

The Role of Adolescents in Preventing Stunting and Early Marriage at Tomohon City

Henny Pongantung¹, Mareyke Yolanda Lusía Sepang², Kansia Anastasia Terok³, Vina Putri Patandung⁴

^{1,4} Bachelor of Nursing, Gunung Maria College of Health Sciences, Tomohon, Indonesia

² Departement of Nursing, Gunung Maria College of Health Sciences, Tomohon, Indonesia

³ Nursing Professions, Gunung Maria College of Health Sciences, Tomohon, Indonesia

Vol 4(2),167-177

© 2025 The Author(s)

<https://doi.org/10.54639/kks.v4i2.1738>

Article Information

Submitted: 24-08-2025;

Revised: 16-09-2025;

Accepted: 24-09-2025;

Published: 30-09-2025;

Corresponding Author:

Mareyke Yolanda Lusía Sepang,
Department of Nursing, Gunung Maria College of Health Sciences, Tomohon, Indonesia
Email: sepangmareyke275@gmail.com

Citation Information (APA Style)

Pongantung, H., Sepang, MYL., Terok, KA., Patandung, VP. (2025). The Role of Adolescents in Preventing Stunting and Early Marriage at Tomohon City. *Karya Kesehatan Siwalima*, 4(2), 167-177.

<https://doi.org/10.54639/kks.v4i2.1738>



This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License.

E-ISSN: 2828-8181

P-ISSN: 2828-8408

Publisher

Lembaga Penerbitan Fakultas Kesehatan,
Universitas Kristen Indonesia Maluku

<https://ojs.ukim.ac.id/index.php/KKS/index>

Abstract

Adolescents are the next generation who are currently in an important transitional stage toward adulthood. At this phase, they are highly vulnerable to various influences, including a lack of knowledge about reproductive health, the risk of stunting, and the impacts of early marriage. In response to these conditions, a community service activity was conducted at the Auditorium of STIKes Gunung Maria Tomohon, Tomohon City, with the aim of providing health education to students so that they can better understand the importance of adolescents' role in preventing stunting and the negative impacts of early marriage. The program was carried out in three stages: planning in collaboration with the BKKBN team and the school, delivering interactive health education using engaging media, and evaluation through a question-and-answer session. A total of 164 students enthusiastically participated in the activity, and the discussion results revealed that reproductive health and early marriage were their primary concerns. It is expected that through continuous education, adolescents will be able to make wiser decisions for their future and contribute to stunting prevention within their communities. Programs like this are essential to be held regularly and to reach more schools.

Keywords: education; reproductive health; early marriage; adolescents; stunting

Introduction

Adolescents are the nation's future generation, as they will eventually replace the current generation in driving national development. At present, adolescents represent the largest proportion of the total population, which is estimated at 224,031,813 people, with 116,695,687 categorized as non-productive. From these data, it is evident that the productive-age population is larger than the non-productive population, resulting in a lower dependency ratio. Considering this situation, there will be an increase in the number of potential workers, as articulated by BKKBN (2021). This phenomenon is considered an economic advantage generated by the increase in savings from the productive population, which can catalyze investment and stimulate economic growth. However, this potential benefit will not provide significant impact if the state fails to invest in human resources; instead, it may trigger mass unemployment, increase the fiscal burden on the state budget, or create social problems such as theft and robbery, which could eventually destabilize the nation.

To realize the demographic dividend by 2045, a significant increase in the potential workforce is expected, as highlighted by BKKBN (2021a, 2021b). This demographic advantage, derived

from increased savings of the productive population, can stimulate investment and accelerate economic growth. Nevertheless, this condition will fail to generate substantial impact if the government does not allocate sufficient resources for human resource development, which may lead to widespread unemployment and further strain the national budget.

To achieve the Golden Generation of 2045, the preparedness of today's adolescents is essential. However, data obtained from the Health Research and Development Agency, Ministry of Health of the Republic of Indonesia (2018), revealed that 25.7% of adolescents aged 13–15 years were categorized as short or very short, while the prevalence among adolescents aged 16–18 years reached 26.9%.

Findings from the Health Research and Development Agency, Ministry of Health of the Republic of Indonesia (2018), revealed that 25.7% of adolescents aged 13 to 15 years were classified as stunted or severely stunted, while the prevalence among adolescents aged 16 to 18 years reached 26.9%. These data underscore the urgent need for interventions to improve the nutritional status of Indonesian adolescents (Health Development Policy Agency, 2022; Ministry of Health of the Republic of Indonesia, 2023).

Adolescence is recognized as the second window of opportunity to improve nutritional status, particularly among adolescent girls, in preparing themselves as future mothers. Therefore, nutritional interventions during this phase play a crucial role. Adolescents also represent a potential group capable of becoming the driving force for behavioral change. Their involvement in stunting prevention efforts is strategic, as they stand at the forefront of creating innovation while serving as agents of change (Dewi et al., 2022).

Adolescence is a critical transitional phase in human life, marking the shift from childhood to adulthood. During this period, various significant changes occur—physically, psychologically, and socially. One of the most striking changes is the development of reproductive organs. Sexual organs begin to function, both in the context of reproduction and as a source of pleasure. These changes are often accompanied by shifts in body shape, physical proportions, and other physiological functions that contribute to an increased sexual drive in adolescents (Adyani & Realita, 2023; Cahyaningsih, 2016).

Beyond physical development, adolescence is also characterized by heightened curiosity about many aspects

of life, including sexuality. As reproductive organs mature, adolescents begin to experience sexual urges more vividly. This is reflected in their attraction to the opposite sex and their desire to explore and seek sexual satisfaction (Kusumastuti & Nina, 2020). Sexual development is influenced not only by biological factors but also by adolescents' psychological state and the influx of easily accessible information, whether through electronic media such as the internet and social media, or print media. Without proper guidance, such exposure can shape risky sexual perceptions and behaviors among adolescents (Romulo et al., 2014).

One of the consequences of reproductive organ maturity that is not accompanied by adequate understanding and self-control is the rise of premarital sexual behavior, commonly referred to as free sex. Such behavior can lead to various problems, including unintended pregnancies among school-aged adolescents and an increased risk of contracting sexually transmitted infections, including HIV/AIDS (Ministry of Health of the Republic of Indonesia, 2023).

Therefore, it is essential for adolescents to receive comprehensive sexuality education that is age-appropriate. This education should not only provide information about the

functions of reproductive organs but also foster attitudes and responsibility in managing sexual urges, while instilling moral and ethical values aligned with cultural and societal norms. In this way, adolescents can navigate their transition period healthily, safely, and with dignity.

Adolescence thus represents a significant transitional stage from childhood to adulthood, marked by major physical, psychological, and social changes. One of the key aspects is reproductive maturity, which sparks sexual urges and curiosity about sexuality. Without adequate knowledge and support, adolescents are vulnerable to engaging in risky sexual behaviors such as premarital sex, which may result in teenage pregnancies (Setyawati et al., 2022).

Teenage pregnancy carries serious consequences, including a high risk of giving birth to low birth weight babies and children suffering from stunting. Stunting, defined as impaired growth and development in children due to chronic malnutrition. Not only does stunting affect physical growth, but it also impacts cognitive development and future productivity (Utami et al., 2021).

One of the major health problems in Indonesia that requires special attention is stunting. Stunting is defined as the failure of growth in children under five

due to chronic malnutrition, lack of psychosocial stimulation, and repeated exposure to infections, particularly during the First 1,000 Days of Life (HPK) (Supariasa & Purwaningsih, 2019; Fajaria et al., 2022; Widasari et al., 2023). Many people still believe that stunting is a normal condition or even hereditary. In reality, stunting is a form of linear growth impairment resulting from long-term nutritional deficiencies and is often associated with chronic infections, characterized by a height-for-age (HAZ) score < -2 SD. A child is categorized as stunted if the z-score falls below -2 SD, while a score below -3 SD indicates severe stunting (WHO, 2018; Darmawan, 2019).

The long-term impacts of stunting include limitations in cognitive and physical development, which subsequently affect individual capacity and productivity in adulthood. Stunted children are also more vulnerable to degenerative diseases. Research has even estimated that the losses caused by stunting are not only individual but also economic, with the potential to reduce Gross Domestic Product (GDP) by up to 300 trillion rupiah per year due to psychosocial burdens and mental health impacts. This makes stunting a serious threat to the sustainability of human resource quality and the nation's future (WHO, 2020).

According to World Health Organization (WHO) data in 2022, the global prevalence of stunting among children under five years old reached 22.3% (Widasari et al., 2023). In Indonesia, the results of the 2024 Indonesian Nutritional Status Survey (SSGI) showed that the national stunting rate decreased to 19.8%, from 21.5% in 2023. Meanwhile, in North Sulawesi Province, the prevalence of stunting was recorded at 21.3% in the third quarter of 2024. This indicates that the challenge of addressing stunting remains significant at the provincial level.

In Tomohon City, however, a notable decline has been observed. In 2022, the stunting prevalence was 13.7%, and successfully decreased to 10.5% in 2023 (Ministry of Health of the Republic of Indonesia, 2023). This achievement is aligned with the strong commitment of the Tomohon City Government in pursuing zero stunting status through various nutritional intervention programs and improvements in child health services. Based on these issues, STIKes Gunung Maria Tomohon has been actively involved in efforts to reduce stunting rates in the city by conducting health education activities for students in Tomohon.

Method

This community service activity was carried out at the Auditorium of STIKes Gunung Maria Tomohon, Tomohon City, as a form of concern for the importance of adolescents' role in preparing for a healthier and higher-quality future. The counseling raised the topic "*The Role of Adolescents in Preventing Stunting and the Impacts of Early Marriage*", with the hope that students would understand early on the importance of maintaining health, particularly in terms of nutrition and reproductive health. As the generation who will later become parents, this knowledge serves as an important foundation in preventing stunting and various other health risks in future children.

The implementation of this activity was carried out in several stages, namely:

Planning Stage

The activity began with careful planning. The community service team coordinated with the BKKBN of Tomohon City to gather information about the conditions and common problems faced by adolescents, as well as relevant educational needs. Based on these discussions, it was agreed that the Auditorium of STIKes Gunung Maria Tomohon would be the appropriate venue for the counseling session. The

team then visited schools, met with teachers and principals, and listened to various stories and challenges faced by the students. This process not only provided a real picture of the needs in the field but also built a warm and enthusiastic relationship between the service team and the schools. After all details were agreed upon, including the implementation date on February 27, 2025, the team prepared a proposal and submitted it to the Research and Community Service Unit for approval.

Implementation Stage

The counseling was conducted on Thursday, starting at 09.00 WITA until completion, at the STIKes Gunung Maria Tomohon auditorium. A total of 164 twelfth-grade students attended, accompanied by teachers and the school principal, who also gave their support. The material was delivered in an engaging manner using visual slides and educational images to make it easier to understand and capture students' attention. The activity was divided into two main sessions: first, discussing how adolescents can contribute to stunting prevention; and second, explaining the impacts of early marriage on adolescent health as well as the potential risks for their future children.

Evaluation

At the end of the activity, the team conducted a simple evaluation to

measure how well the students understood the material. The results were highly encouraging — most students reported gaining a lot of new information that they had never received at school. They stated that they now better understood the importance of maintaining good nutrition from adolescence and the risks of marrying at a young age. The school also expressed appreciation and conveyed hopes that such activities could become an annual program. For the community service team, this was more than just an academic activity — it was a small but meaningful journey in fostering awareness of the importance of a healthy future, starting with today's adolescents.

Results

Before the counseling session began, a pre-test was conducted, followed by a post-test at the end of the activity. The test consisted of 20 multiple-choice questions delivered via Google Forms, which measured students' understanding of the following aspects:

1. Definition of stunting
2. Causes of stunting
3. Classification of stunting
4. Signs and symptoms of stunting
5. Families at risk of stunting

6. The role of adolescents in preventing stunting
7. Definition of adolescent reproductive health
8. Reproductive health problems
9. Dangers of pregnancy
10. Prevention of reproductive health problems
11. Challenges and obstacles of early marriage
12. The role of adolescents in preventing free sex

The evaluation results showed a significant increase in scores. Before the counseling, only 23% of students achieved a score of ≥ 80 , whereas after the counseling this number rose to 80%. The average pre-test score was 64.7%, which increased to 86.5% in the post-test. This demonstrates that the health education activity substantially improved students' understanding.

Score Categories (%)	Pre-test (%)	Post-test (%)
Good: ≥ 80	23	86,5
Fair: 60 – 79	47	7
Poor: < 60	30	6,5

In addition to the quantitative results, student responses observed during the activity showed that the atmosphere became more engaging when the question-and-answer session began. The students enthusiastically raised their hands, asking questions in a manner that was both straightforward

and critical, particularly concerning marriage and the physical changes they were experiencing. This interaction reflected that they actually have a strong sense of curiosity but simply need a comfortable space to ask questions and engage in discussions.

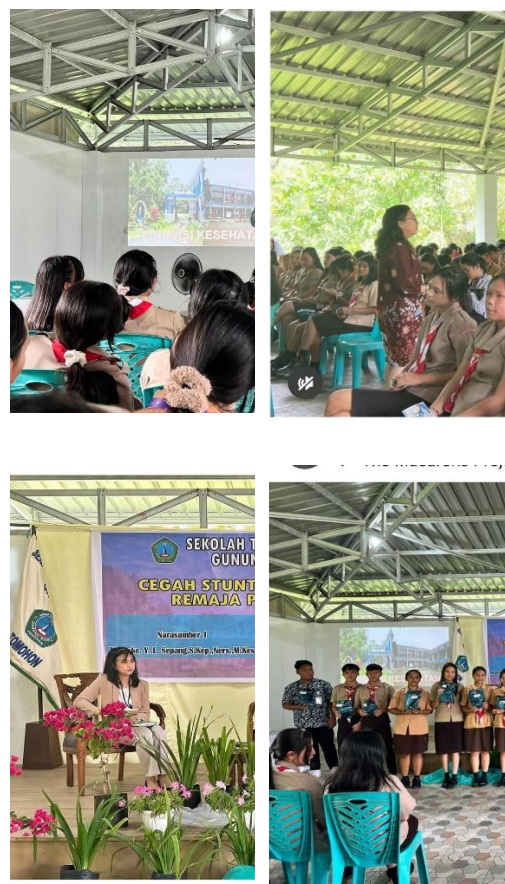


Figure 1. Process of activity implementation

Discussion

The counseling activity conducted at the STIKes Gunung Maria Tomohon Hall on February 27, 2025, ran smoothly and received positive responses from both students and the school community. A total of 164 twelfth-grade

students participated, accompanied by teachers and the school principal. The session was delivered in a communicative manner using engaging visual presentation media that were easy to understand, enabling students to focus and actively engage with the material.

The material was divided into two main topics: the role of adolescents in stunting prevention and the impact of early marriage. These topics were chosen due to their high relevance to adolescents' lives, particularly in shaping healthy and responsible mindsets as future parents. During the question-and-answer session, students showed great enthusiasm. Many asked questions regarding physical changes during puberty, curiosity about early marriage issues, and ways to maintain proper health and nutrition from adolescence.

The discussion revealed that most students did not yet have a comprehensive understanding of the relationship between adolescent health, early marriage, and stunting. This highlights the importance of continuous education on reproductive health and nutrition, particularly within the school environment. The counseling session also provided a safe space for adolescents to ask questions and engage

in open discussions about topics often considered taboo.

The discussion emphasized that stunting is not only an early childhood problem but also has roots in adolescence, especially among adolescent girls. Nutritional deficiencies, particularly iron, may lead to anemia, which poses long-term risks if left unaddressed. An adolescent girl who suffers from anemia and later marries and becomes pregnant at a young age is at high risk of giving birth to a baby with low birth weight or even stunting. This cycle must be broken as early as possible.

Furthermore, early marriage is associated with multiple risks, ranging from physical and mental unpreparedness, emotional developmental challenges, to economic difficulties, all of which may affect parenting patterns. Adolescents need to be equipped with knowledge and awareness to make informed decisions about their future. The activity concluded with reflections from students and feedback from the school. The principal expressed appreciation for the topics delivered and hoped that such activities could become a regular agenda at the school. According to the principal, this program provided significant benefits in raising adolescents' awareness of the importance of

maintaining their health, understanding their responsibilities as the next generation, and contributing to collective efforts toward a stunting-free Indonesia.

Conclusion

The counseling program on stunting prevention and the impact of early marriage successfully improved adolescents' understanding of the importance of maintaining health from an early age. The materials delivered not only provided information but also fostered awareness that adolescents play a crucial role in breaking the cycle of stunting in the future. The participants' enthusiasm demonstrated that adolescents greatly need open and communicative educational spaces, particularly concerning reproductive health, nutrition, and family readiness.

The importance of maintaining nutritional intake, understanding puberty, and avoiding early marriage were the key points emphasized during the session. Adolescents who are physically and mentally healthy will be better prepared to become a high-quality generation capable of raising children free from the risks of stunting.

Recommendations

It is recommended that similar activities be carried out regularly and on a scheduled basis, either monthly or every semester, through health center staff, community leaders, or lecturers engaged in community service programs. Educational efforts can also be delivered through posters, wall magazine competitions, or short videos. In addition, the implementation of *PIK R* (Youth Information and Counseling Center) should be further strengthened so that the target audience can be more easily reached, as peer-to-peer sharing of experiences and knowledge enables adolescents to better understand and respond to current issues concerning their age group.

References

- Adyani, K., & Realita, F. (2023). Penyuluhan Kesehatan Reproduksi Remaja pada Bina Keluarga Remaja sebagai Upaya Pencegahan Stunting. *Poltekita: Jurnal Pengabdian Masyarakat*, 4(2), 435–441.
- Badan Kebijakan Pembangunan Kesehatan, K. K. (2022). *Status Gizi SSGI 2022*.
- Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI. (2018). *Laporan Nasional Riskesdas 2018*. Kementerian Kesehatan RI.

- BKKBN. (2021a). Pendampingan Keluarga Baduta dan Balita.
- BKKBN. (2021b). Stunting Kota Tomohon.
- Cahyaningsih, D. S. (2016). Pertumbuhan Perkembangan Anak Remaja (Jusirman, Ed.; Revisi). CV. Trans Info Media.
- Darmawan. (2019). Stunting Dengan Pendekatan Buku Referensi Framework Who. books.google.com. https://books.google.com/books?hl=en&lr=&id=omEzEAAAQBAJ&oi=fnd&pg=PA2&dq=stunting&ots=5wbT6WNwso&sig=hjcut24_8FbJ4rxr3iVptxr-Z4M
- Dewi, V., Handayani, G. L., & Junita, J. (2022). Pembinaan Kader Kesehatan Dalam Pembentukan Remaja Sadar Gizi di Posyandu Remaja. *Jurnal Pengabdian Meambo*. <https://pengabmas.nchat.id/index.php/pengabmas/article/view/9%0Ahttps://pengabmas.nchat.id/index.php/pengabmas/article/download/9/6>
- Fajaria, C., Yunola, S., & ... (2022). The Relationship Of Knowledge, Dietary Intake And Nutrition-Conscious Family With The Incidence Of Stunting/Severe Stunting. In *Jurnal Kebidanan*. <http://ejournalmalahayati.ac.id/index.php/kebidanan/article/view/5551>
- Kementerian Kesehatan Republik Indonesia, B. K. P. K. (2023). Survei Kesehatan Indonesia (SKI) Dalam Angka.
- Kusumastuti, I., & Nina. (2020). Program Pencegahan Infeksi Menular Seksual Melalui Pemberdayaan Kader Kesehatan Remaja “Jaka Resi” di SMAN 1 Dramaga Kabupaten Bogor. *IAKMI Jurnal Kesehatan Masyarakat Indonesia*, 1(2), 67–74. <http://jurnal.iakmi.id/index.php/IJKMI/article/view/110>
- Romulo, H. M., Noor, S., & Dwi, M. (2014). Peranan Pengetahuan Kesehatan Reproduksi terhadap Perilaku Seksual Remaja Awal. *Jurnal ECOPSY*, 1(4). <https://doi.org/10.20527/ecopsy.v1i4.504>
- Setyawati, V. A. V, Gz, S., Gizi, M., & Kurniadi, A. (2022). Stunting, Malnutrisi, Edukasi Gizi Remaja Masa Kini. books.google.com. <https://books.google.com/books?hl=en&lr=&id=SXmAEAAAQBAJ&oi=fnd&pg=PP1&dq=peran+sekolah+kek&ots=xa-cXhkWua&sig=F3LxW1ZBYSrwm8qZJLpUbbqXa8>
- Utami, D. P., Arundini, F. R., & ... (2021). Sex Education: Membangun Self-Concept Remaja Masjid Nurul Iman Desa Lemahmulya Sebagai Bekal Menjalani Masa Remaja. *Proceedings Uin Sunan* <https://proceedings.uinsgd.ac.id/index.php/proceedings/article/view/727>
- WHO. (2018). Reducing stunting in children: equity considerations for achieving the Global Nutrition Targets 2025. <https://www.who.int/publications/i/item/9789241513647>
- WHO, UNICEF. (2020). UNICEF-WHO-The World Bank: Joint Child Malnutrition estimates - levels and trends - 2020 edition. malnutrition-estimates-group-released-new-data-for-2021
- Widasari, L., Elda, F., Sudarno, R., Puridawaty, B., Battung, S. M., & Soewondo, P. (2023). Stunting-pedia: Apa yang Perlu Diketahui

tentang Stunting (Vol. 1).
Kepustakaan Populer Gramedia
(KPG) bekerjasama dengan Tanoto
Foundation.