

The role of education classes in improving pregnant women's knowledge of stunting prevention: A Literature Review

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Abstract

The current study aimed to determine the role of educational classes in increasing pregnant women's knowledge of stunting prevention. Through the application of inclusion and exclusion criteria, this research is a literature review study that was picked from the most recent five years, 2020-2024. The PubMed database and Google Scholar are used as data sources, and the publish or perish tool is used to search for publications using the following keywords: stunting, educational classes, knowledge, and pregnant women. An example of a study protocol that researchers utilized was the Preferred Reporting Items for the PRISMA technique. This was a literature review study using a defined search strategy and inclusion and exclusion criteria. 352 articles were retrieved from PubMed and Google Scholar databases after duplicate records were removed. The selection process involved evaluating the title and abstract, study design, population, and outcomes. The full texts of some articles were accessible. Ultimately, this review contains nine studies. Educational classes are significant in the prevention of stunting because they have a substantial impact on improving knowledge.

Keywords: Pregnant Women; Education classes; Improving; Knowledge

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1. Introduction

It is a physical development issue that is measured by height for age and is caused by chronic malnutrition, which causes children to become shorter than their age [1]. Stunting is described as a condition that falls under this category. According to Soliman et al (2021), stunting is a growth condition that is caused by malnutrition and can happen anywhere from conception until the age of 24 years old. A prolonged period of insufficient dietary intake can lead to stunting, which is characterized by a height that is not proportionate to the individual's age. An impeded physical growth that is characterized by a decrease in growth rate is one of the symptoms that might be associated with stunting. Stunting is a condition that manifests itself when the fetus is still immature and does not become apparent until the child is two years old. Several dangers can be posed by stunting occurrences, including the possibility of sickness and mortality, as well as the suppression of both motor and cerebral skills [3].

The fact that more than forty percent of children are stunted is the reason why stunting is today considered to be a

significant public health concern [1]. According to information provided by the World Health Organization (WHO), in the year 2020, as many as 149 million children under the age of five were affected by stunting, which further contributed to the development of other health issues [4]. Additionally, according to data from the WHO, more than half of children who are stunted are located in Asia and Africa. The Asian continent is home to several countries, including India, Nepal, Laos, and Indonesia, that have an incidence of stunting that is greater than thirty percent [5].

According to projections made by the World Health Organization (WHO), the number of children under the age of five who are overweight or obese will reach 128.3 million by the year 2025. However, by the year 2030, this number is expected to decrease to 116.5 million. It is estimated that 141.3 million children under the age of five around the world are suffering from stunting at present. Because this number continues to be the greatest number of cases worldwide, efforts to prevent and minimize stunting must continue to be optimized [6]. In the short term, the repercussions of stunting include delayed brain development, decreased cognitive

development, impaired physical growth, and metabolic difficulties. This is because the effects of stunting cannot be separated from the short-term and long-term causes of stunting. A decrease in cognitive ability and learning accomplishment, a lack of endurance, which makes children more susceptible to disease, a high risk of diabetes, obesity, reduced heart and blood vessel function, cancer, stroke, and impairment in the elderly phase of life are some of the effects that can occur throughout a lifetime [7].

Several studies have mentioned the education and awareness of parents, the age of the mother, the socioeconomic conditions, the nutritional quality of pregnant women, and infectious infections that occur during pregnancy as possibly contributing to stunting. According to Saleh et al (2021), the mother is the only source of nutrients for the growth of the fetus while it is still inside the mother's womb. Therefore, the role of the mother's knowledge is a significant component in preventing stunting.

It has been found that mothers' knowledge, attitudes, and practices regarding child nutrition are some of the factors that influence the number of instances of stunting in Indonesia [9]. This is according to the findings of Permatasari et al (2021). According to Simanjuntak et al (2019), knowing is the result of "knowing," which takes place after humans have had the experience of perceiving a certain thing. The majority of people utilize all five of their senses sight, hearing, smell, taste, and touch to be able to perceive their surroundings. According to Toivanen (2021), knowledge is the outcome of perceiving because its acquisition is accomplished via the use of the eyes and hearing. It is also possible to acquire knowledge through one's own experiences or the experiences of others. Knowledge, often known as cognitive abilities, is an essential factor in deciding the behaviors that a person takes. The factors of knowledge manifest themselves as individual or collective considerations that affect behavior [12].

Women who are pregnant are required to be familiar with and attend educational classes on stunting. According to the findings of a study conducted by Yanti et al (2023), education classes, which serve as a medium for disseminating education, provide considerable improvement for pregnant women in terms of knowledge and awareness about stunting. In addition, their attitudes and behaviors during pregnancy were also affected as a result of this increased understanding. This study was conducted to find out the extent to which educational classes play a role in increasing the level of awareness of stunting prevention among pregnant women.

2. Materials and methods

2.1 Research Design

This study is a systematic review of existing literature. The articles were chosen based on the specified theme from the period 2020 to 2024, including the last five years. The population inclusion criteria include pregnant women, mums with either stunted or non-stunted toddlers, and full-text papers that are openly accessible. These articles must have study designs that fall into the categories of RCT, quasi experiments, experiments, or pre-experiments. The exclusion criteria encompassed conference papers, chapters, editorials, theses, and any material that was not open access.

2.2 Data Collection

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For this investigation, the data sources consisted of publications that were discovered in the electronic databases PubMed and Google Scholar. Additionally, the publish or perish tool was utilized to search for articles. When searching through each database, the researcher employed a search technique that included the following keywords: stunting, education class, knowledge, and pregnant women.

2.3 Data Analysis

This research uses the Preferred Reporting Items for Systematic Reviews and the Meta-analysis Statement (PRISMA) technique, as demonstrated in Figure 1, to ensure that they are following the appropriate stages or study methodology [14].

3. Results and Discussions

3.1 Result

A total of 352 articles were obtained from the PubMed database (n=136) and Google Scholar (n=216) using the search method and selection criteria. Eighty-two duplicate data were eliminated. Seventy-two articles were excluded based on title and abstract. Fifty-four articles were excluded based on the study design. One hundred twenty-nine articles were excluded based on population. Three articles had inaccessible full text. Three articles had full text with results that did not match the interest or exposure. The review encompassed a total of 9 studies. The study's selection method is illustrated in Figure 1 PRISMA and summarized in Table 2. Findings from Article Analysis.

3.2 Discussions

The prevention of stunting can be accomplished through a variety of different approaches. On the other hand, there are still a great number of individuals who are not familiar with the phrase "stunting." Impeded growth and development in children is the result of stunting, which is a chronic malnutrition condition caused by a lack of nutritional intake over a lengthy period [2]. Stunting is characterized by the child's height being lower or shorter (stunted) than their age. There is a widespread belief that the condition of children who are short in height is a hereditary element that is passed down from both parents. As a result, many individuals accept this condition without taking any steps to prevent it. It is a well-known fact that genetic variables are among the elements that determine health. However, they have a relatively minor impact when compared to other factors such as behavior, environment (including social and economic issues, culture, and health services), and health services.

In addition to those, factors such as household income, cognitive abilities, maternal understanding of nutrition, maternal parenting styles, previous infections, vaccination history, protein consumption, and maternal nutrition, particularly during pregnancy, are among the numerous factors that have a substantial impact on the occurrence of stunting [23]. To a large extent, the level of education, awareness, and attitudes regarding the fulfillment of nutritional requirements during pregnancy are directly related to the improvement of the nutrition and health of pregnant women.

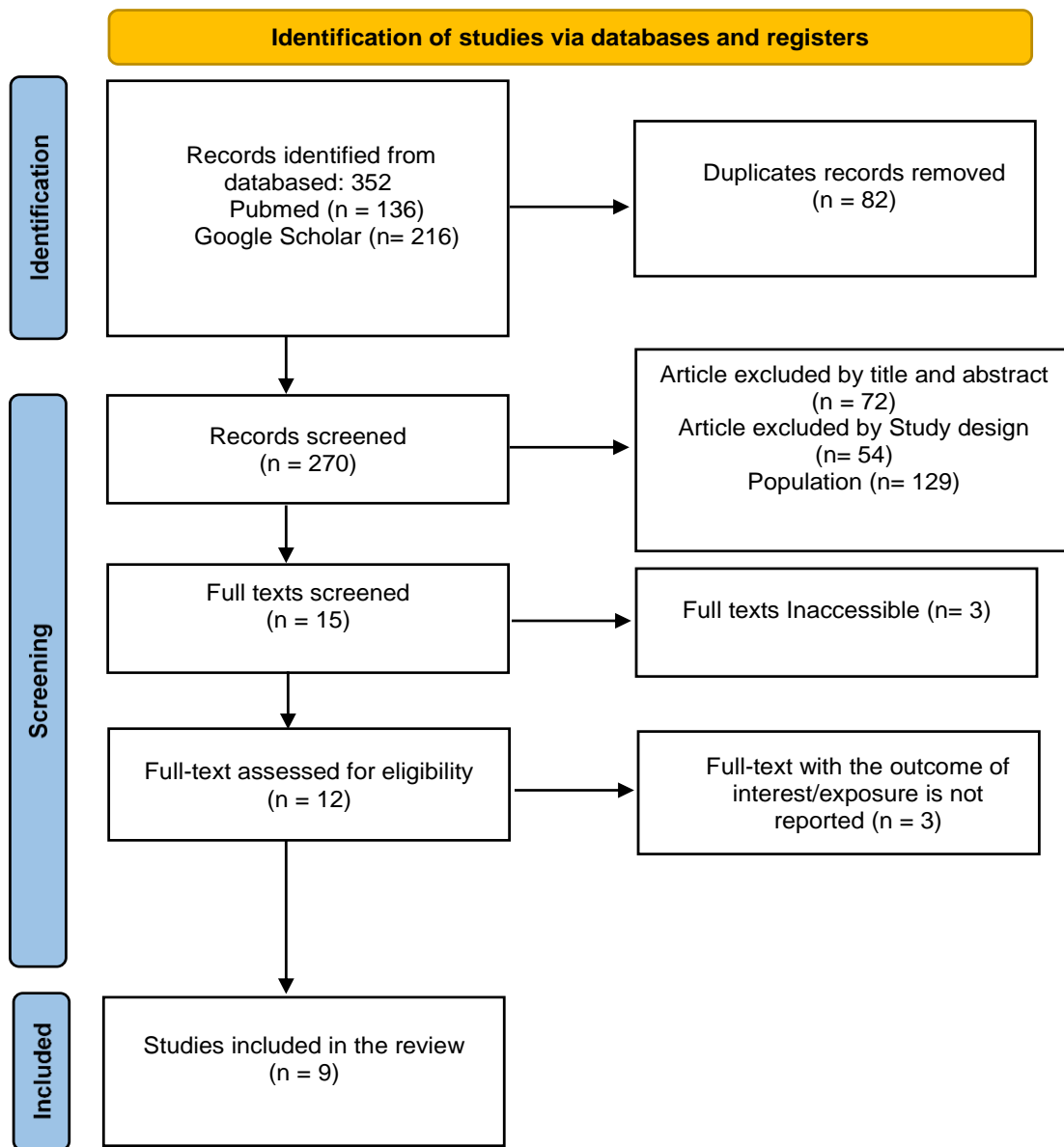


Figure 1. Results of a PRISMA [14]

Table 2. Result of Article Analysis

Author	Objective	Design	Method Educational	Sample	Result
[13]	An evaluation of the effectiveness of a module for pregnant women that focuses on nutrition education, nutrition status, knowledge, and attitude of pregnant women who are taking preventative measures against stunting.	pre-experimental	Module	30 pregnant women	According to the results of the t-test, there is a considerable influence on the level of knowledge and attitudes of respondents after they have received treatment. The results of the t-test with two tails are more than 0.05.
[15]	The objective of this study is to evaluate the effect that education that is presented through video media has on the retention of information by pregnant women in order to prevent stunting.	quasi-experimental	The treatment group was exposed to video media, while the control group was exposed to poster media.	60 pregnant women	As a result of the findings of the research, a significant level of 0.000 was discovered, which suggests that the retention of pregnant women's knowledge about nutrition to prevent stunting is influenced by instruction made through the use of video media and booklet media.
[16]	To determine whether or not education can significantly raise mothers' awareness of stunting	quasi-experimental	Education Outreach	30 pregnant women	On the pre-test, the average score for understanding was 11.40. The average score on the post-test went up by 12.97 points after teaching about preventing stunting was put in place.
[17]	The aim is to evaluate the effects of educational interventions using stunting smart card media on the knowledge and attitudes of pregnant women on stunting prevention.	Quasi-Experimental	education using stunting smart card media	30 first-trimester pregnant women	The study's results showed that the average attitude score before the change was bad, at 28.63. However, after getting educated with the stunting smart card, the total score for positive attitude went up to 37.70. With a 95% confidence level, the p-value was found to be 0.000, which is less than or equal to 0.05. The results show that stunting smart card media has a big effect on what pregnant women know and how they feel about preventing stunting.
[18]	Recognize any shifts in the knowledge that pregnant women have on the prevention of stunting through the use of health education.	pre-experimental	Booklet	33 pregnant women	The p-value of 0.000 is below the significance level of α (0.05), the findings of the bivariate analysis indicate that pregnant women are becoming more aware of the prevention of stunting through health education.
[19]	The purpose of this study is to assess the impact that education about stunting and responsive feeding has on mothers' awareness of stunting.	Pre-Experimental	Booklet	34 Mothers with Stunted Toddlers	Mothers' knowledge about stunting and responsive feeding showed a substantial disparity before and after receiving educational intervention, as indicated by a P value of 0.000 (<0.05).
[20]	The purpose of this study is to examine the impact of educating pregnant women on stunting through WhatsApp Groups.	Pre-Experimental	Poster Media	41 Pregnant Women	The Wilcoxon test showed a p-value of 0.000, indicating a significant influence of stunting prevention education through WhatsApp Groups on the knowledge of pregnant mothers.
[21]	The objective of this study is to examine the extent to which health education through leaflet media influences the level of knowledge that mothers possess regarding the appropriate parenting styles for infants to mitigate stunting.	Pre-Experimental	Media Leaflet	88 Pregnant Women	The Wilcoxon test yielded a p-value of 0.000, indicating statistical significance at a predefined alpha level of 0.05.
[22]	To analyze the impact that health education has on efforts to prevent stunting by altering the knowledge, attitudes, and behaviors of women who have children who are toddlers	quasi-experimental	The seminar method, the seminar and leaflet approach, and the seminar and video method.	114 pregnant women	Through the utilization of the Wilcoxon Signed Rank Test, a significance value was determined, indicating a p-value of 0.000 < α = 0.05 for all approaches. This suggests that health education has a significant impact on enhancing the knowledge of mothers of toddlers in the prevention of stunting.

Inadequate knowledge and habits that need to be more appropriate are both hurdles that stand in the way of achieving optimal nutrition. A significant number of individuals are unaware of the significance of proper nutrition during pregnancy [24]. After analyzing nine study articles that were collected over the past five years, it was shown that the role of educational classes had a major influence in raising the amount of knowledge that pregnant women had regarding the prevention of stunting. The findings of the t-test, which were based on research carried out by Yanti et al (2023), using an educational technique in the form of a module with a sample size of thirty pregnant women, indicated that there was a substantial influence on the level of knowledge and attitudes of respondents after they were provided treatment. The results of the T-test with two tails are more than 0.05 [13]. Patty et al (2023), conducted a study with a sample size of 60 pregnant women. The participants were divided into two groups: a treatment group, which received educational material through video media, and a control group, which received educational material through booklet media. The research yielded very significant results, with a p-value of 0.000, demonstrating that both video and booklet media have a substantial impact on the retention of pregnant women's knowledge about nutrition to prevent stunting [15]. According to Saragih et al (2023), when the educational outreach approach was employed with a group of 30 pregnant women, the average score on the pre-test was 11.40. The average knowledge score on the post-test increased after instruction on stunting prevention. The value is 12.97 [16].

The study conducted by Lestari et al (2024), investigated the impact of education utilizing stunting smart cards on the knowledge and attitudes of thirty pregnant women in their first trimester regarding the prevention of stunting. Before the intervention, the average attitude score was -28.63. However, after receiving education through the use of the stunting smart card, the attitude score improved to 37.70, indicating a favorable shift in attitude. The p-value obtained was 0.000, which is less than or equal to 0.05, and the confidence level was set at 95% [17]. The research conducted by Novianti & Saida (2023), utilized the educational outreach method by distributing booklets to a total of 33 pregnant women who participated in the study. With a p-value of 0.000, which is lower than the significance level of α (0.05), the findings of the bivariate analysis suggested that pregnant women's knowledge of stunting prevention through health education substantially increased. This was evidenced by the significantly increased information [18]. Utario et al (2023), conducted a study on 34 mothers of stunted toddlers, using booklets as a means of education. The findings revealed a noteworthy distinction in the mothers' knowledge regarding stunting and responsive feeding, both before and after receiving educational intervention. The P value for this difference was 0.000, which is less than the threshold of 0.05 [19]. The results of the Wilcoxon test obtained a p-value = 0.000, which means that it is possible to conclude that stunting prevention education via the WhatsApp Group influences on increasing the knowledge of pregnant women. The research was conducted by Sholikhah & Rizkiana (2023), and it was conducted on 41 pregnant women. The poster media method was used [20]. Technological advancements have made the use of social media for educational purposes increasingly prevalent in the past decade. Delivering education using social media offers

numerous benefits, such as reduced expenses, convenient availability, and adaptability [25].

Achjar et al (2023), conducted a study employing leaflet media on a sample of 88 pregnant women. The findings indicated a significant improvement in the participants' knowledge. Wilcoxon test was conducted and yielded a p-value of 0.000, which is less than the significance level (alpha) of 0.05. This indicates that health education utilizing leaflet media has a significant impact on the mother's level of knowledge about parenting practices for toddlers in reducing stunting [21]. The research conducted by Suleman et al (2021), examined the effects of different teaching methods (lecture, lecture leaflet, lecture, and video) on 114 pregnant women. The results were statistically significant, with a p-value of 0.000, indicating that health education has a significant impact on increasing the knowledge of mothers of toddlers about preventing stunting [22].

The provision of educational classes is an alternate intervention that may be utilized to enhance mothers' awareness of stunting, which in turn affects the prevention and reduction of stunting rates [26]. A human being can acquire knowledge as a consequence of "knowing" and after experiencing a certain object. The five senses, sight, hearing, smell, taste, and touch, are the ones that people utilize the most frequently. Sensing is accomplished through these five modes of perception. Because one acquires information through the use of one's eyes and ears, knowledge is the consequence of sensing [27]. It is also possible to acquire knowledge through one's own experiences or the experiences of others. Knowledge, often known as cognitive abilities, is an essential factor in deciding the behaviors that a person takes. The knowledge factor is a consideration that can be made by an individual or a group and affects behavior [28]. The comprehensive analysis of the literature study revealed that educational classes have a crucial role in enhancing information about stunting, hence facilitating the acceleration of stunting reduction.

4. Conclusions

Based on the findings of the nine literature reviews, it was determined that the effect of educational classes on the prevention of stunting had a substantial impact on improving knowledge. In addition, having a good knowledge base affects having favorable attitudes and behaviors towards the prevention of stunting.

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