International Journal of Health Literacy and Science 3 (1) (2025)
International Journal of Health Literacy and Science
https://ihelis.com

Determining The Correlation Between Adolescent Attitudes and Practices in Sexual and Reproductive Health

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Article Info

Article History

Submitted: October 25, 2024

Revised: November 28, 2024

Accepted: January 22, 2025

Keywords:
Correlation; Adolescent; Attitudes; Practices; SRH

Abstract

Adolescents often show gaps between their attitudes and practices regarding sexual and reproductive health, which can affect their overall well-being and decision-making. Understanding these correlations between attitudes and behaviors is critical to developing effective educational interventions and health policies to improve adolescent health outcomes. This study aims to identify the relationship between attitudes and adolescent practices regarding sexual and reproductive health. This study is quantitative. It uses two analytical tests, namely descriptive analysis to see the distribution of variables and a correlation statistical test to see the relationship between variables. Respondents of 179 students were randomly taken at each level. The questionnaire was distributed using a Google form to measure variables. Most respondents were female, 60.9% (n=109), with most being 16 years old, 27.9% (n=50). Grade XII students filled out the questionnaire the most, 44.1% (n=79). A statistically significant relationship was found between adolescents' attitudes and practices regarding sexual and reproductive health (p=0.04). Based on these findings, adolescent sexual and reproductive health education programs can be designed more effectively to adjust to the content and attitude approach according to their needs. The educational program focuses on behavior change with topics relevant to adolescents, using interactive methods, group dynamics, and peer approaches. With the selection of the right approach, it is hoped that it can increase knowledge, develop attitudes, and ultimately direct positive behavior in adolescents towards sexual and reproductive health.

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pISSN 2964-2035
eISSN 3025-9258

Introduction

One of the goals of sustainable development is about sexual and reproductive health. One of the Sustainable Development Goals (SDGs) proclaimed by the United Nations (UN) is to ensure universal access to sexual and reproductive health services, including family planning, sexuality education, and adequate health services for females, men, and adolescents. (Sell et al., 2023; UNESCO, 2023)This achievement is essential to reducing maternal mortality, improving child health, and promoting gender equality. Through comprehensive and inclusive services, people are expected to manage their reproductive health independently, thereby contributing to family welfare and broader economic development. Access to these

services also includes efforts to prevent sexually transmitted diseases and support reproductive health rights for every individual without discrimination. (Desrosiers et al., 2020)(Fertman & Allensworth, 1982).

Adolescence is a critical period from childhood to adulthood during which individuals undergo significant physical, emotional, and social changes. (Turner et al., 2024)During this time, adolescents need support in terms of physical and mental health and adequate educational opportunities to prepare them for future challenges. According to the latest data, there are about 1.3 billion adolescents worldwide, accounting for 16% of the total global population. (UNICEF, 2024; WHO, 2024)Adolescents are estimated to reach more than 28 million people in Indonesia alone by 2024, making them a significant age group in the national development process. (worldometer, 2024). Holistic support for adolescents' needs, especially in health and education, is essential in creating a young generation that is qualified and ready to compete globally.

Sexual and reproductive health services have been overgrown, both through provision by the government and the private sector, aiming to improve the accessibility and quality of services for the community. (UNESCO, 2023) Previous research has proven that health services are proven to be able to reduce the number of unwanted pregnancies and sexually transmitted diseases and become a place to provide reproductive health education. (Kassa et al., 2018) The government has made efforts to strengthen healthcare infrastructure, such as reproductive health clinics and family planning programs, while the private sector has also played an essential role in providing more flexible and tailored services to individual needs. (Sell et al., 2023) The availability of these services, both through public and private service systems, ensures that individuals can make better decisions regarding their sexual health, especially for adolescents and other vulnerable populations.

Despite the availability of information and services, studies have shown that many adolescents have positive attitudes toward sexual health but fail to translate them into healthy behaviors. Peer influence, social norms, and lack of proper education contribute to this gap between attitudes and practices. (Ibinaiye et al., 2024; Kiss et al., 2024). A global study has reported that 52% of adolescents in various countries are involved in risky behavior. (Kiss et al., 2024). These behaviors include drinking alcohol, drug use, and sexual activity. (Ibinaiye et al., 2024; Karlberg et al., 2024; Mawlod et al., 2024). In addition, research in the United States and Europe found that adolescents who are in a thematic environment with a high level of social pressure are 35% more likely to engage in harmful behaviors. (Chien et al., 2023). The 2023 National Adolescent Health Study found that 45% of teens who engage in smoking and alcohol use behaviors do so due to peer male encouragement.

In addition, research by the Indonesian Psychological Research Institute noted that adolescents who have close relationships with friend groups tend to be 40% more likely to engage in negative behaviors such as bullying and risky sexual behaviors. This peer influence factor is one of the leading causes of the increase in adolescent risky behaviors. However, sometimes attitudes and practices are not in line. Although adolescents' attitudes toward risky behaviors tend to be positive, their practices are often inconsistent. This phenomenon shows that even though adolescents know the risks, the social environment and peer pressure influence their actions. Awareness of danger is not always followed by the decision to behave amale and responsibly.

This research is necessary because the correlation of attitudes and actions obtained can be the basis for determining the proper intervention to improve positive health behaviors. Various data in community research, such as the peer approach, impact adolescents' positive behavior (Adam & Charles, 2024; Plourde et al., 2017; Roach, 2018). For example, a study in Ethiopia showed that peer-based intervention programs successfully increased awareness of reproductive health in adolescents by 40% (Busse et al., 2018). In addition, global research also revealed that when adolescents have a positive attitude towards health but lack the support of appropriate interventions, only 30% of them implement healthy behaviors in daily life. Therefore, appropriate interventions can bridge the gap between positive attitudes and aligned actions.

Exploring the relationship between the attitude items and the actions obtained can determine the actual problems in the field. In Batam City, adolescents who live in areas at risk of spreading sexually transmitted diseases the level of knowledge is still low. (Putri et al., 2022). Thus, researchers want to see whether adolescents' attitudes and practices align with their knowledge. The results of this study can later be used to make decisions about providing interventions to improve education on sexual and reproductive health.

Methods

This study uses a quantitative approach with a population consisting of all students of SMA Negeri 14 Batam. The sample was taken using a random sampling technique, and 179 students were selected as

research respondents. Random sampling ensures that every student in the population has an equal chance of being selected. Thus, by randomly selecting respondents, researchers can generalize a larger student population at SMA Negeri 14 Batam. In addition, this method also ensures that the sample is not affected by other external factors. The questionnaire used is designed based on a summary from previous research and modified to suit local characteristics and culture. The questionnaire was distributed online through Google Forms, which was distributed to students to facilitate data collection. The test was conducted on a small group of students before conducting the primary data collection to test the validity and reliability of the questionnaire. Each correct answer to the question is given 1 point with a maximum of 30 points. Before the research, the school had submitted and approved the licensing procedure. After obtaining permission from the principal, the researcher began distributing the questionnaire to all grade levels until the targeted sample size was met. Strict protocols were followed during the study to ensure participant confidentiality and protect their privacy.

First, all personal information collected from participants was anonymized and stored securely. Each respondent's identity was removed from the data set, and only aggregate data were used for analysis. Furthermore, participants were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time without consequences. Prior to completing the survey, participants were provided with clear instructions regarding the confidentiality of their responses, ensuring that the information shared would only be used for academic purposes and would not be disclosed to any third parties. These measures were following ethical standards for research involving human participants, as outlined by institutional review boards and relevant ethical guidelines. (APA, 2019). For data analysis, SPSS version 25 software with the chi-square test method was used to test the relationship between the variables studied. This test aims to examine the relationship between attitude variables and practice. Attitude and practice variables are categorized into two, namely, positive and negative. So specifically, this test helps determine the significance of the relationship between variables.

Results

Table 1. Distribution of Respondents Based on Characteristics (n=179)

Characteristic	Frequency N	Percentage (%)
Gender		
Male	70	(39.1)
Female	109	(60.9)
Age		
15	20	(11.2)
16	50	(27.9)
17	65	(36.3)
18	37	(20.7)
19	7	(3.9)
Grade		
X	42	(23.5)
XI	58	(32.4)
XII	79	(44.1)

Table 1 shows the distribution of sample characteristics: Out of 179 students, the majority are female (60.9%), while males comprise only 39.1%. The most common ages are between 16 and 17, comprising 64.2% of the sample. Most students are from grade XII, representing 44.1%, followed by grade XI at 32.4% and grade X at 23.5%. The characteristic data is simplified in the form of the following pie chart:

Table 2. Distribution of Respondents' Attitudes and Practices

Variable	Frequency N	Percentage (%)
Attitude		
Strongly disagree	1	(0.6)
Disagree	4	(2.2)
Agree	117	(65.4)
Strongly agree	57	(31.8)
Practice		
Not practice	73	(40.8)

Variable	Frequency N	Percentage (%)
Seldom	84	(46.9)
Sometimes	22	(12.3)
Often practiced	0	(0.0)

The distribution of attitudes based on Table 2 shows that most respondents agree (65.4%) or strongly agree (31.8%) with the statements in the survey. In addition, none of the respondents reported practicing the behavior frequently, with the majority rarely (46.9%) or never practicing it (40.8%)

Table 3. Distribution of Attitudes Based on Respondent Characteristics

Characteristic	Attitude							
	Strongly disagree		Disagree		Agree		Strongly agree	
	N	%	N	%	N	%	N	%
Gender								
Male	0	0.0	3	1.7	44	24.6	23	12.8
Female	1	0.6	1	0.6	73	40.8	34	19
Age								
15	0	0.0	0	0.0	18	10.1	2	1.1
16	1	0.6	2	1.1	27	15.1	20	11.2
17	0	0.0	2	1.1	44	24.6	19	10.6
18	0	0.0	0	0.0	22	12.3	15	8.4
19	0	0.0	0	0.0	6	3.4	1	0.6
Grade								
X	0	0.0	1	0.6	31	17.3	10	5.6
XI	1	0.6	2	1.1	40	22.3	15	8.4
XII	0	0.0	1	0.6	46	25.7	32	17.9

Table 3 shows that female respondents tend to agree more or strongly agree than men, with 40.8% agreeing and 19% strongly agreeing. By age, 17-year-olds showed the highest percentage of approval (24.6%), followed by 16- and 18-year-olds.

Table 4. Distribution of Practices Based on Respondent Characteristics

Characteristic	Practice					
	Not practice		Seldom		Sometimes	
	N	%	N	%	N	%
Gender						
Male	29	16.2	32	17.9	9	5
Female	44	24.6	52	29.1	13	7.3
Age						
15	10	5.6	8	4.5	2	1.1
16	22	12.3	21	11.7	7	3.9
17	25	14	43	19	6	3.4
18	15	8.4	19	10.6	3	1.7
19	1	0.6	2	1.1	2	2.2
Grade						
X	16	8.9	21	11.7	5	2.8
XI	28	15.6	26	14.5	4	2.2
XII	29	16.2	37	20.7	13	7.3

The frequency of practice varies based on characteristics. This data is shown in Table 4; it can be seen that most women seldom (29.1%) or never (24.6%) practice these behaviors, while men show a similar trend (17.9% rarely, 16.2% never). Grade XII students showed the highest level of sparse practice (20.7%), followed by grade XI students (14.5%).

Table 5. Correlation between Respondents' Attitudes and Practices

Variables	Practices						Total		Sig
	Often		Sometimes		Seldom				
Attitude	N	%	N	%	N	%	N	%	
Strongly disagree	1	1.4	0	0	0	0	1	0.6	0.04
Disagree	2	2.7	1	1.2	1	4.5	4	2.2	
Agree	55	75.3	52	61.9	10	45.5	117	65.4	
Strongly agree	15	20.5	31	36.9	11	50	57	31.8	
Total	73	100	84	100	22	100	179	100	

In this table of attitudes and practices correlation, respondents who answered "agree" and "strongly agree" were categorized into positive attitudes. A positive attitude means that respondents support the statement being evaluated. Meanwhile, the "often" and "sometimes" columns are grouped into the positive practices of respondents. This positive practice means that even though respondents do not always perform consistently, they try to implement it. The following is a picture of the relationship between the respondents' attitudes and practices.

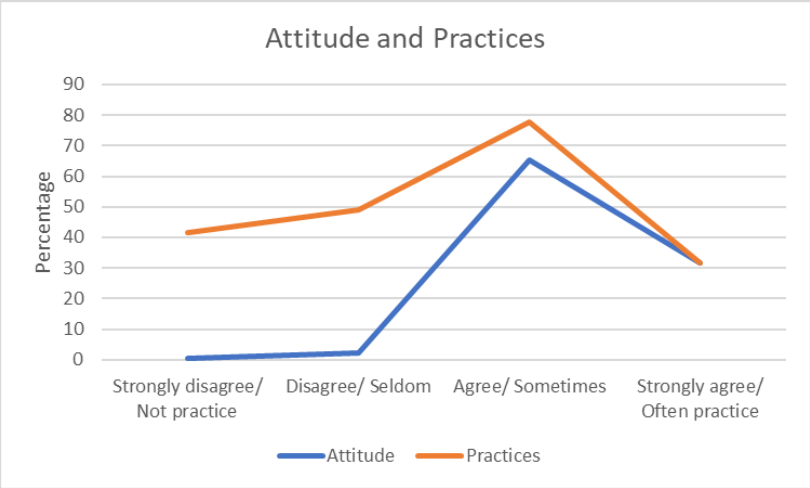

Figure 4. Attitude and Practices Graphics

Discussion

Attitude

The distribution of attitudes by gender shows that women tend to agree more strongly than men. Female respondents stated that a positive attitude towards pregnancy statements should not be considered a negative thing in society. Another statement that received many positive responses was that the source of reproductive health information should be obtained from health workers. 40.8% of women agreed, 19% strongly agreed, 24.6% of men agreed, and 12.8% strongly agreed. Regarding age, respondents aged 16 to 18 are more likely to show a positive attitude than younger or older respondents. The age of 17 is the largest group that agrees (24.6%) and strongly agrees (10.6%).

These findings are relevant to previous research, which found that female respondents, especially in late adolescence, tended to show more positive attitudes toward behaviors related to social values. (Wuttke et al., 2023). This may be due to more intensive social and educational factors in women, especially in the school environment. The study also showed that more positive attitudes were often found in grade XII students, who were generally more cognitively mature and ready to face greater responsibilities.

Regarding attitudes, this study showed that most respondents (65.4%) agreed with the variables studied, while 31.8% strongly agreed. These results are evidenced by adolescents' choosing positive attitudes towards sexual and reproductive health, which is the individual's responsibility. Adolescents agree that education about reproductive health is taught from an early age. Only a tiny percentage showed disagreement (2.2%) and strongly disagreed (0.6%). These results show that the respondents' positive attitude towards the research variables is quite dominant, meaning there is a reasonably high understanding or acceptance of the researched aspect.

Previous research on behavior change confirms that positive attitudes influence a person to take the following action. (Liu et al., 2012; O'Flynn O'Brien et al., 2021)However, this study concluded that a positive attitude does not always lead to respondents' actual practice. It is proven from who agrees to go to the health service to get information. However, many respondents still have not visited the service site.

Practices

Based on characteristics, male respondents tended not to practice (16.2%) and rarely practiced (17.9%) compared to women. However, of the overall respondents, more did not practice and were rarely in the results of the practice variables. By age, 17-year-old respondents showed the highest participation rate in practice but remained dominant in the category of rarely practicing (19%). Grade XII students also showed lower levels of participation in practice compared to their more positive attitudes, where 16.2% of them did not practice, and 20.7% rarely practiced. Respondents rarely and never visited health services, looking for sexual and reproductive health information sourced from health workers. In addition, they rarely communicate this topic to their families. Adolescents tend to rarely and never accept someone's gender identity that does not match their gender. This data is understandable because social norms are still in force in society.

Bandura's (1997) research on the self-efficacy theory explains this phenomenon. Although individuals have positive intentions and attitudes, their belief in their ability to perform such actions plays an important role in implementing the practice. (Bandura, 1976). In other words, even if respondents show a positive attitude, the practice may not materialize due to low self-confidence or lack of adequate support to facilitate the training. In addition, the existence of religious and social norms that apply in society is also a factor that can affect their decisions in practice.

On the other hand, only a few respondents reported that they often practiced practices related to research variables. 40.8% of respondents reported not practicing, while 46.9% rarely practiced, and only 12.3% occasionally practiced. None of the respondents routinely practiced regularly. Adolescents still feel reluctant to talk about sexual and reproductive issues with friends or parents. In addition, adolescents very rarely make visits to health services to check and seek reliable information on this topic.

This finding aligns with previous research that actions sometimes lead to obstacles, so they do not align with attitudes. (Koech et al., 2024; Saghi et al., 2016; Yadav et al., 2018). External factors such as a lack of social support or a less conducive environment can affect an individual's ability to practice their attitudes. In the context of adolescents, other studies have also found that despite good intentions, challenges in terms of accessibility and peer pressure often hinder the implementation of behaviors that align with their attitudes.

Correlation

The correlation table between attitudes and practices shows interesting relationship patterns. The category of practices often carried out is dominated by attitudes, with the categories of agreeing (75.3%) and strongly agreeing (20.5%). Meanwhile, respondents who did not do it were in the attitude of "disagree" (2.7%) and strongly "disagree" (1.4%). Respondents with the criterion of "sometimes" had a fairly high percentage of "agree" (61.9%) and "strongly agree" (36.9%). This result can be interpreted that respondents tend to take positive practices but have not done them consistently. Furthermore, in the "seldom" criterion, there was the most significant percentage of "strongly agreeing" attitudes (50%). These results show that positive practices do not accompany positive attitudes of adolescents. This indicates that there are obstacles or other factors to practice positively often.

This relationship between attitudes and practices shows that positive attitudes do not necessarily follow positive attitudes. For example, respondents who "strongly agree" mostly only carried out practices in the category of "sometimes" (36.9%) or even "seldom" (50%), which indicates that although they have a very positive attitude, positive practices have not been fully reflected in consistent concrete actions. Similarly, the group that "agreed" had a significant number in the "often" category (75.3%), which showed that agreeing attitudes were more often manifested in more consistent positive practices. The test results using an alternative test from chi-square obtained significant results with a p-value of <0.05, which is 0.04.

Previous research has identified barriers to practice in individuals with positive attitudes caused by limited resources or environmental support (Rajbanshi et al., 2022). For example, in the group that "strongly agreed" in this study but only showed the practice of "sometimes" or "seldom," these results support the previous finding that external factors often limit the application of the practices that respondents want (Seno et al., 2024).

Various factors have contributed to this gap, including a lack of knowledge about how to access services, social and cultural pressures, religious norms embraced, and concerns about the potential consequences of taking certain actions. Studies have shown that the gap between knowledge and practice is common in adolescent health behaviors, where appropriate health behaviors do not always accompany positive attitudes. (Bersamin et al., 2017; Poku, 2020). For example, adolescents decide to self-check for

sexually transmitted infections to health services. This visit is often a dilemma for adolescents because the negative stigma attached to society towards this action causes teenagers to become afraid and reluctant to do examinations. In addition, peer influence also plays a role in determining individual practice. The existence of peer pressure is often contrary to the beliefs of adolescents' attitudes.

Overall, the results of this test showed a tendency that positive attitudes could influence positive practices, but other factors may prevent respondents from doing so sustainably or frequently. Motivation, resources, or external constraints are most likely at play in this gap between positive attitudes and positive practices. Therefore, to improve the implementation of positive attitudes in healthy actions, there needs to be more in-depth interventions, including reproductive health education programs that continue with the selection of appropriate methods. In addition, the increase in social support and changes in social norms that limit adolescents' access to health services also need to be improved.

This study has a weakness, namely in terms of the number of samples, so the results can not represent the overall data of adolescents in Batam City. So that the next researcher can conduct a wider sample. In addition, the data obtained also has a bias because respondents are free to fill out questionnaires independently without supervision. Therefore, the peer mentoring method is possible so that adolescents are more open to expressing their attitudes and making decisions to practice without pressure from friends.

Conclusion

Based on the study's results, a significance value of 0.004 was obtained, which means that the attitude variable is related to the practice variable. Respondents' attitudes have shown positive results in some statements, but not practices dominate practice. The results may be related to culture, which is one of the factors influencing adolescent practices. It is recommended that education about sexual and reproductive health become a special program in schools so that continuous education will lead students to good health practices. Further research is to be able to link other variables related to sexual and reproductive health, such as the role of parents or peers.

Author Contributions

In this study, Angga Putri is responsible for the research concept and design and for coordinating the implementation of research at SMA Negeri Batam 14. Tukimin bin Sansuwito contributed to editing and compiling the script. The two authors collaborated in writing and revising the final manuscript. We thank SMA Negeri Batam 14 for its willingness to become a research site.

Funding

This research received no external funding.

Institutional Review Board Statement

Through research ethics approval from Universitas Andalas.

Acknowledgments

The researcher thanked the 14 Batam State High School for being willing to become a research site.

Conflicts of Interest:

The authors declare no conflict of interest.

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