

Exposure to Reproductive Health Information and Behavior in Islamic Boarding School, Sinjai District

Keterpaparan Informasi dan Perilaku Kesehatan Reproduksi di Lingkungan Pesantren, Kabupaten Sinjai

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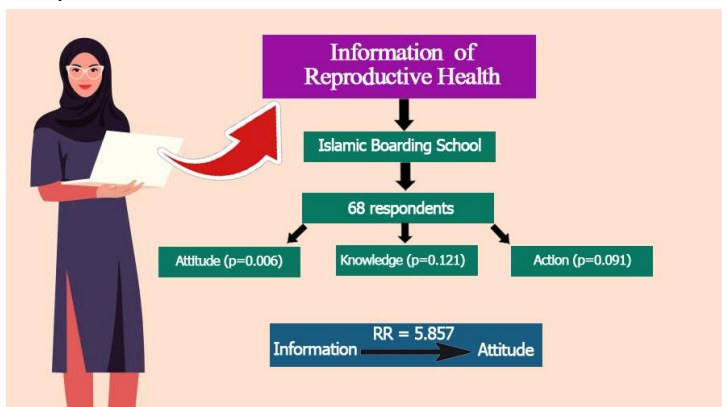
Abstract

Improving reproductive health for adolescents is one of the efforts to improve the quality of human life which will increase the human resource index in the future. This study aims to determine the effect of information exposure on adolescent reproductive health behavior. This study used a quantitative research method with a cross sectional approach to female students at the Darul Ihsan Islamic Boarding School, East Sinjai District, Sinjai Regency with a total of 68 respondents. The results showed that the information exposure variable had a relationship with attitude ($p=0.006$) then what was not related was the knowledge level variable ($p=0.121$) and the action variable ($p=0.091$). The results of the multivariate analysis showed that information exposure had an influence on attitudes with a 5.857 chance of reproductive health behavior for young female students at Islamic boarding schools. This study provides information to young female students to be tabayun to all health information obtained and to increase their knowledge regarding reproductive health. Good health information in terms of maintaining cleanliness will be a very important asset during adolescence.

Abstrak

Peningkatan kesehatan reproduksi bagi remaja merupakan salah satu upaya peningkatan kualitas hidup manusia yang akan meningkatkan indeks sumber daya manusia di masa yang akan datang. Penelitian ini bertujuan untuk mengetahui pengaruh keterpaparan informasi terhadap perilaku kesehatan reproduksi remaja. Penelitian ini menggunakan metode penelitian kuantitatif dengan pendekatan Cross Sectional pada santriwati di Pondok Pesantren Darul Ihsan Kecamatan Sinjai Timur Kabupaten Sinjai berjumlah dengan 68 responden. Hasil penelitian menunjukkan bahwa variabel keterpaparan informasi memiliki hubungan dengan sikap ($p=0.006$) kemudian yang tidak berhubungan adalah variabel tingkat pengetahuan ($p=0.121$) dan variabel tindakan ($p=0.091$). Hasil analisis multivariat menunjukkan bahwa keterpaparan informasi memiliki pengaruh terhadap sikap dengan peluang 5.857 terhadap perilaku kesehatan reproduksi remaja santriwati di Pondok Pesantren. Studi ini memberikan informasi kepada remaja santriwati agar bersikap tabayun atas segala informasi kesehatan yang diperoleh serta meningkatkan pengetahuannya terkait kesehatan reproduksi. Informasi kesehatan yang baik akan dalam hal menjaga kebersihan akan menjadi aset sangat penting pada masa remaja

Graphical Abstract



Keyword

adolescent behavior; boarding schools; female; students; reproductive health

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INTRODUCTION

Adolescence is an important phase for development in later life stages. According to WHO, adolescents are the population with an age period of 10-19 years, according to Regulation of the Minister of Health of the Republic of Indonesia Number 25 of 2014, adolescents are residents in the age range of 10-18 years. Adolescence is a transitional period between childhood and adulthood. Adolescents at this stage have not yet reached the stage of mental and social maturity so that adolescents must face a lot of conflicting emotional and social pressures according to (Permatasari & Suprayitno, 2021). It is estimated that the number of youth groups is around 1.2 billion or 18% of the world's population. Meanwhile, in Indonesia, the results of the 2021 National Socio-Economic Survey (Susenas) show that around 64.92 million people or nearly a quarter of Indonesia's population (23.90 percent) are in the teenage age group. Meanwhile, based on gender, the percentage of male adolescents was slightly higher than female adolescents (24.04 percent compared to 23.76 percent). Furthermore, when viewed by age group, almost 80 percent of adolescents or 4 out of 5 adolescents are aged 19-30 years with details of 39.80 percent being aged 19-24 years and 39.33 percent belonging to the range of 25-30 years (Israwati, 2016; Theresia & Widayasi, 2018).

Based on the results of this population projection, it shows that the teenage population will continue to increase until 2030. This high population must be balanced with efforts to improve the quality of human resources, which is called the concept of reproductive health. Improving reproductive health for adolescents is an effort to improve the quality of human life which will increase the human resource index in the future (Yazdkhasti et al., 2015).

Reproductive health is a state of complete physical, mental and social well-being, not solely free from disease or disability in anything related to the reproductive system, its functions and processes. One of the factors that affect reproductive health is behavior (Purnama et al., 2020). In Government Regulation no. 61 of 2014 stated that reproductive health in adolescents is a problem that must be considered in the implementation of reproductive health services. It is intended that adolescents avoid or be free from sexual deviant behavior. The results of the 2017 Indonesian Demographic and Health Survey (IDHS) found that 8.3% of male adolescents and 2% of female adolescents had premarital sex. The most sexual intercourse was carried out by young

men aged 20-24 by 14% and at the age of 15-19 by 4% (Demon et al., 2019). Based on WHO data, the highest incidence of reproductive tract infections (ISR) in the world are adolescents (35% -42%) and young adults (27% -33%), the prevalence rate of candidiasis (25% -50%), bacterial vaginosis (20%-40%) and trichomoniasis (5-15%). Countries in Indonesia have a hot and humid climate, so that women in Indonesia are more susceptible to experiencing Reproductive Tract Infections (ISR), based on statistical data in Indonesia in 2012 from 43.3 million young women aged 10-14 years who had very poor hygiene behavior (Rohidah & Nuraliza, 2019).

Based on the results of Riskesdas it can be seen that the prevalence of cancer in the group of women is greater than that of men. This pattern occurred in both the 2013 Riskesdas and 2018 Riskesdas. The prevalence in this group showed an increase in two surveys, namely from 0.6% to 2.2% for men, and 0.74% to 2.85% for women. The difference or difference in prevalence between the sexes widened in the 2018 Riskesdas compared to the 2013 Riskesdas, from 0.14 to 0.65%. This can be caused by one type of female-specific cancer, namely cervical cancer. This cancer is the most common type of cancer reported in Indonesia (Solikhah et al., 2020).

From these data, maintaining reproductive health is a very important thing to pay attention to for adolescents (Kyilleh et al., 2018). Teenagers in Indonesia are currently experiencing increased vulnerability to various health risks, especially those related to sexual and reproductive health (Wijayanti & Fairus, 2020). Therefore, understanding and knowing how to clean the vaginal organs properly is very important in maintaining reproductive health. Self-care or personal hygiene is self-care that is carried out to maintain health both physically and psychologically.

Most adolescents are at school, so schools are a place to obtain education, including education on reproductive health, sexuality, and health behavior (Rabbitte & Enriquez, 2019). One model of education that exists in Indonesia is Islamic boarding schools, a place of education and also teaching that emphasizes Islamic religious studies and is supported by a dormitory as a place for students to live. Teenagers interact 24 hours in Islamic boarding schools with a community of peers. Several studies show that health problems in Islamic boarding schools still require attention from various parties involved, both in terms

Table 1
Characteristics of Respondent

Variables	Frequency	Percentage
Age		
12	14	20.6
13	13	19.1
14	13	19.1
15	9	13.2
16	11	16.2
17	4	5.9
18	4	5.9
Class		
7	17	25
8	21	30.9
9	4	5.8
10	8	11.8
11	10	14.7
12	8	11.8
Knowledge		
Enough	49	72.1
Less	19	27.9
Attitude		
Positive	48	70.6
Negative	20	29.4
Action		
Good	30	44.1
Bad	38	55.9
Information Exposure		
Exposed	51	75
Not Exposed	17	25
Attitude		
Good	12	17.6
Enough	48	70.6
Less	8	11.8

of access to health services, healthy behavior, and the environment (Azizah et al., 2020; Ningsih, 2021; Supriadi et al., 2018).

Based on data from the Sinjai district health office for 2021, there were 3523 adolescents with 1657 males and 1866 females. The number of adolescents experiencing reproductive health problems is 14 cases. The percentage of adolescents who received health checks in Sinjai district was 68.2% or 2403 people. Meanwhile, of the 169 targeted youth, there were no youth who had their health checked at the Kampala Health Center, with a percentage of 0.0%.

This means that schools or Islamic boarding schools in the working area of the Kampala Health Center have never received health checks, especially regarding reproductive health. The number of young women in the Darul Ihsan Islamic Boarding School is 55 people. From the Islamic Boarding School data,

there are several complaints such as itching and rashes in the reproductive area. This is influenced by the environment, such as water that is not clean and hygienic or the cleanliness of the female students, for example, teenagers are often wrong in washing the reproductive organs, namely from back to front which should be from front to back, cleaning the reproductive organs using ordinary soap or cleaning fluids that do not have clear composition. In addition, the behavior of female students in maintaining cleanliness is very minimal, this can be seen from the habit of drying underwear on windows and in rooms without ventilation, often taking turns using toiletries, and a lack of habits for sanitation. This makes microorganisms such as fungi very easy to multiply and cause infections in the skin of the reproductive organs. The aim of the study was to determine the effect of information exposure on adolescent

Table 2
The Effect of Information Exposure on Knowledge Level

Information Exposure	Knowledge				P-value
	Enough		Less		
	n	%	n	%	
Exposed	34	66.7	17	33.3	0.121
Not Exposed	15	88.2	2	11.8	

reproductive health behavior among female students at Islamic boarding schools in Sinjai Regency.

METHODS

The type of research used in this research is quantitative research with a cross sectional study approach. This study aims to determine the effect of information exposure on the reproductive health behavior of young female students at the Darul Ihsan Islamic Boarding School, East Sinjai District, Sinjai Regency in 2022. This research was conducted on September 15-26 2022 for female students at the Darul Ihsan Islamic Boarding School, East Sinjai District, Sinjai Regency . The population in this study were female students aged 10-19 years in the Darul Ihsan Islamic Boarding School, Sinjai Regency, namely 68 people. The number of samples was determined using the total sampling formula of 68 respondents. This study uses informed consent prior to the interview. Some of the questions asked were 1). Knowledge, namely the understanding of young female students about the purpose of personal hygiene, how to maintain personal hygiene, and how to prevent infection. 2) Respondents' attitudes were asked to find out reactions or feedback from respondents on reproductive health. 3) Actions, namely habits that are carried out by respondents to their reproductive health. 4) Information Exposure, namely the receipt of information about reproductive health obtained either through print media, electronic media, and the surrounding environment such as teachers, parents, and friends. 5) Reproductive health behavior, namely the response to a stimulus related to a healthy condition involving the reproductive system, function and process possessed by

adolescents. All assessments were carried out using a Likert scale.

Data analysis in this study used the SPSS version 22 application, including univariate analysis to see the variable frequency distribution, chi square analysis to see the relationship between variables and analysis, and multivariate analysis to determine the most influential variables. This study has gone through an ethical due diligence conducted at the Faculty of Medicine and Health Sciences, UIN Aluddin Makassar with number B319/KEPK/FKIK/IX/2022.

RESULTS

Based on the results of univariate analysis of individual factors (Table 1), it was found that the majority of female students aged 12 were 14 respondents (20.6%). Judging from the number of classes, the majority of female students occupied class VIII by 21 respondents (30.9%). The majority of the female students' knowledge level had sufficient knowledge as many as 49 respondents (72.1%). The attitude of the majority of female students has a positive attitude as many as 48 respondents (70.6%). The majority of female students' actions were bad actions by 38 respondents (55.9%). The majority of female students were exposed to information about reproductive health by 51 respondents (75%) and the majority of female students had adequate behavior related to reproductive health behavior by 48 respondents (70.6).

Based on Table 2, it is known that of the 51 respondents who were exposed to information, there were 34 respondents who had sufficient knowledge and 17 respondents who had insufficient knowledge.

And of the 17 respondents who were not exposed to information, there were 15 respondents

Table 3
The Effect of Information Exposure on Attitudes

Information Exposure	Attitude				P-value
	Positive		Negative		
	n	%	n	%	
Exposed	41	80.4	19.6	51	0.006
Not Exposed	7	41.2	58.8	17	

Table 4*The Effect of Information Exposure on Action*

Information Exposure	Action				P-value
	Good		Bad		
	n	%	n	%	
Exposed	26	51	25	49	0.091
Not Exposed	4	23.5	13	76.5	

who had sufficient knowledge and 2 respondents who had less knowledge. Based on the results of the Chi-Square test that has been carried out, a significance value of ($p=0.121$) is obtained, which means that there is no significant relationship ($p<0.05$) to information exposure on female students' reproductive health knowledge.

Based on [Table 3](#) it is known that of the 51 respondents who were exposed to information, there were 41 respondents who had a positive attitude and 10 respondents who had a negative attitude. And of the 17 respondents who were not exposed to information, there were 7 respondents who had a positive attitude and 10 respondents who had a negative attitude. Based on the results of the Chi-Square test that has been carried out, a significance value of ($p=0.006$) is obtained, which means that there is a significant relationship ($p<0.05$) to information exposure on reproductive health attitudes of young female students.

Based on [Table 4](#) it is known that there were 51 respondents who were exposed to information, there were 26 respondents who had good actions and 25 respondents who had bad actions. And of the 17 respondents who were not exposed to information, there were 4 respondents who had good actions and 13 respondents who had bad actions. Based on the results of the Chi-Square test that has been carried out, a significance value of ($p=0.091$) is obtained, which means that there is no significant relationship ($p<0.05$) to information exposure on reproductive health measures for young female students.

Based on [Table 5](#), it shows that from the results of the multivariate test on the 1 independent variable that has the most influence, namely the attitude variable, a significance value ($p=0.004$) is obtained with an RR value of 5.857. In accordance

with the results obtained, respondents who were exposed to information had 5,857 times the opportunity to have positive attitudes related to adolescent reproductive health compared to those who were not exposed to information.

DISCUSSION

Information and Knowledge Exposure

Knowledge about personal hygiene needs to be obtained in order to improve one's health status. By maintaining personal hygiene, improving personal hygiene that is lacking, preventing disease, increasing self-confidence and creating beauty according to [Al-Rifaai et al. \(2018\)](#). Schoolgirls who are less concerned about the cleanliness of the reproductive organs cause the pH balance to be disturbed, for example the level of acidity decreases, natural defenses too will decrease, and are susceptible to infections such as vaginitis, vaginal discharge and ISR (Reproductive Tract Infection) ([Nurhayati & Purwaningroom, 2022](#)).

This study shows that personal hygiene knowledge has no effect on information exposure. This could be due to a lack of information obtained indirectly, such as from electronic media and the internet. The policy of the Darul Ihsan Sinjai Islamic Boarding School which prohibits students from using Android cellphones during the education period, limits students in accessing and obtaining more information about personal hygiene. And this is also because the source of information obtained by respondents is mostly from their peers. However, exposure to information provided by peers is highly dependent on the level of knowledge.

This research is in line with research conducted by Zahrotan Nur Salsabila who stated that the respondents were aged 12-16 years (early

Table 5*The Multivariate Analysis*

Sub Variable	P (sig)	RR	CI 95%
Attitude	0.004	5.857	1.786-19.210
Constant	0	0.029	

youth according to the Ministry of Health). This age is a stage of a person towards adulthood and will experience many changes such as physique, mindset, interests and roles. The mindset of teenagers is still low compared to adults, causing the lack of information obtained (Salsabila, 2022).

Information Exposure and Attitudes

Exposure to information brings changes in behavior towards a person, the most attention is the impact of exposure to information on the attitude of adolescence. Attitude is a person's readiness to behave. Attitude actually shows the connotation of the suitability of reactions to certain stimuli which in everyday life are emotional reactions to social stimuli. One of the social psychologists stated that attitude is a readiness or willingness to act, and not an implementation of certain motives. Attitude is not yet an action or activity, but a predisposition to a behavior (Herawati et al., 2020).

The results of this study indicate that adolescents get more information from their peers. In their teens, teenagers get information about personal hygiene they need from parents or teachers who have more accurate information. Usually teenagers feel embarrassed to ask or discuss their personal hygiene with their teachers or parents. Information exposure has a major influence in shaping the mindset of adolescents, determining and developing adolescent understanding of the information they receive. Where the attitude of adolescents can have a positive or negative impact. Exposure to correct and appropriate information will have a positive impact on adolescents and vice versa. The results of this study prove Lawrence Green's theory that information exposure is one of the enabling factors that enable a person to start the process of changing healthy behavior. The formation of healthy behavior in a person starts from exposure to information about health so that a belief is formed to behave (Aulia et al., 2019).

This is in line with the results of research conducted by Turdjai (2019) based on chi square analysis. The results of the study show that there is a relationship between sources of information and personal hygiene behavior of young women during menstruation with a p value of 0.000 ($P < 0.005$).

Information Exposure and Action

In the present information greatly influences the actions to be taken by a person. Information is needed by all people, including teenagers. Information can be obtained from various sources

such as electronic media, print media, social environment, peers, and health workers. The results of the research show that many respondents are exposed to information. This shows that young female students have a desire to find information about personal hygiene. So that they can do personal hygiene in the right and proper way.

The factors that will affect one's actions are the internal factors of each female student such as lack of awareness, laziness, and so on. Another because that becomes a factor is the lack of availability of water in Islamic boarding schools so that female students do not maintain the cleanliness of their reproductive organs. Provision of clean water is an adequate amount of clean water, which can be used reasonably for basic human needs and other activities that require water. Clean water is the main component for adolescents, as well as for a family in meeting the needs of life every day, including being used for bathing, washing, drinking, and other daily needs. Provision of very good clean water, and having been able to carry out personal hygiene efforts well, can improve health status, also avoid disease through clean and healthy living behavior (Susanto et al., 2021).

In Islamic teachings, a Muslim is ordered to do good deeds to himself, others and the environment. These good deeds take many forms, ranging from the smallest things such as maintaining one's health to something as monumental as reforestation. Whatever the form, the nature of good deeds will return to the goodness of man himself. The essence of good deeds has been mentioned by God in Q.S Al-Isra'/17:7 whose translation is:

"If you do good, you do good for yourselves; and if you do evil, (you do it) to yourselves..."

This is not in line with the research by Rusnen et al. (2022) who stated that there is a relationship between information exposure and personal menstrual hygiene in female students because students can easily obtain information about menstrual hygiene from various sources such as mothers, relatives, friends, teachers, health workers and the media, even from more than one source. The availability of mass media also helps students to easily access information. Students who are exposed to more than 1 source of information about menstrual hygiene will affect adolescents in menstrual hygiene

Information Exposure and Attitudes

Information media that is often used by adolescents such as the internet, television, radio, social media, and school textbooks have a major influence in forming one's opinions and beliefs. Positive suggestive messages from the respondent, if strong enough, will provide a basis for perceiving and evaluating something so that it will manifest concrete actions in the form of positive behavior. Attitude is a person's assessment or opinion of a stimulus or object. Many factors influence a person's attitude such as personal experience, the influence of other people who are considered important, emotional factors, cultural influences, mass media and educational institutions (Saputri & Hidayani, 2017).

A good source of information will have an impact on knowledge and understanding of personal hygiene. The availability of information with the development of technology and information is something that can be accessed by all people, including teenagers. Adolescents who get good sources of information regarding personal hygiene will influence their reproductive health behavior and likewise adolescents who do not get access to information sources will influence their personal hygiene behavior (Dewi & Suhaid, 2022).

Attitude variable based on multivariate results can be obtained a significance value ($p = 0.004$) with a RR value of 5.857. This means that respondents who are exposed to information have 5,857 times the opportunity to have positive attitudes related to adolescent reproductive health compared to those who are not exposed to information.

Based on the results of this study, most respondents stated that information exposure had an effect on attitudes about personal hygiene compared to respondents who said information exposure had no effect. Attitudes and exposure to information include factors that influence a person's behavior. Attitude encourages a person to act or react based on his judgment by determining whether this is good or bad. In addition to attitude, exposure to information is also one of the important things because it can increase knowledge in determining a person's attitude and actions towards efforts to maintain health and improve the quality of health services. Exposure to health information in particular only comes from information through peers. An information is said to be valuable if the benefits are more effective than the cost of getting it. Most of the information cannot be interpreted as a profit with a monetary value, but it can be interpreted with the value of its effectiveness.

Snehandu B. Karr's theory states that one of the determinants of behavior is access to information. The availability of health information is strongly related to changes in a person's behavior (Pertiwi & Karmila, 2020).

Exposure to information is very important to increase the level of knowledge, this causes adolescents to have knowledge about reproductive health because of the various sources of information that have been obtained. As a Muslim we must be *tabayyun* there is news or information that has been obtained, as in Q.S Al-Hujurat/49:6 whose translation is:

"O you who have believed, if there comes to you a disobedient one with information, investigate, lest you harm a people out of ignorance and become, over what you have done, regretful."

In Jalalain's interpretation by Jalaluddin al-Mahalli and Jalaluddin as-Suyuthi, this verse explains that O you who believe, if the wicked person comes to you with a message, then check with you the truth of the news, whether it is true or a lie. According to a qiraat read *fatatsabbaatuu*, it comes from the pronunciation of *Ats-Tsabaat*, which means that you first examine the truth so that you don't inflict a calamity on a people, you become *Ma'ul* from the pronunciation of *Fatabayyanuu*, believe that it will be a disaster for a people without knowing what the situation is or what it is. his explanation of the condition of Fa'il, namely without his knowledge that caused you to make the mistake of a people that regret.

From the verse above it can be seen that as a Muslim we must be *tabayyun* towards news or information obtained, especially news or information about reproductive health. A lot of hoax news or information is spread, so when we hear news about reproductive health, we need to prove the truth first. We don't necessarily believe every news we get or hear, because the information we get affects a person's good or bad behavior.

This study has limitations where in presenting information about personal hygiene to female students there are still many foreign words used which make it difficult for female students to understand the information. The author realizes that the intervention will be effective if the mother tongue is used which is easier for the study population to understand. However, this study proves that exposure to information that enters the Islamic boarding school

environment which tends to be closed will further influence attitudes towards the personal hygiene behavior of female students.

CONCLUSIONS

There is an influence of information exposure on attitudes towards the reproductive health behavior of young female students at the Darul Ihsan Islamic Boarding School, East Sinjai District, Sinjai Regency with an RR value of 5,857. It is hoped that young women should increase their knowledge by frequently reading information about personal hygiene and awareness to always maintain the health of their reproductive organs. It is for the administrators of the boarding school to work together with health workers so that they can more easily monitor the health of young women and provide clean water infrastructure and function the Islamic boarding school health center (poskestren) room. Future researchers can develop further studies by expanding other variables that can influence the actions of female students such as culture, the availability of facilities and infrastructure in Islamic boarding schools.

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AUTHORS' CONTRIBUTIONS

Naurah K. Luqman drafted the research, collected and analyzed data, prepared manuscripts. Sitti Raodhah and Dian R. Wijaya developed research concepts and designs, assisted in data analysis, provided suggestions, and input and improved manuscripts.

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COMPETING INTERESTS

The author(s) declare no potential conflict of interest with respect to the research, authorship, and/or publication of this article.

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