

Risky reproductive health behavior and information access on adolescents: Mix-method analysis

Muhlisa Muhlisa¹, Ridwan Amiruddin, Apik Indarty Moedjiono, Suriah Suriah, Veni Hadju, Ummu Salmah, and Healthy Hidayanty

Faculty of Public Health, Universitas Hasanuddin, South Sulawesi 90245, Indonesia

ABSTRACT

***Corresponding author:**

Muhlisa Muhlisa
muhlisa.blues90@gmail.com

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Adolescence is a vital period of development marked by confusion, a range of emotions, and an understanding of adult behavior, the environment, enthusiasm, and an inclination to explore, particularly with drugs, alcohol, and sex. This study outlines adolescents' knowledge, attitude, access to information and risky behaviors related to reproductive health. This study employed a concurrent triangulation design, using mixed methodologies. The chi-square test was used to examine this form of quantitative study. The focus groups and in-depth interviews with teenagers in several agencies, along with the accompanying teachers and parents, provided qualitative information for this study. Adolescents had greater access to knowledge about reproductive health issues, but the majority were unable to make effective use of this information. Numerous risky habits, including drug use, also set off unsafe sexual behaviors. In contrast to their parents or professors, teenagers increasingly feel more at the ease of sharing stories with their friends. It is intended that parents and educators will act in a peer-like manner by imitating teenagers' social cues. Quantitative analysis revealed relationships among information access, attitude, knowledge, and reproductive behavior. Teenagers typically have higher knowledge of their reproductive health. However, the majority of them struggle to put this knowledge into practice, and as a result, many engage in risky sexual behavior out of curiosity.

Keywords: access to information; reproductive health; risk behavior; adolescents

1. INTRODUCTION

A crucial issue for young people's health is the availability of resources that support their growth. At the moment, it is believed that everyone has the right to information and communication services (Westberg et al., 2022). Additionally, 2.5 million girls under the age of 16 give birth each year, according to poll data. Middle-income nations account for most teenage births, with impoverished, uneducated, and rural areas more prone to teenage pregnancies (WHO, 2020).

Adolescence is characterized by confusion, and a tendency to try new things, particularly when it comes to sex, drugs, and alcohol (Nwagwu, 2007, 2008). One of the most notable and challenging issues is that of sexual

development (Witchel, 2018). During this stage of development, sexual desire increases, sexual values evolve, and sexual conduct begins (Moore and Rosenthal, 2006). Adolescence is a time of significant physical and emotional change as individuals navigate their way through the complexities of sexual maturation.

The internet is seen by many individuals as a promising source of information for younger generations. Some contend that the primary function of the internet is to disseminate information and advance public health, particularly in poor nations (Abiola et al., 2011; Edejer, 2000; Hailstone et al., 2005; Odutola, 2003). These individuals argue that the internet can bridge this knowledge gap and provide access to educational resources that may not be readily available in traditional settings. Additionally, they

believe that it can empower individuals to make informed decisions regarding their health and well-being by providing reliable and up-to-date information.

Numerous studies have revealed that young individuals are more prone to access the internet than their older counterparts are (Eysenbach and Diepgen, 1998). In particular, the technical characteristics of delicate health issues, including ease of access, anonymity, and non-punitive qualities, make it an appealing information source for young people (Borzekowski and Rickert, 2001; Gould et al., 2002; Gray et al., 2005). The accessibility and appeal of the internet to young people can be leveraged to bridge the information gap in poor nations, where traditional health communication methods may be limited. Utilizing the internet as a platform for disseminating public health information, especially on sensitive topics, we can empower young individuals in these nations to make informed decisions about their health and well-being.

Despite regional, national, and sex-specific differences in sexual initiation and activity (Chandra-Mouli et al., 2014), young people marry later, experience sexual activity earlier, and enter puberty earlier (Bearinger et al., 2007; Blanc et al., 2009; Chen et al., 2007). Premarital sex is a severe issue that can have both physical and psychological effects on teenagers. Risk of acquiring venereal disease, HIV/AIDS, which can impair fertility and even result in death, unwanted pregnancies, and abortion, which can result in fertility issues, uterine cancer, permanent impairment, and even death, as well as a high risk of getting cervical cancer (Kavanaugh and Anderson, 2013; Mustapha et al., 2017)

The unique aspect of this study is how the two approaches were used to address a single question, namely, how access to information affects adolescent reproductive health behavior. This study describes access to information and risky reproductive health behaviors among teenagers in light of the significant dangers and consequences of ignorance and barriers to receiving reliable information linked to reproductive health.

2. MATERIALS AND METHODS

2.1 Study design

Qualitative strand: A concurrent triangulation design and mixed-methods approach were employed in this investigation. The first stage of exploration was conducted using quantitative techniques, while the second stage was conducted using qualitative techniques. To carefully select people to respond to the questions given in the qualitative phase, emphasis was placed on the qualitative phase and its relationship with the findings of the first phase (Creswell, 2018). The first stage in gathering data and information is to use a qualitative method with an exploratory case study approach.

Quantitative strand: A quasi-experimental design and pre- and post-tests with a control group comprised the quantitative methodology. Quantitative research was conducted using a cross-sectional observational analysis.

2.2 Participants and study setting

Quantitative data were gathered by completing a questionnaire with questions on health literacy, knowledge, attitudes, beliefs, norms, and behaviors related to sexual activity. The Lemeshow sample formula was used to

calculate sample size. According to the calculations made using the Lemeshow formula, 180 adolescents from the last focus group discussion group who were selected from 7-8 students in 10 classes at the Junior High School in the city of Ternate were considered informants. A total of 180 people made up the entire sample, and each class 8's sampling procedure was drawing lots. A random-number generator was used to select the number of samples for each class. There were ten classes with a total of 18 samples from each class.

Respondents with knowledge in reproductive health were recruited as participants, including instructors from junior high schools 1 and 7 in Ternate, chairmen of the sexes, departments of population and family planning, and the city health office. In total, approximately 18 respondents were interviewed.

2.3 Data collection

A survey asking respondents directly about their literacy levels, knowledge, attitudes, behaviors, norms, and perceptions of premarital sex behavior was used to gather data. The phases of data collecting are enlisting enumerators and coordinating the implementation of research activities, getting in touch with the school to find research participants meeting the identified research participants, having all research participants understand the study's goals, deciding on the date and location of the research meeting, distributing questionnaires to research participants for immediate completion

Focus group discussions were used to gather qualitative information about knowledge, attitudes, behaviors, subjective norms, and views on the behavioral control of adolescent reproductive health, particularly premarital sex behavior. Interview questions were asked in accordance with predetermined interview criteria during focus group discussions.

2.4 Data analysis

Descriptive statistics were used to summarize the quantitative data and identify the interdependence of variables. The percentages based on each respondent's and each question's responses were then calculated using Chi-square, and SPSS Statistics version 27 was utilized for data analysis.

The researchers conducted theme analysis using qualitative data. Gaining familiarity with the data, developing preliminary codes, searching for themes, evaluating themes, and recognizing and labeling themes are all steps in the data-analysis process (Vaismoradi et al., 2013). To verify the accuracy of the data and demonstrate the validity of the qualitative data, the researchers employed member checking by emailing transcripts to the participants.

This study was approved by the Ethic Committee of Faculty of Public Health at Universitas Hasanuddin (approval number: 71122093021). Thus, respondents had the choice to participate in the study and the flexibility to drop out at any moment. Permission to record the discussion was obtained after the participants' consent was evaluated.

3. RESULTS

Quantitative data collection was carried out on 180 respondents, with univariate and bivariate analyses

performed. Of the 180 respondents, 50.6% were male and 49.4% were female, with the majority aged 13 years or older. Most participants engaged in risky behaviors (70.6%). Moderate knowledge was more prevalent (50.6%), along with moderate attitudes (54.4%). Access to information was good (52.8%). The quantitative results of this study are shown in Table 1.

The results of the bivariate analysis show that the knowledge variable ($p=0.040$), attitude ($p=0.002$), and access to information ($p=0.000$) are related to reproductive behavior. Table 2 shows bivariate analysis results with the chi-square test.

Young people need access to a forum that offers reliable, current, and entertaining information on reproductive health. The focus group discussion focused on the participants' understanding, attitudes, behaviors, subjective standards, and perceptions of behavioral control with reference to teenage reproductive health, particularly premarital sexual behavior. In response to the focus group discussion, the informant said that adolescent reproductive health was both physically and mentally sound, adding that women learned this information from the local health center, where they frequently participated in socialization. Some of them were dating and some were not when asked about dating.

Then, ask if it is appropriate or permissible for them to date to their age, which is between 12 and 15 years. They all said that this was not permitted because dating would distract 12- to 15-year-olds from their academic focus. When asked whether they believed dating to be risky, the next question was answered by a qualified maybe. Negative ideas are dangerously impacted by dating. Pregnant women may have unwed pregnancies, which can damage their mental health.

The majority of people receive information about reproductive health through websites and social media platforms, such as Facebook, Instagram, and TikTok. The importance of reproductive health information can be shown in the additional information it can provide. The

adolescent reproduction informants responded that their peers, forums, and health facilities were where they found information on reproductive health. Some people have not received this information. A few people responded that they were less interested because it was related to their memory capacity when asked whether the information conveyed through various media could be understood and whether it helped them learn about reproductive health so that they could access these media again, as it was very helpful.

Table 1. Distribution of respondents based on gender, age, knowledge, attitudes, behavior and access to information

Category	n	%
Sex		
Male	91	50.6
Female	89	49.4
Age		
12	7	3.9
13	103	57.2
14	55	30.6
15	15	8.3
Behavior		
Risky	53	29.4
Not Risky	127	70.6
Knowledge		
Poor	89	49.4
Moderate	91	50.6
Attitude		
Poor	82	45.6
Moderate	98	54.4
Access to information		
Moderate	85	47.2
Good	95	52.8
Total	180	100

Table 2. Factors associated with risky behavior in adolescents

Variable	Behavior				Total		Statistic test	
	Risky		Not risky		N	%	p-value	OR
	N	%	N	%				
Knowledge								
Poor	33	37.1	56	62.9	89	100	0.040	2.092
Moderate	29	31.9	71	78.1	91	100		(1.085-4.034)
Attitude								
Negative	34	37.3	48	52.7	91	100	0.002	2.945
Positive	19	19.9	79	80.1	99	100		(1.513-5.734)
Access to information								
Moderate	39	45.8	46	54.2	85	100	0.000	4.905
Good	14	14.7	81	85.3	95	100		(2.412-9.975)

4. DISCUSSION

Risky behaviors, such as premarital sex, are influenced by teenagers' knowledge of reproductive health (Yau et al., 2020). According to this study's findings, there is a strong link between knowledge and risky sexual activity among adolescents in Ternate. Of the youngsters, 37.1% were less aware of risky behaviors. Today, teenagers have unlimited access to all kinds of information at the local, national, and

international levels, without being constrained by time or geography, which has an effect on rising promiscuity. Good knowledge will influence reproductive health behavior, and increasing knowledge is very important to do to prevent harmful reproductive health behavior (Leekuan et al., 2022; Nursanti et al., 2022; Salam et al., 2016; Pasay-an et al., 2020).

Adolescent knowledge influences sexual behavior (Djannah et al., 2020). Adolescents generally have a

moderate understanding (53%) of the threats to reproductive health and preventative actions (Yau et al., 2020). This lack of understanding may be a result of the high prevalence of risky sexual behavior among sexually active Thai adolescents, which includes promiscuity, irregular condom use, and deliberate refusal to undergo HIV testing (Lolekha et al., 2015; Musumari et al., 2016).

According to this study, the majority of youth are aware that risky behaviors, such as dating, might result in unwanted pregnancies and mental health issues. Meanwhile, some youngsters hold the view that as long as they maintain a positive outlook, dating is not always risky. Adolescents are most likely to learn about reproductive health in the classroom, especially those who are still in school (Cortez et al., 2015). Suggests include sexual education in secondary school curricula to raise knowledge of the advantages of using sexual and reproductive health services and to motivate young people to use them.

Teachers at school are expected to be peers with the ability to teach in elementary areas of adolescent reproductive health. For teenagers to be more open, stay on track, and defend themselves from situations that could endanger their reproductive health, parents must always make the effort to interact with their children more frequently at home. Because they believe it is wrong to discuss or talk about reproductive health issues with their children, some parents hesitate to do so. Others worry that poor sexual behavior results from an understanding of reproduction (Alimoradi et al., 2019; Senderowitz, 2000; Widystari et al., 2015). Consequently, many teenagers turn to their peers, media, and pornography to gain knowledge about reproductive and sexual issues (Brewster et al., 2000). Adolescents can be shielded from issues of reproductive health, sexual violence, and sexual exploitation by having adequate awareness of their reproductive health (Janighorban et al., 2022; Shaw, 2009).

To prevent negative effects on teenagers, it is critical that they have sufficient knowledge of the risks involved and engage in preventative actions against those risks. To be able to make decisions that directly or indirectly affect their reproductive health, adolescents need to be well informed about the risks of premarital sex, protective behaviors, and their effects. One's actions (over-behavior) are greatly shaped by one's knowledge or cognitive theory. Some people take action because of their attitude and knowledge (Ajzen, 2011). As many as 37.3% of youths in Ternate city who have unfavorable attitudes engage in dangerous activities, according to the study's findings, which link attitudes and risky behavior. Apart from worrying about being pregnant and sick, teens have highly conservative attitudes regarding dangerous sexual actions. They were also concerned about hurting their parents (Yau et al., 2020). Many factors, such as culture, significant individuals, the media, one's own experiences, educational institutions, and religious institutions, have an impact on adolescents' premarital sexual views, which may result in unsafe sexual conduct.

It has been noted that supporting sexual and reproductive health and rights for young people, particularly adolescents, requires access to information, education, and services (Ngilangwa et al., 2016). Given their sexually active potential, adolescents require information about their sexual difficulties. The findings of

this study demonstrate a connection between teenagers' access to information and risky conduct; 45.8% of adolescents with adequate access to information engage in risky behavior. According to the findings of the focus groups and interviews, social media, medical facilities, and specific organizational entities are the main sources of information for teenagers. According to the information provided by the local government, socialization and instruction regarding reproductive health have been going smoothly in schools and medical facilities. According to one study, communication methods are significantly positively correlated with information, motivation, and behavioral abilities. Evidence from the literature demonstrates that high levels of behavior are related to correct knowledge (Seif et al., 2019).

Behavior related to reproductive health is directly influenced by the promotion of health, information accessibility, and stakeholder support. Parents influence their children's reproductive health behaviors; however, this influence needs to be supported through parental health promotion. Teenagers are expected to participate in counseling sessions and use resources related to reproductive health. Schools are expected to play a stronger institutional role through a planned counseling schedule, the supply of resources, and the creation of guidelines and modules for parents and adolescents. Parental knowledge plays a significant role in the relationship between parents and teenagers (Widyatutti et al., 2018). It is time to provide more information and awareness on adolescent and child sexual health. Approaching teenagers appears to be slowly changing the perception of the majority of people who believe that sexuality is a natural thing that individuals will find on their own after getting married and that it is prohibited to discuss it in public.

In my opinion, teenagers' risky sexual behaviors are influenced by their knowledge, attitudes, and access to information. While they are aware of these dangers, they struggle to use reproductive health information. Drug use and peer confusion contribute to inappropriate behaviors. Parents and teachers should emulate teenagers' behavior to predict peer behavior and prevent unsafe sexual behavior. By understanding teenagers' knowledge, attitudes, and access to information regarding reproductive health, parents and teachers can effectively communicate and provide accurate information. Additionally, creating a supportive environment in which teenagers feel comfortable discussing their concerns and seeking guidance can further prevent risky sexual behaviors.

5. CONCLUSION

Teenagers' risky sexual behaviors are influenced by their knowledge, attitudes, and access to information. Teenagers are already aware of the dangers of dangerous behavior, and those who decide against dating usually do so unsupervisably by their parents. However, it remains challenging to find information about reproductive health in medical settings and social media. Adolescents have easier access to information on reproductive health issues, but the majority are unable to make appropriate use of this information. Drug use is a dangerous habit that can result in inappropriate sexual behavior. Nowadays, teenagers confide in their friends more frequently than their parents

or teachers do. It is hoped that parents and teachers will be able to predict peer behavior by emulating teenagers. Teenagers frequently possess a greater understanding of sexual and reproductive health, but the majority find it difficult to put this knowledge into practice, which causes many of them to engage in unsafe sexual behavior out of curiosity.

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