

Original Research Paper

The Effect of Nursing Interventions on Community Health Deficiency Problems in Adolescents in Sleman, Indonesia

Suwarsi Suwarsi^{1*} , Pornpan Inta², Zahra Amanda¹

¹Departemen Keperawatan, Fakultas Ilmu Kesehatan, Universitas Respati Yogyakarta, Indonesia

²Faculty of Nursing, Naresuan University, Phitsanulok, Thailand

 suwarsi@respati.ac.id

Submitted: February 21, 2025

Revised: March 26, 2025

Accepted: April 24, 2025

Abstract

Adolescents are known as a solid and mutually influential social group, so that behavioral patterns are often uniform. However, this uniformity can be a challenge and also increase the risk of developing a community health deficit. This occurs because of the lack of knowledge of adolescents about sexually transmitted diseases, the impact of smoking, and a lack of understanding of available health services. These conditions underline the need for comprehensive health education and a proactive community nursing approach. This study aims to improve the effectiveness of community-based health education in enriching adolescents' understanding of STDs, the dangers of smoking, access to health services, and other risky behaviors through adolescent posyandu activities. The study design used a quasi-experimental approach with a one-group pre-test and post-test model. A total sample of 96 adolescents in Pokoh, Sleman, Indonesia. Education was provided simultaneously, with standardized instruments that have been validated and following the principles of research ethics. Data analysis was carried out using the Wilcoxon test. The results showed a significant increase in adolescents' understanding of the dangers of smoking and access to health services after the intervention. However, the increase in knowledge of other risky behaviors was not significant. These findings strengthen the important role of community nurses as the spearhead in addressing community health deficits through sustainable educational and preventive strategies.

Keywords: adolescent; community; intervention; nurse

1. Introduction

Community nursing is positioned as an important link between the health system in the clinic and the community. Community nurses have a role as educators, managers, and advocates in improving the health of the community. In the context of adolescent health, health promotion, and disease prevention require a comprehensive approach involving community nursing staff and good public policy support. Empowering adolescents, reducing health disparities, and improving adolescent health indicators are top priorities in supporting the demographic bonus (Handayani, H. et al., 2024).

However, conditions in the field still show various risky behaviors among adolescents. Obesity, malnutrition, pubertal disorders (juvenile delinquency, smoking), teenage pregnancy, sexual abuse, and road traffic accidents are major health problems among adolescents (Kanthi & Johnson, 2021). Factors contributing to these problems include developmental changes, desire for independence, peer pressure, exploration of sexual identity, use of technology, violence, and social norms (Akinwale et al., 2023). KPAI reported 11,492 cases of juvenile delinquency and violations of the law in 2019 (Akmal Latief & Zulherawan, 2020). This risky behavior, when examined in the context of community nursing, is included in the category of community health deficiency. Community health deficiency occurs when there are health problems or risk factors that can disrupt the welfare of a group. The main causes of community health deficiency are limited access to essential health services and the still dominant use

of traditional medicine in the community (PPNI, 2017). Some signs and symptoms of community health deficiency include the emergence of health problems experienced by the community, the presence of physiological or psychological risk factors, the unavailability of welfare improvement and disease prevention programs, and limited services to address community health problems (PPNI, 2017).

The impact of unaddressed community health deficiencies can have broad implications for the health and development of children and adolescents (Bell et al., 2023). To address this, the government has initiated various community-based programs, one of which is the Adolescent Health Post. This program aims to improve knowledge and the quality of adolescent health through various educational activities and health services managed by health workers and community cadres (Yuniastuti et al., 2022). Implementation in the field shows that increasing the capacity of cadres through workshops and field health services for adolescents is an important strategy in strengthening the role of the adolescent health post (Handayani, H. et al., 2024). However, there are still various challenges in implementing the adolescent health post-program. The level of utilization of health services by adolescents is still relatively low, with attendance rates only ranging from 15-18% in some areas (Avelina et al., 2024). Factors that influence low adolescent participation include lack of knowledge about reproductive health, sexually transmitted diseases, and the impact of promiscuity. In addition, inadequate family support and limited infrastructure are also major obstacles in optimizing this program (Suherman & Tasyiawurin, 2023). Not all adolescents understand the impact of smoking habits on health, including dental and oral problems, and the importance of smoking prevention efforts (Amini et al., 2023).

Therefore, innovation is needed in community nursing interventions, such as community-based education and simulation, to improve adolescents' knowledge and skills in maintaining their health. The innovation in question is the adolescent approach in the community, not only in schools like the previous conventional approach but in the community because some adolescents have also finished school and the community where adolescents return. This intervention can be a strategic step in addressing public health deficiencies and strengthening the role of adolescent Posyandu in improving the welfare of the younger generation. This approach will not only improve adolescent health but also contribute to the development of overall public health by emphasizing preventive and educational strategies that include increasing self-awareness, increasing access to health services, and community-based training.

2. Research Methods

Research Design: This study used a quantitative design with a quasi-experimental approach using a one-group pre-post test design. This design allows researchers to measure changes in adolescents' knowledge levels before and after being given educational interventions. **Location and Time of Research:** This study was conducted in Sleman, Yogyakarta, in December 2024. **Population and Sample:** Population: Adolescents in the Sleman area of Pondok, Yogyakarta. The sample used a total sample of 96 adolescents. The inclusion criteria in this study were adolescents aged 13–18 years, willing to participate in the study by signing a consent form, and no cognitive disorders that could affect their understanding of the educational material.

Research Variables: Independent variable: Health education with PowerPoint media. Dependent variable: Level of adolescent knowledge regarding adolescent health services, the impact of smoking, sexually transmitted diseases, and other risky behaviors. **Research Instrument:** The instrument used in this study was a questionnaire that had been prepared by the researcher himself and had been tested for validity by three experts with a value of 0.9, so it was declared valid. The questionnaire consisted of: 11 questions about knowledge of health services for adolescents, 15 questions about knowledge of the impact of smoking, 15 questions about knowledge of sexually transmitted diseases, and 15 questions about knowledge of the impact of risky behavior. **Research Procedure:** The health education was conducted over two sessions using a lecture method in a single room. Each session was accompanied

by five nurses, consisting of four educators and one moderator. In addition, evaluations were carried out through pre-tests and post-tests. Intervention: Health education was delivered using PowerPoint media and implemented in three stages: an introduction lasting 3 minutes, material presentation covering four topics with a duration of 40 minutes, and a closing session lasting 5 minutes. The material included information about adolescent health services, the dangers of smoking, sexually transmitted diseases, and the impact of risky behavior. Post-test: After the intervention was completed, respondents filled out the same questionnaire again to measure changes in their level of knowledge. Data Analysis: The data obtained will be analyzed using the paired t-test if the data is normally distributed, or the Wilcoxon test if the data is not normally distributed. The analysis was carried out using statistical software to determine the effectiveness of the intervention in improving adolescent knowledge. Research Ethics: This study has obtained ethical approval from SPUP with the code of ethics SPUP_2022_0001_SR_SS. All participants were given informed consent before the study was conducted, and the confidentiality of their data was maintained.

3. Results and Discussion

3.1. Age Characteristics in The Adolescent

The characteristics of respondents in this study consist of age characteristics in adolescents and gender which are depicted in the table below:

Table 1. Characteristics in Adolescents

Category	Classification	Frequency	Percentage
Age	Early adolescence(11-14)	25	21.4
	Middle Adolescence(15-17)	26	23.2
	Late Adolescence(18-24)	45	55.4
Gender	Male	45	44.6
	Female	51	55.4

Source: Primary Data, 2025

Based on [Table 1](#), the age of respondents obtained the highest results in the late teenage age range with a total of 45 teenagers (55.4%) and the gender of respondents shows that the majority of teenagers are female, with a total of 51 teenagers (55.4%).

Table 2. Differences in the Level of Knowledge About Health Services, The Impact of Smoking, Free-Sex Behavior, and Risky Behavior Before and After Education in Adolescents

Variable	perMean		Difference Mean	P-Value
	Pre-test	Post-test		
Knowledge of adolescent health services	80,83	87,33	6,5	0,021
Knowledge about the harmful effects of smoking	67,31	75,58	8,27	0,000
Knowledge about sexually transmitted diseases	73,38	71,31	-2,07	0,087
Knowledge of other risky behaviors	61,42	64,71	3,29	0,187

Primary Data, January 2025

Based on [Table 2](#), the comparison of pre-test and post-test results using a Wilcoxon test, with a significance threshold of $p\text{-value} \leq 0.05$, showed that only knowledge about health services and knowledge about the impact of smoking differed significantly before and after the educational intervention, with p-values of 0.021 and 0.000, respectively.

3.2. Discussion

Based on the results of the study, the majority of respondents were in the late adolescent age range, namely 45 adolescents (55.4%). This shows that this age group has greater involvement in research compared to other age groups.

Late adolescents are individuals who are at a developmental stage between 18 and 24 years (Pamungkas et al., 2024; Akbar et al., 2023). At this age, they experience more mature physical, psychological, social, and cognitive changes compared to early and middle adolescents. At this stage, adolescents begin to build a stronger self-identity, develop independence in decision-making, and experience the transition from education to work or college. In addition, they also begin to establish more complex social and emotional relationships, which are an important part of the transition phase towards adulthood. This phase is characterized by the formation of a more stable identity and increased vulnerability to various developmental problems (Rais, 2022).

Late adolescents' involvement in research and decision-making processes is influenced by various factors. Their engagement in study choice is affected by parental involvement and having an authentic inner compass, with the latter showing stronger associations (Vermote et al., 2023). In addition, accessibility is also a contributing factor in their participation, given that late adolescents are more easily reached through various communication platforms such as social media and educational environments. Studies have shown that they have a higher awareness of the importance of cognition in daily activities and health, especially in relation to cognitive, academic, personal, and social skills (Pinto & Anil, 2023). Interest in the research topic also plays an important role in late adolescent engagement. If the research being conducted is related to health, education, or social behavior, then this age group is more likely to be interested in participating because of its relevance to their lives. Factors such as optimism, self-efficacy, and impulse control also contribute to developing their mental and emotional resilience (Wiratmaja et al., 2023).

In addition, late adolescents are in a critical period of physical and psychological development, where support from parents and the educational environment is essential to help them face the various challenges that arise (Suryana et al., 2022).

The results of this study provide a clearer picture of the characteristics and involvement of late adolescents in research. However, it is important to note that uneven age distribution can affect the generalization of research results to the adolescent population as a whole. Therefore, further research with a more balanced age distribution is highly recommended in order to provide a broader and more comprehensive understanding. Understanding this aspect of development is essential to provide appropriate support and guidance during the transition to adulthood (Akbar et al., 2023).

Based on the results of the study, the majority of respondents in the adolescent category were female, namely 51 people (55.4%). This finding shows that the proportion of female adolescents is greater than that of male adolescents in this study.

Based on the results of the study, the majority of adolescent respondents in this study were female, namely 51 people (55.4%). This proportion shows that female adolescents are more involved in research than male adolescents. This difference in proportion can be caused by several factors, such as the characteristics of the population studied, the tendency of female adolescent to participate in research and social and cultural factors that influence their willingness to participate. In several health studies, adolescent girls tend to be more responsive to surveys and research than adolescent boys. This may contribute to their greater responsiveness to surveys and research compared to males. However, adolescent involvement in health research remains low overall, with less than 1% of studies reporting adolescent participation (Warraitch et al., 2024). In addition, adolescent girls also show higher levels of empathy, both cognitively and affectively, compared to adolescent (Dickel & Johnson, 2024). This

high level of empathy can make them more interested in participating in research, especially those related to health and social welfare.

The results of the study showed a significant influence before and after education on adolescent knowledge of health services. Before being given education, adolescents' level of knowledge tended to be lower, which could be caused by limited information, lack of socialization of health services, and minimal access to valid sources of information. However, after being given education, there was a significant increase in their understanding of the importance of adolescent health services.

Education plays an important role in increasing adolescent awareness of various aspects of health services, including accessibility, types of services available, and the benefits of using them. Education plays a crucial role in increasing awareness and utilization of health services by adolescents. Several studies have shown that providing information about local clinical services during sexual health education classes can bridge the gap between education and access to health services (Decker et al., 2021). In addition, adolescents often face several barriers to accessing health services, such as parental disapproval, stigma, shame, and concerns about confidentiality (Decker et al., 2021; Musonda, 2023). However, factors such as peer and family support, assurance of confidentiality, and better accessibility of services can help increase adolescents' utilization of health services (Decker et al., 2021). To address these barriers and improve accessibility, experts recommend strengthening links between schools and health facilities, increasing awareness among adolescents, and leveraging digital technologies for more effective outreach (Musonda, 2023).

This increase in knowledge can also be associated with the educational methods used. Approaches such as lectures, interactive discussions, and digital-based educational media are becoming more relevant for today's adolescents. Digitalization in education has brought about significant changes in the way adolescents obtain health information. Interactive and visually appealing digital content, such as animated videos and mobile games, have been shown to be more engaging and effective than traditional methods in adolescent education (Saputri et al., 2024). In addition, the use of digital media in education fosters core competencies such as information, communication, and technical skills, which are increasingly relevant in today's digital era (Podbolotova et al., 2021). New media technologies meet the needs of the "media generation" by providing interactive communication and creative implementation in the digital space (Mialkovska et al., 2023). Furthermore, advanced technologies such as the metaverse have shown great potential in health and citizenship education. The metaverse can improve students' readiness for Society 5.0 by strengthening their interest in technology, improving learning outcomes, and creating interactive and immersive virtual environments for learning (Romadhoni et al., 2024). With increased knowledge about health services, it is expected that adolescents will be more proactive in utilizing available health services. This will not only have an impact on improving individual health but also contribute to improving public health more broadly. Therefore, adolescent health education programs need to be continuously developed and adjusted to their needs and characteristics in order to provide optimal impact.

The results of the study showed that there was a significant effect on increasing adolescent knowledge about the dangers of smoking after being given education, with a mean difference of 8.27 between before and after the intervention. This increase reflects the effectiveness of education in improving adolescents' understanding of the negative impacts of smoking, both from health, social, and economic aspects. Before being given education, one of the things that allowed many adolescents to have a limited understanding of the health risks posed by smoking, which could be caused by a lack of access to accurate information and the influence of the social environment (Rasu et al., 2024; Nurarifah & Sukmawati, 2024).

After the educational intervention, there was a significant increase in their understanding of the various dangers of smoking. Education provided through interactive lecture methods, discussions, and

the use of audiovisual media has proven effective in increasing knowledge, as also reported in the study by [Insani et al. \(2024\)](#), where participants' knowledge increased from 11.5% to 97.1% after education, and in the study of [Nurarifah & Sukmawati \(2024\)](#) which recorded an increase from 48% to 84%.

This increase in knowledge shows that health education is an effective intervention in changing adolescents' perceptions and attitudes toward smoking habits. This is in line with research by [Bulan et al. \(2024\)](#), which found that after being given education, adolescents not only understood the negative impacts of smoking but were also more likely to avoid or quit smoking. In addition, education that uses an interactive and digital-based approach has been shown to be more interesting for adolescents and is able to increase understanding more effectively than conventional methods ([Handayani et al., 2024](#)). However, despite the significant increase in knowledge, further evaluation is needed to assess the extent to which these changes have an impact on long-term smoking behavior. Several studies have shown that increasing knowledge alone is not always directly proportional to behavioral changes, so a more sustainable educational approach is needed, such as mentoring, campaigns through social media, and family and school involvement in supporting adolescents to avoid smoking habits ([Insani et al., 2024](#); [Avelina et al., 2024](#)).

The results of this study indicate that the education provided did not have a significant effect on increasing knowledge about sexually transmitted diseases (STDs) and other risky behaviors. This can be seen from the absence of significant changes in knowledge scores before and after the intervention. This finding indicates that although information has been conveyed, there are several factors that can influence the effectiveness of education in improving participants' understanding.

Research on STD education interventions for adolescents has shown mixed results. Several studies reported increased knowledge and changes in attitudes after the intervention ([Izquierdo & Zaldívar, 2021](#); [Barranco-Cuevas et al., 2019](#)). However, the long-term effects of behavioral change and STD prevention are still uncertain. This can be caused by various factors, including lack of information from parents, limited time for intervention, and social taboos that still exist in discussing reproductive and sexual health issues in society ([Izquierdo & Zaldívar 2021](#)).

In addition, the effectiveness of health education is greatly influenced by the delivery method used. Interventions that rely solely on one-way lectures tend to be less effective than interactive methods such as group discussions, role-playing, or the use of digital media. Previous research has shown that successful programs in increasing understanding and behavior change usually consist of several sessions, use a variety of learning methods, and involve social factors such as support from parents and the community ([Rodríguez-García et al., 2025](#)).

The gap between increasing knowledge and changing behavior also needs to be considered. Although education can increase awareness, this does not necessarily have an immediate impact on STD prevention behavior. Several psychosocial factors, such as social norms, peer pressure, and access to sexual health services, can be barriers to implementing the knowledge gained ([Barranco-Cuevas et al., 2019](#)). Thus, to increase the effectiveness of education about STDs and other risky behaviors, a more comprehensive and sustainable approach is needed. Education programs that are designed with a tiered approach, involve various stakeholders, and use interactive methods can increase the effectiveness of interventions in the long term. Therefore, developing programs that take into account social, cultural, and psychological factors is essential to achieve a more significant impact on adolescent behavior.

4. Conclusion

The results of the study showed that community health education had a significant effect on understanding of Health Services and increasing knowledge about the impact of smoking. This confirms that community-based interventions are effective in increasing public awareness and understanding of

health services and the risks of smoking. However, this study also found that community health education had no effect on knowledge of risky behavior and knowledge of sexually transmitted diseases. This is likely due to the characteristics of the target group, namely adolescents, who may require a more specific, interactive, and socially contextualized educational approach to be more effective in raising awareness of these issues. Therefore, a more innovative educational strategy that is oriented towards the needs of adolescents is needed to be able to cover various aspects of health more optimally. Furthermore, it is recommended that further research be undertaken to evaluate digital-based approaches, family and school support, as well as peer-group involvement as integral components of a more comprehensive health education strategy.

Acknowledgements

Our deepest gratitude goes to Yayasan Pendidikan Respati Yogyakarta for the support and opportunity given in the publication of this article. We appreciate all forms of assistance, both in facilities, guidance, and academic support that have been provided. Hopefully this collaboration can continue and provide benefits for the development of science and progress in the fields of education and research.

References

- Akbar, R., Ongkai, T. M. B., Suryana, E., & Abdurrahmansyah, A. (2023). Perkembangan Peserta Didik Pada Masa Remaja Akhir. *JiIP-Jurnal Ilmiah Ilmu Pendidikan*, 6(8), 6356-67. Doi <https://doi.org/10.54371/jiip.v6i8.2094>
- Akinwale, O. D., Bello, C. B., & Elemile, M. G. (2023). Adolescent health issues: The role of public health nurses. *Journal of Integrative Nursing*, 5(1), 59-65. https://doi.org/10.4103/jin.jin_40_22
- Akmal Latief, S., & Zulherawan, M. (2020). Upaya Teoritis Penanggulangan Kenakalan Anak (Juvenile Delinquency). *Sisi Lain Realita*, 5(01), 36–55. <https://doi.org/10.25299/sisilainrealita.2020.6383>
- Amini, N. aisyah, Nurnaningsih, H., Putri, M. H., & Heriyanto, Y. (2023). Description of Adolescent Knowledge Level About the Effect of Smoking on Dental and Oral Health in Kp. Cipadati Kabupaten Bandung. *Jurnal Terapi Gigi Dan Mulut*, 2(2), 122–127. Doi <https://doi.org/10.34011/jtgm.v2i2.1390>
- Avelina, Y., Nababan, S., & Delang, M. A. (2024). Peningkatan Pemanfaatan Posyandu Remaja: Peran Pengetahuan, Dukungan Keluarga, Dan Kader. *Journal of Borneo Holistic Health*, 7(1), 16–23. Doi <https://doi.org/10.35334/borticalth.v7i1.4603>
- Barranco-Cuevas, I. A., & Suemmy, G. F. (2019). Educational Intervention in Sexually Transmitted Diseases. Doi <https://doi.org/10.9734/JAMMR/2019/V30I430189>
- Bell, V., Silva, C. R. P. G., Guina, J., & Fernandes, T. H. (2023). Community Health of Children and Adolescents in Sub-Saharan Africa . *European Journal of Medical and Health Sciences*, 5(3), 22–31. Doi <https://doi.org/10.24018/ejmed.2023.5.3.1702>
- Bulan, O. S., Usfunan, I. K., Hasan, S. S. M., Ngama, P. M., Tefa, E., Keytimu, V. B., ... & Hinga, I. A. T. (2024). Edukasi Bahaya Merokok pada Penghuni Kos YT Penfui. *Jurnal Pengabdian Masyarakat Bangsa*, 2(8), 3444-3449. Doi <https://doi.org/10.59837/jpmba.v2i8.1490>
- Decker, M. J., Dandekar, S., Gutmann-Gonzalez, A., & Brindis, C. D. (2021). Bridging the gap between sexual health education and clinical services: Adolescent perspectives and recommendations. *Journal of School Health*, 91(11), 928-935. Doi <https://doi.org/10.1111/josh.13084>
- Dickel, P., & Johnson, M.P. (2024). Perspective-Taking or Feeling? The Role of Cognitive and Affective Empathy for Adolescents' Social Entrepreneurial Intentions. *Journal of Social Entrepreneurship*. Doi <https://doi.org/10.1080/19420676.2023.2299285>

- Handayani, H. et al. (2024). Improving Adolescent Health Through Digital Youth Capacity Building. *ABDIMAS: Jurnal Pengabdian Masyarakat*, 7(3), 1278-1283. Doi <https://doi.org/10.35568/abdimas.v7i3.4835>
- Hani Handayani, Neni Sholihat, Sri Mulyanti, Asep Setiawan, & Heri Budiawan. (2024). Improving Adolescent Health Through Digital Youth Capacity Building. *ABDIMAS: Jurnal Pengabdian Masyarakat*, 7(3), 1278–1283. Doi <https://doi.org/10.35568/abdimas.v7i3.4835>
- Insani, B. K., Rachmadini, A. K., Putri, D. A., Putri, C. Y., Zahra, M. R., Wijayanti, E., & Munti, D. B. (2024). Edukasi Bahaya Merokok pada Remaja SMP N 1 Kemiri, Kecamatan Kemiri, Kabupaten Tangerang. *Info Abdi Cendekia*, 7(1), 24-32. Doi <https://doi.org/10.33476/iac.v7i1.161>
- Izquierdo, L. R., & Zaldívar, R. T. (2021). Evaluation of educational intervention on sexually transmitted diseases in adolescents. *Community and Interculturality in Dialogue*, 1, 8. Doi <https://doi.org/10.56294/cid20237>
- Kanthi, Esther1,; Johnson, Mary Anbarasi2. Adolescence: An Overview of Health Problems. *Indian Journal of Continuing Nursing Education* 22(2):p 148-163, Jul–Dec 2021. | DOI: 10.4103/ijcn.ijcn_110_21
- Mialkovska, L., Zhvania, L., Yanovets, A., Tykha, L., Nykoliuk, T., & Pimenova, O. (2023). New Media as Modern Communication Technologies: The Digital Dimension. *Khazar Journal of Humanities and Social Sciences*, 26(1), 79–91. Doi <https://doi.org/10.5782/kjhss.2023.79.91>
- Musonda, J., & Banda, S. (2023). Factors Associated with Accessibility and Utilization of Adolescent Health Services in Chingola, Zambia. *Texila international journal of academic research*. Vol.10. Issue 2. Doi. <https://doi.org/10.21522/tjar.2014.10.02.art005>
- Nurarifah, N., & Sukmawati, S. (2024). Peningkatan Pengetahuan Melalui Edukasi Bahaya Merokok Pada Remaja. *Abdi: Jurnal Pengabdian dan Pemberdayaan Masyarakat*, 6(4), 719-724. Doi <https://doi.org/10.24036/abdi.v6i4.946>
- Pamungkas, D. S., & Sumardiko, D. N. Y. (2024). Dampak-Dampak yang terjadi Akibat Disregulasi Emosi pada Remaja Akhir: Kajian Sistematis. *Jurnal Psikologi*, 1(4), 15-15. Doi <https://doi.org/10.47134/pjp.v1i4.2598>
- Podbolotova, M., Dmitrieva, V., Reznikova, R., Grishaeva, Y., & Tkacheva, Z. (2021). Digital socialization of students by means of educational media. In *SHS Web of Conferences* (Vol. 98, p. 05015). EDP Sciences. Doi <https://doi.org/10.1051/SHSCONF/20219805015>
- Pinto, S. D., & Anakkathil Anil, M. (2023). Digital consumer behaviour: insights into the perceptions of late adolescents' consumption of digital media on cognitive health. *International Journal of Adolescent Medicine and Health*, 35(5), 383-393. Doi <https://doi.org/10.1515/ijamh-2023-0045>
- PPNI. (2017). *Standar diagnosis keperawatan indonesia: definisi dan indikator diagnostik, edisi 1*. dpp pgni.
- Rais, M. R. (2022). Kepercayaan diri (self confidence) dan perkembangannya pada remaja. *Al-Irsyad: Jurnal Pendidikan Dan Konseling*, 12(1), 40-47. Doi <https://doi.org/10.30829/al-irsyad.v12i1.11935>
- Rasu, S., Langingi, A. R. C., Lunemo, G. P., Rumondor, G. D., & Surat, F. (2024). Edukasi Tentang Bahaya Merokok Pada Kalangan Remaja Di SMA Katolik Don Bosco Lembean. *Jurnal Pengabdian kepada Masyarakat Nusantara*, 5(2), 2489-2496. Doi <https://doi.org/10.55338/jpkmn.v5i2.3354>
- Rodríguez-García, A., Botello-Hermosa, A., Borralló-Riego, Á., & Guerra-Martín, M. D. (2025). Effectiveness of Comprehensive Sexuality Education to Reduce Risk Sexual Behaviours

- Among Adolescents: A Systematic Review. *Sexes*, 6(1), 6. Doi <https://doi.org/10.3390/sexes6010006>
- Romadhoni, L. D., & Rejekiningsih, T. (2024, August). The Role of Digital-Based Civic Education Teaching Media in Increasing Students' Readiness to Face the Era of Society 5.0. In *Proceeding of International Conference of Religion, Health, Education, Science and Technology* (Vol. 1, No. 1, pp. 329-336). Doi <https://doi.org/10.35316/icorhestech.v1i1.5652>
- Saputri, M.S., Puspita Sari, S., Mustofa, S.B., & Lestantyo, D. (2024). Using Educational Media to Prevent Adolescent Smoking and Raise Health Awareness: A Meta-Analysis. *Jurnal Promkes*. Doi <https://doi.org/10.20473/jpk.v12.isi2.2024.192-202>
- Suherman, N., & Tasyiawurin, N. Z. A. (2023). Factors Associated With The Level Of Youth Attendance At The Youth Posyandu In The Cipondoh Health Center In 2022. *Muhammadiyah International Public Health and Medicine Proceeding*, 3(1), 312–317. <https://doi.org/10.61811/miphmp.v3i1.549>
- Suryana, E., Wulandari, S., Sagita, E., & Harto, K. (2022). Perkembangan masa remaja akhir (tugas, fisik, intelektual, emosi, sosial dan agama) dan implikasinya pada pendidikan. *JiIP-Jurnal Ilmiah Ilmu Pendidikan*, 5(6), 1956-1963. Doi <https://doi.org/10.54371/jiip.v5i6.664>
- Vermote, B., Soenens, B., Vansteenkiste, M., Coenye, J., Verschueren, K., & Beyers, W. (2023). The how and the why of study choice processes in higher education: The role of parental involvement and the experience of having an authentic inner compass. *Journal of Adolescence*, 95(8), 1749–1763. Doi <https://doi.org/10.1002/jad.12246>
- Warraitch, A., Lee, M., Bruce, D., Curran, P., Khraisha, Q., Wacker, C., Hernon, J., & Hadfield, K. (2024). An umbrella review of reviews on challenges to meaningful adolescent involvement in health research. *Health Expectations*, 27(1). Doi <https://doi.org/10.1111/hex.13980>
- Wiratmaja, F. A., Zega, K., Sarjannadil, K. K., Hermawan, M. G., Huda, M. A., Nugroho, N., & Agustini, W. A. (2023). Tinjauan Terhadap Faktor-Faktor Peningkatan Resiliensi Pada Remaja Akhir. *Concept: Journal of Social Humanities and Education*, 2(4), 319-327. Doi <https://doi.org/10.55606/concept.v2i4.948>
- Yuniastuti, A., Nugrahaningsih WH, N. W., Susanti, R., AH, N., A, S., A, B., KD, N., AS, F., AF, N., AL, N., & Agnes DS, A. D. (2022). Inisiasi Posyandu Remaja Sebagai Upaya Peningkatan Derajat Kesehatan Di Kelurahan Bandarharjo, Semarang. *Jurnal Pemberdayaan: Publikasi Hasil Pengabdian Kepada Masyarakat*, 1(1), 36–44. Doi <https://doi.org/10.47233/jpmitc.v1i1.186>