had a major impact on the health care system, the structure of society, and the world economy (World Bank. The global economic outlook during the COVID-19, 2020.)

The adverse impact of the COVID-19 pandemic on maternal and perinatal health is not limited to morbidity and mortality caused directly by the disease itself. Nationwide lockdowns, disruptions to health care services, and fear of attending health care facilities may also have affected the well-being of pregnant women and their fetuses (Burki T., 2020 & Roberton T, Carter ED, Chou VB, et al,2020) Emerging evidence suggests that the rates of stillbirths and preterm births have changed substantially during the pandemic (Khalil A. et.al, 2020 & Been JV, et.al, 2020). Decreased behavior seeking health care, as well as reduced provision of maternity services, have been suggested as possible causes of strong estimates of the indirect health effects of maternal health (Khalil A, von Dadelszen P, Kalafat E, et al, 2020). Studies that have been conducted in New York and China have suggested that there is no increase in the severity of COVID-19 disease in pregnancy, in contrast to that observed in influenza conditions (Breslin et al., 2020, Chen et al., 2020; Zaigham & Andersson, 2020). Breslin dkk (2020). It reported that 86% of COVID-19 maternal cases were mild, 9.3% severe, and 4.7% critical, which was similar to the results in non-pregnant adults. It remains important to maintain awareness that maternal morbidity and fetal death have been observed with COVID-19, so careful monitoring of pregnancies with COVID-19 is urgently needed (Breslin et al., 2020, Zaigham & Andersson, 2020).

Another concern is acute coagulopathy in pregnancy. Pregnant women, some abnormalities of laboratory test results related to COVID-19 (hemolysis, increased levels of liver enzymes, thrombocytopenia) have been noted similar to those that occur in preeclampsia with severe features and HELLP syndrome (hemolysis, increased liver enzymes, low platelets) (Berghella, V. 2020). Pregnant women need to avoid the coronavirus (COVID-19) by getting separate facilities from suspected or confirmed COVID-19 patients. More importantly, pregnant women should take

precautions   to   avoid   new   coronavirus   (COVID-19)   infections (https://covid19.go.id/)

According to data released by the Republic of Indonesia's COVID-19 Acceleration Task Force, the number of positive confirmed cases until August 15, 2020 was 1,334,634 people with a death toll of 36,166 people. Of all COVID-19 sufferers who died, 0.8% were 0–5 years old, 1.3% were 6–18 years old, 4.6% were 19–30 years old, 12.5% were 31–45 years old, 32.3% were 46–59 years old, and 48.5% were 60 years old and above.

The high rate of COVID-19 transmission caused the government to take action quickly and thoroughly. One of the actions taken by the government is to educate through various media as well as health agencies and organizational movements participating in conducting education in the hope that the level of transmission of COVID-19 can be cut off by taking various preventive measures such as physical distancing and reducing activities out of the house and implementing a healthy lifestyle and knowing how this virus is transmitted from goods or people to humans. From the description above, the formulation of the problem in this study is "How is the effectiveness of Booklet Assisted Online Information & Education Communication in COVID-19 Prevention efforts: Maternal Studies?"

Materials and Methods

This research was conducted in the city of Batam Riau Islands from April to July. Type of research is an experiment that acquisition of data that is deliberately generated. The experiment research design used in this study is a quasi experiment using the pattern of one group of pretest and postest design, which is an experiment carried out in one group only without a comparison group. The sample in this study is pregnant women trimester I, II and III a total of 63 people Sample in this study based on certain criteria that must be met by the sample. Among them are 1) Living and settling in batam city, 2) Pregnant women aged 20-35 years, 3) Able to speak Indonesian, 3) Can read and write, 4) Willing to be respondents in research. The instruments used are informed consent forms, Booklets used as media in KIE Covid 19 for mothers and questionnaires that use closed statements. Data analysis using the Wilcoxon Test which in the data that has been tested normally with kolmogorov-Smirnov Test.

Results and Discussions

The results of research is on the knowledge and attitudes of pregnant women regarding covid 19, whose data has been collected for 2 months, namely from April 5 to July 7 with a total of 63 respondents who meet the sample criteria and have been willing to become respondents. The amount has met the research sample, as planned.

Data collection using observation sheets and recording sheets where observation sheets are used to see the smoothness of online-based KIE activities assisted by booklets at the time of the study. And a pre- and post-test questioner is provided to measure knowledge and attitudes before and after KIE is carried out. Both sheets have been checked for completeness until all instruments observed have

been eligible for analysis. The results of the study are presented in table and textureal form.

Tabel 1 Distribusi Frekuensi

Karakteristik	n	(%)
AGE		
< 20	**2**	**3.2**
20-30	**48**	**74.6**
>30	**14**	**22.2**
EDUCATION		
Basis	**8**	**12.7**
Intermediate	**46**	**71.4**
Higher Education	**10**	**15.9**
GAVIDA		
Primipara	**33**	**50.8**
Multipara	**31**	**49.2**
Grandemultipara	**0**	**0**
GESTASI		
Trimester I	**23**	**34.9**
Trimester II	**32**	**50.8**
Trimester III	**9**	**14.4**
TOTAL	**63**	**100**

The table above shows that the age of respondents ranges from 2 maternal people or 3.2% with the age of under 20 years and about 47 maternal people or 74.6% with the age of 20-30 years and 14 maternal people or 22.2% with the age of more than 30 years. In the educational characteristics of respondents there are 8 maternal people or 12.7% with primary education, 45 maternal or about 71.4% with secondary education and 10 reponden or 15.9% with higher education.Based on Gravida then about 32 maternal or 50.8% with primipara, 31 maternal or 49.2% multipara maternal and 0 maternal or 0% with Grandemultipara. While based on Gestation there are 22 maternal or 34.9% with pregnancy trimester I, 32 maternal or 50.8% with second trimester pregnancy and 9maternal at 14.4% with third trimester pregnancy.

Data Normality Test

Table 2 Results of data norality test with Kolmogorov-Smirnov Test can be drawn in the following table

DATA	Kolmogorov Sminorv	Asymp Sig (2-tailed)	conclusion
Pretest	0.177	0.000	Sig. (2-tailed) < 0,05 (Abnormal distribution)
Posttest	0.208	0.000	Sig. (2-tailed) < 0,05 (Abnormal distribution)

The decision making of the results of the normality test using the Kolmogorov Smirov method (K-S test) is as follows:

a) If the value of Asymp. Sig. (2-tailed) > 0.05 can be concluded that the data comes from a normal distributed population.
b) If the value of Asymp.Sig. (2-tailed) < 0.05 can be concluded that the data comes from an abnormally distributed population.

Based on the results of the pretest and posttest data normality test, it is known that the data has an Asymp value. Sig. (2-tailed) by 0.000. Thus, because the value of 0.000 < 0.05, it can be concluded that pretest and posttests data are distributed abnormally.

Research hypothesis testing

The wilcoxon test is used to determine changes in a population (experimental group) before and after receiving treatment. As for the hypothesis with the following details: Ho: There is no influence of e-book-assisted online KIE on maternal knowledge in preventing covid 19
Ha: There is an influence of e-book-assisted online KIE on maternal knowledge in preventing covid 19
The basis for decision making based on the wilcoxon test is:
   a. If the probability value < 0.05, then Ho is rejected and Ha is accepted.
   b. If the probability value > 0.05, then Ho is accepted and Ha is rejected.

The results of statistical analysis of data using the SPSS 22 for windows program, obtained the output seen in the table below:

Table 3 Wilcoxon Test Analysis Results

	Median	**Minimum - Maximum**	**P-*Value***
Pretest (n=64)	60	10 - 80	0,000
PostTest n=64)	80,5	40 - 100	

Analysis:
The result of the significance of p-value of 0.000 < 0.05 then H0 is accepted and Ha is rejected. So that in conclusion There is an influence of online-based KIE assisted by e-books in improving maternal knowledge in covid 19.Increasing maternal understanding of covid 19 that can be measured from client responses (Ahmar 2021).

Pregnant women accounted for 0.7% of the total cases of COVID-19 among women aged 10–49 years. Pregnant women were more likely to be hospitalized but generally had mild disease.(Zha et al. 2022) In contrast, some studies from China showed that the clinical manifestations and characteristics of COVID-19 in pregnant women were similar to those of nonpregnant women (Cheng et al., 2020 , Wei et al., 2020 , Xu et al., 2020 , Yu et al., 2020). Only 21% of pregnant women visit the hospital for full vaccination compared to 49.5% of the general population (MoHFW, 2022) The results showed that accurate knowledge of

COVID-19 likely increased knowledge and attitudes. This can shape the environment that motivates and reduces barriers to increased maternal understanding of covid 19 (Behavioural considerations for acceptance and uptake of COVID-19 vaccines, 2022). Everything during in pandemic revolves around effective communication, both internal and external with people, communities, and countries. It is very important to avoid mistakes during communication (Back, A., Tulsky, J. A., & Arnold, R. M, 2020).

One of the efforts to improve public knowledge in general can be done through communication, information, and education (KIE) programs. Delivery of materials to the program. KIE can be done through several methods and media. The media used varies greatly, ranging from traditional ones, namely the mouth (oral), sounds (kentongan), writing (print), to modern electronics, namely television and the internet. In the KIE program, print media is more effective for conveying information and nutrition education, because print media is a static medium, prioritizes visual messages, and generally consists of a number of words, pictures or photos in color, namely in the form of posters, leaflets, brochures, magazines, modules, and pocketbooks. Of the several print media that can be used in the KIE program, including pocket books or booklets. Booklet is a medium to convey health messages in the form of books, both in the form of writing and pictures (Zulaekah, S, 2012).

Conclusion

Information communication and education as a medium in increasing public awareness in health protocols and vaccinations is very important because it can affect people's knowledge and attitudes and behavior in normal life (Wilson et al., 2020). As a benchmark for increasing public knowledge is that they can re-practice how to wear masks, wash their hands and make handsanitizers and they understand that it is very important to prevent the transmission of COVID-19 (Jothikumar et al., 2005). Low literacy skills in the community and there are still many people who do not have access to some information media so as to make the public have insufficient knowledge about COVID-19 (Wu et al., 2020).

Effective communication is proactive, polite, imaginative, innovative, creative, constructive, professional, progressive, energetic, enabling, transparent, and technology-friendly communication. However, there are many factors that play a key role in receiving information, such as social and cultural characteristics. Gender, generational contrast, language tendencies, strict beliefs, religious beliefs, and diverse literacy influence the actions of the masses. Difficulties and attitudes towards initiatives in public health communication are essential to raising awareness and ultimately acceptable or not government advice.. (Vaughan, E., & Tinker, T, 2009).

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