

Elsimil Application to Increase Knowledge and Attitudes of Young Women to Prevent Stunting

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Abstract

Based on the results of the Indonesian Nutrition Status Survey, the incidence of stunting in 2021 was 24.4%, and it decreased to 21% in 2022. The government continues to strive to reduce the stunting rate with a target of 14% by 2024. In 2022, the National Population and Family Agency (BKKBN) innovated through the Elsimil application to reduce the stunting rate. This study is relevant to the government's efforts to reduce the incidence of stunting. The primary objective of this study is to assess the application of Elsimil in women as prospective brides and mothers to prevent stunting. This research aims to analyze the application of Elsimil in increasing the knowledge and attitudes of teenagers regarding the prevention of stunting in Cirebon City. This is a quantitative research study, a type of quasi-experimental research with a one-group pretest-posttest design. The population is late adolescents (15-19 years old). The sample consisted of 30 young women aged 15-19 years, selected using purposive sampling. The research instrument uses a questionnaire. Univariate analysis uses frequency distribution. Bivariate analysis of the Marginal Homogeneity test for the knowledge variable yields a p-value of 0.00. The McNemar test for the attitude variable yields a p-value of 0.00. There are significant differences in knowledge and attitudes between those who used the Elsimil application before counseling and those who used it after counseling. The Elsimil application can serve as an alternative educational medium for teenagers to help prevent stunting.

INTRODUCTION

In 2022, the National Population and Family Agency introduced the Elsimil application (Electronic Ready to Marry and Ready to Get Pregnant), which can be downloaded from the Google Play Store. This application is aimed at reducing stunting rates among prospective brides and grooms, fertile couples, pregnant women, postpartum mothers, toddlers, and teenagers. (BKKBN, 2020). Stunting is one of the

goals of the Sustainable Development Goals (SDGs). Indonesia is in the process of realizing sustainable development, or achieving the SDGs, namely ending hunger, achieving better food and nutrition security, and supporting sustainable agriculture. The targets included in it are overcoming the problem of stunting, which is aimed to decrease by 2025 (Kemenkes RI, 2022). Stunting remains a significant nutritional issue in Indonesia. The stunting rate in Indonesia is 30.8%. This figure is still relatively high compared to the National Medium-Term Development Plan target of 19% in 2024 (Kemenkes RI, 2018). Stunting is the most significant problem compared to other nutritional issues, such as malnutrition, thinness, and obesity. (Kementerian Kesehatan RI, 2018). Based on the results of the Indonesian Nutritional Status Survey, the incidence of stunting in 2021 was 24.4% and fell in 2022 to 21.6% (Tebi et al., 2022). However, the government continues to strive to reduce stunting rates with a target of 14% by 2024 (Siti Kurnia Widi Hastuti et al., 2022).

Based on the results of routine monitoring processed through the Electronic Community-Based Nutrition Recording and Reporting application, the percentage of stunted toddlers in 2020 reached 13.6%, in 2021 it was 13.4% and in 2022 it reached 12.83%, with the highest contributor to the incidence of stunting in the Sitopeng area. (Dinkes Kota Cirebon, 2022).

The results of Rekno Sulandjari's research on the effectiveness of social media communication in understanding the role of Elsimil in reducing stunting rates in Indonesia show that although the majority of society strongly supports the Elsimil program as one of the requirements that must be applied in marriage procedures, they have not been able to get significant results for its effectiveness in preventing stunting. (Sulandjari et al., 2023). So far, the use of Elsimil has been primarily utilized by prospective brides and grooms, as the stunting-free certificate from Elsimil is a requirement for marriage registration at the Religious Affairs Office. The use of the Elsimil application has not been optimal, so efforts are needed to socialize its use and utilization, especially among teenagers. (BKKBN, 2022).

Teenagers are one of the target audiences of the Elsimil application, as they are prospective brides and grooms, as well as prospective parents. One of the causes of stunting is a lack of nutrition during pregnancy. (Sarliana & Yuli Admasari, 2022). The purpose of this study was to analyze the effect of using the Elsimil application on the knowledge and attitudes of adolescent girls regarding the prevention of stunting in Cirebon City.

METHOD

This is an analytical study using a quasi-experimental method with a one-group pretest-posttest design. (Sugiyono, 2017). The study was conducted in Cirebon City, with the target area being the Majasem area. This is because this area still has the highest number of stunting cases, with the most significant number of teenagers in Cirebon City. (Dinkes Kota Cirebon, 2022). The hypothesis is that the use of Elsimil influences the knowledge and attitudes of adolescents in preventing stunting. The study population consisted of all late adolescents aged 15-19 years in Cirebon City. The sample consisted of female adolescents aged 15-19 years who were unmarried. The sampling technique used was purposive sampling, totaling 30 female adolescents. The research instrument consisted of a 25-question knowledge questionnaire (Cronbach's Alpha = 0.97, greater than the *r* table value of 0.468) and a 20-statement attitude questionnaire (Cronbach's Alpha = 0.94, greater than the *r* table value of 0.468), both of which were found to be valid and reliable. After informed consent was obtained, the sample first downloaded the Elsimil application, followed by completing a pretest using a questionnaire. Furthermore, the sample was given education. In the first meeting, the sample utilized the Elsimil application, which included material on wedding preparation, body mass index, and adolescent reproductive health. In the second meeting, we studied the Elsimil application on anemia and balanced nutrition, and a post-test was conducted. Univariate analysis used a frequency distribution. Bivariate analysis of the Marginal Homogeneity test (nonparametric paired data > 2 criteria) for the knowledge variable and the McNemar Test (nonparametric paired data) for the attitude variable (Dahlan, 2017).

This research has been subject to ethical approval by Poltekkes Kemenkes Tasikmalaya with the number DP.04.03/F.XXVI.20/280/2023.

RESULTS AND DISCUSSION

This research was conducted at SMA N 5 Cirebon City, as it is located within the Majasem Health Center's working area. According to data from the Cirebon City Health Office, Majasem is an area with the largest number of adolescents in Cirebon City. All samples filled out informed consent before participating in the research activities. This sample size is a limitation that could potentially cause bias in the research results. The media used in this study were the Elsimil application, created by BKKBN in 2022, and the Elsimil application module, also made in 2022. This application has the following appearance:

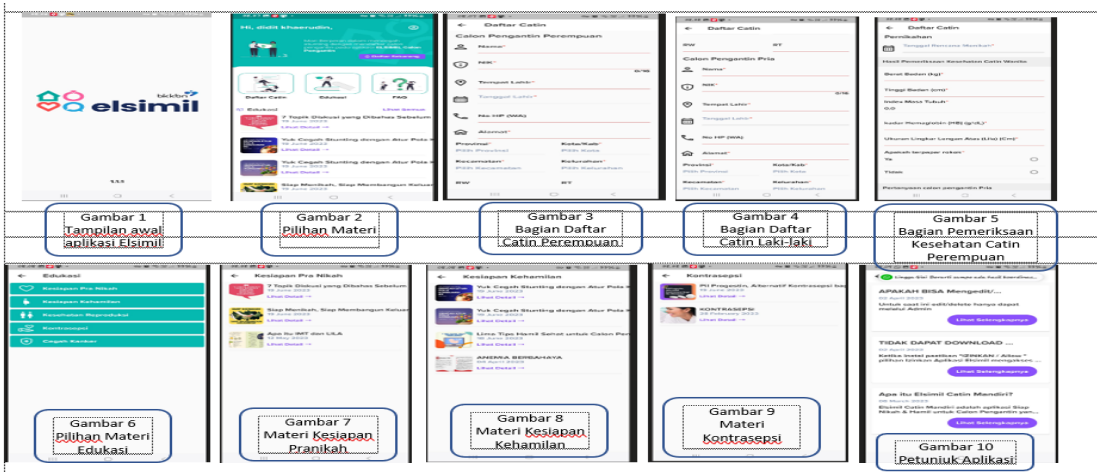


Figure 1. Elsimil Application Display

The sample first downloaded the Elsimil application on their respective mobile phones before the research activity began. The results of the univariate analysis are shown in the following table:

Table 1. Respondent Characteristics		
Respondent characteristics	Number (n)	Percentage (%)
Age		
16 years	24	80
17 years	6	20
Source of information about stunting		
Television	5	16,7
Parents	2	6,6
Teachers	5	16,7
Health workers	8	26,7
Internet	10	33,3

Based on Table 1, it is known that the majority of respondents are aged 16 years (80%). Respondents get information sources about stunting prevention primarily through the internet (33.3%).

Table 2. Frequency Distribution of Knowledge and Attitudes Before and After Counseling

No	Variable	Number (n)	Percentage (%)
1	Knowledge (Before)		
	Good ($\geq 75\%$)	4	13
	Enough (56-74%)	23	77
	Less ($<55\%$)	3	10
2	Knowledge (After)		
	Good ($\geq 75\%$)	23	77
	Enough (56-74%)	7	23
	Less ($<55\%$)	0	0
3	Attitude (Before)		
	Positive ($\geq 61\%$)	11	37
	Negative ($< 61\%$)	19	63
4	Attitude (After)		
	Positive ($\geq 61\%$)	26	87
	Negative ($< 61\%$)	4	13

Based on Table 2, it is evident that before receiving education using the Elsimil application, the majority of respondents had sufficient knowledge, namely 77%. After using the Elsimil application, the majority of respondents also had good knowledge, namely 77%. Respondents' attitudes toward the Elsimil application before receiving education were mainly negative, at 63%, while after using the application, the majority were positive, at 87%.

Table 3. Results of the Marginal Homogeneity Test on the Knowledge variable

		Knowledge After Counseling		Total	<i>p value</i>
		Good	Enough		
Knowledge Before Counseling	Good	4	0	4	0,001
	Enough	19	4	23	
	Less	0	3	3	
Total		23	7	30	

Based on Table 3, it is evident that the knowledge before counseling was good and remained good after counseling for four people. Knowledge before counseling was sufficient, but it improved after counseling for 19 people and remained sufficient for four people. Knowledge was initially lacking, but became sufficient after counseling three people. The p-value is 0.001 (<0.05). It can be concluded that there is a significant difference in knowledge between the pre- and post-counseling periods, as measured using the Elsimil application.

Table 4. McNemar Test Results on Attitude Variables

		Attitude After Counseling		Total	<i>p value</i>
		Positive	Negative		
Attitude Before Counseling	Positive	11	0	11	0,001
	Negative	15	4	19	
Total		26	4	30	

Based on Table 4, the attitude of 11 people remained positive after the positive counseling. Knowledge before the negative counseling became positive for 15 people and remained negative for four people. The p-value of 0.001 (<0.05) indicates a significant difference in attitude between before and after using the Elsimil application.

Currently, the use of applications as educational media has a positive impact on achieving health education goals. (Hairuddin K. et al., 2023). Including one of them through the Elsimil application. Research on Stunting Prevention Education Based on Android Applications shows that there is a significant influence of stunting education using Android applications ($p\text{-value} < 0.05$) on increasing knowledge and attitudes. (Fitriami & Galaresa, 2022).

The results of this study align with other studies on the concept of preventing stunting through the Elsimil application, which demonstrate that the Elsimil application can prevent stunting from the upstream, specifically from the preparation of prospective brides and grooms. (Effendy Syamsuri, 2022). Similar research on the effectiveness of social media communication in understanding the role of elsimil in reducing stunting rates in Indonesia shows that although the majority of society strongly supports the elsimil program as one of the requirements that must be applied in marriage procedures, it has not been able to obtain significant results for its effectiveness in preventing stunting. (Sulandjari et al., 2023). A 2022 study on Elsimil revealed that the Elsimil application is currently in the introduction (socialization) stage, facilitated through mentoring by Genre Ambassadors (Planned Generation) or the Planned Generation Community, and the Family Support Team. (Naurah Lisnarini et al., 2022).

Teenagers need to get education about preventing stunting because teenagers are prospective mothers who will give birth to the next generation. So, healthy preparation of teenagers as prospective mothers is essential (Heryani et al., 2023). This is in accordance with the results of research on adolescent perceptions of stunting and anemia, which shows that several adolescents stated that anemia is the same as low blood pressure (Mulidah et al., 2022). Among the obstacles to overcoming anemia are that teenagers often have a body image that prioritizes being slimmer, limit their intake of nutritious food, lack sleep, and worry excessively about their body (Siswati et al., 2022). The use of the Elsimil application as an alternative information technology media that can be used because of its ease of use and can be used as evaluation material for the condition of prospective mothers, so that it can prevent stunting (BKKBN, 2020). Interesting educational media can make it easier for teenagers to understand the material presented, one of which is through stunting prevention card games (Sulistiyowati et al., 2023). Utilization of WhatsApp media can increase adolescent knowledge in preventing stunting (Lestari et al., 2023).

The results of this study are not in line with those of the study entitled "Relationship of knowledge and attitude towards stunting prevention behavior in adolescent girls," which obtained a $p\text{-value}$ of 0.061 (> 0.05) for the knowledge variable and a $p\text{-value}$ of 0.000 (< 0.05) for attitude. There is no significant relationship between knowledge and stunting prevention behavior; however, an important relationship exists between attitude and stunting prevention behavior. (Azzahra et al., 2024).

CONCLUSIONS AND RECOMMENDATIONS

The use of the Elsimil application has a positive impact on increasing knowledge and changing attitudes in adolescent girls, contributing to efforts to prevent stunting. This application is recommended for use as an alternative medium in health promotion activities for prospective brides and adolescents, supporting efforts to prevent stunting in Indonesia. The challenges faced by adolescents are implementing good knowledge and attitudes in the form of stunting prevention behavior.

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