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The Impact of My.Bi Educational Video on Early Breastfeeding Initiation (IMD) Implementation: A Quasi-Experimental Study

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ABSTRACT

Background: IMD is the beginning of successful breastfeeding, can prevent or reduce infant mortality and is also believed to help increase the body's resistance to risky diseases. IMD as a major proportion of breastfeeding within the first hour after birth influences mothers to breastfeed optimally. Early breastfeeding initiation has an important influence on the success of mothers in providing breast milk so that this needs to be prepared since pregnancy, the preparation that can be done is by providing education as the first step of a health promotion approach in third trimester pregnant women. Objective: to analyse the effect of using My.Bi educational video on the implementation of IMD. Methods: Research and Development for My.Bi video development and quantitative research using Quasi Experiment, One Group Pretest-Postest Design approach. My.Bi educational video through FGD stages, designing videos, developing and validating My.Bi educational video learning media with stages; media needs analysis, learning media development design, expert test validation, TAM test and final media product. Data analysis of IMD implementation using the Chisquare test. Results: showed that the media developed in the form of My.Bi animated videos were suitable for use. The results of the analysis show that there is a significant effect on the implementation of IMD with a significance value of 0.000 <0.05 so it can be concluded that providing education using My.Bi educational media affects the implementation of IMD

Keywords: *Early Breastfeeding Initiation (IMD), My.Bi Educational Video, Breastfeeding Education, Quasi-Experimental Study, Maternal Health Promotion*

1. INTRODUCTION

Word Health Organization (WHO, 2019) The world's MMR is 303,000 while the world's IMR is still relatively high at 37 per 1000 live births. The *ASEAN Statistical Report on Millennium Development Goals* shows that MMR is 305 per 100,000 live births, and IMR is 22 per 1,000 live births. Based on the SDGs monitoring report for the Southeast Asia region, the MMR is still at 175 per 100,000 live births, this figure is still far from the 2030 SDGs target (Kemenkes RI, 2021).

Reducing maternal mortality rate (MMR) and infant mortality rate (IMR) is currently a priority for health programmes in Indonesia. According to data from the Indonesian health profile in 2021, the MMR in Indonesia showed a figure of 7,389 deaths. This number has increased compared to 2020 of 4,627 deaths. The IMR in Indonesia in 2021 was 25,256, a decrease compared to 2020 which was 25,652 (Indonesian Ministry of Health, 2021).

Globally, increased breastfeeding could save more than 820,000 children each year and prevent an additional 20,000 cases of breast cancer in women per year (Unicef, 2022). Breastfeeding plays an important role in infant survival and can help reduce the high infant mortality rate (Charantimath et al., 2020; Hanun et al., 2024). Breastfeeding can help reduce IMR by 13% (Girsang et al., 2021). Breast milk can provide benefits for the health and development of infants (Shen et al., 2023).

The rate of early breastfeeding initiation (IMD) has decreased from 58.2 per cent in 2019 to 48.6 per cent in 2021. IMD is the beginning of successful breastfeeding (S et al., 2019). The various impacts caused when infants are not breastfed are mostly related to nutritional factors, which amount to 53%, while malnutrition affects the occurrence of pneumonia in infants

by 20% and diarrhoea 35% (Dini et al., 2023). Early breastfeeding initiation is the starting point for the success of exclusive breastfeeding in infants, this is supported by research in Ethiopia conducted by (Ahmed et al., 2019) that IMD as the main proportion of breastfeeding in the first hour after birth affects mothers to do optimal breastfeeding. This is in line with research conducted by (Saragih & Hutabarat, 2020) obtained results (ρ = <*0*.05) that IMD carried out as the first step of breastfeeding in infants can affect breast milk production.

The government has promoted various educational programmes to introduce breastfeeding through various media (Risnanto et al., 2023) and the implementation of IMD during childbirth which is one of the benchmarks in the success of breastfeeding (Nidaa & Hadi, 2022). Media as a means of conveying information plays an important role in increasing knowledge and changing perceptions (Pranata et al., 2020). One of them is the use of animated videos, which is an educational media that combines audio media and visual media (Bond & Ramos, 2019). By using animated videos, pregnant women are easier to understand material that is difficult or too heavy to understand because the video displayed will be made as concise as possible coupled with audio and animation that makes pregnant women more *relaxed* so that it is easier to understand the material provided (Fakhri et al., 2019) and makes this animated educational media effective and informative (Kayler et al., 2019). This is in line with research conducted by (Siagiana et al., 2022) obtained the results (ρ = 0.00) that animated videos have a significant effect on the knowledge of third trimester pregnant women about breastfeeding.

Midwives as health workers are one of the closest partners of pregnant women in providing education with the aim of meeting breastfeeding targets and being able to carry out IMD in every delivery by health workers. Based on this, it is in line with the purpose of this study, which is to analyse the effect of the My.Bi educational video on the implementation of IMD during childbirth.

2. METHODS

This research uses the *Research and Development* (R&D) method with the Borg and Gall development model which will be used to develop and validate a product in the form of an animated video (Baso, 2018; Jatmika et al., 2019). In combination with quantitative methods *Quasi Experiment*, using the *One Group Pretest-Postest Design* approach to determine the state of the subject before and after being given treatment and then the results can be seen changes (Saifuddin, 2020).

This research sampling technique uses *purposive sampling*. Respondents in this study were third trimester pregnant women adjusted to the exclusion and inclusion criteria in the Bongomeme Health Centre work area. Determination of the number of samples was determined by the slovin formula and the number of respondents was 52 pregnant women. The questionnaire in this study is an IMD implementation questionnaire consisting of 7 points that have been tested for validity and reliability.

To analyse the results of the study, the *Chi Square* data analysis test was used to determine the effect of using educational videos in the form of animated videos on the implementation of IMD, more details are described in the results of the study below.

3. RESULTS

This research was conducted in the working area of the Bongomeme Health Centre, Gorontalo Regency on 17 October 2023 - 21 January 2024. The initial stages carried out in this study began with conducting a needs analysis. After the analysis stage based on the results of FGDs showed that of the many educational media most needed was educational media in the form of animated videos, then the researchers designed My.Bi educational media in the form of animated videos, in collaboration with experts in the fields of information technology (IT) and animation. The results of the assessment conducted by 2 material experts and 2 media / IT experts on the learning media used, namely the My.Bi (*My Baby With* ASI) educational video, obtained very good results so that the educational media was suitable for use or without revision. The next stage of group trials using the *Technology Acceptance Model* (TAM) test was carried out one-on-one trials getting an average total value of each item of 90% with very good criteria, small group trials getting 89% results which means the learning media is "very good", large group trials are 90%, namely media in the "good" category so that My.Bi educational videos can be used without revision.

Univariate analysis aims to describe the characteristics of each research variable in the form of demographic data and determine the description of the independent variables.

Table 1. Characteristics of Respondents

Characteristics		**Frequency** ***n***	**Percentage** **%**
Age	20 - 25 years	36	69,2

	25 - 30 years	16	30,8
	Total	**52**	**100**
Education	High	16	30,8
	Medium	22	42,3
	Basic	14	26,9
	Total	**52**	**100**
Jobs	Work	19	36,5
	Not Working	33	63,5
	Total	**52**	**100**
Pregnancy Age	31 weeks	7	13,5
	32 weeks	10	19,2
	33 weeks	15	28,8
	34 weeks	11	21,2
	35 weeks	9	17,3
	Total	**52**	**100**
Mass Media Exposure	Available	17	32,7
	None	35	67,3
	Total	**52**	**100**

**Frequency* Distribution Test

Referring to table 1. it shows that the average respondent is 20-25 years old (69.2%), most of them have secondary education (42.3%) who do not have a job (63.5), most of them have a gestational age of 33 weeks (28.8%) and on average they have never been exposed to mass media so that the information obtained about IMD and breastfeeding through My.Bi educational media.

Table 2. Distribution of IMD Implementation

Variable	**Posttest**	
	n	**%**
Implementation of IMD		
Performed	47	90,4
Not Done	5	9,6
Total	52	100

**Frequency* Distribution Test

Based on table 2. above, it can be seen that 47 respondents (90.4%) did IMD during labour.

Table 3. The Effect of Using My.Bi Educational Videos

Implementation of IMD

Variables	**Done**		**Not Done**		**Total**		**Sig.**
Knowledge	***n***	**%**	***n***	**%**	***n***	**%**	
Implementation of IMD							

Good Simply	40 7	97,6 63,6	1 4	2,4 36,4	41 11	100 100	0.001
Total					52	100	

**Chisquare* test

Based on the results of statistical tests in table 3. it shows that after being given education, respondents experienced changes in good knowledge who performed IMD as many as 40 respondents (97.6%) while respondents who had sufficient knowledge performed IMD as many as 7 respondents (63.6%) with a ρ-value of 0.001 <0.05, meaning that there was a significant effect of giving My.Bi educational videos on IMD implementation.

4. DISCUSSION

Product Development of Educational Media "My.Bi" (My Baby With ASI) on IMD.

The development of this animated video model adopts the Borg and Gall model development theory with development stages starting from product analysis to be developed, initial product development, expert validation, one-on-one trials, small sample and large sample trials. After that the research began using this educational video. Previous studies that used the Borg and Gall development model included research by (Putri et al., 2021) animated video-based health promotion in media development using development with the term R&D (Research and Development), which refers to the Borg and Gall model (1983: 772). According to Borg and Gall (2007: 589), "*Educational Research and Development* (R&D) *is a process used to develop and validate educational products*". This means that educational research and development is a process used to produce products based on field tests and then revised, resulting in valid products that can be used. This development research is intended not to test theory, but to develop products that are used in supporting the success of educational activities.

The Effect of My.Bi (*My Baby With* ASI) Educational Video on IMD Implementation.

Action is a person's response to a stimulus. After someone knows the object, then makes an assessment of what is known, the next process is expected that someone will carry out what he knows or reacts to (Notoatmodjo, 2012). In this study, the implementation of IMD for respondents obtained a result of 90.7% with a p-value of 0.000 <0.05, which means that there are significant results on the intervention provided. This is because the educational media provided using the My.Bi educational video there is an animated video about IMD which is clearly designed combined between text and images that are adapted to the material so that it is interesting to learn, can give good results on the implementation of IMD even though there are some respondents who do not perform the IMD stages completely. This is caused by several factors, one of which is age. Respondents who are younger tend to experience boredom when carrying out the IMD process carried out by babies because maturity affects the behaviour carried out. Age can affect the level of maturity in thinking, emotionally a person in solving problems and making decisions and will have roles and responsibilities for their lives (Kunto et al., 2021).

Health education provided to individuals can change a person to behave better. Audio visual is a tool that is considered appropriate when used in health counselling (Li et al., 2021). The advantages of video media can provide realities that may be difficult to record by the eyes and minds of the target, can trigger discussions about attitudes and behaviour, are effective for large numbers of targets and can be repeated, are easy to use and do not require a special place. (Ishak et al., 2022).

This is in line with research conducted by (Rademan et al., 2025) that animated video-based health education can encourage behaviour change in increasing the level of better health behaviour. The use of audiovisual media in providing education is more advisable to do, considering that audiovisual media shows more significant changes in improving mothers' knowledge and attitudes about IMD than using other media (Limbong & Simarmata, 2020). In line with research conducted by (Faizin et al., 2023) that ASINI educational video media affects the attitudes and practices of breastfeeding mothers in the first 3 months with a significant value of 0.000. Providing health education using audio-visual media is faster for respondents to understand the material provided. Delivery of material with audio visual media is provided through digital media using spoken words in the form of illustrations, photos, animations or videos that can have an influence on life behaviour (Aisah et al., 2021), making it easier to deliver material because the video has a virtual message that is easy to remember and easy to apply in life in the era of digital technology life (Wiliyanarti et al., 2022).

5. CONCLUSION

My.Bi (*My Baby With* ASI) educational media is feasible and valid to be used to provide education to respondents at the Bongomeme Health Centre, and has an effect on the implementation of IMD after childbirth. The findings of this study demonstrate that the My.Bi educational video is an effective tool for promoting early breastfeeding initiation (IMD) among mothers. The development and validation process confirmed that the video was suitable for educational use, and statistical analysis revealed a significant impact on IMD implementation. These results highlight the importance of structured and engaging educational interventions during pregnancy to enhance maternal knowledge and confidence in initiating

breastfeeding immediately after birth. Given the critical role of IMD in reducing infant mortality and strengthening immunity, integrating My.Bi educational media into maternal health programs could be a valuable strategy to improve breastfeeding practices. Further research is recommended to explore its long-term impact on breastfeeding success rates and infant health outcomes.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this study. This research was conducted independently, and no financial, institutional, or personal relationships influenced the findings or interpretations presented in this manuscript.

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