



THE EFFECT OF HEALTH EDUCATION WITH NON-DIGITAL GAMIFICATION METHOD ON FEMALE STUDENTS' KNOWLEDGE ABOUT SEXUAL VIOLENCE PREVENTION AT MADINATUL QUR'AN ISLAMIC BOARDING SCHOOL BOGOR 2026

Fitrul Khoironi¹, Fitrul Khoironi², Darmasta Maulana³, Ivana Eko Rusdiatin³, Arni Wianti⁴

^{1,2,3,4}Universitas YPIB Majalengka, Indonesia

Corresponden Email: fitrulkhoironi@gmail.com

Abstract

Sexual violence against adolescent girls remains a public health problem that requires preventive measures through effective and culturally appropriate health education. Islamic boarding schools (pesantren) have limitations in discussing sexuality issues, requiring interactive educational methods that align with Islamic values. This study aims to determine the effect of health education using non-digital gamification methods (card games) on female students' knowledge of sexual violence prevention at Madinatul Qur'an Islamic Boarding School in Bogor in 2026. This study used a quasi-experimental design with a pre-test post-test control group design approach. The study sample consisted of 44 female junior high school students divided into an experimental group and a control group of 22 respondents each using a purposive sampling technique. The research instrument used a questionnaire on knowledge of sexual violence prevention. Data analysis was performed using the Wilcoxon test. The results showed that in the experimental group there was an increase in knowledge with a significance value of $p = 0.000$ ($p < 0.05$), while the control group obtained a value of $p = 0.058$ ($p > 0.05$). These results indicate that health education using non-digital gamification methods significantly improved female students' knowledge of sexual violence prevention. This method is effective as an interactive, participatory health education medium, and is appropriate for the Islamic boarding school environment.

Keywords: Health Education, Non-Digital Gamification, Card Games, Knowledge, Sexual Violence, Female Islamic Students

INTRODUCTION

Health education is a promotive and preventive effort aimed at improving the knowledge, attitudes, and behaviors of individuals and groups in maintaining health. Health education focuses not only on preventing physical illness but also encompasses reproductive health, mental health, and protection against sexual violence. According to the World Health Organization (WHO, 2021), effective health education can help individuals understand health risks, increase self-awareness, and build the ability to make informed decisions to protect themselves from various social and health threats. In the context of adolescent girls, health education is particularly important because this group is at a developmental stage that is vulnerable to various forms of sexual violence.

Sexual violence against women and girls remains a serious global public health problem. The WHO (2021) reports that approximately 31% of women worldwide have experienced physical or sexual violence in their lifetime. In Indonesia, cases of sexual violence have also shown an alarming increase. The Ministry of Women's Empowerment and Child Protection of the Republic of Indonesia (2023)

recorded that 25,050 women were victims of sexual violence in 2022, an increase compared to the previous year. Furthermore, the Indonesian Child Protection Commission (KPAI) reported 834 cases of sexual crimes against children out of a total of 2,133 special child protection cases in the same year. These data indicate that adolescent girls are at high risk of becoming victims of sexual violence, including in educational settings.

The phenomenon of sexual violence occurs not only in public spaces but also in religious-based educational environments such as Islamic boarding schools. Sopyandi and Sujarwo (2023) state that, based on data from the National Commission on Violence Against Women, 19% of cases of sexual violence in educational institutions occur in Islamic boarding schools. This situation indicates that female students need a good understanding of the forms of sexual violence, prevention methods, and safe reporting mechanisms. However, discussions about sexuality and reproductive health in Islamic boarding schools are still considered taboo due to the influence of cultural norms and religious values. Zakiyah et al. (2023) explain that limited access to information about reproductive health leads to low knowledge of adolescent girls regarding self-protection from sexual violence.

Madinatul Qur'an Islamic Boarding School in Bogor is an Islamic-based educational institution that instills moral and religious values in its students. A preliminary survey conducted by researchers in 2025 revealed that there have been no cases of sexual violence within the school. However, several female students were reported to have experienced sexual harassment before entering the school. Furthermore, no health education or specific research related to sexual violence prevention has been conducted at Madinatul Qur'an Islamic Boarding School in Bogor. Interviews with the school's management indicate that education on sexual violence prevention is essential to increase female students' understanding of the forms of sexual violence, how to protect themselves, and the courage to report any acts that may lead to harassment.

One innovative approach to health education is the non-digital gamification method. Non-digital gamification is a learning method that integrates game elements without the use of electronic devices, such as board games, educational cards, role-playing simulations, and group discussions. Zainuddin and Keumala (2021) explain that this method can increase student engagement, motivation, and understanding through an active and enjoyable learning process. Research by da Silva Carvalho et al. (2024) shows that the use of educational games can increase women's knowledge about reproductive health and the prevention of sexual violence. Furthermore, Attarwiyah and Jennah (2025) revealed that the implementation of gamification in Islamic boarding schools can increase learning motivation and create a more interactive learning atmosphere without conflicting with Islamic values.

The non-digital gamification method is considered appropriate for implementation at the Madinatul Qur'an Islamic Boarding School in Bogor, as the school environment has limited access to personal

electronic devices. Through this approach, female students can actively learn about preventing sexual violence in a fun, communicative manner that adheres to the norms of decency and religious values prevailing in the school. In addition to increasing knowledge, this method is also expected to foster students' courage to recognize, reject, and report acts of sexual violence.

Research on sexual violence in religious-based educational settings indicates that Islamic boarding schools (pesantren) are not entirely free from the risk of sexual violence against female students. Several cases in various regions in Indonesia have raised public concerns about the safety and protection of students in Islamic boarding schools. Students' limited knowledge about forms of sexual violence, prevention methods, and reporting procedures is one factor that increases victim vulnerability. Furthermore, a culture of shame, fear, and the perception that discussing sexuality is taboo makes many students reluctant to share their experiences. This situation highlights the need for innovative, interactive, and Islamic-compliant health education through non-digital gamification methods.

Problems identified in efforts to prevent sexual violence in Islamic boarding schools include a lack of reproductive health education, a lack of engaging educational media, and low student engagement in outreach activities. The lecture-based learning method makes students easily bored and less likely to fully understand the material. At the Madinatul Qur'an Islamic Boarding School in Bogor, no specific health education on sexual violence prevention using a non-digital gamification approach has been conducted. As a result, some students still have limited knowledge about forms of sexual harassment, self-protection, and steps to take when facing risky situations. Therefore, active, enjoyable, participatory learning methods are needed, in keeping with Islamic boarding school culture.

Studies have shown that health education and preventive approaches have a significant impact on increasing adolescents' knowledge about preventing sexual violence in Islamic boarding schools. Herlina et al. (2023) stated that health education on preventing sexual violence can improve students' understanding of forms of sexual violence and self-protection. Research by Sopyandi and Sujarwo (2023) also explains that students' low knowledge is influenced by power relations and patriarchal culture in Islamic boarding schools, which discourage victims from reporting. Furthermore, Fuadi et al. (2023) found that unequal power relations in Islamic boarding schools are a factor that increases students' vulnerability to sexual violence, necessitating contextual preventive education. Research by Attarwiyah and Jennah (2025) shows that gamification methods can increase students' motivation, participation, and involvement in the learning process. Furthermore, da Silva Carvalho et al. (2024) demonstrated that the use of educational games in health education effectively increases participants' knowledge about reproductive health and preventive behaviors. Based on these studies, it can be concluded that non-digital

gamification-based health education has great potential to increase female students' knowledge about preventing sexual violence in Islamic boarding schools.

Although various previous studies have discussed health education, sexual violence prevention, and the application of gamification in the learning process, there are still research gaps that require further study. The research by Herlina et al. (2023) focused more on general health education without developing interactive game-based learning methods. The research by Sopyandi and Sujarwo (2023) and Fuadi et al. (2023) focused on the phenomenon and factors causing sexual violence in Islamic boarding schools, but did not test the effectiveness of health education interventions in improving the knowledge of female students. Meanwhile, the research by Attarwiyah and Jennah (2025) only examined the effect of gamification on students' learning motivation in general, not on reproductive health issues and sexual violence prevention. Furthermore, the research by da Silva Carvalho et al. (2024) was conducted in the context of general community reproductive health and has not been applied to Islamic boarding schools with limited use of digital technology. Therefore, research is still needed that specifically examines the effect of health education using non-digital gamification methods on female students' knowledge regarding the prevention of sexual violence in Islamic boarding schools.

The novelty of this research lies in the application of non-digital gamification methods as a medium for health education on preventing sexual violence among female students in Islamic boarding schools. This research not only integrates educational game elements such as knowledge cards, role-playing simulations, and group games, but also adapts them to religious values, Islamic boarding school culture, and the limited use of electronic devices. Furthermore, this research focuses on increasing female students' knowledge about preventing sexual violence, a topic rarely researched in the Islamic boarding school context. This approach is expected to create a more active, enjoyable, participatory, and contextual learning environment, enabling students to more easily understand the forms of sexual violence, self-protection methods, and safe reporting steps. Therefore, this research is expected to become a relevant and applicable health education innovation in supporting efforts to prevent sexual violence in Islamic boarding schools.

LITERATURE REVIEW

Health Education

Health education explains that the educational process aims to improve individuals' knowledge, attitudes, and behaviors so they can maintain and improve their health. Notoatmodjo (2023) states that health education is a learning process designed to influence community behavior by increasing health knowledge and awareness. Furthermore, the WHO (2021) emphasizes that health education is an effective promotive and preventive strategy in building individuals' abilities to protect themselves from various

health risks, including sexual violence. Therefore, health education is crucial for adolescent girls in Islamic boarding schools.

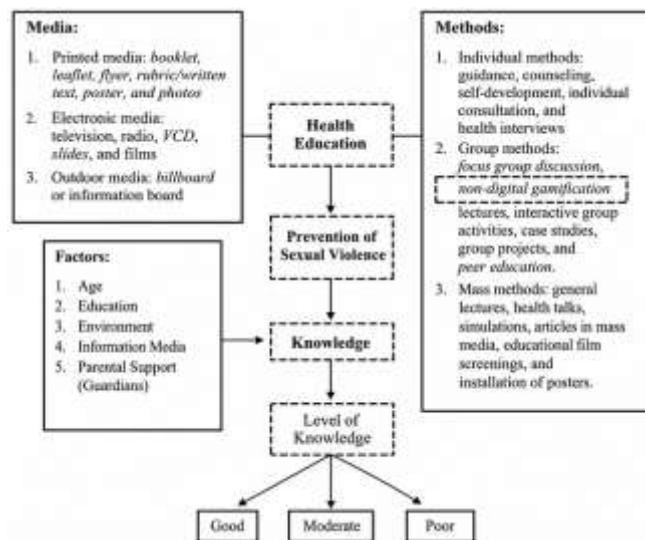
Gamification Non-Digital

Gamification explains that the use of game elements in learning can increase student motivation, engagement, and understanding. According to Zainuddin and Keumala (2021), non-digital gamification is a learning method that uses simple games such as educational cards, board games, and simulations without involving electronic devices. Ryan and Deci (2020) also explain through Self-Determination Theory that students' intrinsic motivation increases when learning provides a sense of competence, engagement, and social cooperation. In the context of Islamic boarding schools, non-digital gamification methods are an appropriate approach because they can create active learning without conflicting with the rules of technology use.

Knowledge in Sexual Violence Prevention

Knowledge explains that a person's level of knowledge influences their ability to understand, assess, and take action on a problem. Bloom, in Budiman and Riyanto (2022), states that knowledge is a cognitive domain that forms the basis for a person's behavior. Good knowledge about sexual violence will help adolescents recognize forms of harassment, understand how to protect themselves, and know the appropriate steps for reporting. Zakiyah et al. (2023) explain that the low level of reproductive health knowledge among female students is influenced by cultural taboos regarding sexuality, so contextual and accessible education is needed.

Thinking Framework



Picture 1 Thinking Framework

METHOD

A research method is a scientific step used by researchers to systematically, objectively, and purposefully obtain data in accordance with the research objectives. Selecting the right method is crucial to ensure the validity and reliability of research results. According to Ishak et al. (2023), an appropriate research method will help researchers explain the relationships between variables and test research hypotheses accurately and in a scientifically justifiable manner.

Types and Design of Research

This study employed a quantitative method with a quasi-experimental design using a pre-test and post-test control group design. This design was used to determine the effect of health education using non-digital gamification (card games) on female students' knowledge of sexual violence prevention. According to Sugiyono (2021), a quasi-experimental design is used when researchers cannot fully control all external variables, but still allows for measuring the effect of the intervention on the experimental and control groups. In this study, the experimental group received health education using lectures and non-digital gamification, while the control group received no intervention.

Population and Sample

The population in this study was all 80 female junior high school students at the Madinatul Qur'an Islamic Boarding School in Bogor. The population is the entire research subject who has certain characteristics according to the research objectives (Ishak et al., 2023). The research sample was obtained using a purposive sampling technique based on inclusion and exclusion criteria. The determination of the sample size used the Slovin formula with a 10% error rate, resulting in 44 respondents consisting of 22 respondents in the experimental group and 22 respondents in the control group. The group division was carried out randomly using odd and even numbers to minimize research bias.

Research Instruments

The research instruments used included a knowledge questionnaire, a PowerPoint lecture, and a non-digital gamification card game. The questionnaire was adapted from a study by Indrawati et al. (2025) on adolescents' knowledge about preventing sexual violence. The instrument was tested for validity and reliability, with a Cronbach's Alpha value of 0.908, indicating excellent reliability. The questionnaire consisted of 15 multiple-choice questions covering indicators of forms of sexual violence, preventive measures, consent, protection rights, and reporting mechanisms. Furthermore, the non-digital gamification media used educational card games designed to increase students' active participation during the learning process.

Data Collection Techniques

Data collection was conducted through primary and secondary data. Primary data were obtained directly through respondents completing pre-test and post-test questionnaires, while secondary data were obtained from the administration of the Madinatul Qur'an Islamic Boarding School in Bogor regarding the number of students and supporting research data. The data collection process began with the distribution of pre-test questionnaires to both groups to measure the respondents' initial knowledge level. Next, the experimental group was given an intervention in the form of health education using lecture methods and non-digital gamification for 20–30 minutes, while the control group was not given any treatment. After the intervention was completed, both groups were given a post-test questionnaire to measure changes in knowledge after the treatment.

Data Processing and Analysis Techniques

Data processing was carried out through several stages, namely editing, coding, scoring, tabulating, and data entry using the SPSS application. The editing stage was carried out to check the completeness of respondents' answers, while coding was carried out by assigning a numeric code to each correct and incorrect answer. According to Notoatmodjo (2018), systematic data processing can improve the accuracy of research analysis results. Data analysis consisted of univariate and bivariate analysis. Univariate analysis was used to describe the frequency distribution of respondent characteristics and knowledge levels before and after the intervention. Bivariate analysis was conducted to determine the effect of health education with non-digital gamification methods on the knowledge of female students using the Paired T-Test if the data were normally distributed and the Wilcoxon Signed Rank Test if the data were not normally distributed with a significance level of $p < 0.05$.

RESEARCH RESULTS AND DISCUSSION

Research result

The research findings describe the data obtained during the research process. The results are presented systematically through univariate and bivariate analyses to determine the effect of health education using non-digital gamification methods on female students' knowledge of sexual violence prevention. The data are presented in the form of frequency distribution tables, normality tests, validity tests, and hypothesis tests to facilitate interpretation of the results.

Characteristics of Research Location

This research was conducted at the Madinatul Qur'an Putri (MQ3) Islamic Boarding School in Bogor, located on Jalan TMMD Melati-Sodong, Singasari Village, Jonggol District, Bogor Regency, West Java. The conducive environment of the Islamic boarding school supports the learning process and the optimal implementation of health education interventions. The study respondents were 44 female junior high school students in grades VII to IX, divided into an experimental group and a control group.

Table 1 Distribution of Respondents by Class

Class	Frequency	Percentage (%)
VII	14	31,8
VIII	16	36,4
IX	14	31,8
Total	44	100

Source: Primary Research Data, 2026.

The table above shows that the majority of respondents came from grade VIII, with 16 students (36.4%), while grades VII and IX each had 14 students (31.8%). The relatively even distribution of respondents indicates that the study involved students from various junior high school levels, thus providing a more representative picture of sexual violence prevention knowledge among female students at the Madinatul Qur'an Islamic Boarding School in Bogor.

Table 2 Distribution of Respondents Based on Research Groups

Group	Frequency	Percentage (%)
Control	22	50
Experiment	22	50
Total	44	100

Source: Primary Research Data, 2026.

Based on the table above, it is known that the number of respondents in the control and experimental groups was 22 people each (50%). Group allocation was carried out randomly using odd and even numbers to reduce research bias. A balanced number of respondents in both groups is expected to increase the objectivity of the research results in assessing the impact of health education using non-digital gamification methods on the knowledge of female students.

Univariate Analysis

Table 3 Level of Knowledge Before Intervention

Level of Knowledge	Control N (%)	Experiment N (%)
Good	10 (45,5)	12 (54,5)
Enough	9 (40,9)	8 (36,4)
Not enough	3 (13,6)	2 (9,1)
Total	22 (100)	22 (100)

Source: Primary Research Data, 2026.

The table above shows that before receiving health education, most respondents in the control and experimental groups already had a good level of knowledge. However, there were still respondents in the fair and poor categories. This indicates that some students have received information about preventing sexual violence, but their understanding is still uneven, necessitating health education interventions to further enhance their knowledge.

Table 4 Level of Knowledge After Intervention

Level of Knowledge	Control N (%)	Experiment N (%)
Good	10 (45,5)	20 (90,9)
Enough	10 (45,5)	2 (9,1)
Not enough	2 (9,1)	0 (0,0)
Total	22 (100)	22 (100)

Source: Primary Research Data, 2026.

The table above shows that after receiving health education using the non-digital gamification method, knowledge increased in the experimental group. The majority of respondents (20 people) were in the good category, with no respondents in the poor category. Meanwhile, the control group showed no significant changes. These results indicate that the non-digital gamification method is effective in improving students' understanding of sexual violence prevention.

Validity and Reliability Test

Table 5 Results of Instrument Validity and Reliability Tests

Variables	Number of Valid Questions	r Count	r Table	Cronbach Alpha	Information
Sexual Violence Prevention Knowledge	14	0,361–0,812	0,361	0,908	Valid and Reliable

Source: Primary Research Data, 2026.

Based on the table above, all items in the knowledge questionnaire are valid, as their calculated r-values are greater than the table r-value of 0.361. Furthermore, the reliability test results show a Cronbach's alpha value of 0.908, indicating very high reliability. Therefore, the research instrument is suitable for measuring female students' knowledge levels regarding sexual violence prevention before and after a health education intervention.

Bivariate Analysis

Table 6 Results of the Shapiro-Wilk Normality Test

Group	Statistics	n	Say.
Control	0,581	22	0,000
Experiment	0,494	22	0,000

Source: Primary Research Data, 2026.

Based on the table above, the significance value for both the control and experimental groups is 0.000, or $p < 0.05$. These results indicate that the research data is not normally distributed, so the hypothesis analysis was continued using the non-parametric Wilcoxon Signed Rank Test. This test was chosen because the number of respondents was less than 50 and met the requirements for non-normal data analysis.

Table 7 Results of the Wilcoxon Test for the Control Group

Variables	Mean Pre-test	Mean Post-test	WITH	P-Value
Knowledge	10,05	10,32	-1,897	0,058

Source: Primary Research Data, 2026.

The table above shows that the control group had a significance value of 0.058, or $p > 0.05$. This indicates no significant difference between the pre-test and post-test scores in the control group. The lack of significant changes in knowledge occurred because the control group did not receive health education intervention using non-digital gamification methods, resulting in minimal increases in respondents' knowledge.

Table 8 Results of the Wilcoxon Test for the Experimental Group

Variables	Mean Pre-test	Mean Post-test	WITH	P-Value
Knowledge	10,27	12,95	-3,942	0,000

Source: Primary Research Data, 2026.

Table 4.8 shows that the experimental group had a significance value of 0.000, or $p < 0.05$. These results indicate that health education using non-digital gamification methods significantly impacted female students' knowledge of sexual violence prevention. The increase in the average post-test score indicates that the card game method improved students' understanding, engagement, and participation in the learning process, making the material easier to understand and remember.

Discussion

The research discussion aims to interpret the research results based on relevant theory and previous research. This study focuses on the effect of health education using non-digital gamification methods on the knowledge of female students about preventing sexual violence at the Madinatul Qur'an Islamic Boarding School in Bogor. The results showed an increase in knowledge after the health education intervention using the card game method in the experimental group.

1. Female Islamic Students' Knowledge Before Being Given Health Education Using Non-Digital Gamification Methods

The results of the study showed that before receiving health education interventions, most female students in the control and experimental groups had good knowledge. However, respondents with adequate and inadequate knowledge were still found. This condition indicates that some students

had obtained information about preventing sexual violence from their surroundings, social media, and informal education at school and family. However, this understanding was still suboptimal, especially regarding non-physical forms of sexual violence, consent, and case reporting mechanisms. The low level of knowledge of some students was also influenced by the cultural taboo in discussing reproductive health in Islamic boarding schools. Research by Zakiyah et al. (2023) stated that limited sexuality education in Islamic boarding schools resulted in adolescent girls' lack of understanding of their rights to self-protection against sexual violence. Research by Herlina et al. (2023) also found that most adolescents only understood physical forms of sexual violence, while verbal and psychological harassment were still poorly understood. Therefore, health education is essential to improve students' knowledge in a more comprehensive and contextual way, appropriate to the Islamic boarding school environment.

2. Female Islamic Students' Knowledge After Being Provided Health Education Using Non-Digital Gamification Methods

The results of the study showed an increase in the level of knowledge of female students after being given health education using the non-digital gamification method. In the experimental group, most respondents were in the good category and no more were found in the poor category after the intervention was given. This increase indicates that the game-based learning method is able to create a more active, enjoyable, and easily understood learning atmosphere for students. Through card games, respondents were more involved in the discussion process, answering questions, and understanding examples of situations related to the prevention of sexual violence. Research by Attarwiyah and Jennah (2025) explains that gamification can increase learning motivation and student participation because it presents elements of competition and group cooperation. In addition, research by da Silva Carvalho et al. (2024) proved that the use of educational games in health education is effective in increasing adolescents' understanding of reproductive health and preventive behavior. In this study, the use of non-digital game media is very appropriate for implementation in Islamic boarding schools (pesantren) because it does not require electronic devices and remains in line with the religious values applied at the Madinatul Qur'an Islamic Boarding School in Bogor.

3. The Influence of Health Education with Non-Digital Gamification Methods on the Knowledge of Female Islamic Students

The analysis results using the Wilcoxon test showed a significance value of 0.000 or $p < 0.05$ in the experimental group, so it can be concluded that there is an effect of health education with non-digital gamification methods on the knowledge of female students regarding the prevention of sexual violence. The increase in the average post-test score indicates that the intervention provided

successfully increased respondents' understanding of forms of sexual violence, self-protection measures, protection rights, and reporting mechanisms. Health education provided through the card game method makes it easier for students to understand the material because the learning process takes place interactively and participatory. According to Notoatmodjo (2018), health education can influence changes in a person's knowledge and behavior through an effective learning process. Research by Li et al. (2023) also states that gamification increases knowledge retention because students are more actively involved during the learning process. Research by Fuadi et al. (2023) adds that contextual preventive education in Islamic boarding schools can increase students' awareness of the risks of sexual violence. Thus, the non-digital gamification method has proven effective as a medium for health education in Islamic boarding schools.

4. Differences in Results between the Control Group and the Experimental Group

The difference in results between the control and experimental groups indicates that the experimental group experienced a more significant increase in knowledge compared to the control group. In the control group, the statistical test results showed a significance value of 0.058 or $p > 0.05$, indicating no significant change in knowledge. This occurred because the control group did not receive health education intervention using non-digital gamification methods. In contrast, the experimental group experienced a significant increase in knowledge after being given the educational card game intervention. This condition indicates that interactive learning methods have a significant influence on improving students' understanding. Research by Zainuddin and Keumala (2021) stated that non-digital gamification can increase student engagement and facilitate understanding of health material through group activities and simple simulations. Research by Mardiah and Desi (2024) also found that game-based participatory learning can improve social awareness and critical thinking skills in adolescents. Therefore, non-digital gamification methods can be used as an alternative, effective health education medium in efforts to prevent sexual violence in Islamic boarding schools.

CONCLUSION

Based on the results of research on the effect of health education with non-digital gamification methods on the knowledge of female students about preventing sexual violence at the Madinatul Qur'an Islamic Boarding School in Bogor in 2026, it can be concluded that the non-digital gamification method is effective in increasing students' knowledge about preventing sexual violence. Before being given the intervention, most respondents in the control and experimental groups were in the sufficient and good knowledge categories, but there were still some students with insufficient knowledge regarding forms of sexual violence, self-protection measures, and case reporting mechanisms.

After receiving health education using a non-digital gamification method in the form of an educational card game, there was a significant increase in knowledge in the experimental group. Most respondents in the experimental group were in the good knowledge category after the intervention was given. The Wilcoxon test results showed a significance value of $p = 0.000$ ($p < 0.05$), so H_a was accepted and H_0 was rejected. This proves that there is an effect of health education using a non-digital gamification method on the knowledge of female students regarding the prevention of sexual violence.

No significant changes were found in the control group, with a p value of 0.058 ($p > 0.05$). The non-digital gamification method has been shown to create a more active, interactive, and enjoyable learning environment, making it easier for female students to understand reproductive health and sexual violence prevention materials. Therefore, this method can be used as an alternative health education medium suitable for Islamic boarding schools and supports promotional and preventive efforts to protect female students from the risk of sexual violence.

REFERENCES

- Attarwiyah, A., & Jennah, R. (2025). Gamification learning in Islamic boarding schools to improve student motivation and engagement. *Jurnal Pendidikan Islam*, 14(1), 55–67.
- Bafaqih, N., & Sa'adah, M. (2022). Pencegahan kekerasan seksual di lingkungan pesantren: Tantangan dan strategi perlindungan santri perempuan. *Jurnal Sosial Keagamaan*, 8(2), 120–131.
- Budiman, & Riyanto, A. (2022). *Kapita selekta kuesioner pengetahuan dan sikap dalam penelitian kesehatan*. Salemba Medika.
- da Silva Carvalho, M., Pereira, A., & Santos, R. (2024). Educational board games as a strategy to improve women's knowledge about sexual health and violence prevention. *Journal of Health Education Research*, 39(2), 145–156. <https://doi.org/10.1093/her/cyad021>
- Fuadi, M. A., Marintan, M. A., Mahanani, Q. F. I., & Aslambik, M. (2023). Menyoal ketimpangan relasi kuasa dan upaya pencegahan kekerasan seksual di pesantren: Sebuah tinjauan kritis. *Musāwa Jurnal Studi Gender dan Islam*, 22(2), 148–160. <https://doi.org/10.14421/musawa.2023.222.148-160>
- Herlina, L., Syamsun, A., Harahap, I. L., & Pujiarohman, P. (2023). Penyuluhan pencegahan kekerasan seksual pada anak di Pondok Pesantren Raudlatussibyan NW Belencong Lombok Barat. *Jurnal Warta Desa (JWD)*, 5(3), 164–172. <https://doi.org/10.29303/jwd.v5i3.274>
- Ikhsan, M., Rahmah, S., & Hidayat, T. (2024). Religious literacy approach in preventing sexual violence among female students in Islamic boarding schools. *Journal of Islamic Education Studies*, 12(1), 44–58.
- Indrawati, R., Lestari, A., & Kurniawan, D. (2025). Pengembangan instrumen pengetahuan remaja tentang pencegahan kekerasan seksual di sekolah. *Jurnal Pendidikan Kesehatan Indonesia*, 11(1), 45–56.
- Ishak, M., Siregar, N., & Harahap, F. (2023). *Metodologi penelitian kesehatan dan aplikasi statistik*. CV Media Sains Indonesia.
- Kementerian Pemberdayaan Perempuan dan Perlindungan Anak Republik Indonesia. (2023). *Data kekerasan terhadap perempuan dan anak di Indonesia tahun 2022*. KemenPPPA RI.
- Kompas.id. (2025). *Dua kasus kekerasan seksual di pesantren Jawa Barat, 14 santriwati diduga menjadi korban*. Kompas.id.

- Li, Y., Zhang, H., & Chen, X. (2023). Gamification and health education outcomes among adolescents: A self-determination theory perspective. *Frontiers in Education*, 8, 112233. <https://doi.org/10.3389/feduc.2023.112233>
- Mardiah, S., & Desi, A. (2024). Non-digital gamification as contextual learning in pesantren education. *Jurnal Inovasi Pendidikan*, 10(3), 201–214.
- Notoatmodjo, S. (2018). *Metodologi penelitian kesehatan*. Rineka Cipta.
- Notoatmodjo, S. (2023). *Promosi kesehatan dan perilaku kesehatan*. Rineka Cipta.
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions. *Contemporary Educational Psychology*, 61, 101860. <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Sopyandi, D., & Sujarwo, S. (2023). Kekerasan seksual di lembaga pendidikan berbasis agama: Analisis kasus pesantren di Indonesia. *Jurnal Perlindungan Anak Indonesia*, 5(2), 89–101.
- Sugiyono. (2021). *Metode penelitian kuantitatif, kualitatif dan R&D*. Alfabeta.
- World Health Organization. (2021). *Violence against women prevalence estimates, 2018: Global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women*. WHO.
- Yıldız, E., Demir, S., & Karaca, M. (2024). Gamification in adolescent health promotion: Enhancing engagement and preventive behavior. *International Journal of Adolescent Medicine and Health*, 36(1), 77–86. <https://doi.org/10.1515/ijamh-2023-0184>
- Zainuddin, Z., & Keumala, C. (2021). Gamification non-digital dalam pembelajaran kesehatan berbasis partisipatif. *Jurnal Pendidikan Kesehatan*, 9(1), 33–42.
- Zakiyah, N., Fitria, D., & Lestari, M. (2023). Cultural barriers in reproductive health education among female students in Islamic boarding schools. *Jurnal Kesehatan Reproduksi*, 14(2), 98–110.