

The Effect of Educational E-Booklets on Prospective Newlyweds' Knowledge Level about Stunting Prevention

Ella Kusuma Ning Ayu^{1*)}, Didien Ika Setyarini², Sheila Tania Marcelina³, Lisa Purbawaning Wulandari⁴

^{1*),2,3,4} Poltekkes Kemenkes Malang; Jalan Besar Ijen No 77 C Malang

ABSTRACT

Background: Stunting is a serious problem in fetuses and children up to the age of two, as it can increase infant mortality rates, morbidity, developmental disorders, and lead to low adult productivity. Stunting occurs due to a lack of knowledge about stunting prevention, starting from the preconception period. Therefore, counseling and education for prospective newlyweds are essential components in improving knowledge. This study aimed to determine the effect of educational e-booklet media on the knowledge of prospective newlyweds regarding stunting prevention at the Office of Religious Affairs in the Bululawang District. Methods: The research design used in this study was pre-experimental with a One Group Pre-Test Post-Test approach, involving 30 prospective newlyweds who met the inclusion criteria and were selected through simple random sampling. Data were collected by administering research questionnaires before and after providing educational media. Results: Bivariate analysis using the Wilcoxon Signed Rank Test showed that there was an effect of educational e-booklet media on the improvement of knowledge about stunting prevention among prospective newlyweds ($p\text{-value} \leq 0,05$). Therefore, health education on stunting prevention needs to be provided for prospective newlyweds.

Keywords: E-booklet, Stunting knowledge, Prospective Newlyweds

ABSTRAK

Latar Belakang: Stunting merupakan masalah serius pada janin dan anak hingga usia dua tahun, karena dapat meningkatkan angka kematian bayi, angka kesakitan, gangguan tumbuh kembang, dan berujung pada rendahnya produktivitas orang dewasa. Stunting terjadi karena kurangnya pengetahuan tentang pencegahan stunting, dimulai sejak masa prakonsepsi. Oleh karena itu, penyuluhan dan edukasi kepada calon pengantin baru merupakan komponen penting dalam meningkatkan pengetahuan. Penelitian ini bertujuan untuk mengetahui pengaruh media e-booklet edukasi terhadap pengetahuan calon pengantin baru tentang pencegahan stunting di Kantor Agama Kabupaten Bululawang. Metode: Desain penelitian yang digunakan dalam penelitian ini adalah pra-eksperimental dengan pendekatan One Group Pre-Test Post-Test, dengan melibatkan 30 orang calon pengantin baru yang memenuhi kriteria inklusi dan dipilih melalui simple random sampling. Pengumpulan data dilakukan dengan pemberian angket penelitian sebelum dan sesudah pemberian media edukasi. Hasil: Analisis bivariat menggunakan Wilcoxon Signed Rank Test menunjukkan terdapat pengaruh media e-booklet edukasi terhadap peningkatan pengetahuan tentang pencegahan stunting pada calon pengantin baru ($p\text{-value} \leq 0,05$). Oleh karena itu, pendidikan kesehatan mengenai pencegahan stunting perlu diberikan kepada calon pengantin baru.

Kata Kunci : E-booklet, Pengetahuan Stunting, Calon Pengantin Baru

Corresponding author: Ella Kusuma Ning Ayu

Jurusan Kebidanan Malang, Prodi Sarjana Terapan Kebidanan Malang,
Poltekkes Kemenkes Malang
Email: ellakusuma377@gmail.com

INTRODUCTION

Stunting is a developmental disorder in children characterized by shorter height or stature (dwarfism) compared to age-specific standards. It is caused by chronic malnutrition resulting from inadequate nutrient intake over a prolonged period (Anggraini et al., 2020). Stunting is not only affected by insufficient food availability and certain nutrient deficiencies but also by economic conditions, lack of knowledge about nutrition, and poor environmental sanitation. One of the factors contributing to stunting can be traced back to the preconception phase, where the lack of public awareness about the importance of understanding health during this phase poses a risk to the health of prospective newlyweds and their future children (Evrianasari & Dwijayanti, 2017).

Based on UNICEF World Bank data in 2020, the prevalence of stunting in Indonesia was positioned at 115 out of 151 countries worldwide. In 2017, Indonesia was previously ranked as the third-highest country regarding stunting prevalence in Asia. The stunting condition in Indonesia, based on the Indonesian Child Nutrition Status (SSGBI) in 2019, indicated that the prevalence of stunting had started to decline from 30,8% in 2018 to 27,67% in 2019 (Kementerian Kesehatan RI, 2020). This reduction was still considered high as it exceeded the WHO's tolerance level of 20% for stunting rates. A previous journal article titled "Pemberdayaan Kader Posyandu Dalam Program Pencegahan Stunting Pada Balita Di Masa Pandemi Covid-19 (Empowering Posyandu Cadres in the Stunting Prevention Program for Toddlers During the Covid-19 Pandemic)" by Has et al. (2021) showed that in East Java, the prevalence of stunting among toddlers decreased by 6,61%, from 32,81% in 2018 to 26,2% in 2019. Several regions in East Java targeted for stunting intervention included Nganjuk, Lamongan, Malang, Trenggalek, Kediri, Probolinggo, Sampang, Bangkalan, Pamekasan, Jember, Sumenep, and Bondowoso (Has et al., 2021). Data from the Health Department of Malang Regency in 2021, obtained from preliminary research, indicated that Bululawang District had the highest prevalence of stunting in Malang District, with a decrease of 11,40% from 2020 to 8,90% in 2021.

According to WHO (2018), preventive efforts in stunting cases could be initiated from the preconception period to ensure the proper preparation of 1000 Days of the Child (from conception to age 2) because Women of Reproductive Age (WRA) had already taken the necessary steps before pregnancy. Prevention was carried out through both nutritional and non-nutritional approaches, with important targets for improving nutrition and health being adolescents, prospective newlyweds, and pregnant women (Fitriani et al., 2021). Therefore, ensuring adequate nutrition for premarital women and before pregnancy was crucial to be maintained as it optimized the function of reproductive organs, such as ensuring successful fertilization, the proper maturation of ova or eggs, and the production of high-quality ova supported by good nutrition. Good nutrition also played a vital role in providing nutritional reserves for fetal growth and development (Susilowati, 2016).

Counseling and education are essential components in improving knowledge, which is a fundamental aspect for prospective newlyweds. Providing education to prospective newlyweds can be done during premarital health services, which are one of the requirements for completing marriage documents. These health services are conducted by healthcare personnel in collaboration with the Ministry of Religious Affairs (Kostania et al., 2020). In providing education, using media that can help enhance knowledge is necessary. Pratiwi & Puspitasari (2017) and Muhdar (2018) reported that the use of booklets as a health education medium is one way to improve knowledge (Muhdar et al., 2018; Pratiwi & Puspitasari, 2017). With the advancement of time, where almost everyone can access and own smartphones, it has led to the possibility of delivering technology-based health education in the form of e-booklets. The research conducted by Setyawati & Herlambang (2015) titled "Model Edukasi Gizi Berbasis E-Booklet Untuk Meningkatkan Pengetahuan Gizi Ibu Balita (E-Booklet-Based Nutrition Education Model to Improve Maternal and Child Nutrition Knowledge)" demonstrated a significant increase in knowledge among the group that received health education using e-booklet as a medium. E-booklets can be a potential tool for enhancing the nutrition knowledge of prospective fathers and mothers (Setyawati & Herlambang, 2015).

The preliminary study conducted on data from the Office of Religious Affairs (KUA) in Bululawang Subdistrict revealed that the number of couples getting married in July 2022 was 33 pairs. Therefore, the researchers were motivated to conduct a study regarding the effect of using e-booklet media as an educational tool to increase knowledge about stunting prevention among prospective newlyweds at the Office of Religious Affairs in Bululawang Subdistrict. In this study, the researchers selected prospective newlyweds as the target group to improve health quality.

RESEARCH METHOD

The design of this study was pre-experimental research using a One Group Pre-Test-Post Test design to measure the level of knowledge about stunting prevention among prospective newlyweds before and after being provided with e-booklet educational media. The research was conducted from January to July 2022 at the Office of Religious Affairs (KUA) in Bululawang District, Malang Regency. The research participants consisted of 30 prospective newlyweds at the Office of Religious Affairs in Bululawang, selected randomly using a simple random sampling method from a total population of 33. The inclusion criteria for the sample in this study were women at the Office of Religious Affairs in Bululawang who were registered to have their first marriage or not their first marriage but did not have any children yet and owned a smartphone. The independent variable in this study was e-booklet educational media, while the dependent

variable was the knowledge of prospective newlyweds about stunting prevention. Data collection was done using a multiple-choice questionnaire regarding knowledge about stunting, and then bivariate analysis was conducted using the Wilcoxon Signed Rank Test.

RESULTS AND DISCUSSION

Characteristics of Respondents

Based on the inclusion criteria and random selection, 30 respondents were assessed for their knowledge about stunting before and after being provided with e-booklet educational media. According to Table 1, it is known that the majority of respondents were aged 17-25 years with a percentage of 86,7%, had completed high school education (63,35%), and worked as self-employed individuals (40%).

Table 1. Characteristics of Prospective Newlyweds at the Office of Religious Affairs in Bululawang District

Characteristics	N	F (%)
Umur		
17-25 years	26	86,7
25-35 years	4	13,3
Education		
Elementary School (SD)	1	3,3
Junior High School (SMP)	7	23,3
High School (SMA)	19	63,3
College/University (PT)	3	10,1
Occupation		
Unemployed	10	33,3
Self-employed (Entrepreneur)	12	40
Laborer/Farmer	5	16,7
Private Employee	3	10

The age of the respondents indicated that all of them were in the healthy, productive age range, which did not include the age at risk for pregnancy. As individuals grew older, changes occurred in their physical and psychological aspects. Their cognitive abilities and thinking patterns developed, leading to improved knowledge, including knowledge related to the importance of stunting prevention. Additionally, the highest level of education attained was examined because it was found to be a factor effecting knowledge (Andriani, as cited in Nissa, 2017). Occupation status was also an important factor that could facilitate individuals in receiving information and adopting positive behaviors. This was supported by their interactions with others in their efforts to obtain the necessary sources of information. These statements are consistent with previous research findings that have shown how occupation can effect an individual's level of knowledge (Setyawati & Herlambang, 2015). Therefore, considering these three characteristics was important in analyzing the results.

Knowledge of Prospective Newlyweds Before and After Being Provided with e-Booklet Educational Media on Stunting Prevention

Based on Table 2, it can be observed that the number of prospective newlyweds with good knowledge of stunting prevention before being provided with e-booklet educational media was 2 individuals, accounting for 6,7% of the total respondents. On the other hand, the number of prospective newlyweds with good knowledge of stunting prevention after being provided with e-booklet educational media was 27 individuals, accounting for 90% of the total respondents.

Based on the analysis of data from the questionnaires filled out by the respondents, the knowledge of prospective newlyweds before being provided with e-booklet educational media, as shown in Table 2, indicates that out of 30 respondents, 15 respondents had a sufficient category (50%), 13 respondents had a lacking category (43,3%), and only 2 respondents had a good category (6,7%). This can be seen in the pre-test, where the questions related to stunting prevention had the lowest number of correct answers. The majority of prospective newlyweds at the Office of Religious Affairs in Bululawang Subdistrict had limited or fair knowledge of stunting prevention. According to the researcher, the lack of knowledge can be attributed to the fact that most of the respondents, 26 individuals (86,7%), had never received information about stunting. This aligns with the findings of Notoatmodjo (2014), which states that one of the factors effecting knowledge is the information acquired through formal and non-formal education, which can effect an individual's knowledge (Notoatmodjo, 2012). This is consistent with the opinion (Ar-Rasily & Dewi, 2016) that a lack of knowledge can be caused by various factors, including age, education, occupation, and a lack of information about

stunting. The existing knowledge about stunting that prospective newlyweds had before could be obtained through personal experiences, experiences shared by others, and other factors contributing to knowledge formation.

With the existing theories, this study implemented an intervention that was carried out for 7 consecutive days, where the researcher reminded the respondents to use the e-booklet media to reinforce the material being learned. On the 8th day, a post-test assessment was conducted. The intervention yielded significant improvement, as observed in the data obtained from the post-test, where 90% of the respondents had a good level of knowledge about stunting prevention. This provided evidence that the e-booklet media had an impact on knowledge improvement. This aligns with the findings of Jeklin, (2016), who stated that the use of e-booklet educational media was considered effective in enhancing knowledge, attitudes, and roles because e-booklets were health education media equipped with systematic and concise explanations, as well as illustrative images that facilitated individuals in understanding the concepts and facts related to the educational content. The research conducted by Viola dan Rahma, (2021), also indicated that e-booklet educational media presented educational material in a fun, concise, and easily accessible format using images. Therefore, e-booklets served as educational media that could be utilized in the learning process, either with the assistance of an educator or for self-learning (Violla & Fernandes, 2021).

Furthermore, the bivariate analysis using the Wilcoxon Signed Rank Test showed an obtained Z value of -4,794 with a p-value (Asymp. Sig 2-tailed) of 0,000, which was less than the critical value of the study, which was 0,05. Based on these results, the null hypothesis (H0) was rejected. The conclusion drawn was that there was a significant difference in the level of knowledge about stunting prevention among prospective newlyweds at the Office of Religious Affairs in Bululawang District before and after being provided with e-booklet educational media.

According to Gemilang & Christiana (2016), the use of booklet media by health promotion officers is useful for delivering the intended information effectively (Gemilang Ritznor, 2016). Booklets are a print communication medium that can contain various elements such as recommendations, promotions, and prohibitions to the audience, with the goal of helping the public better understand the conveyed message. Rahmiyati et al. (2019), revealed that using e-booklet media as a learning tool for prospective newlyweds made it easier for the research subjects or targets to understand the conveyed information as they could directly observe the images and text within the media, leading to an increase in knowledge.

Knowledge can be increased through the provision of information via media. The advantages of delivering health information using e-booklet media include its soft file format, allowing it to be accessed and studied at any time. Moreover, e-booklets can be self-studied by prospective newlyweds, and they contain a relatively larger amount of messages or information compared to leaflets. This is consistent with the research conducted by Sari (2019), which showed the effect of leaflets and booklets in improving an individual's knowledge (Sari, 2019). However, when comparing these two media, booklets are considered more effective than leaflets in achieving the goal of enhancing knowledge about teenage pregnancy in Pertiwi Private High School in Jambi City. This finding is supported by the research conducted by A. D. Anggraeni & Riyaningrum (2022), which stated that there was an improvement in parents' knowledge about stunting prevention through direct health education using e-booklet educational media. The increase was evidenced by the data obtained from 45 parents in the pre-test, where more parents had limited knowledge (20 individuals), fair knowledge (15 individuals), and good knowledge (10 individuals). In the post-test assessment, more parents had good knowledge (38 individuals) and fair knowledge (7 individuals) (Anggraeni & Riyaningrum, 2022).

Based on the obtained results, it can be concluded that education using e-booklet media had a significant effect on the knowledge of prospective newlyweds regarding stunting prevention. The presented statistical analysis was able to support several previous studies and existing theories, which stated that through e-booklet educational media utilizing smartphones, education could be conducted with various interesting concepts, thereby contributing to the improvement of an individual's knowledge. This finding aligned with the research conducted by Khotimah et al. (2019). According to Wiroatmojo & Sasonoharjo, the highest sensory absorption was through vision, accounting for 82%, followed by hearing at 11%, touch at 3.50%, taste at 2.50%, and smell at 1%. This indicated that there were several senses that aided in knowledge acquisition, with vision being the highest. Therefore, delivering educational material using e-booklet media could be applied to enhance knowledge. Having good knowledge could effect an individual's response and actions when making decisions. It served as a guide for daily life and habits, leading to positive behavior. Regular habits could transform an individual's behavior, making them better with a positive attitude in their actions (Hati, 2017).

Table 2. Frequency Distribution of Knowledge of Prospective Newlyweds Before and After Being Given Education through e-Booklet Media on Stunting Prevention

Knowledge Category of Prospective Newlyweds	Before Education E-Booklet		After Education E-Booklet		P-value
	f	%	f	%	
Good	2	6,7	27	90	0,000*
Sufficient	15	50	3	10	
Lacking	13	43,3	0	-	
Total	30	100	30	100	

CONCLUSION

Based on the research findings, it was found that there was an effect of e-booklet educational media on the level of knowledge regarding stunting prevention among prospective newlyweds in the Office of Religious Affairs (KUA) Bululawang District, Malang Regency. The pre-test results before being provided with e-booklet education on stunting prevention showed that the majority of respondents had a sufficient level of knowledge about stunting. However, after being given e-booklet education, the majority of respondents had a good level of knowledge.

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