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SEHATI PROGRAM AS AN INNOVATIVE INTERVENTION TO IMPROVE SEXUAL COMMUNICATION SELF EFFECACY AMONG HIGH SCHOOL STUDENTS

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ABSTRACT
Adolescents are a vulnerable group facing reproductive health problems due to limited knowledge, inadequate sexual communication skills, and exposure to inappropriate information from their environment and digital media. These conditions may increase the risk of unsafe sexual behavior and negatively affect their health and future. Therefore, innovative interventions are needed to empower adolescents through self-education and sexual communication skills training. This study aimed to analyze the effectiveness of the SEHATI Program (Self Education on Health Reproduction and Adolescent Training Innovation) in improving sexual communication self-efficacy among high school students. A quasi-experimental study with a pretest–posttest control group design was conducted at SMA Negeri 2 Ungaran. The sample consisted of 70 students selected using purposive sampling and divided into intervention and control groups. The intervention group received the SEHATI Program, which included reproductive health education, healthy sexual communication simulations, and the use of innovative digital learning media, while the control group received no intervention. Data were collected using the validated Sexual Communication Self-Efficacy Scale (SCSES). Univariate analysis was performed using measures of central tendency, while bivariate analysis was conducted using the Mann–Whitney test. The statistical analysis showed a significant improvement in sexual communication self-efficacy in the intervention group compared to the control group, with a p-value of 0.01 ($p < 0.05$). The SEHATI Program is an effective and innovative educational intervention for improving sexual communication self-efficacy among adolescents.

Keywords: adolescents; digital health education; reproductive health; sexual communication self-efficacy

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INTRODUCTION

Adolescence is a critical developmental period marked by rapid biological, psychological, and social transitions, including the maturation of reproductive health and sexual identity (Norton et al., 2016). During this stage, individuals begin to explore intimate relationships and establish behavioral patterns that may influence their long-term health outcomes. However, this phase also increases vulnerability to various reproductive health risks(Indarwati et al., 2023). Globally, adolescents face persistent challenges such as early sexual initiation, unintended pregnancy, and sexually transmitted infections (STIs). These issues are often linked to inadequate knowledge, limited access to accurate information, and sociocultural barriers that restrict open discussions about sexuality(Scull et al., 2022). In Indonesia, these challenges are further intensified by prevailing norms that consider sexual topics as sensitive or taboo(Assarzadeh et al., 2021).

Effective sexual communication is a fundamental component of healthy adolescent development (Dunlap et al., 2020). It enables individuals to express boundaries, negotiate safe practices, and make informed decisions regarding their reproductive health(Sani et al., 2016). However, many adolescents lack the necessary skills and confidence to communicate about sexual issues, which increases their susceptibility to risky behaviors. Sexual communication self-efficacy plays a crucial role in shaping adolescents' ability to engage in healthy sexual interactions. It reflects an individual's confidence in discussing sexual matters assertively and responsibly (Widman et al.,

2021). Higher levels of self-efficacy are associated with safer sexual behaviors, while lower levels are linked to avoidance, miscommunication, and increased risk-taking(Widman & Ph, 2024).

Despite its importance, sexual communication self-efficacy is often overlooked in conventional reproductive health education programs. Most interventions primarily focus on knowledge dissemination rather than skill dev(Loureiro et al., 2021)elopment, resulting in a gap between what adolescents know and what they are able to practice in real-life situations(Intan Kumalasari, 2024). Recent advancements in educational approaches highlight the importance of learner-centered and technology-based interventions. Digital media has emerged as a powerful tool to deliver health education, offering interactive, accessible, and engaging learning experiences that align with adolescents' preferences and digital literacy(Yanti et al., 2022).

Self-education approaches, when combined with skill-based training, have the potential to enhance both knowledge and behavioral competence. This integrated strategy allows adolescents to actively participate in the learning process while developing practical communication skills that are essential for real-world application(Navan, 2024).To address these gaps, the SEHATI Program (Self Education on Health Reproduction and Adolescent Training Innovation) was developed as an innovative intervention (Intan Kumalasari, 2024). The program integrates digital self-learning modules with structured training sessions, including simulations of healthy sexual communication, aiming to strengthen adolescents' confidence and communication abilities(Melly Damayanti, Firman Fuad Wirakusuma, 2018).

Although previous studies have demonstrated the effectiveness of reproductive health education in improving knowledge and attitudes, limited evidence exists regarding interventions specifically targeting sexual communication self-efficacy, particularly within the Indonesian context. Furthermore, the integration of digital self-education and communication training remains underexplored (Mawardika et al., 2025). Therefore, this study aimed to evaluate the effectiveness of the SEHATI Program in improving sexual communication self-efficacy among high school students. This research is expected to contribute to the development of innovative, evidence-based interventions that enhance adolescent reproductive health and support informed and responsible decision-making(Intan Kumalasari, 2024). The research is expected to generate empirical evidence on the effectiveness of a theory-driven educational intervention in strengthening adolescents capacirt to engage in assertive, safe and responsible communication concerning reproductive health.

METHOD

This study employed a quasi-experimental design using a pretest–posttest control group approach. The research was conducted from December 2024 to January 2025 at SMA Negeri 2 Ungaran, located in the working area of Lerep Public Health Center, Semarang Regency. The sample consisted of 70 high school students from grades X to XII, selected using a purposive sampling technique. Participants were equally allocated into two groups: an intervention group and a control group. The instrument used in this study was the Sexual Communication Self-Efficacy Scale (SCSES). The questionnaire had previously undergone validity testing, with item correlation coefficients ranging from 0.52 to 0.84, exceeding the r-table value of 0.46. Reliability testing using Cronbach's alpha yielded coefficients ranging from 0.78 to 0.91, which were higher than the acceptable threshold of 0.70, indicating that the instrument had high reliability. The measurement tool used in this study had obtained ethical clearance, with approval number 1002/KEP/EC/UNW/2025. Univariate analysis was conducted using measures of central tendency, while bivariate analysis was performed using the Mann–Whitney test. The statistical analysis resulted in a p-value of 0.00 ($p < 0.05$), indicating a statistically significant difference between the intervention and control groups.

RESULT

Table 1
Respondent Characteristics Based on Sex (n = 70)

Sex	Control Group		Intervention Group	
	f	%	f	%
Male	9	25,7	5	14,28
Female	26	74,3	30	85,72

Table 1, the majority of respondents in the control group were female, comprising 26 respondents (74.3%), while in the intervention group, the majority were also female, totaling 30 respondents (85.72%). Overall, it can be concluded that most respondents in this study were female.

Table 2
Respondent Characteristics Based on Source of Information (n = 70)

Source of Information	Control Group		Intervention Group	
	f	%	f	%
Parents	7	20	6	17,1
Teachers/ School	8	22,9	9	25,7
Healthcare Professionals	5	14,3	4	11,4
Social Media/ Internet	11	31,4	12	34,4
Peers	4	11,4	4	11,4

Table 2, the majority of respondents in the control group obtained information from social media/internet sources, accounting for 11 respondents (31.4%), while in the intervention group, the majority also obtained information from social media/internet sources, totaling 12 respondents (84.3%). Overall, it can be concluded that most respondents obtained information from social media/internet sources.

Table 3
Mean Sexual Communication Self-Efficacy Scores of High School Students Before (Pre-Test) the Intervention in the Control and Intervention Groups (n = 70)

Group	N	Median	Minimal	Maksimal	Std. Dev	T
Control (Pre-Test)	35	62,0	45	78	61,43±7,82	0,39
Intervention (Pre-Test)	35	63,0	46	82	62,17±8,01	

Table 3, the data indicate the pre-intervention Sexual Communication Self-Efficacy scores of high school students before the implementation of the *Self Education on Health Reproduction and Adolescent Training Innovation* program. In the control group, the median score was 62.00, with a minimum score of 45, a maximum score of 78, and a mean ± standard deviation of 61.43 ± 7.82. Meanwhile, in the intervention group, the median score was 63.00, with a minimum score of 46, a maximum score of 82, and a mean ± standard deviation of 62.17 ± 8.01. The statistical analysis showed a t-value of 0.39 and a p-value of 0.698. The comparison of pre-test Sexual Communication Self-Efficacy scores between the control and intervention groups showed a p-value of 0.698, which was greater than $\alpha = 0.05$. Therefore, it can be concluded that there was no significant difference between the control group and the intervention group before the intervention was administered.

Table 4
Mean Sexual Communication Self-Efficacy Scores of High School Students After (Post-Test) the Intervention in the Intervention and Control Groups (n = 70)

	N	Median	Minimal	Maksimal	Std. Dev	t	P v
Control (Post Test)	35	64,00	48	73	64,29±7,35	8,12	0,00
Intervention (Post Test)	35	78,00	53	98	77,86±6,98		

Table 4, the data demonstrate the Sexual Communication Self-Efficacy scores of high school students after the implementation of the *Self Education on Health Reproduction and Adolescent Training Innovation* program. In the control group, the median score was 64.00, with a minimum score of 48, a maximum score of 73, and a mean ± standard deviation of 64.29 ± 7.35. Meanwhile, in the intervention group after receiving the *Self Education on Health Reproduction and Adolescent Training Innovation* program, the median score was 78.00, with a minimum score of 53, a maximum score of 98, and a mean ± standard deviation of 77.86 ± 6.98. The statistical analysis

revealed a t-value of 8.12 and a p-value of 0.00. The comparison of post-test Sexual Communication Self-Efficacy scores between the intervention and control groups showed a p-value of 0.00, which was lower than α = 0.05. Therefore, it can be concluded that there was a significant difference between the control group and the intervention group after the implementation of the *Self Education on Health Reproduction and Adolescent Training Innovation* program.

Tabel 5
Mean Scores of Sexual Self-Efficacy in Primiparous Mothers Before and After Kegel Exercise Education in the Control Group

Group	N	Median	Minimal	Maksimal	Std. Dev	T	P v
Pre-Test (Control)	35	368,0	45	78	61,43±7,82	1,42	0,16
Post Test (Control)	35		48	82	64,29±7,35		

Table 5, the data present the Sexual Communication Self-Efficacy scores of high school students before and after the intervention in the control group. Before the intervention, the median score was 62.00, with a minimum score of 45, a maximum score of 78, and a mean ± standard deviation of 61.43 ± 7.82. After the intervention period, the median score increased to 64.00, with a minimum score of 48, a maximum score of 82, and a mean ± standard deviation of 64.29 ± 7.35. The statistical analysis showed a t-value of 1.42 and a p-value of 0.16. The comparison of Sexual Communication Self-Efficacy scores before and after the intervention in the control group yielded a p-value of 0.16, which was greater than α = 0.05. Therefore, it can be concluded that there was no significant difference in Sexual Communication Self-Efficacy scores before and after the intervention in the control group.

Table 6
Mean Sexual Communication Self-Efficacy Scores of High School Students Before and After the Self Education on Health Reproduction and Adolescent Training Innovation Program in the Intervention Group (n = 70)

Group	N	Median	Minimal	Maksimal	Std. Dev	T	P v
Pre-Test (Intervention)	35	63,00	46,00	80	62,17±8,01	9,47	0,00
Post-Test Interventio	35	78,00	62,00	92	77,86 ±6,98		

Table 6, the data show the Sexual Communication Self-Efficacy scores before and after the intervention in the intervention group. Before the intervention, the median score was 63.00, with a minimum score of 46.00, a maximum score of 80, and a mean ± standard deviation of 62.17 ± 8.01. After the implementation of the Self Education on Health Reproduction and Adolescent Training Innovation program, the median score increased to 78.00, with a minimum score of 62.00, a maximum score of 92, and a mean ± standard deviation of 77.86 ± 6.98. The statistical analysis revealed a t-value of 9.47 and a p-value of 0.00. The comparison of Sexual Communication Self-Efficacy scores before and after the intervention in the intervention group showed a p-value of 0.00, which was lower than α = 0.05. Therefore, it can be concluded that there was a significant difference in Sexual Communication Self-Efficacy scores before and after the implementation of the *Self Education on Health Reproduction and Adolescent Training Innovation* program.

Table 1.
Analysis of the Effect of the Self Education on Health Reproduction and Adolescent Training Innovation Program on Sexual Communication Self-Efficacy

Group	N	Median	Minimal	Maksimal	Std. Dev	P v
Control	35	63,0	45	80	61,80 ± 7,91	0,01
Intervention	35	72,00	48	92	71,07 ± 9,51	

Table 7, the statistical test results showed that the control group had a median score of 63.00, with a mean ± standard deviation of 61.80 ± 7.91, a minimum score of 45, and a maximum score of 80. Meanwhile, the intervention group had a median score of 72.00, with a mean ± standard deviation of 71.07 ± 9.51, a minimum score of 48, and a maximum score of 92. The test statistic analysis demonstrated that the Asymp. Sig. (2-tailed) value for the comparison between the control and intervention groups was p = 0.00, which was lower than α = 0.05. Therefore, it can be concluded that the Self Education on Health Reproduction and Adolescent Training Innovation program had a statistically significant effect on Sexual Communication Self-Efficacy.

DISCUSSION

Sexual Communication Self-Efficacy Scores of High School Students Before (Pre-Test) the Intervention in the Control and Intervention Groups (n = 70)

The findings of this study demonstrated that the comparison of pre-test Sexual Communication Self-Efficacy scores between the control and intervention groups yielded a p-value of 0.698, indicating no statistically significant difference between the two groups prior to the intervention. This result suggests that both groups had relatively comparable baseline characteristics in terms of their confidence and ability to communicate about sexual and reproductive health issues before the implementation of the *Self Education on Health Reproduction and Adolescent Training Innovation* program. Baseline equivalence between groups is an essential prerequisite in quasi-experimental research, as it strengthens the internal validity of the study and ensures that any differences identified during the post-intervention phase are more likely attributable to the intervention itself rather than to pre-existing disparities between participants(Intan Kumalasari, 2024).

The absence of significant differences in pre-test scores also reflects that adolescents in both groups shared similar levels of exposure, understanding, and perceptions regarding sexual communication(Decker et al., 2021). Adolescence is a developmental stage characterized by rapid physical, psychological, and social changes, during which individuals often experience uncertainty in discussing topics related to sexuality and reproductive health (Oktarina et al., 2024). In many cultural contexts, including conservative social environments, communication regarding sexual issues is frequently considered sensitive or taboo, limiting adolescents' opportunities to openly express concerns, ask questions, or seek accurate information. Consequently, adolescents commonly demonstrate moderate to low levels of self-efficacy in sexual communication prior to receiving structured educational intervention (Gebreyesus et al., 2019).

From a theoretical perspective, the findings may be interpreted through Bandura's Social Cognitive Theory, which emphasizes that self-efficacy develops through experience, social interaction, verbal persuasion, and observational learning(Sipahutar, 2020). Before exposure to the intervention program, participants in both groups had not yet received systematic educational stimulation designed to strengthen their communication confidence or interpersonal skills regarding sexual health matters. As a result, their initial self-efficacy levels remained relatively homogeneous. This similarity indicates that students entered the study with comparable psychosocial readiness and communication capacities, thereby providing a strong foundation for evaluating the effectiveness of the intervention in subsequent analyses(Andani et al., 2024).

Furthermore, the comparable baseline scores between groups suggest that external influences such as school environment, peer interaction, access to information, and family communication patterns may have affected participants similarly before the intervention(Assarzadeh et al., 2019). Adolescents today are increasingly exposed to sexual and reproductive health information through digital media and social networking platforms; however, the quality and reliability of such information vary considerably. Without guided education, adolescents may encounter misinformation, fragmented knowledge, or social stigma that hinder the development of healthy sexual communication skills. Therefore, the lack of significant baseline differences highlights the importance of structured, evidence-based educational programs that can provide accurate knowledge while simultaneously enhancing adolescents' confidence in discussing sensitive issues responsibly and assertively(Assarzadeh et al., 2021).

In the context of intervention research, the non-significant pre-test findings represent a positive methodological outcome because they confirm the comparability of the control and intervention groups prior to treatment implementation (Norton et al., 2016). This condition increases confidence that any significant changes observed during the post-test phase are associated with the effectiveness of the *Self Education on Health Reproduction and Adolescent Training Innovation*

program rather than confounding baseline variations. Therefore, the pre-test equivalence observed in this study not only supports the rigor of the research design but also provides a valid basis for interpreting the subsequent impact of the intervention on improving Sexual Communication Self-Efficacy among high school students(Intan Kumalasari, 2024).

Sexual Communication Self-Efficacy Scores of High School Students After (Post-Test) the Intervention in the Intervention and Control Groups

The findings of this study revealed a statistically significant difference in post-test Sexual Communication Self-Efficacy scores between the intervention and control groups following the implementation of the *Self Education on Health Reproduction and Adolescent Training Innovation* program. Students in the intervention group demonstrated substantially higher median and mean scores compared with those in the control group, indicating that the intervention was effective in enhancing adolescents' confidence in communicating about sexual and reproductive health issues. The significant increase observed after the intervention suggests that structured reproductive health education combined with adolescent-centered training strategies can positively influence students' psychosocial competencies, particularly in the domain of sexual communication self-efficacy(Sani et al., 2021).

The improvement in Sexual Communication Self-Efficacy among students in the intervention group may be attributed to the comprehensive and interactive nature of the educational program. Adolescents often encounter barriers when discussing sexual and reproductive health topics due to embarrassment, fear of judgment, cultural stigma, or limited communication skills (Dunlap et al., 2020). The intervention provided students with opportunities to access accurate information, engage in guided discussions, and develop communication strategies in a supportive educational environment. Such learning experiences are essential in fostering adolescents' confidence to express opinions, negotiate interpersonal boundaries, and seek clarification regarding reproductive health matters. Consequently, students who participated in the program were more likely to develop stronger beliefs in their ability to communicate effectively about sensitive issues(Yanti et al., 2022). These findings are consistent with Bandura's Social Cognitive Theory, which states that self-efficacy can be strengthened through mastery experiences, observational learning, verbal encouragement, and social interaction. The *Self Education on Health Reproduction and Adolescent Training Innovation* program may have facilitated these mechanisms by encouraging active participation, peer interaction, and experiential learning activities(Intan Kumalasari, 2024). Through repeated exposure to educational content and communication practice, students gradually developed greater confidence in their ability to discuss sexual health topics appropriately and responsibly. This process likely contributed to the significant difference observed between the intervention and control groups during the post-test assessment(Widman & Ph, 2024).

In addition, the results emphasize the critical role of school-based reproductive health education in promoting adolescents' psychosocial well-being. Adolescence is a vulnerable developmental period during which individuals are exposed to various social pressures, misinformation, and risky behaviors related to sexuality. Without adequate education and communication skills, adolescents may struggle to make informed decisions regarding their reproductive health (Dunlap et al., 2020). The significant increase in Sexual Communication Self-Efficacy among students in the intervention group indicates that educational interventions can function not only as sources of knowledge but also as empowerment strategies that strengthen adolescents' decision-making abilities, interpersonal competence, and self-confidence in managing reproductive health issues(Loureiro et al., 2021).

From a public health and educational perspective, these findings provide important implications for the development of adolescent reproductive health promotion programs. The effectiveness of the *Self Education on Health Reproduction and Adolescent Training Innovation* program suggests that innovative, participatory, and adolescent-focused educational approaches should be integrated into

school health programs to improve communication self-efficacy among students. Strengthening adolescents' ability to communicate openly and responsibly about sexual health may contribute to healthier behaviors, improved peer and family interactions, and reduced risks of adverse reproductive health outcomes(Julia Brasileiro, PhD, MPH1, Judith Kotiuga, PhD2, Jordyn McCrimmon, MA3, Elizabeth M. Aparicio, PhD, MSW, LCSW-C4, Aaron Lankster, MS3, Laura Widman, 2025). Therefore, sustainable implementation of similar educational interventions may serve as an important strategy for enhancing adolescent reproductive health literacy and psychosocial resilience(Melly Damayanti, Firman Fuad Wirakusuma, 2018).

Sexual Self-Efficacy in Primiparous Mothers Before and After Kegel Exercise Education in the Control Group

The findings of this study demonstrated that there was no statistically significant difference in Sexual Communication Self-Efficacy scores before and after the observation period in the control group, as indicated by a p-value of 0.16, which was higher than the significance level of $\alpha = 0.05$. Although a slight increase in the median and mean scores was observed after the study period, the change was not substantial enough to indicate a meaningful improvement in students' self-efficacy related to sexual communication. These results suggest that, in the absence of a structured educational intervention, adolescents' confidence and ability to communicate about sexual and reproductive health issues tend to remain relatively stable over time(Brasileiro et al., 2025).

The absence of significant improvement in the control group may be associated with the limited exposure to systematic reproductive health education during the study period. Adolescents commonly obtain information regarding sexuality from informal sources such as peers, social media, or internet platforms, which may not consistently provide accurate or comprehensive knowledge. While these sources can increase awareness to some extent, they often fail to develop deeper communication skills, critical thinking abilities, and self-confidence related to discussing sensitive sexual health issues. Consequently, without targeted educational stimulation, students may experience minimal changes in their level of Sexual Communication Self-Efficacy(Scull et al., 2022).

From a psychosocial perspective, self-efficacy is not formed solely through passive exposure to information but rather through active learning experiences, social interaction, and opportunities to practice communication skills. According to Bandura's Social Cognitive Theory, self-efficacy develops through mastery experiences, verbal persuasion, observational learning, and emotional regulation. Students in the control group did not receive the structured learning activities or adolescent-centered training provided in the intervention program; therefore, they lacked the supportive mechanisms necessary to significantly enhance their communication confidence. This may explain why the control group showed only modest score changes that were statistically insignificant (Indarwati et al., 2023).

In addition, cultural and social factors may also contribute to the relatively unchanged Sexual Communication Self-Efficacy scores in the control group. In many communities, conversations related to sexuality and reproductive health remain sensitive and are often avoided in both family and educational settings. Adolescents may feel embarrassed, hesitant, or fearful of negative judgment when attempting to discuss sexual matters openly. Without guided interventions that normalize healthy communication and provide safe discussion spaces, students may continue to experience psychological barriers that limit the development of effective sexual communication skills. Therefore, natural progression alone may not be sufficient to improve adolescents' self-efficacy in this domain(Mawardika et al., 2025).

The findings from the control group further strengthen the overall interpretation of the study by emphasizing the importance of structured educational interventions in improving Sexual

Communication Self-Efficacy among adolescents. The lack of significant change in the control group indicates that improvements in the intervention group were unlikely to occur spontaneously or as a result of external factors unrelated to the program(Assarzadeh et al., 2021). Instead, the results suggest that the *Self Education on Health Reproduction and Adolescent Training Innovation* program played a critical role in facilitating meaningful improvements in adolescents' communication confidence and reproductive health-related self-efficacy. These findings highlight the need for evidence-based, school-centered reproductive health education programs that actively engage adolescents in the learning process and foster psychosocial skill development(Navan, 2024).

Sexual Communication Self-Efficacy Scores of High School Students Before and After the Self Education on Health Reproduction and Adolescent Training Innovation Program in the Intervention Group (n = 70)

The findings of this study demonstrated a statistically significant improvement in Sexual Communication Self-Efficacy scores among high school students after the implementation of the *Self Education on Health Reproduction and Adolescent Training Innovation* program. The intervention group showed a considerable increase in both median and mean scores following the intervention, with the statistical analysis indicating a p-value of 0.00, which was lower than $\alpha = 0.05$. These findings suggest that the educational intervention was effective in enhancing adolescents' confidence and perceived ability to communicate about sexual and reproductive health issues. The substantial increase in post-test scores reflects the positive impact of structured and adolescent-oriented reproductive health education on students' psychosocial competencies(Assarzadeh et al., 2019).

The improvement in Sexual Communication Self-Efficacy observed in the intervention group may be attributed to the comprehensive learning approach incorporated within the program. Adolescents often face difficulties discussing sexual matters openly due to cultural stigma, embarrassment, inadequate knowledge, or fear of social judgment(Andani et al., 2024). The *Self Education on Health Reproduction and Adolescent Training Innovation* program appears to have created a supportive learning environment in which students were encouraged to engage actively in discussions, ask questions, express opinions, and develop communication strategies related to reproductive health. Such participatory educational experiences can strengthen adolescents' confidence in expressing themselves and interacting more effectively regarding sensitive health-related topics (Sani et al., 2016).

From a theoretical standpoint, these findings are closely aligned with Bandura's Social Cognitive Theory, which emphasizes that self-efficacy develops through mastery experiences, observational learning, social persuasion, and emotional reinforcement. Through the intervention process, students were likely exposed to opportunities for interactive learning, peer engagement, and communication practice, all of which may have contributed to strengthening their belief in their own communication abilities(Loureiro et al., 2021). The significant increase in Sexual Communication Self-Efficacy scores suggests that repeated exposure to accurate reproductive health information and supportive educational interactions can positively influence adolescents' cognitive and behavioral confidence(Widman & Ph, 2024).

Furthermore, the results highlight the importance of innovative school-based reproductive health programs in addressing adolescents' developmental and psychosocial needs. During adolescence, individuals experience significant emotional, social, and physical changes that increase their vulnerability to misinformation, risky behaviors, and unhealthy interpersonal relationships (Melly Damayanti, Firman Fuad Wirakusuma, 2018). Effective communication skills are essential for adolescents to negotiate boundaries, make informed decisions, and seek appropriate support regarding sexual and reproductive health concerns. The notable improvement in self-efficacy following the intervention indicates that educational programs focusing not only on knowledge

acquisition but also on communication empowerment can contribute meaningfully to adolescent health promotion and behavioral readiness.

The significant difference between pre-test and post-test scores in the intervention group also provides strong empirical evidence supporting the effectiveness of the *Self Education on Health Reproduction and Adolescent Training Innovation* program as an educational strategy for adolescents. These findings imply that structured reproductive health interventions should be integrated into school health promotion programs to strengthen adolescents' communication competence and psychosocial resilience(Intan Kumalasari, 2024). Enhancing Sexual Communication Self-Efficacy may ultimately help adolescents develop healthier attitudes, improve interpersonal relationships, and reduce the risk of adverse reproductive health outcomes. Therefore, sustainable implementation of similar educational innovations may represent an important investment in adolescent health and well-being (Widman & Ph, 2024).

Effect of the Self Education on Health Reproduction and Adolescent Training Innovation Program on Sexual Communication Self-Efficacy

The results of this study demonstrated that the *Self Education on Health Reproduction and Adolescent Training Innovation* program had a statistically significant effect on Sexual Communication Self-Efficacy among high school students. The intervention group achieved higher median and mean scores compared with the control group, while the statistical analysis revealed a p-value of 0.00, which was lower than $\alpha = 0.05$. These findings indicate that the intervention effectively improved adolescents' confidence and capability in communicating about sexual and reproductive health issues. The significant difference between groups suggests that structured reproductive health education combined with adolescent-centered training strategies can positively influence psychosocial development, particularly communication-related self-efficacy (Brasileiro et al., 2025)

The effectiveness of the intervention may be explained by the program's emphasis on active learning and participatory engagement. Adolescents frequently experience challenges in discussing sexual and reproductive health topics due to embarrassment, cultural norms, limited communication skills, and inadequate access to reliable information(Scull et al., 2022). Through the *Self Education on Health Reproduction and Adolescent Training Innovation* program, students were provided with opportunities to explore reproductive health topics in a safe and supportive educational environment. Interactive discussions, peer involvement, and guided communication activities likely enabled participants to develop stronger interpersonal confidence and greater comfort in expressing opinions or asking questions related to sensitive issues. These experiences may have contributed substantially to the improvement in Sexual Communication Self-Efficacy observed in the intervention group(Intan Kumalasari, 2024).

From a theoretical perspective, the findings support Bandura's Social Cognitive Theory, which proposes that self-efficacy develops through mastery experiences, social modeling, verbal persuasion, and emotional reinforcement. The intervention program appears to have facilitated these processes by encouraging students to participate actively in educational activities, observe positive communication behaviors, and receive constructive feedback from facilitators and peers(Navan, 2024). As adolescents become more familiar with reproductive health concepts and communication practices, they are more likely to perceive themselves as capable of engaging in meaningful and responsible discussions regarding sexual health matters. Consequently, the intervention strengthened both cognitive understanding and behavioral confidence among participants(Andani et al., 2024).

In addition, the findings underscore the importance of school-based reproductive health education in promoting adolescents' psychosocial well-being and healthy behavioral development(Sani et al.,

2016). Adolescents are increasingly exposed to information related to sexuality through digital media and peer networks; however, such information is not always accurate or developmentally appropriate. Without proper guidance, adolescents may experience confusion, misinformation, or difficulties in making informed decisions regarding their reproductive health. The significant impact of the intervention program suggests that educational initiatives designed specifically for adolescents can serve as effective tools for improving communication competence, fostering critical thinking, and empowering students to engage in healthier interpersonal interactions(Loureiro et al., 2021).

The significant influence of the *Self Education on Health Reproduction and Adolescent Training Innovation* program also provides important implications for nursing practice, school health services, and adolescent health promotion policies. Integrating innovative reproductive health education into school curricula may enhance adolescents' ability to communicate effectively, build healthy relationships, and reduce risky sexual behaviors(Brasileiro et al., 2025). Furthermore, strengthening Sexual Communication Self-Efficacy can contribute to better decision-making, increased health literacy, and improved reproductive health outcomes among adolescents. Therefore, the implementation of evidence-based educational interventions should be considered an essential strategy in supporting adolescent development and promoting long-term reproductive health and psychosocial resilience(Widman et al., 2021).

CONCLUSION

The Self Education on Health Reproduction and Adolescent Training Innovation program was effective in significantly improving Sexual Communication Self-Efficacy among high school students, as evidenced by the significant difference between the intervention and control groups p (0,00) < α (0.05).

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