Pediomaternal Nursing Journal

Original Article

The effectiveness of "RS Centing" intervention to improve knowledge and behavior among adolescents to prevent stunting

Dwi Faqihatus Syarifah Has*, Eka Srirahayu Ariestiningsih, Rina Zahrotul Mufidah, Mar'atus Sholihah

ABSTRACT

Introduction: Based on data from the 2021 Indonesian Nutritional Status Study (SSGI), the prevalence of stunting in Gresik Regency is 23%, close to the prevalence rate of stunting in East Java of 23.5%. Despite the decline, stunting is still a challenge for the government. The Gresik Regency government is focusing on ten sub-districts as priority focus locations for reducing stunting, one of which is the Kebomas Sub-District. Therefore, the researchers analyzed the implementation of *Remaja Sehat Cegah Stunting*/Healthy Youth Posyandu Prevent Stunting (RS Centing) program, which focuses on educating youth about stunting.

Methods: Pre-experimental research, with a population of 75 teenagers, was selected based on inclusion: (1) age criteria (17-21 years old), (2) respondents who actively participate in youth activities, and (3) live in areas focused on stunting. The sampling technique used simple random sampling, which obtained 64 respondents. The dependent variable is adolescents' level of knowledge and attitudes toward stunting—data analysis using simple linear regression analysis test. The research (1) gives a pre-test about knowledge and behavior for preventing stunting, (2) the "RS Centing" program provides assistance and outreach to young people in stunting focus locations. Then, (3) after assisting for three months, the team gave a post-test knowledge and behavior about stunting. The instruments used to conduct the research were questionnaires, pre and post-respondent knowledge, and behavior towards stunting, which would be given to respondents by Google link.

Results: There was an influence of the RS Centing program on increasing knowledge (*P*-value <0.01) and attitudes (*P*-value <0.01) of adolescents in preventing stunting in Kebomas District, Gresik.

Conclusion: The knowledge factor has the greatest influence (*P*-value 0.041, and relative value 0.000-0.376). Through this research, the Gresik Regency Government can optimize the RS Centing Program to reduce stunting in the Gresik Regency and achieve a stunting prevalence target of 10% in 2024.

Keywords: attitudes of adolescents; knowledge; stunting

INTRODUCTION

Stunting poses a significant global challenge, hindering human growth and development. Approximately 162 million children under the age of five are affected by Stunting, with projections suggesting that this number could rise to 127 million by 2025 if current trends persist. According to data from the United Nations Children's Emergency Fund (UNICEF, 2020), 56% of stunted children reside in Asia, while 37% are in Africa. The surge in stunting cases in 2020 can be attributed to the COVID-19 pandemic, which diverted global health resources and attention away from other health issues. Additionally, the economic repercussions of lockdown measures in various countries have exacerbated the problem, significantly impacting children's nutritional status (Has et al., 2021).

The United Nations (UN) member countries have committed to achieving Sustainable Development Goals (SDG) targets by 2030, which include ending hunger, improving nutrition, and ensuring access to an adequate food supply. These goals aim to address malnutrition in all its forms, including undernutrition and overnutrition, and prioritize the nutritional needs of vulnerable populations such as children under five years old, adolescent girls, pregnant and lactating women, and the elderly. Despite these efforts, the 2020 Global Hunger Index (GHI) highlights ongoing challenges, with 690 million children worldwide suffering from malnutrition, 144 million experiencing stunting and 47 million facing wasting (Nwabuko & Nnaji, 2020).

According to data from the Indonesian Toddler Nutrition Status Survey (SSGBI) and the Ministry of Health of the Republic of Indonesia, the prevalence of stunting in East Java has shown a declining trend from 2019 to 2021. Although the annual targets have not yet been met, there has been a decrease from 26.86% in 2019 to 25.64% in 2020, and further down to 23.5% in 2021 (Grebmer et al., 2021) and (Kemenkes RI, 2017). The prevalence rate of stunting in East

***Correspondence**: Dwi Faqihatus Syarifah Has (dwi_syarifah@umg.ac.id)
Faculty of Health Science, Universitas Muhammadiyah Gresik, Gresik, Indonesia

Volume 10 (1): 1-6
http://dx.doi.org/10.20473/pmnj.v10i1.47824

e-ISSN: 2355-1577 | p-ISSN: 2656-4629

Article History
Received: July 21, 2023 | Revised: August 31, 2023 | Accepted: September 02, 2023| Published : March 12, 2024

Java in 2022 is still quite high, namely 23.5%. The highest figure was in Bangkalan Regency at 38.9%, while the lowest was in Mojokerto Regency at 6.9% of the total in East Java (Dinas Kesehatan, 2021).

Gresik Regency, located in East Java, faces a significant challenge with a high prevalence of stunting. According to the 2021 Indonesian Nutritional Status Study, the prevalence of stunting in Gresik Regency stands at 23%, which closely mirrors the rate of stunting in East Java at 23.5% (Puspasari & Andriani, 2017). Despite some improvement, stunting remains a pressing issue for the local government. The National Medium-Term Development Plan has targeted reducing the stunting prevalence rate to 14% by 2024 (Dinas Kesehatan, 2021). The Gresik Regency Government identified ten priority sub-districts for stunting reduction efforts in 2022 to address this issue. These sub-districts include Dukun, Ujung Pangkah, Sidayu, Kebomas, Driyorejo, Wringinanom, Kedamean, Menganti, Cerme, and Duduk Sampeyan, as outlined by the Department of Health in 2021.

From the latest data, Gresik Regency is ranked 6th in East Java for cases of increased stunting, where there are 3,701 cases in Gresik Regency and the highest number is in toddlers aged 0-23 months (Zaini, 2023). The prevalence of stunting in children 0-23 months in Indonesia based on the 2018 Riskesdas (5) was recorded at 29.9%, which is still relatively high based on WHO criteria (Pemkab Gresik, 2020). The high prevalence of stunting in toddlers aged 0-23 months not only has an impact on physical growth failure but simultaneously also creates a risk for children to grow and develop with sub-optimal levels of intelligence and children who are more susceptible to disease.

The sustainable development goals (SDGs) set by the United Nations aim to address hunger, ensure adequate nutrition, and secure food access for all (Has et al., 2021). Achieving these goals involves tackling issues like malnutrition, especially among children under five, as well as meeting the nutritional needs of various vulnerable groups such as young women, pregnant and lactating women, and the elderly. This global effort, including Indonesia's commitment, targets completion by 2030 (Kemenkes RI, 2017). As of 2020, the Global Hunger Index (GHI) indicates a staggering 690 million people worldwide suffering from malnutrition. Among them, 144 million children are affected by stunting, a sign of chronic malnutrition, while 47 million suffer from wasting, a sign of acute malnutrition. Indonesia aims to reduce stunting among children under five to 10% by 2030 (WHO, 2020).

Stunting, a form of chronic malnutrition, is a pervasive global challenge that hinders human development. It manifests as shorter-than-normal height in children due to prolonged inadequate nutrient intake or recurrent infections. In some cases, Stunting begins before birth due to poor maternal nutrition and health during pregnancy. Children affected by stunting face numerous health risks, including higher morbidity and mortality rates, increased susceptibility to obesity and non-communicable diseases in adulthood, compromised cognitive development and reduced productivity and income potential. Each year, approximately 10.5 million child deaths are linked to malnutrition, with the majority occurring in developing countries. Indonesia ranks among the top five countries globally with the highest prevalence of child stunting (Sadler et al., 2022).

Stunting, also known as chronic malnutrition, represents a distinctive form of growth failure and remains a significant impediment to global human development. Unlike acute malnutrition, which is characterized by short-term nutrient deficiencies, chronic malnutrition is prolonged. Children affected by stunting typically exhibit seemingly normal, proportionate bodies, but their height falls below the expected range for their age group (Mokoagow, 2018). Stunting is a complex and cumulative process influenced by inadequate nutrient intake, recurrent infections, or both. Research suggests that stunting can occur before birth due to poor nutritional intake during pregnancy, inadequate parenting practices, and the consumption of low-quality food, all of which can contribute to growth inhibition (Candra, 2020).

Childhood stunting poses significant challenges as it is linked to increased risks of morbidity and mortality, as well as future health issues such as obesity and non-communicable diseases. Additionally, stunted children may experience shorter adult stature, impaired cognitive development, and reduced productivity and income potential. Alarmingly, malnutrition-related factors contribute to approximately 10.5 million child deaths annually, with a staggering 98% of these deaths occurring in developing countries (Noviansyah, 2022).

According to the 2020 Susenas (Kemenkes RI, 2022), an analysis of the current conditions and health of adolescents, which could be a manifestation of stunting in the future is obtained: (1) There are only 6 out of 10 livable houses seen from 4 things, namely sanitation, drinking water, cleanliness, and materials, (2) 25.70% of youth in Indonesia smoke, (3) 1 in 4 youths aged 16-18 do not attend school, (4) Most youth in Indonesia graduated from high school/junior high school/ equivalent. 38.77% graduated from high school, (5) 35.41% graduated from junior high school, and only 10.3% graduated from university; of course, this affects the level of work participation; the youth work participation rate is 61.3%, ¼ youth aged 16-18 are already in the labor market, and the rest are aged 19-30 years, (6) 1 out of 10 Indonesian youths are unemployed, preparing to become parents by postponing marriage, (7) 3 of 10 young women married at 16-18 (8) 41% of young women who have been married at 16-18 have and are currently participating in family planning programs, 43% have never, (9) The participation of young women who had been married at 19-30 years was even higher.

Adolescents are one of the main targets for stunting prevention (Dinas Kesehatan, 2020). Adolescents will later take on the role of parents. Therefore, inviting adolescents to be more active in contributing to efforts to prevent stunting is important. Adolescents or students not only know and understand stunting for themselves but also become agents of change who are able to disseminate stunting information more widely to their surroundings. This must be done together as an effort to make Indonesian people healthy, prosperous, and productive (Ariestiningsih et al., 2022).

Based on the results of research Focus Group Discussion in Klangonan Village and Singosari Village, it was concluded that the class coverage of pregnant women mothers who attended nutrition and health counseling was still very low, namely in Klangonan, 28.57% while in Singosari, 12.35%. The coverage of families participating in family development is also still low, namely in Klangonan Village, it is 62.39%, while in Singosari Village, it is 38.59% because of the low coverage of assistance and education for adolescents, pregnant women, and toddlers.

Therefore, the researchers wanted to know the effect of the "RS Centing" (*Remaja Sehat Cegah Stunting*/Healthy Youth Preventing Stunting) Program on the Knowledge and Attitudes of Adolescents about Stunting in the Gresik Regency. This study aims to determine and analyze the influence of the "RS

Centing" Program on Adolescents' Knowledge and Attitudes about Stunting.

METHODS

Design

This study adopts a pre-experimental research design.

Sample and Setting

The sample consists of 64 adolescents aged 17-21 years from Kebomas District, Singosari Village (Fig. 2). The sampling technique employed was simple random sampling.

Variables

The independent variable was RS Centing program and the dependent variable was adolescents' level of knowledge and attitudes toward stunting.

Instruments

Questionnaires are utilized as instruments for data collection. Pre- and post-test questionnaires are administered to assess students' knowledge and attitudes toward stunting. These questionnaires are distributed to respondents via a Google link.

Procedure

The study begins with the completion of the respondent's pre-test questionnaire, followed by the implementation of the RS Centing program (Fig. 1). This program encompasses various components, including the provision of pocketbooks, assistance, and education through stunting prevention videos tailored for adolescents, as well as direct education and consultation sessions with nutritionists. After the program implementation, the respondents undergo the completion of the post-test questionnaire to assess any changes in their knowledge and attitudes toward stunting.

Data Analysis

Data analysis involves using SPSS analysis with the paired t-test method and multiple linear regression analysis to assess the impact of the RS Centing program on adolescents' knowledge and attitudes toward stunting.

RESULTS

The research results are presented in three stages, namely univariate, bivariate, and multivariate data analysis. For univariate data analysis, it presents data on the respondents' age, knowledge, and attitudes before and after assistance at the RS Centing and the implementation of preventive measures the respondents have taken (Fig. 3).

Table 1. Respondent's Age

Age (years)	n	%
17-19	35	54.7
20-21	29	45.3
Total	64	100

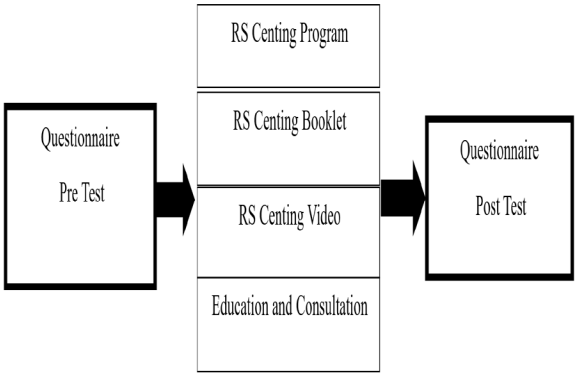

Figure 1. RS Centing Prorgam

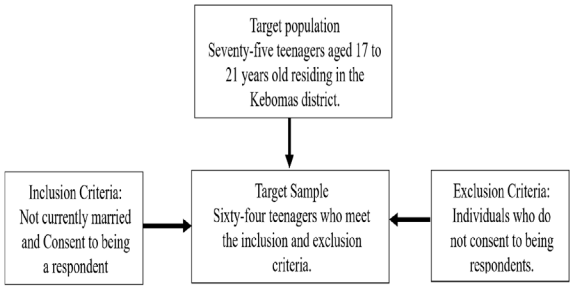

Figure 2. Study Population and Sampling Chart

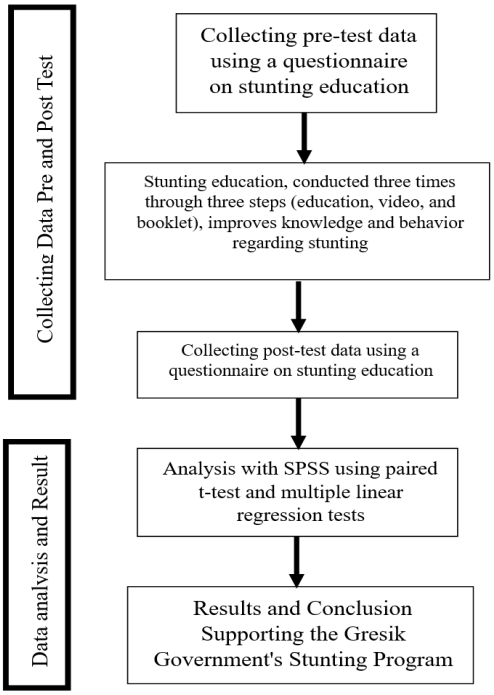

Figure 3. Operational Flowchart

Based on Table 1, most respondents were 17-19 years old (54.7%), while respondents aged 20-21 amounted to 29 respondents (45.3%).

Table 2. Knowledge of Pre- and Post-Educational Respondents RS Centing Program

Knowledge	Low	High	Mean
Pre-test	40	86	66.47
Post-test	68	90	80.64

Based on Table 2, the results show that before the RS Centing Education Program was carried out, the average respondent's score was 66.47; after education, the respondent's knowledge increased with an average knowledge value of 80.64.

Table 3. Attitude of Respondents in Pre and Post-Education RS Centing Program

Respondent Attitude	Low	High	Mean
Pre-test	60	80	70.94
Post-test	70	85	79.30

Based on Table 3, the results show that before the RS Centing Education Program was carried out, the average respondent's score was 70.94; after education, the respondent's knowledge increased with an average knowledge value of 79.30.

Table 4. Precautions taken by respondents after participating in the RS Centing Program

Action Post Education	Low	High	Mean
Post Actions	70	95	84.53

Based on Table 4, it is known that after receiving education from the RS Centing program, respondents were able to take action to prevent stunting, with an average score of 84.53.

Table 5. The Effectiveness of the RS Centing Program on Respondents' Knowledge and Attitudes about Stunting

Variables	95% CI		df	Sig.
	Lower	Upper		
Knowledge	-16.474	-11.870	63	<0.001
Behavior	-10.300	-6.419	63	<0.001

Based on the Table 5, it is known that the respondents' knowledge and attitude test scores have increased after attending the RS Centing program. Based on the significance, it can be concluded that the RS Centing program was declared effective in increasing the knowledge and attitudes of respondents towards stunting prevention in the Kebomas District with a value of knowledge (*P*-value <0.001) and attitude (*P*-value <0.001).

Table 6. The Effectiveness of the RS Centing Program in Increasing Respondents' Stunting Prevention Measures

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	256.431	2	128.215	3.219	0.047
Residual	2429.507	61	39.828		
Total	2685.938	63			

Based on Table 6, it is known that there is an educational influence of the RS Centing Program on Increasing Stunting Prevention Measures from respondents with a sig <0.05, namely sig 0.047.

Table 7. The most influential factors for increasing stunting prevention measures for respondents

Variables	Stan-dardized Coef. B	Unstandardized Coefficient		t	Sig.
		B	Std Er-ror		
Knowledge	0.254	0.192	0.092	2087	0.041
Behavior	-0.184	-0.205	0.136	-1.507	0.137

Based on the results of Table 7, it can be concluded that the factor that has the greatest influence is knowledge of increasing stunting prevention measures in respondents, with (*P*-value 0.041) with a relationship between 0.008 – 0.376.

DISCUSSION

Based on bivariate analysis (Table 5), the "RS Centing" program increases knowledge and behavior towards stunting prevention, with sig 0,000 for knowledge variables and 0,000 for behavior variables. Then, after processing the data to prove the related variable using multiple linear regression analysis (Table 7), the result is a knowledge variable with sig 0.041. Based on the research results above, it is stated that the RS Centing program effectively increases adolescents' knowledge and behavior about stunting. In line with the research results above (Fitriani et al., 2022) and (Rizkiana, 2022), the role of youth is a precious period when adolescents are in a state of physical and psychological health, as well as good education. So, handling adolescent problems, including health problems, will require the involvement of multi-disciplines, cross-programs, cross-sectors, and the community (Resmiati, 2022). One of the development programs carried out by several health centers is for the youth program to prevent stunting, one of which is the Garuda Health Center, which has the Children and Youth Share Movement program, which is a forum for little doctors and Youth Health Cadres. Trained by the puskesmas to become a driving force in carrying out health activities, one of which is improving nutritional status. In addition, the Garuda Health Center also has a room on the 3rd floor for handling HIV-STIs in Andir District, which works with NGOs called Friends of the Garuda Family.

Based on observations during this research, Gresik has begun to hold programs focusing on adolescents frequently to prevent stunting in every district. Providing this education is a preventive effort to prevent stunting earlier. Therefore, stunting counseling is targeted at adolescents with an age range of 15-25 years. This adolescents is expected to be a pioneer in preventing stunting, even though they are single (not married yet). Adolescents who receive knowledge can apply the knowledge gained to their families so that people will be more aware and alert about the impact of stunting.

Health institutions have launched various stunting prevention initiatives targeting adolescents across multiple regions (Anjaswarni et al., 2022). Adolescents represent a crucial demographic in breaking the cycle of stunting, as they are prospective parents who will shape the next generation's health. Initiatives have been undertaken, including pre-testing on stunting, dissemination of Android applications, and provision of stunting educational materials such as pocketbooks, followed by post-tests to evaluate the effectiveness of these activities. Results showed a notable increase in knowledge and attitude scores among participants using pocketbooks and Android applications. Specifically, the group utilizing pocketbooks saw a knowledge increase of 4.3 points and an increase in attitude of 5.3 points.

In comparison, the group using Android applications witnessed a knowledge increase of 3.4 points and an attitude increase of 6 points. These findings underscore the effectiveness of both media formats in positively influencing adolescents' understanding and attitudes toward stunting (Anjaswarni et al., 2022). However, while youth empowerment has shown promise in reducing stunting prevalence, it necessitates comprehensive programs, including training, orientation, continuity, guidance, and follow-up. Challenges such as funding constraints and human resources readiness must also be addressed to implement youth empowerment initiatives effectively and reduce stunting (Rahayu et al., 2022).

In addition, according to research (Noviasty, 2020), community service activities are carried out by providing information and education through a gathering place for youth sharing, which then forms groups through the WhatsApp application. Educational media is provided through PPTs, videos, and comics, as well as sharing sessions and discussions with resource persons. Assessment of adolescent understanding through pre and post-tests found an increase in adolescent knowledge, previously 30% to 85% for PUP material and 59% for stunting material. Community service activities are also carried out for the same purpose: community service efforts in Mayangrejo Village, Kalitidu District, Bojonegoro Regency to reduce the incidence of stunting (Noviasty, 2020). Community service is conducted through educational activities and socialization of adolescent reproductive health for students in grades 11 and 12 of Al–Aly Islamic High School, Mayangrejo Village, Kalitidu, so that they can be responsible for their reproductive health and futures. This community service activity has proven to increase the knowledge and understanding of adolescents regarding reproductive health and the effects of marriage and pregnancy at a very young age so that it can reduce the prevalence of stunting under five in Mayangrejo Village.

The logical consequence of implementing development is youth empowerment, which is involvement in empowering the community (community empowerment) that is participatory and sustainable. From this statement, a common thread can be drawn that youth involvement in sustainable development is not only through physical activities but also by providing innovations and ideas that empower the community to overcome problems, including existing health and nutrition matters.

CONCLUSION

The role of adolescents is a precious period when adolescents are in a state of physical and psychological health, as well as good education. So, handling youth problems, including the problem of stunting in the future, requires the involvement of multi-disciplines, cross-programs, cross-sectors, and the community.

The development of the resilience of the Planned Generation Youth needs to be encouraged so that teenagers avoid sexual relations outside of marriage and early marriage, which starts from a lack of knowledge about reproductive health. Moreover, adolescents are future parents who influence the future generations to be born. From there, it became apparent that youth could be an alternative entry point for implementing stunting reduction programs.

The important role of the government and the Gresik Regency Health Office is to make policies and programs for youth empowerment to reduce stunting rates in the Gresik Regency. Initiating youth cadres to prevent stunting is equipped with the theory and practice of measuring nutritional status as well as stunting prevention education.

Declaration of Interest

There are no conflicts of interest.

Acknowledgment

The author expresses gratitude to the Gresik District Government, the Gresik District Health Office, and the Singosari Village Government.

Funding

None.

Data Availability

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

REFERENCES

Anjaswarni, T., Winarni, S., Hardy, S., & Kuswulandari, S. (2022). Youth empowerment in the integration program of stunting prevalence reduction in East Java during COVID-19 pandemic: A document review. *Journal of Public Health for Tropical and Coastal Region, 5*(1), 32–41. https://doi.org/10.14710/jphtcr.v5i1.13748

Ariestiningsih, E. S., Has, D. F. S., & Kurniawan, G. (2022). Analyze role of the ascription of responsibility on the causative factors and efforts to prevent stunting in toddlers in Balongpanggang District, Gresik. *Journal of Humanities and Social Studies, 6*(1), 1–6. https://doi.org/10.33751/jhss.v6i1.4978

Candra, D. A. (2020). Pencegahan dan penanggulangan stunting. In Epidemiologi Stunting. Universitas Diponegoro Semarang.

Dinas Kesehatan. (2020). *Kualitas remaja jadi kunci cegah stunting*. Humas Dinkes Bandung. https://dinkes.bandung.go.id/kesehatan-keluarga-dan-

gizi/

Dinas Kesehatan. (2021). *Profil dinas kesehatan Provinsi Jawa Timur*. In Buku Profil.

Fitriani, Barangkau, Hasan. M, Ruslang, Eka Hardianti, Khaeria, Oktavia. R, & Selpiana. (2022). Cegah stunting itu penting!. *Jurnal Pengabdian Kepada Masyarakat Sosiosaintifik, 4*(2), 63–67. https://doi.org/10.54339/jurdikmas.v4i2.417

Grebmer, K. von, Bernstein, J., Wiemers, M., Schiffer, T., Hanano, A., Towey, O., Chéilleachair, R. N., Foley, C., Gitter, S., Ekstrom, K., & Fritschel, H. (2021). Global hunger index. October, 1–57. https://www.globalhungerindex.org/pdf/en/2021.pdf

Has. D. F. S, Genoveva, G., Ariestiningsih, E. S. (2021). Nutrisi anak dan pendapatan keluarga: perspektif dampak sosial ekonomi masa pandemi COVID-19. *Jurnal Kesehatan Terpadu, 5*(1), 1–5. https://garuda.kemdikbud.go.id/documents/detail/3371597

Kemenkes RI. (2017). *Pedoman pelaksanaan pemantauan status gizi (PSG) tahun 2017*. Direktorat Gizi Masyarakat.

Kemenkes RI. (2022). *Buku saku hasil survei status gizi indonesia (SSGI) 2022*.

Mokoagow, H. (2018). *Gambaran tingkat pendidikan ibu dan pendapatan keluarga dengan status gizi balita*. Skripsi.

Noviansyah, H. (2022). *Strategi percepatan pencegahan stunting dengan pendekatan keagamaan guna mewujudkan generasi berkualitas (Studi pada wilayah kantor Kementerian Agama Kabupaten Pringsewu)*. PhD thesis, UIN Raden Intan Lampung. http://repository.radenintan.ac.id/18459/

Noviasty, R. (2020). Eduwhap youth to be ready to prevent stunting in youth sharing gathering. LOGISTA - *Jurnal Ilmiah Pengabdian Kepada Masyarakat, 4*(2), 494–501.

Nwabuko, O. C., & Nnaji, T. O. (2020). Epidemiology in the news -the case of COVID-19 pandemic disease. *IOSR Journal of Dental and Medical Sciences, 19*(May), 35–38. https://doi.org/10.9790/0853-1905043538

Pemkab Gresik. (2020). *Satgas COVID-19 Kabupaten Gresik*. Dinas Kesehatan. https://satgascovid19.gresikkab.go.id/3-langkah-penting/

Puspasari, N., & Andriani, M. (2017). Hubungan pengetahuan ibu tentang gizi dan asupan makan balita dengan status gizi balita (BB/U) Usia 12-24 Bulan. *Amerta Nutrition, 1*(4), 369–378. https://doi.org/10.20473/amnt.v1i4.2017.369-378

Rahayu, S., Rahayu, M. A., Apriningrum, N., Chairudin, C., Asep, A., & Ulya, N. (2022). the role of youth in the stunting prevention via podcast in Karawang Regency 2020. *Interdisciplinary Social Studies, 1*(8), 1079–1085. https://doi.org/10.55324/iss.v1i8.185

Resmiati, R. (2022). Peningkatan pengetahuan dan sikap remaja terhadap stunting melalui aplikasi android dan buku saku remaja stunting. *LOGISTA - Jurnal Ilmiah Pengabdian Kepada Masyarakat, 6*(1), 98–102. https://doi.org/10.25077/logista.6.1.98-102.2022

Rizkiana, E. (2022). Pengetahuan dan sikap remaja putri terhadap konsumsi tablet tambah darah (TTD) sebagai pencegahan stunting. J*urnal Ilmu Kebidanan, 9*(1), 24–29. https://doi.org/10.48092/jik.v9i1.183

Sadler, K., James, P. T., Bhutta, Z. A., Briend, A., Isanaka, S., Mertens, A., Myatt, M., O'Brien, K. S., Webb, P., Khara, T., & Wells, J. C. (2022). How can nutrition research better reflect the relationship between wasting and stunting in children? Learnings from the Wasting and Stunting Project. *Journal of Nutrition, 152*(12), 2645–2651. https://doi.org/10.1093/jn/nxac091

UNICEF. (2020). *Child nutrition and COVID-19*. https://data.unicef.org/topic/nutrition/child-nutrition-and-covid-19/

USAID. (2020). *Save the children, safely fed Canada, Infant and child feeding recommendations when COVID-19 is suspected or confirmed*.

WHO. (2020). *Health of mothers, newborns, children and adolescents*. WHO. https://www.who.int/maternal_child_adolescent/topics/child/nutrition/en/

Zaini, M. (2023). *Rembuk stunting 2023, integrasikan upaya wujudkan Zero stunting di Gresik*.