(RESEARCH ARTICLE)

The effect of premarital classes on the level of knowledge about pregnancy preparation in preventing stunting

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Abstract

Unplanned pregnancies accounted for 40% of total pregnancies in Indonesia between 2015-2019, which is one of the risk factors for stunting. The national stunting prevalence reached 21.6% in 2022, so the World Health Organization set a target to reduce stunting below 20% by 2024 in accordance with the Sustainable Development Goals. This study was conducted to analyze the effect of premarital classes on the level of knowledge of prospective brides regarding pregnancy preparation in preventing stunting. This study used a one-group pre-posttest design to analyze the effect of premarital classes on knowledge about pregnancy preparation to prevent stunting. The study was conducted at the Surabaya Family Learning Center in December 2024, involving 100 respondents who met the inclusion and exclusion criteria. Data were collected through questionnaires administered before and after the class. Variables such as gender, exposure to information, age, education, and income were also considered. Before attending the premarital class, the participants' knowledge level was categorized as good (31%) and poor (30%). After the intervention, 63% of participants reached the excellent category. Wilcoxon test showed a significant increase in knowledge after the intervention (p-value = 0.000). Further analysis showed the effect of gender (Mann-Whitney test p-value pre: 0.001 and post: 0.000) and education level (Kruskal-Wallis test p-value pre: 0.001 and post: 0.005) on the effectiveness of premarital classes. Premarital classes are effective in increasing the knowledge of brides-to-be about pregnancy preparation in preventing stunting. Premarital class programs need to consider gender and education level factors for optimal results.

Keywords: Premarital Class; Pregnancy Preparation; Preventing Stunting; Knowledge Brides; Health Education

1. Introduction

Indonesia has committed to realizing the Sustainable Development Goals (SDGs) Agenda, with the goal of ending all forms of malnutrition by 2030 [1]. One of the important targets in the SDGs is to reduce the prevalence of stunting below 20% by 2024, in accordance with the target set by WHO [2]. Based on the Indonesian Nutrition Status Survey (SSGI) data in 2022, the national stunting prevalence was recorded at 21.6% [3], with East Java reaching 19.2% [4].

Stunting is often caused by poor preparation for pregnancy [5]. According to data from the Good Mention Institute in 2022, around 40% of pregnancies in Indonesia are unplanned, and 30% of them are unwanted pregnancies [6]. According to the Ministry of Health of the Republic of Indonesia, stunting can start from the fetal period and is only seen when the child is two years old, with a lack of nutritional intake during pregnancy as one of the main causes. [7]. Therefore, it is very important to prevent nutritional problems in pregnant women starting before pregnancy, by maintaining their health and nutritional status [8].

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In Surabaya city, the Office of Women Empowerment, Child Protection, Population Control, and Family Planning has developed a marriage parenting education facility through the Surabaya City Family Learning Center program, as part of efforts to reduce the prevalence of stunting [9].

This study aims to assess the effect of premarital classes on the knowledge of brides-to-be regarding pregnancy preparation in an effort to prevent stunting. It is hoped that the results of this study can be a consideration for establishing mandatory premarital classes as a condition of marriage throughout Indonesia.

2. Material and methods

This study uses a quantitative method with a pre-experimental one group pretest-posttest approach. The aim was to analyze the effect of premarital classes on the level of knowledge of brides-to-be regarding pregnancy preparation in preventing stunting. The study was conducted on brides-to-be who were registered as participants in premarital classes at the Surabaya City Family Learning Center Indonesia and met the inclusion criteria, namely brides-to-be who will have their first marriage, are not pregnant (for women), are willing to become respondents by signing informed consent, and follow the entire series of class activities until completion. Meanwhile, the exclusion criteria included brides-to-be who had attended premarital classes elsewhere, did not complete all class sessions, withdrew as respondents, or did not complete the pretest and posttest questionnaires. The population of this study was brides-to-be who attended premarital classes at the Surabaya City Family Learning Center, Indonesia, with a sample size of 100 respondents.

Data collection was conducted in December 2024 through a structured questionnaire that included respondent characteristics, pretest and posttest knowledge of pregnancy preparation, and four Likert scale questions related to information exposure of prospective brides before attending premarital classes. Bivariate analysis was conducted with Wilcoxon test to determine the difference between pretest and posttest scores, Kruskal-Wallis test to analyze the relationship between information exposure, age, education, and income with pretest and posttest scores, and Mann-Whitney test to see the relationship between gender and pretest and posttest scores.

Bivariate analysis was performed using the Wilcoxon test to determine differences in pretest and posttest scores, with the results of the Z value = -8.413 and significance (Asymp. Sig.) of 0.000. The Kruskal-Wallis test was used to analyze the relationship between several characteristic variables and knowledge scores. The test results showed the value of information exposure in the pre-test was $p = 0.520$ and post-test $p = 0.229$; age variable with pre-test $p = 0.737$ and post-test $p = 0.771$; income with pre-test $p = 0.035$ and post-test $p = 0.253$; and education level with pre-test $p = 0.001$ and post-test $p = 0.005$. The Mann-Whitney test for the gender variable resulted in a value of $p = 0.001$ in the pre-test and $p = 0.000$ in the post-test. The validity test of the questionnaire was conducted on 100 respondents, with Cronbach's Alpha values of 0.799 for the knowledge section and 0.853 for the information exposure section, indicating high reliability.

3. Results and Discussion

The research was conducted in December 2024 at the Surabaya City Family Training Center Indonesia and was attended by 100 respondents.

Table 1 Characteristics of Respondents of Prospective Brides in Premarital Classes

Respondent Characteristics	Category	Frequency (100)	Percentage (100%)
Gender	Female	60	60%
	Male	40	40%
Age	<20 Years	9	9%
	20-25 Years	43	43%
	26-30 Years	24	24%
	>30 Years	24	24%
Education	Elementary school	11	11%

	Junior high school	7	7%
	Senior high school	71	71%
	Bachelor degree 1	11	1%
Income	< Rp4.525.479,19	58	58%
	Rp4.525.479,19	10	10%
	> Rp4.525.479,19	16	16%
	Rp0	16	16%
Information Exposure	Low	27	27%
	Medium	49	49%
	High	24	24%

A total of 100 respondents were involved in this study. The majority were female (60%), with the largest age group in the range of 20-25 years (43%). The respondents' education level was dominated by high school graduates (71%). Most respondents had incomes below the Provincial Minimum Wage (58%), and as many as 16% had no income. Based on the level of information exposure, most respondents were in the moderate category (49%).

Table 2 Differences in Pre-test and Post-test Results of Respondents' Knowledge

Interval	Category	Pre-test		Post-test		P - Value
		Frequency (100)	Percentage (100%)	Frequency (100)	Percentage (100%)	
<54	less	30	30%	4	4%	0.000
55 - 69	Enough	22	22%	11	11%	
70 - 84	Good	31	31%	22	22%	
>85	Very good	17	17%	63	63%	

The results of the Wilcoxon analysis test regarding the knowledge of participants before and after attending premarital classes showed a p-value of 0.000 <0.05, which means that there was a significant difference in knowledge after the intervention was carried out. Before the intervention, the majority of respondents were in the "less" (30%) and "Good" (31%) categories. After the intervention, the proportion of the "Very good" category increased sharply from 17% to 63%, while the "less" category decreased dramatically to 4%. These results indicate that premarital classes are effective in significantly increasing the knowledge of respondents. research conducted by [10,11], that premarital classes are effective in increasing the knowledge of brides-to-be, especially related to reproductive health, pregnancy planning, and stunting prevention, this study underscores the importance of premarital education as a preventive measure to ensure a healthy pregnancy and reduce the risk of health problems such as stunting in infants. Thus, premarital classes can be a very important intervention in improving the quality of preparation of brides-to-be, both physically, mentally, and socially, to prevent health problems that can affect mothers and children in the future.

Table 3 Factors Associated with Pretest and Posttest Scores in Premarital Classes

Factors	$\rho - Value$ Pre-test	$\rho - Value$ Post-test
Information Exposure	0.520	0.229
Gender	0.001	0.000
Education	0.001	0.005
Income	0.035	0.253
Age	0.737	0.771

The results of the Kruskal-Wallis analysis test showed that the variables of age, income, and information exposure did not have a significant relationship with the level of knowledge both before and after the premarital class ($p = > 0.05$). In contrast, the results of the Kruskal-Wallis analysis test showed that education was significantly related to the level of knowledge at pre-test ($p = 0.001$) and post-test ($p = 0.005$). In addition, the Mann-Whitney analysis test showed that gender was also significantly related to knowledge both before ($p = 0.001$) and after premarital classes ($p = 0.000$). Thus, education and gender are factors that influence the increase in respondents' knowledge. Research conducted by [12,13], that education has an effect on knowledge, because people with higher education are better able to understand information, also showed a significant increase in knowledge in individuals in pairs with higher education levels after receiving information. The results of the Mann-Whitney test conducted in this study indicated a significant difference between men and women in knowledge change, indicating that gender affects the way couples process information. These results are in line with research [14] which states that women use premarital counseling services more often. This indicates that education and gender play a crucial role in influencing how couples receive and process information about pregnancy preparation.

4. Conclusion

This study concludes that the level of knowledge of brides-to-be regarding pregnancy preparation in preventing stunting has increased, from good and less categories before attending premarital classes to very good after attending the class. This finding concludes that premarital classes play a significant role in improving the knowledge of brides-to-be. In addition, the relationship analysis conducted also showed that gender and education level had an influence on the effectiveness of premarital classes, while the variables of income, age, and exposure to information did not show a significant influence.

Compliance with ethical standards

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Disclosure of conflict of interest

There is no conflict of interest.

Statement of ethical approval

The Research and Ethics Committee of the Faculty of Medicine, Airlangga University, Indonesia, has approved this study with letter number 199/EC/KEPK/FKUA/2024, which is valid from December 6, 2024 to December 6, 2025.

Statement of informed consent

Informed consent was obtained from all participants involved in this study.

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