

Reproductive Health Information Access of Health Faculty Students

Izzatul Arifah
*Department of public health , Faculty Of
 Health Science*
Muhammadiyah Surakarta University
 Surakarta, Indonesia ia523@ums.ac.id

Meutia Fildzah Sharfina *Department
 of public health , Faculty Of Health Science*
Muhammadiyah Surakarta University
 Surakarta, Indonesia
 meutiafildzah@gmail.com

Meira Sri Widowati
*Department of public health , Faculty Of
 Health Science*
Muhammadiyah Surakarta University
 Surakarta, Indonesia
 meiradewi12@gmail.com

Abstract— The increase of knowledge through accessing Reproductive Health (RH) information lessens adolescents' behaviors that adversely affect their reproductive health. Health faculty students have an opportunity to access information through various sources. Knowledge of sources and types of information is important to develop strategies to provide RH information for students. This study was aimed to describe access to RH information, sources of the information and types of topics questioned by health faculty students at Muhammadiyah University of Surakarta (UMS). This was quantitative descriptive research. The sample was 280 students of the health faculty (Health Sciences, Pharmacy, Medicine and dentistry) at UMS. The research instrument was a self-administered questionnaire that was valid and reliable. The data were presented in the form of diagrams, tables and narratives. The majority of respondents had accessed RH information 1-4 times a month. The respondents accessed RH information mostly through the internet sources (80.4%) and mass media (54.3%) compared to accessing information through influential individuals such as lecturers, health workers and parents. The topics of information accessed on all sources of information were the reproductive system, sexually transmitted infections and family planning. Meanwhile, a topic of sexuality was less frequently accessed and tended to be accessed through certain sources such as the internet, media and lecturers. The topics of RH that had been accessed through each source of information were not comprehensive. The government was expected to provide a complete and up-to-date reproductive health information websites as one of the strategies to provide RH information for students.

Keywords: *reproductive health information, information access, source of information, topic of information*

I. INTRODUCTION

Adolescence is a phase that stretches between childhood and adult phases, but the exact age of adolescents is still debatable. Sawyer recommends the term of adolescents for 10-24 years old age of young people based on considerations of biological growth's pattern and the transition of social roles [1]. 19-24 year adolescent attends colleges so they are referred as college students. Adolescent in this age are more susceptible by experiencing problems related to sexuality. This case is due to their reproductive and sexual functions that are biologically ready to be sexually active, but they are in a period of abstaining from sexual activity since premarital sexual activity is taboo in Indonesian culture [2, 3]. Meanwhile, modernization and globalization have resulted in longer period of sexual abstain

because young people spend more time in education so the marriage is delayed. Thus, such condition creates a greater opportunity for them to be engaged in sexual activity [4]. Therefore, the college period is a critical time to assess risky sexual behavior for young people.

Although sexuality is taboo in Indonesia, national scale data shows that there were 8% of men and 2% of women who report having premarital sex. The sexual experience was reported to be higher among women and men aged 20-24 years compared to 15-19 years [5]. The magnitude of premarital sexual behavior was confirmed in several studies in Indonesian cities. A research on college students in Semarang and Pekalongan found that 2% and 13% (respectively) of students had premarital sexual experiences [6, 7]. These studies suggest that risky sexual behavior among students is quite high. Risky sexual behavior resulted in unwanted pregnancy and sexually transmitted infection, especially for unsafe sexual intercourse. Whereas, the national data show that less than half of the proportion of adolescents had premarital sex using condoms in their last sexual intercourse [5]. Hence, it is not surprising that the proportion of people living with HIV in adolescence is also quite high. The data of HIV/AIDS information system indicate that there is an increasing trend of adolescents living with HIV from year to year. The percentage of HIV infection in 20-24 years old adolescents is higher than 15-19 years (16% compared to 4%) [8]. In addition, in 2017, the incidence of unwanted pregnancies reported by young women in Indonesia, according to Indonesian Health Demographic Survey (IDHS), reached 12% [5].

Accessing RH information is believed lessening behaviors that adversely affect one's reproductive health [9]. Previous studies showed that direct or indirect (through information technology) education about sexuality and reproductive health was an effective way of promoting non-risky sexual behavior such as delaying initiation of sexual behavior, reducing the number of sexual partners and using contraception [10, 11]. The Indonesian government created various programs to provide reproductive health education for adolescents. However, that program mainly focused on high school students and very few programs focused on college students. In the meantime, there are only a small number of universities which provide reproductive health information program for their students. Unfortunately, UMS was not one of them. Some students eventually seek on their own about Reproductive Health (RH) information from

various sources outside the provision of formal information. Mostly, adolescent's sources of health information are friends and parents, especially mother. They also access RH information from mass media and the Internet. Nurmansyah's study on students at one of the health faculties in Jakarta showed that the main source of the students' information was friends, mothers, health workers and lecturers [12]. Students also receive RH information because they participate in community organization and access mass media and the Internet as well [13]. Knowledge about sources of information of health reproductive information is well-understood, but little is known about the topic of information obtained through that sources of information. Knowledge of sources of information and the types of information accessed is important in order to determine strategies for providing comprehensive reproductive health information to students. Therefore, researchers were interested in describing the topics of reproductive health information obtained from various sources of reproductive health information.

A study on students in China shows that there were significant differences in the level of knowledge about sexuality and reproductive health in health and non-health faculty students [14]. Whereas, access to information sources is also influenced by the level of knowledge of an individual [15]. Therefore, this study was aimed to describe information access of health faculty students through several formal information sources such as health workers, lecturers, parents, media and the Internet. This selection was based on an assumption that health faculty students had more knowledge about RH issues and the opportunities to access better health information source than non-health discipline students.

II. METHOD

This was descriptive quantitative study. This study was conducted in October 2018 at Muhammadiyah University of Surakarta, namely Faculty of Health Science, Faculty of Pharmacy, Faculty of Medicine, and Faculty of Dentistry. The study population was third-year students of Faculty of Health Science, Faculty of Pharmacy, Faculty of Medicine, and Faculty of Dentistry at Muhammadiyah University of Surakarta. The sample was 280 respondents. The determination of the sample size used the Lemeshow formula and the number of samples obtained exceeds the minimum sample size. The sampling technique used was Proportional Random Sampling. The variables were sources of reproductive health information and types of reproductive health information accessed. The research instrument was a self-administered questionnaire that had been tested for its validity and reliability. The univariable analysis was used to describe the research variable.

III. RESULT

A. Characteristic of respondents

Table 1 displays information about respondents' characteristics based on gender, age, access to reproductive health information and frequency of access. The majority of respondents was women (more than three quarters of the total respondents) and most of them were 21 years old. Respondents had accessed reproductive health information mostly 1-4 times a month in the past year.

TABLE I. CHARACTERISTIC OF RESPONDENTS

Variables	Frequency	Percentage (%)
Sex		
Male	56	20
Female	224	80
Age		
20	72	25.7
21	167	59.6
22	34	12.1
23	5	1.8
24	2	0.7
Access of RH Information		
Access	235	83.9
No Access	45	16.1
Frequency of Monthly Access^{a,b}		
1-2 times		
3-4 times	151	63.7
5-6 times	60	25.5
>6 times	15	6.3
	9	3.8

B. Source of Reproductive Health Information

Figure 1 shows information about proportion of respondents' access to RH information source.

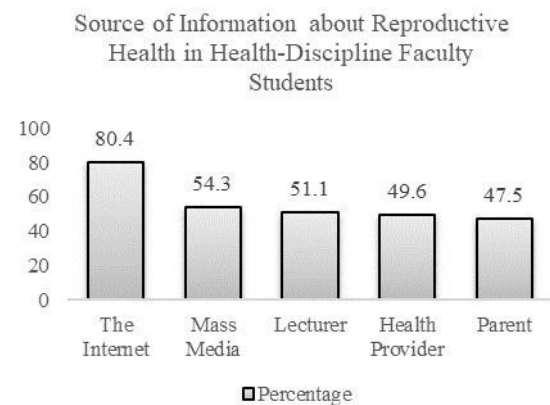


Fig. 1. Bar Chart of distribution Reproductive Health information in health discipline faculty students at UMS

The bar chart shows that the largest proportion of respondents was those who accessed reproductive health information through the Internet, which were more than three-quarters of the total respondents. While, the smallest proportion of respondents' access information through asking parents, which is slightly below half of the total respondents. Each of three sources of information, namely parents, health personnel and lecturers, was accessed by about half of the total respondents, each. The Internet and mass media are the two most widely used sources of information by respondents. *Topics of information sought through certain information sources.*

Table 2 explains the topics of reproductive health information that had been accessed through each information source. The topics were grouped into several categories of information, namely the reproductive system, sexuality, family planning, sexually transmitted infections (STIs), and individual relationships.

TABLE II. TOPIC CATEGORIES OF INFORMATION ACCESSED BY RESEARCH RESPONDENTS THROUGH FIVE SOURCES OF INFORMATION, NAMELY THE INTERNET, MEDIA, HEALTH WORKERS, LECTURERS AND PARENTS

Information Topics	Information Sources				
	<i>The Internet (%)</i>	<i>Mass Media (%)</i>	<i>Health Provider (%)</i>	<i>Lecturer (%)</i>	<i>Parents (%)</i>
Reproduction system					
Puberty	48.4	42.7	40.2	48.9	51.8
Reproductive anatomy	48.4	34.2	55.4	69.9	14.2
Sexuality					
Sexual desire	16.0	15.1	10.7	18.1	4.5
Premarital sex	28.8	30.2	16.5	37.7	18.8
Abortion	23.5	33.5	20.1	37.7	5.2
Teen Pregnancy	35.5	37.5	18.7	38.4	17.2
Sexual Abuse	41.7	46.0	16.5	24.4	17.2
Family Planning					
Family planning	26.2	38.8	34.5	41.2	21.8
Contraception	27.1	32.2	47.4	47.5	8.2
STI					
Sexual Transmitted Infection	42.2	40.1	52.5	60.8	11.2
HIV/AIDS	48.8	55.9	50.3	65.7	7.5
Individual Relationship					
Dating	0	1.3	1.4	1.4	42.8
Marriage	61.3	46.7	22.3	34.9	50.3
Other	4.0	1.3	2.8	1.4	0

1) *Reproductive system*: About half of the total participant accessed information about puberty through each source of information. Meanwhile, the topic of reproductive anatomy was also accessed by about half of the respondents, but there was a tendency to access it through certain sources of information. The largest proportion of respondents accessed that topic through lecturer and health provider, which was 66.9% and 55.4% respectively. Only a few respondents accessed this information through parent sources, which was less than one fifth of respondents.

2) *Sexuality*: Topics about sexual desire were rarely accessed by respondents through various sources with a range of 18.2% (lecturers) to 4.5% (parents). Some topics such premarital sexual intercourse, abortion and teenage pregnancies were accessed by around a quarter to a third of respondents through each of the three sources namely the internet, media and lecturers. While, other topics such as sexual abuse, accessed through the internet and the media, had 41% and 46%, respectively. Based on the average proportion of respondents who accessed the topic of sexuality, the two least popular sources of information were parents and health workers.

3) *Family Planning*: The two most frequent sources of information referred by respondents for Family Planning information and contraception were lecturers and health

workers, which were 41.5% and 47.5% and 34.5% and 47.5%, respectively. There was interesting finding about family planning information in parents' source. Although access information about it in parents was low, there was a significant gap between the proportion of respondents who accessed information about family planning and contraception, which was 21.8% compared to 8.3%. This showed that unmarried teenagers could discuss with parents about family planning, but they rarely talked about contraception.

4) *Sexually Transmitted Infections (STIs)*: About more than half of the respondents sought information about STIs and HIV through two of the highest sources namely lecturers and health workers. The next referred sources of information were the Internet and media. Only 7.5% of respondents sought information about HIV and 11.3% of STIs through parental discussion.

5) *Individual Relationships*: Most respondents accessed to marriage through internet sources, which were 61.3%. The next largest proportion was parents (about half of respondents). Meanwhile, the smallest proportion were health provider, namely 22.3%. Interestingly, almost no respondents sought information about dating in mass media, the internet, health provider and lecturers. Most of the participant access information about dating through asking

parents, which was equal to 42.9%.

There were several trends about the topic pattern of information accessed by information sources. Further review of groups accessed information on the internet and the three most widely accessed categories were reproductive system, STIs and sexuality. Meanwhile, in the group that accessed information through the media, the three largest topic groups were STI, reproductive system and family planning. In the group of information sources for health workers, three dominant groups of topics were STIs, the reproductive system, and family planning. The group of information accessing through lecturers were IMS, reproductive systems and family planning. While, at the parent information source, categories of topics that were often asked were individual relations, reproductive systems and family planning.

IV. DISCUSSION

This study found that the majority of participant accessed reproductive information through the Internet. This result was in accordance with other studies both abroad and within the country. A study in Florida (the USA) found that 76% of teens used the Internet as a source of information. Meanwhile, study about teenagers in Surabaya (East Java) implied that almost half of them used the Internet as a source. [16, 17]. The majority of respondents accessed this information through more than one source of information. This meant that students did not only depend on one source of information. This was in accordance with the results of research conducted by [16] that the priority of source of information were the Internet, teachers and health workers. They used that source as combination as well, not the only source. Adolescents sought information from various sources, and then compared that information until they found an answer to the problem they had, as explained in Kurniasih's study about the model of seeking reproductive health information [13].

The Internet and mass media are preferable tools because they provide a sense of privacy when accessing information that is considered taboo [17, 18]. Zainafree's research on UNNES students showed that students tended to access more freely about reproductive health information through mass media and the Internet, rather than health provider [19]. The Internet is more popular because of the convenience finding information, the availability of various types of information, and the active participation of teens to seek information they need. Whereas, mass media such as television, newspapers, magazines and radio can be counted as source of RH information when that media provides certain information related to reproductive health. Accordingly, because of its nature that makes teenagers passively receive the information provided, the mass media are not the main reference in seeking reproductive health information.

Lecturers and health provider are the main references of the adolescents in seeking RH information. Health provider and lecturers are the figures who are considered having qualified knowledge about reproductive health so it is assured the adolescence getting the right answers. However, adolescents' access to this source remain hindered by feelings of shame, lack of confidence, feeling of distrust to that figure to share

their reproductive health problems, even feeling neglected [18, 20, 21].

Other finding suggests that the information seeking related to sexuality was the lowest. This result revealed a finding as it had been predicted. It said that the topic of sexuality is a sensitive, personal topic and Indonesian culture considered that sexual topic is taboo. However, it was very unfortunate considering that respondents were health faculty students who should have broader view that sexuality was part of the normal life of a human being. Respondents tended to access more information about the reproductive system, STIs, and family planning. This finding was positive because knowledge about that was important for individuals to practice good reproductive health behaviors and avoid reproductive health problems.

Overall, this study found that the lecturer was the most referred source for various reproductive health information. Respondents made the lecturers as the main source of information related to sexual and sensitive behavior as well, such as sexuality, STIs and family planning. This could be explained because lecturers of health science had an appropriate area of competence as source of reproductive health information. Non-health faculty students may have different information source because the lecturer may not necessarily have qualified knowledge about reproductive health. Further study was needed to be conducted to prove this assumption.

The next sources of information are the internet and mass media. In group of respondents who access information of sexuality, there are big gaps between internet, media and parents' sources. This shows that sexuality is still considered sensitive and taboo information to be asked to parents. So, they are more convenient look for that information from a certain sources which is more personal, such as the internet and mass media [17]. Buhi, et al., in his study, added that the majority of adolescents after accessing information through the Internet had higher readiness and confidence to discuss the topic with health providers. However, the teens stated that they rarely paid attention to the quality of the sites they visited by checking whether the pages were managed by health workers or not, and whether the information presented on the pages was constantly updated [17]. This showed that adolescents did not pay attention to the quality and trustworthiness of information they accessed. Attention was needed for website providers to ensure that teens got the right information after accessing information sources via the Internet. The government needed to consider this condition in determining regulations regarding the up to date information and the confidentiality of content provided when planning of using website as one of the media for education and dissemination of reproductive health information.

Another important source of information is parents. The role that has been carried out by the majority of parents of respondents was providing information about individual relationships and puberty. This study suggested that parents had educated their teenage regarding the major changes related to the reproductive system which was puberty. Unfortunately, discussion about puberty was not followed by other topics namely STIs, sexuality and family planning. Other finding reveals that the majority of parents was failed

to act as information provider relating to sexuality to their children. It could be caused by the fact that many parents found it difficult and uncomfortable to talk about sexuality with their children because they did not get that communication patterns about the topic from their parents. Culture in several Asian countries like Indonesia consider that sexuality is a taboo topic to be discussed openly, especially between parents and children [14, 22].

Parents should have a strategic role to be the main source of reproductive health information for their children because of the closeness and opportunity they have. A systematic study identified parents-children communication about sexuality as protective factors for various sexual behaviors including delaying the initiation of sexual intercourse primarily for girl [23]. However, good parental communication is hindered by the inability of parents to hold open, non-judgmental discussions caused by a lack of communication knowledge, lack of knowledge about sexuality, cultural norms and taboos [24]. That condition has to be considered by expertise/researcher and the government when planning an intervention to improve adolescent reproductive health outcomes through parents.

V. CONCLUSION

Based on the discussion, it could be concluded that health-discipline students tended to access reproductive health information through the Internet sources and mass media rather than accessing it through influential individuals such as lecturers, health providers and parents. The topics of reproductive health that had been accessed through each source of information was not comprehensive. Topics of information that were generally accessed on all sources of information were the reproductive system, sexually transmitted infections and family planning. Meanwhile, the topic of sexuality tended to be accessed through certain sources such as the Internet, media and lecturers. This finding showed some consideration needed before planning interventions to improve adolescent reproductive health outcomes through online source such as websites and other formal figures such as lecturers and parents. The government was expected to provide a complete and up-to-date reproductive health information websites as one of the strategies to provide reproductive health information for students.

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