ISSN : 2579-4426
e-ISSN : 2580-6432
Fakultas Keperawatan Universitas Klabat
Bekerjasama dengan PPNI Provinsi Sulawesi Utara
Volume 9, No.1, April 2025
Online Journal: http://ejournal.unklab.ac.id/index.php/nutrix

INCREASING KNOWLEDGE ABOUT PREGNANCY PREVENTION AMONG ADOLESCENTS THROUGH EDUCATION INTERVENTION

Lea Andy Shintya

Fakultas Keperawatan, Universitas Klabat, Airmadidi, Minahasa Utara 95371, Indonesia

E-mail: lea@unklab.ac.id

Abstract

Adolescent pregnancy has become a significant public health issue worldwide, including in Indonesia which has a negative impact on the holistic health of adolescents. One effective approach to addressing the issue of teenage pregnancy is through health education interventions aimed at increasing adolescent knowledge and awareness of reproductive health. The research aims to analyze the influence of health education on the prevention of adolescents pregnancy. The research method used was quasi-experimental with a pre-post design, involving 30 female student respondents in this study, with samples taken using the total sampling method. Data were collected by distributing questionnaires before and after the health education intervention. Data analysis was conducted using the Wilcoxon Signed Ranks Test formula. The results of the pretest and post-test scores from 30 participants. The minimum score on the pretest was 41, while the maximum score was 76, with an average of 56.90. After the treatment, the posttest scores showed a minimum of 71, a maximum of 94, with an average of 82.17. The analysis used the Wilcoxon Signed Ranks Test to see the significant difference in knowledge before and after the treatment, obtaining a p-value of 0.000 < α. 0.05. Indicates that Ho is rejected, which means that the intervention conducted has successfully increased adolescents' knowledge about pregnancy prevention among Adolescent. Further research is required to investigate other variables like video on demand or Google slide media that may affect the efficacy of interventions and to ascertain the optimal means for disseminating information to adolescents.

Keywords: *Adolescent, health education, pregnancy*

Abtsrak

Kehamilan remaja telah menjadi masalah kesehatan masyarakat yang signifikan di seluruh dunia, termasuk di Indonesia yang berdampak negatif pada kesehatan holistik remaja. Salah satu pendekatan yang efektif untuk mengatasi masalah kehamilan remaja adalah melalui intervensi pendidikan kesehatan yang bertujuan untuk meningkatkan pengetahuan dan kesadaran remaja tentang kesehatan reproduksi. Penelitian ini bertujuan untuk menganalisis pengaruh Pendidikan Kesehatan terhadap pencegahan kehamilan remaja. Metode penelitian yang digunakan adalah kuasi-eksperimental dengan desain pre-post, melibatkan 30 responden siswi dalam penelitian ini, dengan sampel diambil menggunakan metode total sampling. Data dikumpulkan dengan menyebarkan kuesioner sebelum dan setelah intervensi Pendidikan Kesehatan. Analisis data dilakukan menggunakan rumus Uji Wilcoxon Signed Ranks. Hasil skor pretest dan post-test dari 30 peserta. Skor minimum pada pretest adalah 41, sedangkan skor maksimum adalah 76, dengan rata-rata 56,90. Setelah perlakuan, skor posttest menunjukkan minimum 71, maksimum 94, dengan rata-rata 82,17. , Analisis menggunakan Uji Wilcoxon Signed Ranks untuk melihat perbedaan signifikan dalam pengetahuan sebelum dan setelah perlakuan, memperoleh nilai p sebesar 0.000 < α. 0.05. ,Menunjukkan bahwa Ho ditolak, yang berarti bahwa intervensi yang dilakukan telah berhasil meningkatkan pengetahuan remaja tentang pencegahan kehamilan di kalangan remaja. Penelitian lebih lanjut diperlukan untuk menyelidiki variabel lain seperti media video on demand atau google slide yang mungkin mempengaruhi efektivitas intervensi dan untuk menentukan cara terbaik dalam menyebarkan informasi kepada remaja.

Kata Kunci: Kehamilan, pendidikan kesehatan, remaja

ISSN : 2579-4426
e-ISSN : 2580-6432
Fakultas Keperawatan Universitas Klabat
Bekerjasama dengan PPNI Provinsi Sulawesi Utara
Volume 9, No.1, April 2025
Online Journal: http://ejournal.unklab.ac.id/index.php/nutrix

Introduction

According to the Kementerian Kesehatan (2024), adolescents are the age group from 10 to 18 years. Adolescent health is something that must be given great attention because during this period, adolescent undergo significant physical, psychological, and social changes (Fadli, 2023). The fluctuation in oestrogen levels heightens emotional sensitivity and enhances sexual desire to the opposite gender (Jamie Eske; Mandy French, 2024) The adolescent health initiative aims to prepare teenagers to become healthy, intelligent, high-quality, and productive adults, and to participate in maintaining, preserving, and improving their own health (Puspitasari & Rohmah, 2021). Efforts to maintain adolescents health include avoiding adolescent pregnancies.

Adolescents girls, especially those in early adolescence, are particularly vulnerable to the health consequences of pregnancy and delivery as their bodies are not physically ready. According to (Primadi, 2017), pregnancy at a young age is at risk of premature birth, low birth weight (LBW), and delivery bleeding, which can increase maternal and infant mortality. Teenage pregnancy is also associated with unwanted pregnancies and unsafe abortions. Mental health issues that adolescents may experience during pregnancy include being prone to stress and depression due to feelings of shame (Patimatun, 2019) and the guilt felt by the adolescents (Anjaswari, 2021). Social problems that will arise are ostracized by the community and social circles, and pregnancy can also hinder educational advancement to achieve one's goals (SmithBattle, 2020)

Base on global data from World Health Organization (2023) about 16 million girls aged 15 to 18 years and two million girls under the age of 15 give birth every year. Worldwide, one in five girls has given birth by the age of 18. Based on data UNICEF (2018) globally in 2022, an estimated 13 per cent of adolescents girls and young women give birth before age 18. Fewer than 35% of adolescents have reportedly obtained sexual and reproductive health knowledge in educational institutions.(World Economic Forum, 2024). Ismail (2018) in the Southeast Asian region, the average adolescents birth rate in 2018 is 37.2 for every 1,000 women aged between 15 and 18. Data in Indonesia, first pregnancy age of Indonesian women in the second position being in the age range of 15-18 years. The Central Statistics Agency of North Sulawesi Province (2023) has released data for the year 2023 show 20.03 % of women in Manado City are known to be pregnant at an age younger than 19 years.

One of the efforts that can be made to reduce those numbers is by providing health education regarding reproductive health in schools, risks of early pregnancy, a healthy decision-making. Knowledge about adolescent reproductive health can be enhanced through reproductive health education that begins in adolescence. Reproductive health education for adolescents not only conveys information about reproductive organs but also serves to prevent risks caused by free association, such as sexually transmitted infections and unwanted or risky pregnancies (Danang & Setyawan, 2022). Base research from Campero et al., (2021) founded on comprehensive sexual education, is a promising approach to improve key outcomes related to early pregnancy. The novelty in this research on preventing teenage pregnancy through educational interventions can be developed from various aspects that have not been extensively explored, such as helping teenagers make better decisions and integrating sexual education for teachers as facilitators of reproductive health discussions.

According to the data global collected, numerous adolescents continue to possess insufficient understanding of reproductive health and pregnancy prevention (WHO, 2024). Numerous pregnancy prevention

ISSN : 2579-4426
e-ISSN : 2580-6432
Fakultas Keperawatan Universitas Klabat
Bekerjasama dengan PPNI Provinsi Sulawesi Utara
Volume 9, No.1, April 2025
Online Journal: http://ejournal.unklab.ac.id/index.php/nutrix

initiatives fail to engage out-of-school adolescents or individuals in communities with restricted access to health information. This results in a deficiency in pregnancy prevention initiatives among all adolescents. Society frequently regards reproductive health education as a taboo subject. This obstructs the acceptance and execution of health education programs among adolescents.

Methods

In this study, the type used is pre-experimental design, which is an experimental research conducted on only one group called the experimental group without any comparison or control group. The research design used is a one group pre-test-post-test design, which is an experimental study conducted on one group of mine that was randomly selected and without conducting stability and clarity tests of the group's condition before treatment. The one group pre-test and post-test design research is measured using a pre-test conducted before the treatment and a post-test conducted after the treatment.

The population in this study consists of all 30 female students in the 3C grade of the junior high UNKLAB Adventist Laboratory Schools. The sampling technique is total sampling. The inclusion criteria in this study are female students in class 3C who Come to school during the sampling period, and the exclusion criteria are female students who do not come to school.

The instrument used is a questionnaire on knowledge about pregnancy prevention adopted from (Rafi'ah, 2019) with 24 statements the test-retest reliability value is 0.73 and Cronbach's Alpha is 0.88. The questionnaire was administered before and after the health education was provided. During the implementation of the health education intervention, the researcher used a laptop and PowerPoint equipment while explaining the discussion on preventing adolescents pregnancy, discussion about the importance of preventing pregnancy, methods of preventing pregnancy, supporting factors for preventing pregnancy also providing a question-and-answer session during the intervention.

In a research study that conducted, one must not overlook the ethics of valuing and respecting the rights of the respondents involved. The initial phase of the research was conducted by creating an informed consent form signed by the community members who agreed to be respondents after receiving an explanation regarding the purpose and benefits of the study. The ethical principle considered by the researchers here is Autonomy, where respondents have the right to decide for themselves whether or not to participate in the research. Certainly, this research has good objectives and benefits, especially for the patients at the research site (Beneficence). In the implementation of this research, there are no dangerous elements or risks that could harm any party (Nonmaleficence). Furthermore, the collected data is kept private and confidential and is used solely for research purposes (Confidentiality). The researchers do not discriminate against respondents based on religion, ethnicity, race, or nationality, and do not favor any particular group (Justice). Additionally, the researchers uphold the principles of truth and honesty (Veracity).

In this study, to analyze the difference between pretest and posttest results, a non-parametric statistical test was used this test was chosen because the data is not normally distributed. The Wilcoxon Signed Ranks Test formula is used to test the hypothesis whether there is a significant difference between the average pretest and posttest scores. If the p-value (result of the statistical calculation) is less than the significance level α=0.05, then the null hypothesis (H0) is rejected, which means there is a significant difference between the two scores.

ISSN : 2579-4426
e-ISSN : 2580-6432
Fakultas Keperawatan Universitas Klabat
Bekerjasama dengan PPNI Provinsi Sulawesi Utara
Volume 9, No.1, April 2025
Online Journal: http://ejournal.unklab.ac.id/index.php/nutrix

Results

After data collection and analysis based on formula used, the results are presented in the following tables.

Table I. Average Knowledge Score About Pregnancy Prevention Before and After Health Education

	N	Mean	Std. Deviation	Min	Max
Pre Test Knowledge	30	56.90	8.044	41	76
Post Test Knowledge	30	82.17	7.679	71	94

Table 1 shows the research results, presenting pretest and post-test scores data from 30 participants. The minimum score on the pretest was 41, while the maximum score was 76, with an average of 56.90. After the treatment, the post-test scores showed a minimum of 71, a maximum of 94, with an average of 82.17.

The difference in knowledge pre and post was given Health Education.

Table 2. Difference in Knowledge Pre and Post Health Education

	Post Test Knowledge - Pre Test Knowledge
Z	-4.816[b]
Asymp. Sig. (2-tailed)	.000

Based on the results in table 2, based on the analysis using the Wilcoxon Signed Ranks Test to see the significant difference in knowledge before and after treatment, a p-value of 0.000 < α. 0.05 was obtained. Indicates that Ho is rejected, meaning This shows that the intervention carried out has successfully increased adolescents knowledge about pregnancy prevention among adolescents.

Discussion

From the research findings, it was found that there was a change in knowledge among junior high school girls before and after receiving Health Education. Adolescents provide a susceptible demographic requiring a comprehensive understanding of reproductive health. During this developmental stage, adolescents experience considerable physical, emotional, and social transformations, rendering them susceptible to the dangers of early pregnancy and sexually transmitted illnesses (Latifah, 2025). Consequently, it is essential for adolescents to receive thorough and precise reproductive health education.

Educational institutions serve as a primary environment for adolescents, where the instruction received can provide a robust foundation of information regarding reproductive health and cultivate positive attitudes and behaviors in interpersonal and sexual relationships (Yuniarti et al., 2024). Junior high schools are essential in delivering reproductive health education to adolescents (Başar et al., 2021). One initiative to avert adolescent pregnancy is providing health education regarding the issue at the junior high school level (SMP), as this age typically signifies the onset of puberty (Aryanti et al., 2020).

Understanding reproductive health is crucial in preventing teenage pregnancy. The cultivation of positive attitudes is anticipated to enhance teenage behaviour, so ensuring compliance with established standards or norms (Yolanda et al., 2019). It is crucial for adolescents to acquire knowledge about reproductive health at the earliest opportunity to prevent adolescent pregnancies, which can elevate mother and newborn death rates (Danang & Setyawan, 2022). Adverse impacts can be mitigated if pupils (adolescents) are provided with knowledge. This is thought to mitigate adverse influences on youngsters. To mitigate the elevated incidence of pregnancy, it is essential to deliver health education pertaining to pregnancy-related practices (As-Sanie et al., 2020). Early health education is deemed the most effective approach of mitigating elevated pregnancy rates. Enhancing adolescent

understanding of pregnancy can be achieved through health education (Decker et al., 2020).

According to the research conducted by Jannah et al (2019), health education can markedly enhance adolescents' understanding and perspectives about the prevention of teen pregnancy. Moreover, Ramirez et al (2022) assert that educational strategies for adolescent sexuality are essential to effectuate protective changes and mitigate the risks associated with sexual behaviour. Wilkins et al (2022) that health education, particularly sexual health education, is essential for shaping adolescents' sexual health behaviours and outcomes. Effective health education interventions enhance students' health literacy (Fitriasari et al., 2024).

Conclusions

The research findings indicate a disparity in the average knowledge scores of adolescents prior to and subsequent to receiving Health Education on pregnancy prevention. The data indicates a substantial enhancement in knowledge from pre-test to post-test scores following the intervention, demonstrating its efficacy in augmenting adolescent comprehension. These findings align with numerous other studies indicating that education and counselling can positively influence adolescents' knowledge. This research suggests the ongoing development and implementation of similar intervention programs in many contexts to improve adolescents' knowledge and awareness. Moreover, additional study is required to investigate other variables that may affect the efficacy of interventions and to ascertain the optimal means for disseminating information to adolescent. Consequently, this research significantly contributes to the advancement of more effective instructional practices in the future.

References

Anjaswari, B. (2021). *Skripsi Dampak Kehamilan Tidak Direncanakan Pada Remaja Literatur Riview*.

As-Sanie, S., Gantt, A., & Rosenthal, M. S. (2020). Pregnancy prevention in adolescents. *American Family Physician*, *70*(8), 1517–1524.

Başar, F., Yavuz, B., & Yeşildere Sağlam, H. (2021). Evaluation of the Effectiveness of Reproductive Health Education Program Given to Adolescents. *The Journal of Pediatric Research*, *8*(4), 469–478. https://doi.org/10.4274/JPR.GALENOS.2021.99266

Campero, L., Cruz-Jiménez, L., Estrada, F., Suárez-López, L., de Castro, F., & Villalobos, A. (2021). "I Matter, I Learn, I Decide": An Impact Evaluation on Knowledge, Attitudes, and Rights to Prevent Adolescent Pregnancy. *The Journal of Primary Prevention*, *42*(4), 343–361. https://doi.org/10.1007/s10935-020-00609-w

Danang, O. :, & Setyawan, A. (2022). *PENGARUH PENDIDIKAN KESEHATAN TERHADAP PENGETAHUAN REMAJA TENTANG KESEHATAN REPRODUKSI (Studi di SMA Muhammadiyah 2 Mojosari-Mojokerto)*.

Decker, M., Berglas, N., & Brindis, C. (2020). A Call to Action: Developing and Strengthening New Strategies to Promote Adolescent Sexual Health. *Societies*, *5*(4), 686–712. https://doi.org/10.3390/soc5040686

Fitriasari, E., Umasugi, M. T., & Husada, S. M. (2024). Efektivitas Intervensi Pendidikan Kesehatan terhadap Peningkatan Pengetahuan pada Mahasiswa di STIKes Maluku Husada. *Jurnal Kesehatan Masyarakat Indonesia (JKMI)*, *2*(1), 12–17. https://doi.org/10.62017/JKMI.V2I1.2186

Jamie Eske; Mandy French. (2024). *Female sex hormones: Types, roles, and effect on arousal*. https://www.medicalnewstoday.com/articles/324887

Jannah, R. N., Anggraeni, M. D., & Setiawati, N. (2019). THE EFFECT OF AUDIOVISUAL MEDIA ON ADOLESCENTS' KNOWLEDGE AND ATTITUDE ABOUT TEENAGE PREGNANCY. *Annals of Tropical Medicine and Public Health*, *22*(11), 347–355. https://doi.org/10.36295/ASRO.2019.221145

Kementerian Kesehatan. (2024). *Remaja*. https://ayosehat.kemkes.go.id/kategori-usia/remaja

Latifah, N. (2025). Adolescent Reproductive Health Counseling Activities on the Level of Knowledge of Students of Mts Al-Ihsan, Padang Tikar Village 2024. *Journal of Midwifery and Nursing*, *7*(1), 98–101. https://doi.org/10.35335/JMN.V7I1.5897

Maizura Ismail. (2018). *Too young to be a mother | The ASEAN Post*. https://theaseanpost.com/article/too-young-be-mother

Mira Aryanti, Purwandyarti Apriliani, & Intan Anggita. (2020). *Upaya Preventif Kehamilan Remaja dengan Pendidikan Kesehatan Mengenai Kesehatan Reproduksi pada Remaja di Kecamatan Indramayu*.

Patimatun, P. (2019). *Dampak Psikologis Bagi Remaja yang Hamil di luar Nikah*. https://buletin.k-pin.org/index.php/daftar-artikel/441-dampak-psikologis-bagi-remaja-yang-hamil-di-luar-nikah

Primadi. (2017). *Inilah Risiko Hamil di Usia Remaja – Sehat Negeriku*. https://sehatnegeriku.kemkes.go.id/baca/umum/20170930/5823163/inilah-risiko-hamil-usia-remaja/

Puspitasari, S., & Rohmah, F. A. (2021). Adolescent mental health initiative. *Community Empowerment*, *6*(8), 1450–1462. https://doi.org/10.31603/CE.5068

Rafi'ah, D. (2019). *Studi Kasus Pelaksanaan Pendidikan Kesehatan Dengan Media Google Slide Terhadap Pengetahuan Kehamilan Remaja Pada Remaja Di Wilayah Puskesmas Keputih*.

Ramirez, N. L. R., Suarez, Y. M. M., Giraldo, J. E. G., & Pavia, L. P. R. (2022). Latin American overview of educational strategies for the prevention of teenage pregnancy. *Revista Cubana de Salud Publica*.

Rizal Fadli. (2023). *Tahapan Perkembangan Remaja Usia 10-18 Tahun yang Perlu Diketahui*. https://www.halodoc.com/artikel/tahapan-perkembangan-remaja-usia-10-18-tahun-yang-perlu-diketahui?srsltid=AfmBOornSwL8hEpL6n4LbQ3k6JDNLKQrfIOMREOoN79JZ-pHIOMtpnc-

SmithBattle, L. (2020). "I Wanna Have a Good Future": Teen Mothers' Rise in Educational Aspirations, Competing Demands, and Limited School Support. *Youth & Society*, *38*(3), 348–371. https://doi.org/10.1177/0044118X06287962

The Central Statistics Agency of North Sulawesi Province. (2023). *Persentase Penduduk Perempuan yang Umur Kehamilan Pertamanya Lebih Dari atau Sama Dengan 19 Tahun Menurut Kabupaten/Kota di Provinsi Sulawesi Utara - Tabel Statistik - Badan Pusat Statistik Provinsi Sulawesi Utara*. https://sulut.bps.go.id/id/statistics-table/2/MTUxNSMy/persentase-penduduk-perempuan-yang-umur-kehamilan-pertamanya-lebih-dari-atau-sama-dengan-19-tahun-menurut-kabupaten-kota-di-provinsi-sulawesi-utara.html

Unicef. (2018). *REPORT ON THE REGIONAL FORUM ON ADOLESCENT PREGNANCY, CHILD MARRIAGE AND EARLY UNION IN SOUTH-EAST ASIA AND MONGOLIA*.

Wilkins, N. J., Rasberry, C., Liddon, N., Szucs, L. E., Johns, M., Leonard, S., Goss, S. J., & Oglesby, H. (2022). Addressing HIV/Sexually Transmitted Diseases and Pregnancy Prevention Through Schools: An Approach for Strengthening Education, Health Services, and School Environments That Promote Adolescent Sexual Health and Well-Being. *Journal of Adolescent Health*, *70*(4), 540–549. https://doi.org/10.1016/j.jadohealth.2021.05.017

World Economic Forum. (2024). *Tackling adolescent pregnancies with healthcare and education | World Economic Forum*. https://www.weforum.org/stories/2024/03/how-countries-can-save-millions-by-prioritising-adolescent-sexual-and-reproductive-health/

World Health Organization. (2023). *Adolescent pregnancy*.

Yuniarti, S., Florentis Yustanta, B., Novita Kowaas, I., Nurrachmawati, A., Rahmawati, S., Kemenkes Surabaya, P., Tinggi Ilmu Kesehatan Karya Husada Kediri, S., & Author, C. (2024). The Effect of Health Education Programs on Adolescents'

ISSN : 2579-4426
e-ISSN : 2580-6432
Fakultas Keperawatan Universitas Klabat
Bekerjasama dengan PPNI Provinsi Sulawesi Utara
Volume 9, No.1, April 2025
Online Journal: http://ejournal.unklab.ac.id/index.php/nutrix

Knowledge and Attitudes regarding Reproductive Health. *Journal of World Future Medicine, Health and Nursing*, *2*(2), 325–338. https://doi.org/10.70177/HEALTH.V2I2.820