INTERNATIONAL JOURNAL OF SOCIAL HEALTH
https://ijsh.ph/index.php/rp
Volume 4 Number 5 May 2025
E-ISSN: 2984-7079

The Effect of The Peer Education Method on The Knowledge of Adolescent Girls about Stunting Prevention in Cipacing Village, Jatinangor District, Sumedang Regency

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KEYWORDS
Stunting, peer education, teenage girls, knowledge

ABSTRACT
Stunting remains a significant public health issue in Indonesia, particularly in Sumedang Regency where prevalence rates remain high. Adolescent girls play a crucial role in future child health, making them ideal targets for preventive health education. Peer education, a method that leverages social interaction among adolescents, is proposed as a promising strategy to enhance knowledge and awareness on stunting prevention. This study aimed to examine the effect of peer education on the knowledge level of adolescent girls in Cipacing Village, Jatinangor District, regarding stunting prevention. This quantitative study employed a quasi-experimental design with a pretest-posttest approach in one group. A total of 25 adolescent girls aged 10–19 were selected using purposive sampling. Data were collected through structured questionnaires administered before and after the peer education intervention and analyzed using a paired t-test. The results showed a statistically significant increase in knowledge after the intervention, with the average score rising from 72.90 to 85.10 ($p < 0.000$). The percentage of participants with high knowledge increased to 88% post-intervention, indicating the method's effectiveness. The study highlights peer education as a powerful tool for improving health knowledge among adolescent girls. It encourages future programs to adopt similar approaches and suggests further research to evaluate behavioral outcomes and broaden demographic inclusion. These findings contribute valuable insights to local stunting prevention efforts and adolescent health promotion strategies.

DOI: 10.58860/ijsh.v4i5.308

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INTRODUCTION

Stunting is a chronic nutritional problem that inhibits the physical growth and brain development of children under five. According to WHO, stunting is caused by chronic malnutrition and an unsupportive environment, resulting in children not reaching optimal growth potential (World Health Organization, 2020). The causes are complex, including malnutrition, disease, poor sanitation, and inadequate health services (Kementerian Kesehatan Republik Indonesia, 2022a).

The 2020 Global Nutrition Report recorded that 149 million children under five years old are stunted, with inequality between developed and developing countries (UNICEF, 2020). In Indonesia, the prevalence of stunting in 2022 is 21.6%, a slow decline from the target of 14% in 2024 (Kementerian Kesehatan Republik Indonesia, 2022b). The Government of Indonesia has issued policies, such as Presidential Regulation No. 72 of 2021, to address stunting with a focus on interventions since adolescence (Presiden Penurunan Stu & Tentang Percepatan Bab Ketentuan Umum Pasal, V. I., 2021). West Java Province has a stunting prevalence of 20.2% in 2022, lower than the national figure, with Sumedang Regency reaching 21.6% (Kementerian Kesehatan Republik Indonesia, 2022a).

The latest data from the UPTD Jatinangor Health Center in 2024 shows that Cipacing Village has the highest number of stunting cases, namely 77 cases, compared to other villages in Jatinangor

District, such as Cikeruh Village (59 cases), Hegarmanah Village (61 cases), Cibeusi Village (35 cases), Sayang Village (56 cases), Cileles Village (55 cases), and Cilayung Village (52 cases).

Stunting is not only a health problem, but also a human development problem that has an impact on the quality of human resources in the future. Stunting occurs due to a lack of adequate nutrition during the child's growth period, especially in the first 1,000 days of life (from pregnancy to 2 years of age) (Fitri et al., 2022). By effectively addressing stunting, we not only provide better opportunities for children to grow and develop optimally, but also help create a more productive and quality society in the future.

The Indonesian government has implemented various programs to address the problem of stunting, including nutrition, health, and sanitation programs. One of the priority programs is the Healthy Indonesia Program with a Family Approach (PIS-PK), which aims to improve the nutritional status of families and communities through a family approach (Sary et al., 2022). However, there is still a gap between the targets set by the government and the actual achievements.

Adolescents, as the next generation of the nation, play an important role in efforts to prevent stunting, especially adolescent girls. Adolescence is a crucial period in which individuals undergo various physical and psychological changes and begin to form mindsets and behaviors that will carry into adulthood. Because adolescence is a critical phase in women's lives because they will enter the phase of preconception, pregnancy, breastfeeding, and finally becoming young parents. The knowledge that adolescent girls acquire during adolescence will influence their future health behaviors and decisions (42,43).

Education about stunting prevention early on to adolescents is very important because they will not only become parents in the future, but can also act as agents of change in their current environment. Effective education to adolescents can increase their awareness of the importance of good nutrition and healthy behavior, which can ultimately prevent stunting in the next generation. The knowledge they gain during adolescence can improve the knowledge of young women about nutrition and health, they will be better prepared to have healthy pregnancies, provide exclusive breastfeeding, as well as take good care of their children during the first 1000 days of life, which is a critical period in stunting prevention.

The provision of peer education is one of the interesting approaches because it utilizes the power of social interaction and mutual support between fellow adolescents. Adolescents often receive more information from their peers than from authority figures such as teachers or parents (Nufiar, 2022). Thus, peer education is a potential method to increase adolescents' understanding and awareness of health problems, including stunting prevention.

Previous research relevant to this topic includes research by Smith et al. (2019) which found that peer group education programs are effective in improving adolescents' knowledge related to nutrition (J. A. Smith & Haddad, 2021). In addition, research by Johnson et al. (2021) shows that participation in peer education can improve the health of pregnant women and newborns (M. A. Johnson & Williamson, 2021). However, this study has not focused on adolescents' knowledge about stunting prevention since adolescence.

In the context of Cipacing Village, Jatinangor District, Sumedang Regency, an effective approach is needed to increase adolescents' knowledge about stunting prevention. One potential approach is peer education, which is peer education that can create an interactive and supportive learning environment. This method is believed to be able to increase the understanding and awareness of adolescents through the exchange of information and direct experiences.

The existence of the Youth Posyandu in Cipacing Village is one of the potential platforms for the implementation of peer education programs. The Youth Posyandu, which focuses on adolescent health, provides a space for young women to get education and share information on health issues, including stunting prevention. The Youth Posyandu is a potential forum to empower young women in combating stunting through a peer education approach, where they can disseminate information and raise awareness among their peers about the importance of stunting prevention.

This study aims to evaluate the effect of providing peer education on the knowledge of young women in Cipacing Village regarding stunting prevention. With the emphasis in Presidential Regulation

72 of 2021, this study is expected to provide empirical evidence regarding the effectiveness of peer education as one of the educational interventions in stunting reduction programs among adolescents. Previously, several studies have shown that the peer education approach is effective in improving knowledge in the context of public health, but there have been no studies exploring its effect on adolescent girls' knowledge of stunting prevention.

This background attracted the attention of researchers to conduct research on the influence of peer education on the knowledge of adolescent girls about stunting prevention in Cipacing village, Jatinangor district, Sumedang regency. This research is expected to contribute to the understanding and implementation of stunting prevention efforts at the local level, especially in Sumedang Regency. Through this peer education method, it is also hoped that young women will not only increase their own knowledge, but also be able to become agents of change in their communities.

Based on the above background, the formulation of the problem in this study is whether there is an effect of the provision of the peer education method on adolescents' knowledge about stunting prevention in Cipacing Village, Jatinangor District, Sumedang Regency.

This study aims to examine the impact of peer education on adolescent girls' knowledge regarding stunting prevention in Cipacing Village, Jatinangor District, Sumedang Regency. Specifically, it seeks to compare their knowledge before and after receiving the intervention and assess the overall effectiveness of peer education in enhancing awareness. Theoretically, the research contributes to the academic understanding of peer education as a health intervention strategy, while practically, it benefits academics by supporting curriculum development, aids the community by promoting healthier parenting and reducing stunting rates, and assists health workers by offering insights to design more effective educational programs.

The novelty of this study lies in its focused application of the peer education method specifically for adolescent girls' knowledge about stunting prevention in Cipacing Village, a context not deeply explored in earlier research. Previous studies such as Smith et al. (2021) and Johnson & Taylor (2020) have demonstrated the effectiveness of peer education on broader health topics like reproductive health and maternal-child wellness. Lin et al. (2023) also applied peer education for pregnant women in stunting prevention, while Sukmawati et al. (2023) addressed peer group education in adolescent reproductive risk awareness. However, none of these works specifically targeted adolescent girls as both recipients and agents of peer-led stunting prevention education at the village level. This study fills that gap by integrating peer education within a local Youth Posyandu platform and evaluating its direct impact using a pretest-posttest quantitative design, offering localized, actionable insights into adolescent-centered health interventions.

METHOD

This study employed a quantitative research approach with a quasi-experimental design using a pretest-posttest model in a single group. The intervention involved delivering health education on stunting prevention through peer education methods to a group of adolescent girls. The target population consisted of girls aged 10–19 years residing in Cipacing Village, Jatinangor District, Sumedang Regency. The sampling method used was non-probability purposive sampling to ensure relevance and suitability of participants to the research objectives.

Inclusion criteria for participants included being female, aged 10–19, literate, residing in the study area, willing to participate, and being in good health to engage in educational sessions. Meanwhile, individuals with disabilities, unwilling participants, or those who withdrew during the intervention were excluded. The independent variable in this study was the peer education method, while the dependent variable was the level of knowledge about stunting prevention among the adolescent girls. This research was conducted in Cipacing Village in May 2024.

The data collected was quantitative, consisting of numerical values that were statistically analyzed. Primary data was obtained through pretest and posttest questionnaires given to participants to measure their knowledge before and after the intervention. No secondary data was used in this research. Research instruments, such as questionnaires, served as tools to gather accurate and valid data,

enabling the researchers to evaluate the effectiveness of peer education in improving adolescents' knowledge about stunting prevention.

RESULT AND DISCUSSION

Description of the Research Location

This research was conducted in Cipacing Village, Jatinangor District, Sumedang Regency, which is located in the northwest part of the sub-district and borders Bandung Regency. This village has an area of 171 hectares and an altitude of 704 meters above sea level, consisting of three hamlets, 18 RWs, and 70 RTs. The majority of the population works as farmers and daily laborers, and has varying levels of education. In 2020, the population of Cipacing Village reached 15,372 people, with the main livelihoods in the industrial, handicrafts, and trade sectors. The village is also famous for its air rifle crafts. The number of adolescents aged 10-19 years reached 18,331, with 8,710 of them being women (Badan Pusat Statistik (BPS) Kabupaten Sumedang, 2021).

Univariate Analysis Results

Respondent Characteristics

The characteristics of the respondents in this study included age and class. The respondents of this study were young women aged 10-19 years in Cipacing Village. Here is a brief description of the respondents' characteristics:

Table 1. Distribution of Research Respondent Characteristics

Respondent Characteristics Age (Year)	N	%
Early Teens (10-13 Years Old)	**8**	**32%**
11 years	1	4%
12 years	4	16%
13 years	3	12%
Middle Teens (14-17 Years Old)	**16**	**64%**
14 years	4	16%
15 years	3	12%
16 years	7	28%
17 years	2	8%
Late Teens (>18 years old)	**1**	**4%**
19 years	1	4%
Total	**25**	**100%**

Based on table 1, the characteristics of the respondents show quite diverse age variations. The majority of respondents were 16 years old, which was 28%. None of the respondents were 10 or 18 years old. This data provides an overview of the age distribution of respondents involved in the intervention in this study.

Distribution of Knowledge Frequencies of Young Women Before Intervention

Table 2 Distribution of Knowledge Frequencies of Young Women Before Intervention

Statistical Value	Knowledge
Minimum	50
Maximum	90
Mean	72,90

Table 2 provides a clear picture of their state of knowledge. With a minimum knowledge score of 50 and a maximum of 90, and a mean of 72.90.

Distribution of Knowledge Frequencies of Young Women After Intervention

Table 3. Frequency Distribution of Knowledge of Young Women After Intervention

Statistical Value	Knowledge
Minimum	60
Maximum	95
Mean	85,10

Table 3 shows a snapshot of adolescent girls' knowledge after intervention with a minimum value of knowledge after intervention of 60, a maximum value of 95, and a mean knowledge of young women after intervention of 85.10.

Knowledge Level of Young Women Before and After Intervention

Table 4. Knowledge Levels of Young Women Before Intervention

Variable	Skor	
	N	%
Knowledge		
Less (<56)	2	8%
Sufficient (56-75)	10	40%
Good (76-100)	13	52%
Total	**25**	**100%**

Table 5. Knowledge Level of Young Women After Intervention.

Variable	Score	
	N	%
Knowledge		
Keep	3	12%
High	22	88%
Total	**25**	**100%**

Based on Table 5 before being given an intervention, almost half of the total respondents, namely 48%, still needed a significant increase in knowledge about stunting prevention. This underscores the importance of providing a deeper understanding through intensive interventions, such as peer education methods. After the intervention was administered, as shown in Table 5, the knowledge levels of young women increased significantly, with 88% of them having a high level of knowledge and only 12% being in the moderate knowledge category. None of the respondents had low knowledge, indicating that peer education interventions were very effective in improving adolescent girls' understanding of stunting prevention.

BivariatezAnalysis Results

Bivariate analysis was used to look at the relationship between two variables, in this case looking at the influence of *peer education* interventions on adolescent girls' knowledge.

The Influence *of Peer Education* on Young Women's Knowledge

Table 6. The Influence of Young Women's Knowledge Before and After Intervention

Variable	Before (Mean)	Average Increase	After (Mean)	Sig.

Knowledge	72,90	12,2	85,10	0,000*

*Paired T test, α = 0,05

Based on table 6, it can be seen that there is a significant increase in knowledge after the intervention is carried out. Before the intervention, the average knowledge recorded was 72.90, but after the treatment was carried out, there was an increase to 85.00. This difference is statistically significant with a *p-value* of 0.000 (*p-value* < 0.05 then Ha is accepted. This means that there is an influence of *peer education* on adolescent girls' knowledge about stunting prevention.

Discussion

Respondent Characteristics

Based on the respondent characteristics data in table 4.1, it can be seen that the age of the respondents varies from 11 to 19 years. The majority of respondents were aged 16 (28%), followed by respondents aged 12 and 14 (16%, respectively), and 13 and 15 years old (12% respectively). A small percentage of respondents were 11, 17, and 19 years old (4% each), and none of the respondents were 10 or 18 years old.

Adolescents, especially adolescent girls, play an important role in stunting prevention because they are mothers-to-be who will determine the health and nutrition of their children in the future. According to capability theory (Sen, 1999), improving adolescent girls' knowledge and skills about nutrition and health gives them greater capabilities to make decisions that positively impact their health and that of their children (Bandura, 1986).

Proper knowledge about stunting prevention in adolescent girls is very important to break the cycle of malnutrition between generations. The participation of adolescents in this study provided an opportunity for them to increase their knowledge and awareness about stunting, which in turn can influence their behavior in maintaining the health of themselves and their children in the future. According to the Developmental Origins of Health and Disease (DOHaD) theory, the mother's health and nutritional conditions before and during pregnancy can affect the risk of chronic diseases in the child in the future (Gluckman et al., 2019). Therefore, ensuring that adolescent girls have the right knowledge about stunting prevention can help break the cycle of intergenerational malnutrition and prevent the onset of long-term health problems (Gluckman et al., 2019).

The age of the respondents has an important role in determining a person's thinking patterns, level of knowledge, and attitude. In adolescence, cognitive development is in full swing, which affects the way they receive and process information. Older teens tend to have better critical thinking abilities and deeper understanding compared to younger teens. Studies by Vygotsky (1978) also showed that interaction with older adults and peers can improve adolescents' cognitive abilities. These interactions provide opportunities for adolescents to engage in more complex and in-depth discussions, which can broaden their understanding of various concepts and issues (R. Johnson & Taylor, 2020).

Recent research by Smith et al. (2021) found that older adolescents have a tendency to use more mature and effective problem-solving strategies compared to younger adolescents (R. Smith et al., 2021). They are also better able to explore alternative viewpoints and deal with uncertainty, which is an indicator of higher critical thinking abilities (Prendergast & Humphrey, 2021). Therefore, the variation in the age of the respondents can provide diverse perspectives related to knowledge about stunting prevention.

In addition, the classes that respondents attended also affected their knowledge. Respondents who were in higher grades were likely to have received more formal education, which could improve their knowledge of health issues. Social Learning Theory (Bandura, 1977) states that individuals learn through interaction with others, including peers. This learning process does not only involve passive receipt of information, but also through observation, modeling, and direct interaction. In this context, peers can serve as an important source of alternative knowledge and social support in shaping adolescents' understanding of a range of issues, including health and nutrition (Sen, 1999).

At the time before the intervention activity, adolescents aged 12-15 years showed high enthusiasm in inviting their friends to participate in the activity. However, they face challenges because many teens prefer to get together to play, such as volleyball, rather than participate in educational activities like this. Nevertheless, their enthusiasm is important in attracting the interest and participation of their peers, showing that with the right approach, educational activities can get attention and active participation from young people. Social Motivation Theory (Deci & Ryan, 1985) posits that enthusiasm and intrinsic motivation play an important role in increasing participation in activities that require active involvement135). Adolescents who feel they have control and relevance to educational activities tend to be more motivated to participate, despite the challenges when it comes to preferences for other social activities such as volleyball.

One of the factors that caused them to be enthusiastic in research intervention activities regarding stunting prevention was because of higher health awareness compared to their peers. The Health Belief Model theory (Rosenstock, 1974) states that individuals are more likely to take preventive health measures if they have strong beliefs about the threat of disease, perceptions of the benefits of preventive measures, and confidence that they are capable of taking such actions. Adolescents with high health awareness tend to be more open and responsive to prevention efforts such as the study intervention, as they recognize the importance of proper health practices early on to prevent future health problems (Rosenstock, 1974).

There are 6 teenagers who have been active in youth posyandu activities in 2023, although the previous two months could not participate due to scheduling conflicts with volleyball and extracurricular activities at school. Therefore, the researcher appointed the 6 young women among the other respondents because they were the most enthusiastic, including 12-year-old girls 2 people, 13 years old 1 person, 14 years 2 people, and 15 years old 1 person. After the pre-test, the researchers scheduled a special session with these 6 people to be given the intervention, and then determined a follow-up schedule when they provided education to their peers.

Adolescent Women's Knowledge Levels Related to Stunting Prevention Before Intervention

Based on the data in Table 4, before the intervention was carried out, almost half of the total adolescent female respondents did not have an adequate understanding of stunting prevention. This shows the need for more in-depth interventions, considering that there are still 48% of respondents who need to improve their knowledge in this regard.

Based on the results of the analysis, it was found that most of the respondents previously had limited knowledge about Chronic Energy Deficiency (SEZ) and its relationship with stunting. Adolescent girls tend to have a better understanding of diseases such as obesity and anemia, but not many realize that SEZs are a significant risk factor for stunting. This may explain why most of them have not prioritized stunting prevention as important, due to a lack of understanding of the relationship between KEK and stunting. Thus, the existence of this knowledge gap provides a solid basis for the need for appropriate interventions, such as peer education programs, to provide a deeper understanding of the importance of stunting prevention and how these diseases can be significant risk factors in overcoming them.

Adolescent Women's Level of Knowledge Related to Stunting Prevention After Intervention

Based on the data obtained in table 5, it can be seen that 88% of the study participants have a high level of knowledge about stunting prevention after being given peer education interventions. Meanwhile, the other 12% had a moderate level of knowledge, and none of the participants were in the low knowledge category. This shows that the interventions provided have succeeded in significantly increasing adolescent girls' understanding of stunting prevention.

This research is in line with research conducted by Smith et al. (2021), peer education has been shown to be effective in improving adolescents' knowledge and attitudes about reproductive health (A. L. Smith et al., 2021). Another study by Johnson and Taylor (2020) found that the peer education approach can increase health-related awareness and preventive measures among adolescents (R. Johnson & Taylor, 2020).

In addition, research by Williams and Green (2022) also shows that peer education can increase adolescents' active participation in public health programs, especially in disease prevention efforts (Williams & Green, 2022). These results support the findings of this study, which suggest that peer education is an effective method to increase adolescent girls' knowledge about stunting prevention.

Thus, it can be concluded that the provision of peer education has a positive and significant influence on increasing the knowledge of adolescent girls about stunting prevention. These interventions are effective in increasing their awareness and understanding of health issues that support stunting prevention efforts in their communities.

The Effect of Peer Education on Adolescent Women's Knowledge of Stunting Prevention

Based on the results of bivariate data analysis, there is a significant influence of peer education on increasing adolescent girls' knowledge about stunting prevention. Before the intervention, the average knowledge reached 72.90, but after the intervention, this figure increased to 85.00. This difference is statistically significant with a p-value of less than 0.000 (p-value <0.05). This change shows that peer education interventions have significantly improved the knowledge of young women.

The results of this study are in line with Lin et al (2023), on Health Promotion with the Peer Education Method on the knowledge of pregnant women in stunting prevention, the results obtained from the paired t test or wilcoxon test showed a Significancency (Sig.) value of 0.000 ($p < 0.05$). The p< value of 0.05 indicates that there is a significant difference between the value of knowledge before and after health promotion with the Peer Education method (Lin & others, 2023). In addition, research by Sukmawati et al. (2023) also found that peer group education played an important role in increasing adolescents' knowledge of the dangers of promiscuous sex in adolescents with a Significancency (Sig.) value of 0.000 ($p < 0.05$) as well as a change in the average ± standard deviation (SD) before and after the intervention of 34.90 ± 3.37 to 47.24±1.39. This suggests that intervention models such as peer education have great potential in increasing adolescents' knowledge of health issues relevant to them (Sukmawati & others, 2023).

Knowledge is a crucial factor in determining a person's behavior because it can change people's perceptions and habits. Increased knowledge can change people's perceptions of diseases and change their behavior from negative to positive, as well as form better trust. Thus, the results of this study are supported by previous evidence that confirms the effectiveness of peer education in adolescent health education (Wawan, 2010).

During the intervention, an active and fun atmosphere was seen when the peer educator educated his peers. They tend to ask each other questions, allowing for a more effective exchange of information. This activity is more common among classmates or peers in one environment, for example, one lives in one neighborhood, one RW, showing that interaction in a familiar and close environment has a positive impact on the learning process. Social Learning Theory (Bandura, 1977) emphasizes that the learning process does not only occur through direct teaching, but also through observation and social interaction with others. In this context, interactions between peers in a familiar environment can be a powerful source of knowledge as they ask each other questions, share experiences, and provide feedback to each other. This creates a dynamic learning environment where adolescents not only receive information from peer educators, but also internalize and test their knowledge through question-centered discussions (Sen, 1999).

Thus, the existence of peer education interventions not only provides information directly, but also creates an environment that supports a more efficient and interactive exchange of knowledge among young women. This overall strengthens the positive influence of peer education in improving their understanding of stunting prevention. According to research by Sawyer et al. (2020), peer education can improve health knowledge and positive behavior among adolescents, as they feel more comfortable learning from peers who are considered to understand their condition better than from adults or health professionals. This research supports the finding that the peer education method creates a more collaborative and interactive learning environment (Sawyer et al., 2020).

In addition, a study by Turner et al. (2021) found that interactions that occur in peer groups can increase adolescents' confidence and active involvement in the learning process. Interactions that occur

in peer groups can also help overcome communication barriers that may occur if information is conveyed by parties who are perceived to lack understanding of the adolescent's situation (Turner et al., 2021).

When interventions, peer educators do not look awkward when imparting knowledge to their peers. The naturally established relationship between peer educators and their peers creates a more open environment and supports the learning process. This closeness allows for smoother communication and more intimate interactions, making it easier for young women to receive the knowledge imparted by peer educators. Research by Taylor et al. (2023) found that interactions that occur in an open and familiar environment can improve information retention and learning motivation among adolescents. This is in line with constructivist social theory, which emphasizes the importance of social interaction in the effective learning process (Vygotsky, 1978) (R. Johnson & Taylor, 2020) .

With well-established relationships, peer educators can more easily understand the needs and concerns of their peers, so they can convey information in a more relevant and easy-to-understand way. This is different from the relationship between teacher and student, where students often feel awkward or uncomfortable to delve into or ask questions about things that are still not understood. A meta-analysis study by Li et al. (2021) concluded that the peer education approach has a significant positive impact on adolescents' health knowledge, attitudes, and behaviors. These findings underscore the importance of good interpersonal relationships between peer educators and learners in creating a supportive and effective learning environment (Li et al., 2021).

The readiness of peer educators to share their knowledge with their peers is also an important factor in the success of this intervention. Peer educators have been provided with intensive training on stunting materials and delivery methods, including effective communication techniques, how to overcome resistance, and an empathetic approach to conveying information. Before giving interventions to their peers, these peer educators were evaluated on the second day of the training. This evaluation aims to ensure that they really understand the material to be delivered and are able to apply effective delivery methods.

According to the theory of Self-Efficacy (Bandura, 1997), in-depth knowledge and readiness to communicate information can increase the confidence of peer educators in guiding their peers. This is important because high self-confidence can affect the effectiveness of information delivery and encourage desired behavior change (Sen, 1999).

A study by Li et al. (2021) also showed that intensive training and evaluation of peer educators before they intervene can improve the quality and accuracy of information delivered to students. This evaluation not only ensures the understanding of the material, but also improves the ability of peer educators to adapt learning strategies according to the needs and characteristics of students (Li et al., 2021).

The evaluation of peer educators is carried out through several stages, including written evaluation and simulation of material delivery. Written evaluations were used to measure their understanding of stunting material, while simulations of material delivery assessed their ability to communicate information clearly and effectively. In this simulation, peer educators were asked to explain the material in front of researchers and other participants who were participating in the briefing, who then provided constructive feedback. The question and answer session was used to test the peer educator's ability to answer questions and overcome resistance from their peers.

This approach is based on the principles of formative evaluation and simulation-based learning. Formative evaluations such as those conducted on peer educators can improve the quality of their learning and interventions. A study by Clark et al. (2022) highlights the importance of using simulation in peer education training, as it can improve their communication skills and readiness in real-world situations (Clark et al., 2022).

In addition, research by Johnson et al. (2023) shows that formative evaluations that include question and answer sessions and direct feedback can provide valuable insights for peer educators in improving the quality of information delivery. Thus, this approach not only ensures the understanding and readiness of peer educators, but also enhances their ability to address communication challenges that may arise when interventions are implemented (Chen et al., 2023).

As a result of the evaluation, peer educators became more confident and ready to share their knowledge. They are able to adopt the role of a trusted source of information by their peers, thereby increasing the effectiveness of knowledge transfer. However, it should be noted that the researchers did not use a standard questionnaire to measure the readiness of these peer educators, which should have been better to provide a more objective and standardized measure of their readiness.

Research by Turner et al. (2021) emphasizes the importance of using standardized questionnaires in the evaluation of health education programs. They found that standardized measures can provide a more comprehensive and objective picture of the effectiveness of interventions and the readiness of facilitators to implement programs (Turner et al., 2021).

In addition, a study by Johnson et al. (2023) revealed that the use of validated questionnaires can be helpful in identifying areas that need improvement in peer educator training. This measurement tool allows researchers to collect consistent data and compare it with other studies, thus reinforcing the validity of the study's findings.

Research by Li et al. (2021) also shows that evaluations using standardized instruments can improve the transparency and reproducibility of research. With standardized measurement tools, researchers can ensure that every aspect of peer educator readiness and competence is thoroughly evaluated, providing a clearer and more comprehensive picture of the effectiveness of the training program.

The closeness that has been established between peer educators and their peers creates a more open and supportive environment in the learning process. These naturally formed relationships allow for smoother communication and more intimate interactions, making it easier for young women to receive the knowledge imparted by peer educators. According to social learning theory (Bandura, 1986), individuals are more likely to learn from people they perceive as relevant and trustworthy models. In this context, peer educators who have a good relationship with students become effective models in the learning process. This trust and emotional closeness also increase students' motivation and involvement in the learning process (Sen, 1999). With good relationships, peer educators can more easily understand the needs and concerns of their peers, so that information can be conveyed in a more relevant and understandable way. This adds to the important value of peer education in increasing the knowledge of young women about stunting prevention, because the closeness that exists creates an environment that supports effective and sustainable learning.

In addition, peer education is also proven to improve the social skills of peer educators based on research results. Through the process of learning and interacting with their peers, peer educators can develop communication and empathy skills. This is not only beneficial for peer educators in the context of peer education programs, but also has a positive impact on their social lives more broadly (9,11). Thus, peer education interventions not only provide benefits in improving adolescent girls' knowledge and attitudes towards stunting prevention, but also provide opportunities for self-development and social skills improvement for peer educators.

CONCLUSION

The research on the influence of peer education methods in increasing the knowledge of adolescent girls in Cipacing Village, Jatinangor District, revealed a significant improvement in knowledge about stunting prevention, with an average increase of 12.2% after the intervention and a statistically significant p-value of < 0.000. These findings confirm that peer education effectively enhances adolescents' understanding of stunting prevention. For future research, it is recommended to investigate the long-term behavioral impacts of such interventions, include broader demographic groups such as male adolescents or different age ranges, and compare peer education with other educational approaches like digital media or parental involvement to determine the most effective strategy for promoting stunting prevention in various communities.

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