

## Research Article

### Stunting Knowledge and Attitudes among Adolescents in Banjar Pande, Sayan Village, Ubud, Gianyar: The Effect of Structured Education

Ni Luh Putu Ratih Komalasari, Ni Putu Wiwik Oktaviani\*, Ni Wayan Trisnadewi, I Made Sudarma Adiputra, Hendro Wahyudi

STIKES Wira Medika Bali, 80239, Bali, Indonesia

#### Article history:

Submission May 2024

Revised June 2024

Accepted June 2024

#### \*Corresponding author:

E-mail:

[wiwikoktaviani@](mailto:wiwikoktaviani@stikeswiramedika.ac.id)

[stikeswiramedika.ac.id](mailto:stikeswiramedika.ac.id)

#### ABSTRACT

**Introduction:** Stunting is a chronic nutritional problem that remains a major threat to the quality of human resources. One of the efforts to break the stunting cycle is through the active role of youth. However, many adolescents are still unaware of stunting, so it is necessary to increase adolescent knowledge by providing structured education. The aim of this study was to determine the effect of structured education on adolescents' knowledge and attitudes about stunting. **Methods:** This study is pre-experimental research with a pretest-posttest one-group design. The sample size was 34 people, selected using a purposive sampling technique. Structured education was provided through modules and video media three times, conducted once a week for 45 minutes. **Results:** The results of the study showed that the average pretest score for adolescents' knowledge was 11.97, and the posttest score was 16.26. The average pretest score for adolescents' attitudes was 37.68, and the posttest score was 55.21. The results of the Wilcoxon signed-ranks test for knowledge showed a p-value of  $0.000 < 0.05$ , and for attitudes, it also showed a p-value of  $0.000 < 0.05$ , indicating that there was an effect of structured education on adolescents' knowledge and attitudes about stunting. **Conclusion:** Structured education using modules and video media is an effective method to convey messages in an understandable and engaging way, enabling the target audience to learn the material well, increasing adolescents' knowledge about stunting and encouraging the formation of positive attitudes.

**Keywords:** Adolescent, Attitude, Knowledge, Structured Education, Stunting

#### Introduction

According to the Indonesian Ministry of Health (2020), stunting poses a significant risk to the quality of human resources due to its interference with brain and intelligence development, among other issues. Many factors

contribute to the incidence of stunting. One of these factors is a lack of knowledge about health and nutrition before and during pregnancy [1]. Nutritional intake factors show that 32% of adolescent girls in Indonesia are at risk of chronic energy deficiency (KEK), and 48.9%

#### How to cite:

Komalasari, N. L. P. R., Oktaviani, N. P. W., Trisnadewi, N. W., Adiputra, I. M. S., & Wahyudi, H. (2024). Stunting Knowledge and Attitudes among Adolescents in Banjar Pande, Sayan Village, Ubud, Gianyar: The Effect of Structured Education. *Basic and Applied Nursing Research Journal*, 5(1), 47 – 52. doi: 10.11594/banrj.05.01.06

experience anemia [2]. High rates of anemia and malnutrition in adolescent girls before pregnancy can result in stunted children during pregnancy. Teenagers are potential parents in the future. To give birth to a healthy child during the first 1000 days of life (HPK) period, prospective mothers must pay attention to their nutritional intake during adolescence.

The percentage of stunting in Indonesia is still relatively high and requires special attention. Indonesia is the second-highest country in Southeast Asia for stunting after Timor-Leste [3]. Based on 2020 JME, UNICEF, and World Bank stunting data, Indonesia's stunting prevalence ranks 115th out of 151 countries in the world [4]. Based on SSGI data from 2021, the national stunting prevalence is 24.4%, or 5.33 million children under five, which is still above the WHO's standard threshold of 20% [5]. The prevalence of stunting in Gianyar district in 2021 was 5.1% [5]. While the current stunting prevalence in several areas is below 20%, it has not yet met the 2024 National Medium Term Development Plan (RPJMN) target of 14%. Even if the 14% target is achieved, it does not mean Indonesia is free of stunting. The next target of the Sustainable Development Goals (SDGs) is to eliminate all forms of malnutrition by 2030 [6].

Considering the complexity of the stunting problem, prevention needs to be carried out jointly by the government and non-government organizations in a comprehensive manner. One of the prevention efforts is optimizing the role of teenagers in preventing stunting through communication, information, and education [7]. Gianyar Regency once had the highest prevalence of stunting in Bali at 40.9%. Efforts have been made to reduce stunting rates, but the COVID-19 pandemic presents a challenge to these efforts. It is feared that a prolonged pandemic will increase the prevalence of stunting. Ubud sub-district, including Sayan village, where most people are engaged in tourism, has been hit hard economically by the pandemic. Decreased income has led to reduced purchasing power, which can impact nutritional consumption [8]. Some of the efforts to prevent stunting in Sayan village, Ubud

sub-district, include providing assistance to toddler posyandu, HATINYA PKK (providing plant seeds for home gardens), and increasing the capacity of cadres and mothers of toddlers to make local PMT (supplementary feeding).

One way to break the cycle of stunting between generations is to involve teenagers. Teenagers in Pande Banjar have more diverse activities than those in other Banjars in Sayan Village. In Sayan village, there is no stunting prevention program involving teenagers. Research shows that involving teenagers can strengthen their contribution to improving health [9]. Teenagers' involvement in stunting prevention starts with the knowledge they have about stunting.

Based on a preliminary study conducted through interviews by the author in Banjar Pande, Sayan Village, Ubud, and Gianyar, data were obtained from 10 teenagers regarding their knowledge of stunting. Five had heard the word "stunting" but did not know the meaning, impact, or prevention of stunting. The other five had never heard of stunting. All 10 said they had never received information about stunting from health workers. Based on the background described above, the author wants to conduct research on the effect of structured education on teenagers' knowledge and attitudes about stunting in Banjar Pande, Sayan Village, Ubud, and Gianyar.

## **Methods**

### **Study design**

This research was pre-experimental with a one-group pre-post test design. It was carried out in Banjar Pande, Sayan Village, Ubud, and Gianyar. The population in this study consisted of all teenagers in Banjar Pande, Sayan Village, Ubud, and Gianyar. A total sample of 34 teenagers met the inclusion criteria and were selected using a non-probability sampling technique called "purposive sampling." The inclusion criteria for this research were teenagers aged 15–17 who had never received counseling about stunting, who were members of an organization, and who were actively involved in organizational activities in the research area.

### **Instruments**

This research used two variables: the independent variable (structured education) and the dependent variable (adolescents' knowledge and attitudes). The instrument or data collection tool in this research was a questionnaire that had been tested for validity and reliability. The knowledge questionnaire consists of 20 statements, and the attitude questionnaire consists of 15 statements. Questionnaires were given before and after providing structured education.

The knowledge questionnaire uses an ordinal measuring scale: a good score of 76–100%, a sufficient score of 56–75%, and a poor score of <56%. The attitude questionnaire uses an ordinal measuring scale: a positive score >50%, and a negative score ≤50%. The validity and reliability tests of the questionnaire were carried out in Banjar Mas, Sayan Village, Ubud. The results of the validity test for the attitude questionnaire showed that the calculated *r* value was between 0.431 and 0.850, so the 15 statement items were deemed valid. Reliability testing was carried out using Cronbach's alpha. The questionnaire is considered reliable if the Cronbach's alpha value is ≥ 0.60. The reliability test results for the knowledge questionnaire were 0.729, and the reliability test results for the attitude questionnaire were 0.758, so both questionnaires were declared reliable.

### **Intervention**

Researchers provided interventions in the form of health education about stunting. The material in the module and video consists of understanding stunting, causes of stunting, characteristics of stunting, impacts of stunting, prevention of stunting, efforts by teenagers to prevent stunting, and the consumption of iron supplement tablets in young women. Health education was delivered using lecture methods, questions and answers, modules, and video media. Each health education session lasted 45 minutes, in line with the time allocation prepared in the outreach program. The health education intervention was provided three times at weekly intervals. Each meeting was divided into three sessions: Session One involved providing material using the lecture

method displayed via PowerPoint slides; Session Two involved displaying videos; and Session Three was a question-and-answer session. After implementing health education, teenagers' knowledge and attitudes about stunting were measured again by giving questionnaires to respondents. The post-test was conducted after the third health education session.

### **Data collection**

Data collection was carried out by providing structured education using modules and video media during three meetings at intervals of once a week, with a duration of 45 minutes per meeting. We grouped the teenagers in one room. The principal investigator (PI) was a speaker, and others were facilitators. We open the session with friendly talks and continue to educate them. A short discussion was provided at the end of the meeting.

### **Data analysis**

Research data analysis included univariate and bivariate analyses. Univariate analysis was used to describe the frequency distribution of respondent characteristics, knowledge, and attitudes among adolescents. Bivariate analysis was used to test whether there was an effect of structured education on teenagers' knowledge and attitudes about stunting using the Wilcoxon Signed Rank Test with a confidence level of  $\alpha = 0.05$ . The results obtained a *p*-value <  $\alpha$ , leading to the rejection of the null hypothesis (*H*<sub>0</sub>).

### **Ethical considerations**

Following the approval of the Institutional Review Board, this research will be carried out in compliance with the ethical standards that have been established. The prospective benefits and drawbacks of taking part in this study were discussed with the individuals who accepted the invitation to take part. In addition, researchers have proved their willingness to offer informed consent. In the event that they do not intend to take part in the investigation, participants who are contemplating taking part in this study have the choice to either decline participation or discontinue their involvement in the study.

## Result and Discussion

Table 1. Characteristics Based on Gender and Education

Gender	Frequency	Percentage (%)
Male	14	41,2
Female	20	58,8
Education	Frequency	Percentage (%)
Senior High School Grade 1	9	26,4
Senior High School Grade 2	15	44,1
Senior High School Grade 3	10	29,4

Based on Table 1, the majority of respondents were 20 women, with a percentage of 58.8%. All respondents' education was

SMA/SMK, with the highest percentage in second grade at 44.1%.

Table 2. Analysis of Stunting Knowledge and Attitudes Among Adolescents

Variable	Pretest		Posttest		Mean Difference	Z	P value
	Mean	SD	Mean	SD			
Knowledge	11,97	2,007	16,26	1,460	4,47	-5,114	0,000
Attitudes	37,68	4,577	55,21	2,717	17,53	-5,095	0,000

Based on the results of the Wilcoxon Signed Rank Test statistical test on teenagers' knowledge, p-value of  $0.000 < \alpha 0.05$  was obtained, and on teenagers' attitudes, p value of  $0.000 < \alpha 0.05$  was also obtained.

## Discussion

The results of the Wilcoxon Signed Ranks Test show a p-value of  $0.000 < \alpha 0.05$  for both the knowledge and attitude components, indicating a significant effect of providing structured education on the knowledge and attitudes of teenagers about stunting in Banjar Pande, Sayan Village, Ubud, Gianyar. This is supported by research by Butar-Butar [10], which shows that providing structured education significantly influences female students' knowledge and attitudes about menstruation with a p-value of 0.000. Butar-Butar stated that education is an interactive process that encourages learning, adding new knowledge, attitudes, and skills through strengthening certain practices and experiences [10].

According to Notoatmodjo [11], education cannot be separated from media because media can make the messages conveyed more interesting and easier for the target audience to understand. Educational media can impact increasing understanding and changing

behavior. Factors influencing the success of socialization include individual factors, the presentation of video and leaflet material, the choice of words used, and the visualization in leaflet and video media. Individual factors refer to characteristics in understanding leaflet or video material. People's capacity for understanding and interest in the material varies; some prefer written material, others need images, and some prefer a combination of images and audio. The material and word choice affect the success of socialization because if they are too complicated, it will make it difficult for people to understand. Visualization and audio greatly influence interest in viewing or reading socialization media; inappropriate visualization and audio can cause boredom, hindering the expected socialization outcomes [12].

Structured education is an interactive process for providing health information, where the information is neatly arranged to increase understanding and optimize behavior useful for preventing disease, overcoming health problems, and improving health status [13,14]. Respondents in this study were given structured education about stunting, including understanding, causes, signs and symptoms, impacts, prevention, and giving iron supplement tablets to young women. According to Cangara

[15], providing information related to health from trusted sources can influence behavior. Health workers play an important role as sources of information, expected to provide clear information regarding health-related knowledge. Health education can change mind-sets, resulting in changes in attitudes [16].

The research results showed an increase in correct answers in teenagers' overall knowledge about stunting. This indicates the success of providing structured education. Teenagers can clearly understand the characteristics, causes, impacts, and prevention of stunting and how to administer iron tablets to prevent stunting. Combining media is also necessary to facilitate changes in knowledge and attitudes [17,18]. The use of modules and videos greatly influences teenagers' interest in participating in education [19,20]. During the implementation of structured education, teenagers actively asked questions about the material provided. The choice of combined media relates to the process of sensing an object, where most knowledge is obtained from the eyes and ears.

Researchers believe that the methods used in providing education also influence the level of knowledge and ability to change attitudes. Knowledge and attitudes can be changed by using a combination of methods, which in this study included lectures, questions and answers, and video screenings. Properly delivered education impacts teenagers' cognitive perceptions, helping them recognize the importance of stunting and ultimately realize that stunting is a serious health issue. This encourages teenagers to grasp the information conveyed by educators and implement methods to improve health and prevent stunting.

## Conclusion

There were thirty-four respondents in this study, all aged between fifteen and seventeen years. Most respondents were female, and all had a high school or vocational school education. The results of the Wilcoxon Signed Rank Test indicated a significant influence of structured education on adolescent knowledge and attitudes about stunting in Banjar Pande, Sayan Village, Ubud, Gianyar. Additionally, there was an improvement in teenagers' knowledge and

attitudes about stunting after receiving health education.

Further studies are recommended to explore the long-term impact of structured education on adolescent knowledge and attitudes towards stunting, involving a larger and more diverse sample. It would also be beneficial to investigate the effectiveness of different educational media and methods to determine the most impactful approach for stunting prevention among adolescents.

## Limitations

This research is pre-experimental, so it cannot fully confirm the effectiveness of the intervention in changing knowledge and attitudes. Researchers could not optimally control factors influencing the provision of education, such as the condition of the learning subjects.

## Implications

The implications of this research can serve as the basis for policies to empower teenagers and form peer groups to provide information through structured education using modules and videos about stunting. This can be distributed to other peers to prepare themselves as future mothers and break the cycle of stunting.

## Acknowledgement

This research was carried out successfully with the assistance of various parties. My sincere gratitude goes to the health cadres who have been instrumental in helping me complete this research project and to the Pande Banjar neighborhood of Sayan Village, Ubud, Gianyar, for providing a location for the research.

## Conflict of interest

We declared that there is no conflict of interest.

## Funding

There is no funding or sponsorship in this study.

## References

1. Saputri, R. A., & Tumangger, J. (2019). Hulu-Hilir Penanggulangan Stunting Di Indonesia. *Journal of Political Issues*, 1(1), 1–9. <https://doi.org/10.33019/jpi.v1i1.2>

2. Kemenkes, R. I. (2018). Laporan Nasional Rischesdas 2018. *Jakarta: Badan Penelitian Dan Pengembangan Kesehatan*.
3. Hatijar, H. (2023). The Incidence of Stunting in Infants and Toddlers. *Jurnal Ilmiah Kesehatan Sandi Husada*, 12(1), 224–229. <https://doi.org/10.35816/jiskh.v12i1.1019>
4. Taufiqurokhman, T. (2023). Equality Strategy for Reducing Stunting Prevalence Rate: Case Study of DKI Jakarta Province. *Jurnal Bina Praja*, 15(3), 495–506. <https://doi.org/10.21787/jbp.15.2023.495-506>
5. Munira, S. L. (2023). Hasil Survei Status Gizi Indonesia (SSGI) 2022. *Jakarta: Badan Kebijakan Pembangunan Kesehatan Kementerian Kesehatan RI*.
6. Pusdatin Kemenkes, R. I. (2018). Situasi Balita Pendek (Stunting) di Indonesia. *Jakarta: Kementerian Kesehatan Republik Indonesia*.
7. Millati, N. A., Kirana, T. S., Ramadhani, D. A., & Alvewria, M. (2021). Cegah Stunting Sebelum Genting. *Jakarta. Kepustakaan Popular Gramedia, Tanoto Foundation*.
8. Aksol, M. I., & Sodik, M. A. (2021). Pengaruh Ekonomi Faktor Ekonomi Terhadap Gizi Balita. *OSF Preprints. January*, 26.
9. Khodijah Parinduri, S. (2021). OPTIMALISASI POTENSI REMAJA PUTRI DALAM PENCEGAHAN STUNTING DI DESA WANGUNJAYA KECAMATAN LEUWISADENG KABUPATEN BOGOR. *PROMOTOR*, 4(1), 23–29. <https://doi.org/10.32832/pro.v4i1.5518>
10. Butar-Butar, J. (2018). PENGARUH PEMBERIAN EDUKASI TERSTRUKTUR TENTANG MENSTRUASI TERHADAP PENGETAHUAN DAN SIKAP SISWI KELAS IV DAN V DALAM MENGHADAPI MENARCHE DI SDN 106453 SUKADAMAI KABUPATEN SEDANG BEDAGAI TAHUN 2018. *POLITEKNIK KESEHATAN KEMENKES RI MEDAN*.
11. Notoatmojo, S. (2018). *Promosi Kesehatan dan Perilaku Kesehatan*. Rineka Cipta.
12. Mansyur, A. R. (2020). Dampak COVID-19 Terhadap Dinamika Pembelajaran Di Indonesia. *Education and Learning Journal*, 1(2), 113. <https://doi.org/10.33096/eljour.v1i2.55>
13. Patandung, V. P., Sepang, M. Y. L., & Rembet, I. Y. (2020). PENGARUH EDUKASI TERSTRUKTUR TERHADAP PENGETAHUAN PASIEN DIABETES MELITUS TIPE 2. *Jurnal Ilmiah Perawat Manado (Juiperdo)*, 8(01), 80–88. <https://doi.org/10.47718/jpd.v8i01.1155>
14. Sarwono, S. W. (2016). *Psikologi remaja*. Rajawali Pers.
15. Cangara, H. (2016). *Pengantar ilmu komunikasi*. Raja Grafindo Persada.
16. Runiari, N., Ruspawan, I. D. M., Candra, I. W., Sumirta, I. N., Hartati, N. N., Wedri, N. M., Juanamasta, I. G., & Aungsuroch, Y. (2024). Disaster Risk Management Model for Enhancing the Preparedness of Pregnant Women in Response to the Eruption of Mount Agung: A Quasi-Experimental Study. *Journal of Nursing and Midwifery Sciences*, 11(2). <https://doi.org/10.5812/jnms-146003>
17. Mahardika, I. M. R., & Ni Made Ayu Sukma Widyandari. (2023). The Effectiveness of Leaflet and Video Educational Media Through Whatsapp toward the Knowledge of Type 2 DM Patients. *Babali Nursing Research*, 4(1), 43–53. <https://doi.org/10.37363/bnr.2023.41140>
18. Saridewi, D. P., Aungsuroch, Y., & Juanamasta, I. G. (2023). Independence of Deaf Students Through Mesatue Method Using Cartoon Media In Hindu Religious Learning. *Journal of Education Technology*, 7(1), 99–108. <https://doi.org/10.23887/jet.v7i1.55150>
19. Dewi, L. P. D. K., Prihatiningsih, D., & Laksmi, I. G. A. P. S. (2022). The Description of Parents Knowledge Level in Teaching Sex Education to Preschool Age Children in Banjar Kertagraha Kesiman Kertalangu Denpasar. *Basic and Applied Nursing Research Journal*, 3(1), 1–6. <https://doi.org/10.11594/banrj.03.01.01>
20. Zam, B. M. I. A. Z., Harnanto, A. M., Widodo, W., Sunarto, S., & Sumardino, S. (2022). Improved Fire Disaster Mitigation Efforts through Nursing Disaster Education among a Boarding School Students and Teachers at Surakarta City. *Basic and Applied Nursing Research Journal*, 3(1), 19–23. <https://doi.org/10.11594/banrj.03.01.04>