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# **Implementation of adolescent health programs at public schools and religion-based schools in Indonesia**

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## **Significance for public health**

Adolescents are the nation's next-generation in which the rapid development of technology can cause various problems for their health especially reproductive health which is one of the major challenges for public health among adolescent. One of health programs conducted by stakeholder in Indonesia is YCHS. This program was designed to improve adolescent health through school approach. Nevertheless, there are some problems in the implementation such as unequal access to get information of adolescents health between public schools and religion based schools, the lack of stakeholders support, and the lack of students' involvement in health adolescents programs. Through this study, we will find how the implementation and the effect of YCHS program regarding adolescents' knowledge, attitudes, and the exposure about the policy of adolescent health. So, it can contributes to the public health.

## **Abstract**

*Background:* Adolescents are a vulnerable group who have great curiosity and need access to various adolescent health information. Therefore, the government has implemented a strategy through the implementation of Youth Care Health Services (YCHS). However, some of the

stakeholders and youth have limited access to YCHS especially the ones delivered in schools setting. The purpose of this study was to investigate the implementation of adolescent health programs in schools especially public schools and religion-based schools.

*Design and methods:* This study was an analytic observational quantitative study by using a cross-sectional design. This study was conducted in public schools and religion-based schools in North Surabaya Indonesia. The sample in this study consisted of 100 students through a simple random sampling technique.

*Results:* There was a difference in the level of knowledge of adolescent reproductive health between public schools and religion-based schools ( $p=0,047$ ). Student's attitudes ( $p=0,000$ ) and environmental influences ( $p=0,000$ ) both related with reproductive health contents. However, there was no difference in adolescent's attitudes about adolescent reproductive health programs ( $p=0,190$ ) and adolescent's exposure to adolescent reproductive health policies ( $p=0,196$ ).

*Conclusion:* The implementation of adolescent health programs in two types of schools (public and religion-based) were different. Adolescents should have the same rights to obtain knowledge about adolescent health as the prelude for forming a positive attitude. Therefore, stakeholders need to conduct regular monitoring and evaluation on the implementation of standardized adolescent health programs in all types of schools.

## **Introduction**

Adolescents are the future investment to the nation. Adolescents need to stay productive and contribute positively in the improving health status of their peers. Their role is becoming important especially in rapid development of the flow of information and technology. This rapid development in technology and vast access of information created challenges for stakeholders to ensure the right access of these adolescents. This phenomenon affects the reproductive health status of adolescents and the quality of adolescents in the future <sup>1</sup>.

The data of basic health research in 2013 showed the prevalence of marriage age that occurs at young age less than 15 years old was 2.6% and ages 15-19 years old were 23.9%. This phenomenon contributed to the occurrence of mothers who give birth at a young age (<20 years old), and even less than 15 years old. Other data from National Population and Family Planning Board in 2013 stated that as many as 4.38% of adolescents aged 10-14 years old have engaged in free sex, while adolescents aged 14-19 years old were around 41.8%. According to the national

data, the prevalence of stunting in teenagers was 30.7% and prevalence of malnourished teenagers were 11.2%. Previous research showed that the odds of being stunted in adolescence could be explained by the combined effect of being stunted in childhood and having a mother whose height was less than 145 cm. Also, girls were more likely than boys to be stunted in childhood, whereas boys were more likely than girls to be stunted in adolescence. The latter is probably attributable to differences in the pace of maturation. In terms of policy and (reproductive health) programmes, it is important to recall that adolescent girls whose height and weight were subnormal (weight <45 kg and height <145 cm) might run an obstetric risk. Following these cut-off points, 83% and 23% of 16-year-old girls in this study would face obstetric risk, respectively, for weight and height if they marry and become pregnant soon<sup>2</sup>. In addition, National Narcotics Agency stated that adolescents started smoking at the age of 10-19 years old (19.7%), and there was an increase cases of drug users in 2012 to 2013 (from 3.6 million people to 3.8 million people). The data also showed that 22% of the drugs abuse cases were teenagers<sup>3</sup>.

Adolescents need attention and guidance from teachers, parents, or counseling regarding adolescents' health. Guidance and counseling related to the understanding of adolescent regarding their reproductive health, to their understanding to preventing problems, and to the development and maintenance of healthy behavior<sup>4</sup>.

The government has implemented various strategies to solve problems related to adolescent reproductive health. Efforts had been made to solve youth's problems in Indonesia. Strategies for implementing adolescent health policies were carried out by the government through cross-sectoral cooperation, basic health services, referrals, and intervention patterns. These strategies had been adapted to the needs of the stages of the adolescent development process. The problems faced by adolescents, the goals, and commitments from each agency were similar which pushed the stakeholders to work together. The program managers from various sectors need to synchronize their programs and implement this program to fulfill the right to information and services for adolescents. Based on research conducted in 2019, it was found that the programs that were carried out were still uncoordinated and had not been evaluated effectively. Sectors that have adolescent segmentation may not have a supportive attitude and were not actively involved in the implementation of adolescent health programs<sup>5</sup>.

One of the government programs, namely Youth Care Health Services (YCHS) which can be carried out at health centers or hospitals, schools with the aim of providing quality adolescent health services and increasing knowledge and prevention of various problems that occur in adolescents. YCHS also provides an evaluation of adolescent health services which will always make improvements according to the needs of adolescents<sup>6</sup>. This YCHS government program has been implemented in one of the Health centers in Surabaya, namely Tanah Kalikedinding health center. Tanah Kalikedinding health center is one of the health centers in North Surabaya that has implemented the YCHS Program. The implementation targets cover all adolescent groups. Based on the results of the preliminary survey, the results of the preliminary survey data has shown that on visits to Health Center up to June 2016, adolescents aged 15-19 years of age visited this health service center more frequently than other age categories. As of June 2016, 110 women aged 15-19 years visited as many as 110 teenagers, while nearly 120 young men aged 15-19 years visited Tanah Kalikedinding health center Surabaya.

Tanah Kalikedinding health center is one of the health centers in Surabaya that has implemented the YCHS Program. The implementation targets cover all adolescent groups. Based on the results of the preliminary survey, it is known that the data on visits to Tanah Kalikedinding health center up to June 2016, adolescents aged 15-19 years of age visited this health service center more frequently than other age categories. As per June 2016, 110 women aged 15-19 years visited as many as 110 teenagers, while nearly 120 young men aged 15-19 years visited Tanah Kalikedinding health center in Surabaya.

### **YCHS Overview at Tanah Kalikedinding health center Working Area**

The YCHS program has been implemented by Tanah Kalikedinding health center Surabaya where its implementation is adjusted to the conditions at the health center. YCHS at Tanah Kalikedinding health center has used the National Standard issued by the Indonesian Ministry of Health to ensure the quality of its services. The development of standards that can guarantee the quality of YCHS is implemented in a measured, equitable, and steady manner. The process of developing this standard is carried out through several steps required in accordance with the YCHS National Standard. The YCHS National Standard is a written document containing various requirements for the quality of the YCHS, which includes the requirements for the quality of inputs, processes, and outputs. The YCHS National Standard was developed to be used

as a guide in directing and assessing the quality of YCHS. Basically, the YCHS National Standard is a quality control guideline used by health facilities to improve and guarantee the quality of the YCHS that has been implemented. To be able to use this standard, health facilities must first be able to implement YCHS. The criteria for a health center that are able to implement YCHS were: Provide counseling services to all adolescents who need counseling in contact with YCHS officers. Tanah Kalikedinding health center has implemented YCHS by providing person-to-person services for adolescents in need; Provide guidance to at least 1 (one) school in 1 (one) year in public schools or religion-based schools, with a minimum of carrying out education activities at the target schools at least 2 times a year. Tanah Kalikedinding health center has several schools that are trained in the high school.

### **Youth House**

The health services provided at Tanah Kalikedinding health center has shown that the number of male and female adolescents who visit the health center is quite significant, however, the visit rate fluctuates in each month from January to October 2016. Apart from data from officers at the health center, the results of interviews with *Youth House* peer stated that the implementation of the YCHS program was limited to the adolescent who came to the health center. Therefore, *Youth House* as a partner for community youth groups tries to carry out YCHS activities in targeted adolescents outside the building such as in schools, youth groups. However, the evaluation of program implementation has not been well coordinated. This is evidenced by the absence of documentation on the evaluation of the success of activities carried out by *Youth House*. The schools in the Tanah Kalikedinding health center work area are also diverse, ranging from public schools to religion-based schools.

The existence of an adolescent reproductive health program has been supported by the government and stakeholders to show it to adolescents because the existence of this adolescent reproductive health program can help adolescents get information and support positive attitudes towards adolescent reproductive health. Many adolescent reproductive health programs have been given to adolescents and high school students such as YCHS. Program which can be done at the health centers, hospitals, or places where adolescents usually gather, such as malls<sup>7</sup>. The existence of this program is aimed at adolescents, in ludic way, accepts adolescents with open arms, maintains confidentiality, respects the adolescent, and is sensitive to the needs of the

adolescent. There are also many benefits provided by this program for adolescents so that students will feel protected and directed towards attitudes and attitudes towards adolescent reproductive health. The involvement of adolescents is very important and adolescents conveyed that they were very happy to be involved starting from program planning. Adolescents as the main driver in the implementation of adolescent health programs<sup>8</sup>. Edutainment (education and entertainment) is an effective strategy in adolescent health programs. Edutainment adolescent health promotion strategies are in accordance with the characteristics, needs, and capacities of current adolescents<sup>9</sup>. This edutainment strategy has also been reviewed by previous research in 10 high school schools in Surabaya, the result is that all adolescents are actively involved in youth health empowerment programs<sup>10</sup>.

Every adolescent has different behavior. This behavior can be influenced by the environment, knowledge, and many other factors that influence the emergence of various kinds of behavior. Previously that is meant by the behavior itself is all human activities, either those that could be directly observed or those that could not be observed by other parties. According to Green, the behavior is an action that has a specific frequency, duration, and purpose, whether done consciously or unconsciously<sup>11</sup>. There are three factors that can influence behavior, they are: *Predisposing Factors*, which are factors that precede behavior that provide a rational or motivational basis for the behavior, including knowledge, perceptions, attitudes, certain characteristics of counseling teachers about adolescent reproductive health education. These characteristics include age, socio-economic, education or training, and gender. *Enabling Factors* are factors that precede behavior that allow a motivation to be realized. Included in this factor is the availability of resources (infrastructure, costs, time, and learning media), the affordability of resources that can be reached either physically or can be paid for by teachers or schools, for example learning facilities and learning media, community or government regulations; policies in the form of rules issued by the education office or school principal are an enabling factor for counseling teachers to implement adolescent health education in schools<sup>12</sup>.

*Reinforcing Factors* are the factors that follow a behavior that has a continuing influence on that behavior, and contributes to the persistence or overcoming of the behavior. For example, support from school leaders, either the principal or their representative regarding reproductive health education, peer influence, support from school committee organizations, and support

from education and health offices, also environmental conditions can influence behavior. The implementation of *Reproductive Health of Adolescent* education in schools by teachers is also influenced by the condition of the surrounding community related to views, religion, norms, customs, and culture regarding reproductive health education<sup>13</sup>.

School is the primary institution that influences the development and growth process of adolescent development. Health Ministry, Educational Ministry and Religion Ministry recognizes two models of the education system, namely the national education model and the local education model. The national education model is an education system in which curriculum, assessment, and supervision and to measure the level of education of the nation are managed and supervised by the country. Meanwhile, local education is education that is developed by individuals in the community, whether the curriculum, assessment system, and even evaluation are traditionally managed. Both of these educational models contribute to the development of education in Indonesian society<sup>14</sup>. In general, the national education system tends to place practical sciences related to world management, while local education prioritizes religious sciences. Based on the researcher's observations, it is known that public schools and religion-based schools have different curriculum, especially about adolescent health material content. There are several subjects in religion-based schools that do not exist in public schools, for example, Women's Fiqh subjects are not in public schools. The description of the *Reproductive Health of Adolescent* content curriculum in public schools and religion-based schools is also different. The analysis of differences related to the curriculum will be examined further by the research team.

Not all the stakeholder groups coordinate regularly, there are even adolescent groups who have not had access to the YCHS program such as adolescents at Islamic boarding schools, street youth, and community youth including this is a religion-based school. However, referring to the YCHS Program guidebook<sup>7</sup>, the program targets not only school adolescents but also young people outside of school, not only public schools but also religion-based schools. According to the Interview done by the researcher with the Ministry of Surabaya, it was found that these stakeholders did not have the authority and were not actively involved in the implementation of the adolescent health program. Therefore, this study aims to see the implementation of adolescent health programs in public schools and religion-based schools.



## **Design and Methods**

This study was an analytic observational quantitative study using a cross-sectional design. This study was conducted in own-state and private schools which consist of public and religion-based schools in the Tanah Kalikedinding health center working area (Table 1). Religion-based schools in the Tanah Kalikedinding Village area consist of religious public schools and religious private schools. Religion-based schools, especially private schools, are boarding schools. Students which are studying in boarding schools are different from those who study in regular schools. In general, parents send their children to boarding or religion-based schools with the consideration of having a longer learning time about religion and being more focused, enabling children to be more independent and better prepared for the various challenges they will face in the future. Religion-based school students are required to study religious material more deeply to make students feel they have limited time to access other information they need due to their busy schedules and too many specific lessons.

This study was conducted from April to July 2017. The population in this study were adolescents aged 10-15 years who attended public schools and religion-based schools in the working area of Tanah Kalikedinding health center. The sample obtained in this study consisted of 100 students after using the sample size formula for the cross-sectional study and were selected randomly. The variables in the study were students' knowledge and attitudes about adolescent reproductive health. The level of knowledge of adolescent reproductive health is categorized into 3, namely less if <60%, moderate if 60-80%, and good if >80%. Variable Attitudes of adolescents regarding reproductive health and reproductive health programs were categorized to be strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). The statistical test was performed with a significance value of  $\alpha = 0.05$ .

## **Results**

### **Respondent characteristics**

This study was conducted in two different types of schools, namely public schools and religious-based schools in Tanah Kalikedinding health center, Surabaya. According to the results of this study, it was found that most of the gender in public which is own-state schools were female and a small proportion of males. Meanwhile, for religion-based which is own-state

schools, all respondents in this study were female (100%). In contrast to public which is private schools, respondents were the same number of both male and female. Meanwhile, most of the private schools based on religion were male (56.8%) (Table 2).

According to the age of the respondents in this study were divided into ages ranging from 10 to 15 years. The most common ages were 13 and 14 years. The ages of 13 and 14 years are the normal age for junior high school adolescents, in general public and religion-based schools, the number of respondents was the same age of 13 years, while the age of 14 was mostly found in public schools (Table 2). The most respondents obtained to be used as research subjects were grade 7 (first grade in junior high school) both in religion-based public schools, public-private, or religion-based private schools. As for public schools, all respondents were in grade 8 (second grade in junior high school).

### **Adolescent reproductive health knowledge (HIV)**

Adolescent knowledge about adolescent reproductive health should have been honed from childhood to adolescence. The importance of having knowledge about adolescent reproductive health is important since it can influence adolescent behavior to take actions that are safe or unsafe for their health. This study resulted that there were differences in the level of knowledge of adolescent reproductive health between public schools and religion-based schools.

Based on Table 3, it shows that most of the knowledge level of reproductive health among school adolescents is good (39%) and a small proportion is in the poor category (30%). This shows that the level of knowledge of the reproductive health of adolescents in public schools is in a good category (72.9%), while all adolescents in religion-based schools have a moderate level of knowledge (100%), as well as public-private schools also have a moderate level of knowledge (80%, and it is different with adolescents in religion-based private schools who mostly have a low level of knowledge (67.6%). The standard deviation of adolescents in general schools is 22.47 and 19.98 for religion-based schools. The results of the *t-test* statistical test with  $\alpha = 0.05$  showed that there were differences in the level of knowledge of adolescent reproductive health between public schools and religious-based schools with a value of  $p = 0.047 < 0.05$ .

After obtaining the knowledge about adolescent reproductive health, adolescents will show different attitudes. In this study, the attitudes of adolescents regarding content of reproductive

health program were categorized as strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD).

Based on Table 3, it shows that most adolescents have a strong attitude (50%) towards adolescent reproductive health. Only in public-private schools did the majority of respondents agree (50%) on receiving education about adolescent reproductive health. The results of the *t-test* statistical test with  $\alpha = 0.05$  showed that there were differences in attitudes regarding adolescent reproductive health between public schools and religious-based schools with a value of  $p=0.000<0.05$ .

### **Attitudes of adolescent towards adolescent reproductive health program**

The adolescent reproductive health program for the adolescent from the Government has been followed up by stakeholders in each region, one of which is in Surabaya. Based on table 3, it showed that the majority of adolescents have agreed (55%) towards adolescent reproductive health programs. Only state schools based on religion did the majority of respondents strongly agree (60%) with the adolescent reproductive health program. The results of this study indicate that there was no significant difference in Attitudes of Adolescent towards Adolescent Reproductive Health Program between public schools and religious-based schools with a value of  $p = 0.190 > 0.05$ .

### **Exposure of adolescent regarding adolescent reproductive health program policy**

The government, after developing various strategies in the form of an adolescent reproductive health program, has also produced a policy on the program. The attitudes are shown by adolescents regarding policies on adolescent reproductive health programs. Based on Table 3, it is known that most adolescents answered that there was exposure (82%) to the adolescent reproductive health program policies. Only in public schools are based on religion where the majority of respondents chose none (80%) regarding the policy on adolescent reproductive health programs. The results of the *t-test* statistical test with  $\alpha=0.05$  showed that there was no difference in attitudes regarding adolescent reproductive health policies between public schools and religious-based schools with a value of  $p=0.196>0.05$ .

### **Attitudes of adolescents regarding the influence of the environment or others on adolescent reproductive health**

Environmental influence greatly affects adolescent reproductive health. As for the attitudes of adolescents shown about the influence of the environment or other people on adolescent reproductive health. In this study, the attitudes of adolescents regarding the Influence of the Environment or Other People on Adolescent Reproductive Health were categorized as either there is or there is not.

Based on Table 3, it is known that the majority of adolescents stated that there was influence of the environment or other people on adolescent reproductive health (75%). Only in public schools based on religion did the majority of respondents stated that the Influence of the Environment or Other People on Adolescent Reproductive Health was not exist (80%). The results of the *t-test* statistical test with  $\alpha=0.05$  showed that there were differences in attitudes about the influence of the environment on adolescent reproductive health between public schools and religious-based schools with a value of  $p=0.000<0.05$ .

### **Discussion**

#### **Adolescent reproductive health knowledge (HIV)**

Adolescent HIV knowledge proved by another study that discusses adolescent reproductive health knowledge. There is no relationship between gender and an increase in the score of knowledge about the reproductive health of adolescents because adolescents are very enthusiastic which mainly cause a great curiosity about the information which they will hear related to changes or reproductive health problems that they are facing<sup>15</sup>. However, after obtaining information, female students have higher knowledge scores than male students<sup>16</sup>. This study also found similar result where female students tend to pay more attention to lessons or material diligently than male students, especially when the material presented is related to reproductive health so that men tend not to be serious.

The high level of knowledge about reproductive health in each school explains that they get more information about reproductive health. They also formally obtain knowledge of reproductive health in schools through biology lessons and physical education, health, and sports. More of their knowledge about reproductive health is obtained from their environment because there is a sense of interest in studying the problem. A strong desire to study matters

related to reproductive health for adolescents is a natural thing. This is because the local culture or parents of students still consider it taboo when talking about reproductive health matters. As a form of distribution, they continue to seek outside information, one of which is reading books, magazines, or searching for information on the internet.

The results showed that students in both high schools have accessed to biology subjects. The source of the information both school were from the internet. Unfortunately, even though their knowledge of reproductive health tends to be good, they still had unsafe sexual actions or behavior. It is because they still feel taboo about sharing their reproductive health problems. Previous study found several factors that affect knowledge, there are age, place of residence, parental education, and sources of information obtained<sup>17</sup>.

The high level of students' knowledge about reproductive health was due to their own interest. A person's knowledge is collected and applied through stages (1) Awareness; (2) Interest (feel interested); (3) Evaluation (considering); (4) Trial, in which the subject starts trying to do something in accordance with what the stimulus wants; (5) Adoption, in which the subject has new behavior in accordance with his knowledge, awareness, and attitude towards the stimulus<sup>18</sup>.

The religion-based school students have very limited to access the sources of information they need because of the density of activities related to religion, while in public schools it is more flexible to seek information from various sources without any obligations and restrictions. Therefore, there was a difference level of knowledge between public schools and religion-based schools.

### **Attitudes of Adolescent Regarding Adolescent Reproductive Health**

The results of this study differ from the results of previous studies, which stated that there is no significant relationship between attitudes about reproductive health in public and private high schools. However, this research showed that there are differences in attitudes between religious-based high schools and general high schools.

The difference in attitudes was because their beliefs that reproductive health still considered as taboo. Even though they have good knowledge, their attitude has not been able to properly admit the response. The emotions of adolescents who are at puberty also affect their attitudes about reproductive health. Attitude has 3 main components, namely: (1) Trust (belief), (2) Ideas and

concepts towards an object; (3) Emotional life or emotional evaluation of the object and tendency to act (trend to behave)<sup>19</sup>.

Schools will certainly provide all knowledge and information about adolescent reproductive health. Students not only gain knowledge and information on adolescent reproductive health through learning at school and counseling during consultations, but students can seek information independently through increasingly sophisticated technology. There have been many applications and ways to access information about adolescent reproductive health. In this case, good knowledge cannot guarantee that the attitude shown by students is also good. This is due to the fact that the discussion about adolescent reproductive health is considered taboo. Students and their families also consider it as taboo. According to the previous article, the factors that make this matter taboo were due to age, place of residence, parental education, and all sources of information they get<sup>16</sup>. Previous study showed that thirty seven percent of students had ever discussed on at least two sexual and reproductive health topics with their parents. Of which, majority of student preferred to discuss with their peers than parents. Condom use during first intercourse was associated with having communication about sexual and reproductive health [AOR = 1.9, 95% CI: 1.0, 3.8]. Cultural taboo, shame and lack of communication skill were reasons that hinder communication between parent and adolescent about sexual matters<sup>20</sup>.

The culture in the own-state and private of public high schools is also different. Although the knowledge they received was the similar, the environment they were in was different. Each school provides their own school rules. Therefore, the attitudes given by students were also different. Not only by the teacher, the caring attitude must also be obtained by students for their peers. So that the feeling of closeness and concern of a teacher to student behavior are very important. Seeing high school students in their adolescent years in which the students go through the stages of self-maturation and attitude instability. According to the article, the perspective given by adolescents on the physical and emotional changes at puberty is deemed not good, so it can have an impact on negative attitudes towards reproductive health and vice versa<sup>17</sup>. Therefore, during this puberty period, they will look for truth and compatibility with themselves both about reproductive health or their relationships. Culture and knowledge at school are very important. Schools create various written rules, but teachers must also know unwritten rules such as adolescent attitudes, adolescent interactions, solving adolescent problems, or approaches to adolescents. Government agencies with collaboration of all stake holders should develop policies

and programs for implementing and evaluating integrated and comprehensive sexual educational programs<sup>21</sup>.

### **Attitudes of Adolescent towards Adolescent Reproductive Health Program**

According to the previous research, adolescent attitudes regarding participation in the adolescent health program are also good because they have high cognitive or knowledge as well<sup>19</sup>. The results of this study indicated that there was no difference in attitudes regarding adolescent reproductive health programs between public schools and religious-based schools. This is because the two schools implement and uphold knowledge and programs on adolescent reproductive health. So that adolescents will be interested in following and agreeing to the existence of this adolescent reproductive health program. One of the factors that can influence the formation of attitudes is the cognitive aspect that becomes an argument for something that is believed<sup>22</sup>. Adolescent cognitive about adolescent health program is still lacking. This is evidenced by research in 2019, showing that 76.2% of adolescents are not aware of any adolescent care health service programs, even as many as 90% have never accessed adolescent health programs<sup>15</sup>.

The implementation of this adolescent health program is not only aimed at students. Adolescent health programs should also be aimed at parents and teachers who give an important role to students. Parents with high knowledge of adolescent reproductive health do not guarantee that their children to give a positive attitude and high knowledge of adolescent reproductive health as well<sup>20</sup>. Therefore, with the reproductive health program for adolescents, parents have the right to know the times, culture, lifestyle of adolescents and students today so that parents know about problems and what will happen to students or children if they are not well informed about this. Parents involvement for a relatively short period of time can positively impact parents' knowledge and attitudes about adolescent sexuality<sup>23</sup>. Teachers are also very important in upholding this adolescent reproductive health program. Participation of teachers can be implemented at every school to increase their knowledge and skills and to prevent unsafety adolescent sexual behavior<sup>23</sup>. Not only providing adolescent reproductive health lessons during reproductive learning hours. So that students have time and knowledge limitations when learning. Therefore, students feel that the existence of this adolescent reproductive health

program is very important. Youth intention is also high to participate in the implementation of youth health programs<sup>24</sup>.

### **Exposure of adolescent regarding adolescent reproductive health program policy**

There are adolescent reproductive health policies that have met the specified standards, but adolescent reproductive health programs still have problems such as in aspects of communication (promotion and outreach), then disposition, namely commitment between program implementers and stakeholders<sup>25</sup>. This includes implementing resources, forming organizational structures, and administrative aspects of program services. One of the strategies for adolescent health programs is the existence of cross-sector networks. However, not all government stakeholders are actively involved and have a supportive attitude toward adolescent health program policies. Even though all government stakeholders have a strong influence because they have adolescent segmentation<sup>25</sup>.

The results showed that there was no difference in attitudes regarding adolescent reproductive health policies between public schools and religious-based schools. This is because students feel that the policy on the program is an important thing for the formation of adolescent reproductive health programs. Because with the existence of a policy a program will run well and orderly. Students and stakeholders will also run with the existing rules and policies to run an adolescent reproductive health program. However, an adolescent reproductive health program policy must be adapted to the culture and norms that exist in that place. Program development policy should be aimed at ways to maintain and strengthen the existence of positive values and norms of adolescents that are in line with existing religions and cultures<sup>26</sup>.

Reproductive health policy is one of the important things in overcoming various population and health problems. Adolescents are only given limited direct guidance on how to become successful adults, free from STIs or unwanted pregnancy<sup>27</sup>. The belief of adolescents or students in obtaining and running an adolescent reproductive health program is an important factor in the running and effectiveness of the program. After there is gained, students will know and get the benefits provided by the program. Program policies on adolescent sexual and reproductive health have been widely implemented in Indonesia<sup>26</sup>. However, this has not been carried out optimally and has not fulfilled the needs of today's adolescent. The stakeholders support was influenced by health promotion, the role of parents, and the reproductive health behavior of students<sup>28</sup>.



## **Attitudes of adolescents regarding the influence of the environment or others on adolescent reproductive health**

Attitudes are more influenced by internal factors of students (such as students' perspectives, self-confidence, and self-emotional level) and the environment. Previous study was that unfriendly attitudes of providers which keep adolescents waiting, inadequate duration of consultations, judgmental attitudes of some providers, lack of satisfactory services provision and lack of confidentiality will put off adolescents from accessing and using adolescents' reproductive health services irrespective of their sex, age, class, religion, residence, ethnic group, parents' education or income levels<sup>29</sup>.

Besides knowledge and attitudes, there were other factors such as the rapid development of information technology, if without a high level of religiosity, it will have an impact on students' negative attitudes towards problems related to reproductive health. Therefore, adolescents will be familiar with the use of today's technology. This must be balanced with parental supervision that teaches what should and should not be obtained in the use of technology. There are so many positive things in the use of technology and can support the learning process and add information to a child, especially in adolescent reproductive health<sup>30</sup>.

Schools have their own rules in using technology in students. There are those who allow the students to bring smartphones to school and those who do not allow students to bring and use them when the learning process begins. However, learning today is not far from the use of technology. Besides technology, peers are a supporting factor for adolescent reproductive health. The factors that can influence adolescent sexual behavior are the relationship between the parents of adolescents, the presence of negative peer pressure, understanding at the religious level, and the influence of the media, either directly or indirectly<sup>31</sup>. Peer educators are considered ready to help motivate and share experiences with the students at school<sup>32</sup>.

## **Conclusion**

The conclusion in this study is that the implementation of the adolescent health program was different between public schools and religion-based schools because there was a difference knowledge and attitude between students from public schools and students from religion-based schools. There needs to be equal access to adolescent health programs that are supported by all

stakeholders ranging from family, school, and government. Multi-sector networking and edutainment are strategies for the successful implementation of adolescent health programs. Edutainment is a word that states a mix of entertainment and education or marriage of education and entertainment. The main aim of this mixture is to support education with entertainment. Edutainment is defined as an application compounded with educational aims and measurements and providing learners with regarding the value of life, using resource and methods and having a good time with the way of creating and having experience. Therefore, it is necessary to monitor and evaluate the implementation of adolescent health programs in all types of schools so that all adolescents have the same rights in obtaining information about adolescent reproductive health according to their needs. This can be a provision for adolescents in preparing for puberty and as an effort to prevent adolescent risky behavior.

**Clinical trials:** This study was not involved any clinical trial.

**Ethical approval:** This study was approved by Health Ethics Research Committee from Faculty of Ners, Universitas Airlangga, ref: 1773-KEPK (29 September 2019). All of the participants agreed to join this study and provided written informed consent; they were allowed to withdraw during this study and this study was also anonymous and voluntary.

**Authors' contributions:** All of the authors have equal work in this study. All of the authors have approved the final manuscript.

**Conflict of interest:** The authors declare no conflict of interest.

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Table 1. Definition of public school and religion-based school in Indonesia

Status	Type of school	
	Public school	Religion based school
Own-state	follow the curriculum that has been determined by the Ministry of Education	follow the curriculum that has been determined by the Ministry of Religion
Private	Has their own curriculum, not should follow the curriculum that has been determined by the Ministry of Education	Has their own curriculum, add education of religion more.

Table 2. Characteristics of the respondents

Variable	Public achool				Religion based school				Total	
	Own-state		Private		Own-state		Private			
	n	%	n	%	n	%	n	%	N	%
Age (mean: min-max)	14: 10-15				13: 10-15					
Gender										
Male	4	8,3	5	50	0	0	21	56,8	30	30
Female	9	18,8	5	50	5	100	16	43,2	31	31
Total	48	100	10	100	5	100	37	100	100	100

Table 3. Adolescent health programs in public schools, public-religion based, private schools, and private-religion based.

Variable	Public school				Religion based school				Total		
	Own-state		Private		Own-state		Private				
	N	%	N	%	N	%	N	%	N	%	p
Adolescent reproductive health knowledge											0,047*
Poor	4	8,3	1	10	0	0	25	67,6	30	30	
Moderate	9	18,8	8	80	5	100	9	24,3	31	31	
Good	35	72,9	1	10	0	0	3	8,11	39	39	
Attitudes of adolescent regarding adolescent reproductive health											0,000*
Strongly agree	23	47,9	4	40	4	80	19	51,4	50	50	
Agree	21	43,9	5	50	1	20	15	40,5	42	42	
Disagree	2	4,1	0	0	0	0	2	5,4	4	4	
Strongly disagree	2	4,1	1	10	0	0	1	2,7	4	4	
Attitudes of adolescent towards adolescent reproductive health program											0,190
Strongly agree	17	35,4	4	40	3	60	15	40,5	39	39	
Agree	28	58,3	5	50	2	40	20	54,1	55	55	
Disagree	3	6,3	1	10	0	0	2	5,4	6	6	
Strongly disagree	0	0	0	0	0	0	0	0	0	0	
Exposure of adolescent regarding adolescent reproductive health program policy											0,196
There is exposure	43	89,6	7	70	1	20	31	83,8	82	50	
No exposure	5	10,4	3	30	4	80	6	16,2	18	42	
Attitudes of adolescents regarding the influence of the environment or others on adolescent reproductive health											0,000*
There is influence	38	79,2	9	90	1	20	27	73	75	75	
No influence	10	20,8	1	10	4	80	10	27	25	25	
Total	48	100	10	100	5	100	37	100	100	100	

\*significant variable (p-value<0,05)