

Knowledge and Access to Adolescent Reproductive Health Information in Indonesia

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ABSTRACT

Background: According to research, Indonesia faces challenges as a result of a low level of knowledge of adolescent reproductive health (ARH) due to limited exposure to information media. Access to information and knowledge among adolescents influences their risky behaviors towards ARH. This quantitative and cross-sectional study aims to examine the relationship between ARH behaviors and access to information and knowledge among unmarried Indonesian adolescents aged between 10 and 24, both male and female.

Method: This study collected secondary data from the 2019 Program Performance and Accountability Survey (PPAS). The independent variables were access to information and knowledge about ARH, whereas the dependent variables were ARH behaviors. In addition, the confounding variables were adolescent characteristics (i.e., age, gender, and level of education) and family characteristics (i.e., social economy and location of residence). The data were analyzed using a multivariate logistic regression statistical test.

Results: The findings revealed a significant relationship between ARH behaviors and access to information about ARH from various information media (p -value = 0.001) as well as between ARH behaviors and knowledge of ARH (p -value = 0.001). The findings suggested that health promotion for ARH should be enhanced by providing access to information from various social media commonly used by adolescents, which can increase knowledge about ARH and influence adolescent behaviors toward good reproductive health.

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INTRODUCTION

Adolescence is a transitional period between late childhood and early adulthood.¹ According to the World Health Organization (WHO), adolescents made up 18% of the world's population, or 1.2 billion people.² In Indonesia, according to the 2020 census, adolescents aged between 10 and 19 made up 17.3% of the total population.³ During this period, adolescents experience physical and psychological changes, some of which are sexual and reproductive changes.¹ The Global School-Based Student Health Survey (GSHS) revealed that 3.3% of adolescents aged between 15 and 19 had AIDS, with only 9.9% of women and 10.6% of men having comprehensive knowledge about HIV/AIDS. In addition, 0.7% of women and 4.5% of men had had premarital sex. These findings suggested risky behaviors and reproductive health problems among adolescents.⁴ Access to information plays a crucial role in influencing adolescent behaviors. Lack of access to accurate information and proper understanding can lead to risky

behaviors such as premarital sex, early marriage, and unintended pregnancy.⁵

According to the PPAS 2019 in Indonesia, the level of adolescent knowledge about reproductive health remained low. This is evident from the low index of adolescent knowledge about topics such as fertility, HIV/AIDS, sexually transmitted infections (STIs), the perfect timing for marriage and childbirth, adolescent reproductive health (ARH), and the effects of drugs and alcohol.⁶ Research shows that many adolescents act and behave on the contrary to the Triad ARH, making them vulnerable to reproductive health problems. The Triad ARH includes three risks to adolescent reproductive health, namely sexuality, HIV/AIDS, and drugs (e.g., narcotics, alcohol, psychotropics, and other addictive substances). These issues are of great concern to the Indonesian government. Given that adolescents are characterized by high curiosity and susceptibility, they are often exposed to inaccurate information.⁷

The lack of availability and understanding of information about ARH leads adolescents to engage in

risky behaviors such as premarital sex, early marriage, and unintended pregnancy.⁷ A study provided data on the increased risk of sexual behavior in adolescents.^{8,9} Without access to good knowledge, it is difficult for them to avoid risky sexual behaviors because they do not have adequate information. As a result, their views, attitudes, and behaviors in relation to reproductive health and its potential risks for their future remain the same.¹⁰ Lack of knowledge about premarital sex can predispose adolescents to bad attitudes and influence their reproductive health behaviors.¹¹

Previous studies found that there is a relationship between access to information and ARH behaviors.^{7,12} However, a study in the Luhur Sulaiman Islamic Boarding School, Tulungagung found that knowledge about ARH did not influence ARH behaviors.¹³ Therefore, the researchers aim to examine the relationship between knowledge of and access to information about ARH among adolescents in Indonesia using the data from the 2019 Program Performance and Accountability Service (PPAS).

METHOD

This study used a quantitative analysis with a cross-sectional approach. This study used secondary data from the 2019 PPAS. PPAS is an annual nationwide survey conducted in all provinces in Indonesia. The survey aims to measure the achievement of indicators and strategic targets for the population, family planning, and family development programs with a particular focus on adolescents. The data collection for the 2019 PPAS took place at different times across provinces, ranging from June 10 to September 10, 2019. The sample for this study was selected using stratified multistage sampling. The sample of adolescents was taken from the interview respondents of the 2019 PPAS with a total of 69,915 families, 69,662 of which were successfully interviewed. From this sample, this study focused on unmarried female and male adolescents aged between 10 and 24 with a total of 41,788 adolescents.

The data analysis in this study included several types of analysis. Univariate analysis was conducted to examine categorical data variables. The results of the univariate analysis were presented in the form of descriptive statistics. Bivariate analysis using chi-square ($p\text{-value} = 0.25$) was conducted to determine the relationship between the independent variables (i.e., access to information and knowledge of adolescents) and the confounding variables (i.e., characteristics of adolescents and families) with the dependent variable (i.e., ARH behaviors). Multivariate analysis using a logistic regression test with a significance level of 5% was conducted to determine the relationship between

multiple independent variables with the dependent and confounding variables. The data analysis in this study followed a similar study in Kenya.¹⁴ This study received ethical approval from the Health Research Ethics Committee of the Polytechnic of Health, the Ministry of Health, Bengkulu No. KEPK.M/110/03/2022.

RESULTS AND DISCUSSION

The results of the analysis show that several things were presented in tabular form and explained using descriptive statistics. Table 1 depicts the access to information resources and knowledge on adolescent reproductive health in Indonesia. Table 2 shows that adolescent respondents obtained information sources based on the amount of information that respondents had accessed about reproductive health, namely: most (70.4%) access to information from friends/neighbors/relatives, almost half (34.5%) access to information from mothers, a small part (3.4%) from fathers, most (70.7%) teacher resources, almost half (26.9%) of medical workers, almost half (33.8%) of community organizations, almost half (26.6%) are sources of religious leaders or community leaders, most (74.6%) are sources of formal education, and a small part (5.6%) are sources of non-formal education.

Table 3 shows the number of youth information media access in the form of a small portion (6%) access to radio information media, almost all (79.8%) media access to television, a small part (13.9%) access to newspaper media, a small (8.2%) access to magazine/tabloid media, a small part (13.4%) access media pamphlets/leaflets/brochures, a small part (5.3 %) flipchart media access, almost some (31.7%) have access to poster media, almost some (37.1) access to Street banner affixed on the both ends media, some (12.9%) access to banner media, some (18.5%) access to billboards, a small part (3.6%) access to exhibition media, almost half (40.4%) access to website/internet media, a small part (10%) access Mupen KB media, and a small part (8.9%) access media information through murals/wall painting/gravity.

Based on Table 4 it can be seen the results of the description of adolescent knowledge about reproductive health which is in accordance with the basic concept of reproduction in Indonesia, namely: almost all (94%) adolescents have correct knowledge about women's fertile period, almost some (47.1%) have correct knowledge of women who have had menstruation can get pregnant only by having sexual intercourse once, a small proportion (11.6%) have the correct knowledge of the age women should get married, almost some (33.6%) have the correct knowledge of the age that men should marry, the majority (65.4) % have the correct knowledge of the age when planning to marry, a small portion (6.6%) have the correct

knowledge of the age women should have their first child, a small portion (25.3%) have the correct knowledge of the minimum/lowest age limit for women to give birth, a small proportion (13.3%) have correct knowledge about the maximum/highest age limit for women to give birth, almost some (48%) have correct knowledge about

Consequences of Getting Married at a Young Age, almost all (80.7%) have correct knowledge of the consequences arising from consuming drugs, almost part (47.7%) know true knowledge of the dangers of HIV-AIDS, almost part (42.2%) know correct knowledge about how to avoid HIV-AIDS.

Table 1. Description of access to information resources and knowledge on adolescent reproductive health in Indonesia

Variables	n	%
Age		
Late Adolescents (20-24 years old)	6,919	16.6
Middle Adolescents (15-19 years)	15,199	36.4
Early Adolescents (10-14 years)	19,670	47.1
Gender		
Female	19,615	46.9
Male	22,173	53.1
Education level		
University Education	3,163	7.6
Complete-Post Secondary Education	27,122	64.9
Primary Education	11,503	27.5
Area of residence		
Urban	18,752	44.9
Rural	23,036	55.1
Socioeconomic		
Poor	12,399	29.7
Middle	19,023	45.5
Richer	10,366	24.8
Exposure to reproductive health information		
No Access	1,900	4.5
Access	39,888	95.5
Number of media information sources		
> 3	13,272	31.8
1-3	26,616	63.7
None	1,900	4.5
Knowledge of reproductive health		
Good	3,594	8.6
Medium	9,508	22.8
Less	28,686	68.6
Adolescent reproductive health behavior		
Positive	24,936	59.7
Negative	16,852	40.3
Total	41,788	100

Table 2. Description of access to information resources on adolescent reproductive health in Indonesia

Sources of Information	Yes		No	
	n	%	n	%
Friends/neighbors/siblings/relatives	29,434	70.4	12,354	29.6
Mother	14,422	34.5	27,366	65.5
Father	1,413	3.4	40,375	96.6
Teachers	29,552	70.7	12,236	29.3
Medical workers	11,248	26.9	30,540	73.1
Community organizations	14,132	33.8	27,656	66.2
Community/religious leaders	11,133	26.6	30,655	73.4
Formal education	31,192	74.6	10,596	25.4
Non-formal education	2,341	5.6	39,447	94.4

Table 3. Description of access to information media on Adolescent Reproductive Health (ARH) in Indonesia

Sources of Media Information	Yes		No	
	n	%	n	%
Radio	2,513	6.0	39,275	94.0
Television	33,337	79.8	8,451	20.2
Newspaper	5,805	13.9	35,983	86.1
Magazines/Tabloids	3,410	8.2	38,378	91.8
Pamphlets/Leaflets/Brochures	5,587	13.4	36,201	86.6
Flipcharts	2,206	5.3	39,582	94.7
Posters	13,250	31.7	28,538	68.3
Street banner affixed on both ends	15,508	37.1	26,280	62.9
Banners	5,386	12.9	36,402	87.1
Billboard	7,734	18.5	34,054	81.5
Exhibition	1,494	3.6	40,294	96.4
Website/Internet	16,879	40.4	24,909	59.6
Mupen KB (family planning service unit car)	4,160	10.0	37,628	90.0
Mural/Wall Painting/Gravity	3,720	8.9	38,068	91.1

Table 4. Description of knowledge of Adolescent Reproductive Health (ARH) in Indonesia

Knowledge of Adolescent Reproductive Health	True		False	
	n	%	n	%
Women's fertility period	39,274	94.0	2,514	6.0
Women already menstruating can get pregnant only by having sexual	19,692	47.1	22,096	52.9
Age women should get married	4,834	11.6	36,954	88.4
Age men should get married	14,032	33.6	27,756	66.4
Age planning to get married	27,338	65.4	14,450	34.6
Age women should have their first child	2,763	6.6	39,025	93.4
The lowest limit for women to give birth	10,570	25.3	31,218	74.7
The highest limit for women to give birth	5,571	13.3	36,217	86.7
Consequences of getting married at a young age	20,073	48.0	21,715	52.0
Consequences of consuming drugs	33,735	80.7	8,053	19.3
Knowing the dangers of HIV-AIDS	19,948	47.7	21,840	52.3
Knowing ways to avoid HIV-AIDS	17,633	42.2	24,155	57.8

Based on Table 5, the results show that there are 6 variables related to Adolescent Reproductive Health (ARH) behavior, namely: access to information on adolescent reproductive health (both from exposure and many sources/media), adolescent knowledge about reproductive health, characteristics of adolescents by age, gender, education level, and family characteristics in the form of socio-economic. Of the several variables studied, it is designed to identify any behavior related to reproductive health. Then the results of further analysis of adolescents who were exposed to or were said to be at risk were 5.431 times having negative behavior towards adolescent reproductive health compared to adolescents who were not exposed to access to reproductive health information (OR 5.431; 95% CI:3.839-7.684).

Similarly, adolescents who only access 1-3 sources/media of information have a risk of 6.302 times negative behavior (OR 6.302; 95% CI:4.362-9.106) compared to adolescents who have more than 3

information sources and who do not access any sources/media risk information 4.363 times behave negatively. This states the importance of access to information exposure regarding adolescent reproductive health with many sources/media of information with more than 3 sources/media. Adolescents who have moderate knowledge are at 1,856 times risk of negative behavior on adolescent reproductive health compared to adolescents who have good knowledge (OR 1.856; 95% CI:1.701-2.026), while adolescents with less knowledge have 1.613 times risk of negative behavior on adolescent reproductive health (ARH).

It can be seen that the characteristics of middle adolescents aged 15-19 years are at risk of negative reproductive health behavior 17.038 times compared to late adolescents, and early adolescents aged 10-14 years are at risk of negative reproductive health behavior as much as 5.888 times. Then, male adolescents are at risk of 1.228 times negative behavior toward adolescent

reproductive health when compared to female adolescents. Adolescents with secondary education levels are at risk of 2.318 times negative behavior towards adolescent reproductive health, and adolescents with a basic education level (less than junior high school) are at risk of 2.141 times negative behavior towards adolescent reproductive health. The results of this study indicate that the socio-economic characteristics of adolescent families who are in the richer middle level are at risk for negative adolescent reproductive health behavior, with a middle socioeconomic risk of 1.183 times negative behavior compared to social.

The respondents of this study were adolescents whose age, gender, and level of education were analyzed. These characteristics can influence ARH behaviors as evidenced by the results of a study that showed a significant relationship between adolescent characteristics and reproductive health behaviors (p-value = 0.001). This is supported by previous research on factors that can influence premarital sexual behavior among adolescents, namely gender, education, and the like.¹⁷ Research also shows that age, education, and gender are associated with

cervical cancer, with women being the majority and its risk increases with age.¹⁴

In addition, mid-adolescents aged between 15 and 19 are faced with a greater risk of engaging in negative reproductive health behaviors compared to early and late adolescents. There is a relationship between age and ARH behaviors due to the fact that mid-adolescents tend to be interested in having a relationship with the opposite sex and make mistakes that can raise concerns, especially regarding ARH behaviors. In contrast, early adolescents are still shaping behavior, whereas late adolescents have a better understanding due to their broader knowledge and experience.¹⁸ These findings are in line with research showing that most mid-adolescents start to have romantic relationships and explore sexual activities.¹⁹ In this period, they develop a stronger desire to date and have sexual fantasies compared to early adolescents who pay more attention to their physical conditions. Meanwhile, late adolescents tend to be more selective and have better self-image and responsibility towards themselves.²⁰

Table 5. Modeling the association of access to Information and knowledge with Adolescent Reproductive Health behavior

Variables	B	P-value	OR (95% CI)
Access to exposure			
No Access	-	-	1
Access	1.692	0.001	5.431 (3.839-7.684)
Access to multiple sources of media information			
> 3	-	0.001	1
1-3	1.841	0.001	6.302 (4.362-9.106)
None	1.473	0.001	4.363 (3.027-6.289)
Knowledge			
Good	-	0.001	1
Moderate	0.619	0.001	1.856 (1.701-2.026)
Less	0.478	0.001	1.613 (1.520-1.712)
Age			
Late Adolescents (20-24 years old)	-	0.001	1
Middle Adolescents (15-19 years)	2.835	0.001	17.038 (15.656-18.542)
Early Adolescents (10-14 years)	1.773	0.001	5.888 (5.543-6.254)
Gender			
Female	-	-	1
Male	0.206	0.001	1.228 (1.169-1.291)
Education Level			
University Education	-	0.001	1
Complete-Post Secondary Education	0.841	0.001	2.318 (2.051-2.620)
Primary Education	0.761	0.001	2.141 (1.987-2.308)
Area			
Urban	-	-	1
Rural	0.016	0.551	1.016 (0.964-1.071)
Socioeconomic			
Poor	-	0.001	1
Middle	0.168	0.001	1.183 (1.105-1.266)
Richer	0.112	0.001	1.118 (1.118-1.189)

Male and female adolescents are different in terms of reproductive health, which influences their reproductive health behaviors. In this study, male adolescents in Cirebon City tended to exhibit a higher prevalence of negative risk behaviors in relation to reproductive health compared to female adolescents. This is probably due to the belief that boys and girls are very different. For example, women face a greater risk of unintended pregnancy through casual sex, leading to women prioritizing their reproductive health more than men.²¹ There is a tendency for male adolescents to deviate from ARH behaviors, as reflected in more permissive norms associated with male adolescents compared to female adolescents.²² This is supported by previous research showing that male adolescents are involved in risky reproductive health behaviors, such as watching pornography which can lead to a desire for sexual activities.²³

In addition, adolescents who are in elementary or secondary education tend to face a greater risk of negative reproductive health behaviors. This is evident in the transitional period of adolescents who enter formal education. It was found that the more mature a person is, the better their cognitive abilities and problem-solving skills. This is because age plays a significant role in shaping a person's knowledge.²⁴ Meanwhile, another study found that during junior high or senior high school education, adolescents start to actively engage in reproductive health activities and have high curiosity, from puppy love to dating to show their affection and give their attention, which can deviate from their sexual orientation. As a result, it is crucial to have an understanding and increase their knowledge about reproductive health.²⁵

This study also showed that family characteristics, namely socioeconomic backgrounds, were associated with ARH behaviors (p-value = 0.001). Adolescents from upper-middle socioeconomic backgrounds were at a greater risk of negative behaviors compared to adolescents from lower socioeconomic backgrounds. This finding is in line with research conducted in Bali which suggested that family socioeconomic backgrounds were associated with juvenile delinquency, including ARH.²⁶ Another study showed that adolescents from middle socioeconomic backgrounds were more likely to undergo cervical screening compared to those from poor socioeconomic and less educated backgrounds.¹⁴ Furthermore, adolescents from higher socioeconomic backgrounds tended to have a greater exposure to and influence from Western and modern lifestyles such as using illegal drugs, drinking alcohol, and having free sex. Therefore, it is important to pay attention to adolescents from middle to upper socioeconomic

backgrounds because their luxurious and permissive lifestyles can lead to a lack of gratitude and a tendency to take things for granted. This can also lead to an antisocial environment. However, research conducted in Ambon suggested that adolescent sexual behaviors were not associated with socioeconomic backgrounds, but their attitudes and personality traits.²⁷

On the other hand, the other family characteristics, namely locations of residence, did not show any significant relationship with ARH behaviors (p-value = 0.551). This finding is in line with previous studies which suggested that locations of residence are not associated with ARH behaviors.²⁸ Furthermore, it was found that adolescents living in rural areas tend to lack an understanding of reproductive health compared to adolescents living in urban areas who tend to have better knowledge of factors influencing sexual behaviors.²⁹ However, in spite of the accessibility of information in urban areas, many adolescents still encounter misinformation about reproductive health.³⁰ As a result, specific strategies are necessary to address health behaviors among hard-to-reach populations. This can involve policies and regulations that can influence community, institution, and organization, as well as individual interactions with families, peers, neighbors, health workers, and others.¹⁵

Furthermore, there was a significant relationship between access to information and ARH behaviors (p-value = 0.001). This suggested that adolescents with easier access to information had a 5.432 times higher risk of negative ARH behaviors. Adolescents who had access to up to three sources or information media faced a 6.316 times higher risk of ARH behaviors compared to those who did not have access to many sources or information media, which was a 4.371 times higher risk of ARH behaviors. Negative behaviors can be influenced by various media, friends, and environments. Today, the easy access to mass media and the amount of information available in printed, electronic, and online formats will have a significant impact on adolescent behaviors, including their reproductive health problems.³¹

The research conducted in West Jakarta suggested that adolescents who accessed information from more than three sources had better knowledge that influenced their behaviors compared to those who accessed information from less than three sources.⁹ However, the ease of internet access and technological advancements have brought negative consequences such as enabling adolescents to access illegal pornographic sites. If adolescents do not have the proper knowledge to process the information, they will satisfy their curiosity by having premarital sex.³² Moreover, adolescents who lack basic information about ARH will have limited access to

reproductive health services.³³ Therefore, the media plays a crucial role in disseminating inaccurate information. Increased exposure to information from the media about reproductive health encourages adolescents to actively seek information from various sources.³⁴ This finding is in line with the research conducted in North Sumatra which suggested that there is a relationship between exposure to information about ARH and the level of knowledge of adolescents about ARH.³⁵ By providing accurate information, it is hoped that adolescents will have the necessary knowledge to behave responsibly in accordance with their reproductive health.

The research conducted in Ponorogo suggested that the sources of information were an important factor to consider. Adolescents can obtain information from various sources, such as movies, videos, books, websites, and their friends.³⁶ However, very few adolescents receive education related to sexual and reproductive health from their teachers or parents. Instead, they are more open to their friends.³⁷ This is in line with the research conducted in Bengkalis suggested that mass media and friends brought negative impacts on adolescent sexual behaviors at the State Senior High School 1 of Siak Kecil. If they do not get accurate information about reproductive health from health workers, they will look for information from alternative sources, such as friends, pictures, or movies, that can be misleading. Obtaining information from the media can have both positive and negative impacts on adolescent behaviors.³⁸ The media that provide accurate information will positively influence adolescents, and vice versa.⁷ Therefore, parties who have knowledge about reproductive health, including parents, teachers, health workers, and others, need to give guidance so that adolescents are not confused or encounter familiar terminologies when accessing reproductive health information on the internet.³⁹

The research in West Jakarta suggested that health education and promotion played important roles in adolescents. However, there were challenges in terms of knowledge, information, and education about reproductive health, low attitudes, and behaviors related to reproductive health, lack of support from family, friends, schools, environments, and societies, as well as policies. Therefore, health promotion efforts should be able to identify the needs of adolescents related to reproductive health by providing accurate health information from more than three sources or information media.⁴⁰ Knowledge plays a crucial role in influencing individual actions. Therefore, it is essential to improve the understanding of the younger generations, especially adolescents. ARH education for adolescents should aim to provide knowledge about reproductive anatomy and physiology as well as various reproductive issues such as

pregnancy, STIs, HIV/AIDS, unintended pregnancy and its complications, as well as overall development and behavior necessary to maintain a healthy reproductive function (mentally, physically, spiritually, and economically).⁴¹ This is consistent with previous research which suggested that there is a significant relationship between knowledge and ARH behaviors (p-value = 0.001). Many factors influence adolescent knowledge about reproductive health, which also influences their positive sexual behaviors.⁴² This is reflected in research conducted in India which suggested that education was positively associated with good knowledge about reproductive health, which is reflected in the frequency of media usage.¹⁵

The research conducted in Samarinda suggested that adolescents who gained knowledge about ARH were able to avoid negative behaviors such as having free sex.⁴³ Sexual education plays a crucial role in increasing knowledge so that adolescents are able to act reasonably and responsibly in relation to their sexual behaviors. In contrast, inaccurate information can lead adolescents to misunderstand and misperceive sexual activities.⁴⁴ From the analysis of the data in this study, it was found that adolescents with insufficient knowledge were at risk of negative ARH behaviors. In particular, insufficient knowledge would influence their sexual behaviors.⁴⁵ Conversely, their knowledge was also influenced by the sources of information.⁴⁶ In other words, the perspectives of adolescents towards reproductive health would encourage them to behave according to their best knowledge.⁴⁷ Moreover, deviations in sexual behavior among adolescents can be caused by a lack of knowledge and guidance about ARH. ARH education is a suitable promotive and preventive effort to instill moral values and increase the knowledge and attitudes of adolescents.⁴⁸ The strength of this study lies in the accessibility of data regarding reproductive health, whereas the limitation includes the number of data that were analyzed in terms of variables and respondents. Nevertheless, the data are still relevant because PPAS is only done every five years.

According to the National Population and Family Planning Board (BKKBN), reproductive health programs aim to equip teenagers or younger generations with knowledge, awareness, attitudes, and responsible behavior for a healthy reproductive life. This is achieved through advocacy, empowerment, promotion, IEC (information, education, and communication), counseling, and services for adolescents dealing with specific problems.⁴⁹ To prevent reproductive health problems, increasing the reproductive health knowledge of adolescents requires clear communication and delivery of IEC materials about the causes and consequences of sexual behaviors, actions to take, and service recommendations.⁵⁰ Adolescent risk

behaviors are behaviors that are believed to have negative impacts on and risks to health. For example, inadequate knowledge about reproductive health (e.g., STIs), engaging in intimate relationships, watching inappropriate content that triggers negative sexual behaviors, using premarital contraception, early marriage, and unsafe abortion.⁵¹ Unfortunately, many adolescents are victims of misunderstanding about risky sexual behaviors at a young age, which can result in unintended pregnancy and early marriage.⁵²

Reproductive health behaviors are influenced by affection and love, which are associated with intimate relationships with the opposite sex and a strong desire for a partner. Adolescents are responsible for making decisions about their reproductive health. The results of the univariate analysis showed that the majority (59.7%) of adolescent behaviors were positive compared to almost negative reproductive health behaviors (40.3%). L. Green stated that behavior is influenced by three factors, namely predisposing factors (i.e., knowledge, attitude, belief, value, etc.), supporting factors (i.e., physical environment, e.g., facilities, and health), and driving factors (i.e., attitudes and behaviors of health workers or other professionals).⁷

CONCLUSION

There is an increase in the number of maternal deaths when compared to before the pandemic. Factors that increase the risk of maternal death come from direct and indirect factors. Indirect factors such as age, health facility access, inadequate tools, and health services, access to knowledge, cultural practice, and poverty. Direct factors are comorbidities such as obesity, diabetes, cardiovascular disease, hypertension, and immune impairment. Countries need to address and prevent severity in mothers with COVID by increasing access to and early detection of the disease. Further research needs to explore programs carried out by countries to address the increasing maternal mortality rate and examine effective solutions.

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