Research Report

Behavior study about teenage pregnancy and related factors in female junior and senior high school students in Jakarta

Studi perilaku remaja mengenai kehamilan remaja dan faktor-faktor yang berhubungan pada siswi SLTP/SLTA di DKI Jakarta

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Abstract

Objective: To get data about female teenage behavior in their sexual changes, unwanted teenage pregnancy and their negative consequences, contraception, and the relation between factors which are related to female teenage behavior.

Method: Cross-sectional study at five Government Junior High Schools and five Government Senior High Schools in five regions in Jakarta. Two hundred female teenage respondents, aged between 11-17 years old, came from five Government Junior High Schools and five Government Senior High Schools in Jakarta who were picked by cluster random sampling, 20 students from each grade of school. The respondents were given questionnaires which have been validated before, and then we did scoring and statistical measurement with SPSS 13th version.

Result: The respondents' knowledge about their sexual organ changes and sexual behavior is moderate (46%), unwanted teenage pregnancy and their consequences is poor (79.5%), contraception is poor (62%) and scoring result of knowledge is poor (71%). Knowledge scoring among respondents aged between 11-14 years old is poor (85.9%), and also in age group 15-17 years old (60%). Respondents' attitude about their sexual organ changes and sexual behavior is good (40.5%), unwanted teenage pregnancy and their consequences is good (42.5%), while contraception is poor (73.5%), and scoring result of attitude is poor (56.5%). Attitude scoring in age group 11-14 years old is poor (68.2%), and in group 15-17 years old is also poor (47.8%). Respondents' behavior about their sexual organ changes and sexual behavior is poor (51%), unwanted teenage pregnancy and their consequences is good (66%), contraception is moderate (49%), and scoring result of behavior is moderate (49%). Attitude scoring age between 11-14 years old is moderate (55.3%), between 15-17 years old is moderate and poor (each 44.3%). The relation between behavior and the greatest impression of information source which is significant is from teacher/school (p=0.001). The relation between behavior and knowledge is only significant in age group 15-17 years old (p=0.014). There is significant relationship between behavior and attitude in age group 11-14 years old (p=0.013) and 15-17 years old (p=0.000). Determinant factor contributing to this behavior level is the information taken from their teacher/school (p=0.010).

Conclusion: Respondents' behavior about their sexual organ changes and sexual behavior is poor (51%), about unwanted teenage pregnancy and their consequences is good (66%), about contraception is moderate (49%) and scoring result of behavior is moderate (49%). Attitude scoring in age group 11- 14 years old is slightly better than in group 15-17 years old.

[Indones J Obstet Gynecol 2010; 34-2: 51-8]

Keywords: teenage pregnancy, unwanted pregnancy, sexual behavior, contraception

Abstrak

***Tujuan**: Diperolehnya data mengenai sebaran perilaku remaja putri mengenai perubahan perilaku seksual yang terjadi pada dirinya, sebaran perilaku remaja putri mengenai kehamilan remaja yang tidak diinginkan dan dampaknya, sebaran perilaku remaja putri mengenai alat kontrasepsi dan hubungan antara faktor-faktor yang berhubungan dengan perilaku remaja putri.*

***Metode**: Studi bersifat deskriptif analitik yang dilakukan pada lima Sekolah Menengah Pertama dan lima Sekolah Menengah Atas di lima wilayah DKI Jakarta. Studi ini melibatkan dua ratus responden remaja putri berusia 11-17 tahun yang berasal dari lima SMP Negeri dan lima SMA Negeri di Jakarta yang dipilih secara cluster random sampling, masing-masing 20 responden diambil dari murid kelas I - kelas III. Responden diberi kuesioner yang telah dilakukan uji validasi sebelumnya, setelah terkumpul dilakukan skoring dan penghitungan statistik dengan SPSS versi 13.*

***Hasil**: Pengetahuan responden mengenai perubahan organ seksual dan perilaku seksual adalah sedang (46%), kehamilan yang tidak diinginkan dan dampaknya kurang (79,5%), alat kontrasepsi kurang (62%) dengan hasil skoring pengetahuan adalah kurang (71%). Sedangkan skoring pengetahuan bila dibagi berdasarkan usia 11-14 tahun, kurang (85,9%) dan 15-17 tahun juga kurang (60%). Sikap responden mengenai perubahan organ seksual dan perilaku seksual adalah baik (40,5%), kehamilan yang tidak diinginkan dan dampaknya baik (42,5%), alat kontrasepsi kurang (73,5%) dengan hasil skoring sikap adalah kurang (56,5%). Sedangkan skoring sikap bila dibagi berdasarkan usia 11-14 tahun adalah kurang (68,2%) dan 15-17 tahun juga kurang (47,8%). Perilaku responden mengenai perubahan organ seksual dan perilaku seksual adalah kurang (51%), kehamilan yang tidak diinginkan dan dampaknya baik (66%), alat kontrasepsi sedang (68,5%) dengan hasil skoring perilaku adalah sedang (49%). Sedangkan skoring perilaku bila dibagi berdasarkan usia 11-14 tahun adalah sedang (55,3%) dan 15-17 tahun sedang dan kurang (masing-masing 44,3%). Hubungan antara perilaku dan sumber informasi yang paling berkesan yang bermakna adalah berasal dari guru/sekolah (p=0,001). Hubungan perilaku responden dengan pengetahuan responden barulah bermakna pada usia 15-17 tahun (p=0,014). Terdapat hubungan yang bermakna antara perilaku dengan sikap responden pada usia 11-14 tahun (p=0,013) dan pada usia 15-17 tahun (p=0,000). Analisis bivariat dan multivariat menunjukkan bahwa faktor sumber informasi dari guru menjadi determinan utama perilaku responden.*

***Kesimpulan**: Perilaku responden mengenai perubahan organ seksual dan perilaku seksual adalah kurang (51%), mengenai kehamilan yang tidak diinginkan dan dampaknya baik (66%), mengenai alat kontrasepsi sedang (68,5%). Penilaian perilaku pada kelompok usia 11-14 tahun sedikit lebih baik dibandingkan dengan kelompok 15-17 tahun.*

[Maj Obstet Ginekol Indones 2010; 34-2: 51-8]

***Kata kunci**: kehamilan remaja, kehamilan yang tidak diinginkan, perilaku seksual, alat kontrasepsi*

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INTRODUCTION

According to the consensus of the World Health Organization (1998), teenager is defined as an age group between 10 and 19 years old. Adolescence constitutes the transition between the period of childhood and the period of adulthood, and its primary psychological problems are marked by the problem of self identity.[1,2] Adolescence is a dynamic period characterized by heterogeneous behavior. The acceptance by peer groups is extremely important.[3,4] Biologically, adolescence is a period in which teenagers begin to be attracted to their opposite sex.[2]

The disparity between the age of first menstruation (which biologically signifies a maturity indicated by being capable of getting pregnant) and the age of marriage is getting wider. As a result, this disparity is the primary causal factor for adolescent fertility faced by teenagers nowadays. Many teenagers start their sexual activity at early age and have been engaged in sexual activity prior to marriage. If pregnancy occurs, usually it will become an unwanted pregnancy.[2,5]

Approximately 40% of adolescent pregnancies ended with abortion.[3,4] This situation will certainly increases maternal morbidity and mortality rates.[1] In Indonesia, there are already a number of studies that describe the sexual adolescent behavior, one of them was conducted by UII in 1984 which found that 13% of 845 marriages were preceded by pregnancy.[2]

In an effort to reduce maternal morbidity and mortality rates in general, particularly as a result of adolescent pregnancy, it is necessary to carry out undertaking to prevent such pregnancy. Therefore, teenagers have the right to get access to unbiased information on adolescent fertility, including information on the sexual drives they experience.[2] Such information can be provided, among others, through the education on how to become a responsible family, sexual education, and other activities. If those efforts fail to yield results in preventing unhealth sexual adolescent activity, it is necessary to make efforts on preventing unwanted pregnancies.[2]

Unwanted pregnancy can be prevented by means of contraception. For that reason, teenagers who are engaged in sexual activity should be provided with contraception. It is necessary to provide these teenagers with communication, information, and education (CIE) about contraception. Contraception does not only prevent unwanted pregnancy, but also may reduce the risks of sexually transmitted diseases, including HIV/AIDS.[3,5]

In view of the fact that physically and psychologically female teenagers are not yet mature enough to get pregnant, particularly in unwanted pregnancies, pregnancy as well as delivery may result in high maternal mortality rate. Therefore, female teenagers should have the right to get access to information on their reproductive health. This information may include education about their reproductive organs, menstruation, pregnancy, delivery, and contraceptive services. Thus, it is necessary to understand the data on adolescent behavior nowadays which explains the above-mentioned aspects, so that appropriate interventions adapted to the existing condition through knowledge, attitudes, and behavior could be carried out.

The general objective of this study was to obtain a description on the behavior of female teenagers in the Greater Jakarta (DKI Jakarta) related to their reproductive health. Furthermore, the specific objective was to obtain the data on distributions of female adolescent behavior regarding the changes occurring in their sexual behavior, distributions of the female adolescent behavior regarding unwanted adolescent pregnancy and their impacts, distribution of female adolescent behavior regarding contraceptive methods (their knowledge, attitudes and behavior), and the relationship of various factors associated with female adolescent behavior.

METHODS

This study employed an analytical, descriptive cross-sectional design which was conducted in a number of Junior and Senior High Schools in five areas of Jakarta. The study was performed in August to September 2008, with target population of the study being female teenagers aged between 12 and 18 years old and attending Junior and Senior High Schools in accordance with the inclusion criteria. Samples were collected by means of multistage cluster sampling from the state-owned Junior and Senior High Schools located in five different areas in the Greater Jakarta. A written agreement on the participation of the respondents was previously secured, only after they received both oral and written explanations. The instrument in this study is a questionnaire consisting groups of questions regarding the respondent characteristics, parents' characteristics, source of information, and respondent's knowledge on sexual organs and sexual behavior (five questions), unwanted adolescent pregnancy and its impacts (five questions), contraceptive methods (five questions), and questions about attitude and behavior on sexual organs and sexual behavior (five questions), unwanted adolescent pregnancy and its impacts (five questions), and contraceptive methods (five questions).

Before the questionnaire was distributed, we performed validity and reliability test on the questionnaire by conducting 15 questionnaire tests on the students of Junior High Schools and another 15 questionnaire tests on the students of Senior High Schools.

Data was then processed statistically with SPSS package version 13. The confidence interval used was 10%.

RESULTS

The study was conducted at five Junior High Schools and five Senior High Schools, each of which situated in one of the five areas of the Greater Jakarta in August to September 2008. From each of these schools, 20 respondents were taken from all female students in each grade, grade 1 to 3. So that we had a total of 200 teenagers to be put into the study.

Table 1. Distribution of respondents based on the knowledge of the changes in sexual organs and sexual behavior, unwanted adolescent pregnancy and its impacts, and contraceptive methods.

Knowledge	Total (n=200)	Percent
Sexual organs & Sexual behavior changes		
Good	84	42.0
Moderate	92	46.0
Poor	24	12.0
Unwanted adolescent pregnancy and its impacts		
Good	4	2.0
Moderate	37	18.5
Poor	159	79.5
Contraceptive methods		
Good	26	13.0
Moderate	50	25.0
Poor	124	62.0
Scoring of knowledge		
Good	5	2.5
Moderate	53	26.5
Poor	142	71.0

This study showed that the knowledge of respondents on the sexual organs and sexual behavior changes was moderate (n=92, 46.0%), while knowledge on the unwanted pregnancy and its impact was poor (n=159, 79.5%). Similarly, the majority of the respondents' knowledge on contraceptive methods was poor (n=124, 62%). It is showed that majority of the res-pondents' knowledge was poor (n=142, 71.0%). (Table 1)

Table 2. Distribution of respondents based on the attitudes toward the changes in sexual organs and sexual behavior, unwanted adolescent pregnancy and its impacts, and contraceptive methods.

Attitude	Total (n=200)	Percent
Sexual organs & Sexual behavior changes		
Good	81	40.5
Moderate	69	34.5
Poor	50	25.0
Unwanted adolescent pregnancy and its impacts		
Good	85	42.5
Moderate	64	32.0
Poor	51	25.5
Contraceptive methods		
Good	14	7.0
Moderate	39	19.5
Poor	147	73.5
Score result of attitude		
Good	25	12.5
Moderate	62	31.0
Poor	113	56.5

The respondents' attitude toward their sexual organs and sexual behavior changes was good (n=81, 40.5%). Half of the respondents' attitude toward unwanted pregnancy and its impacts was good (n=85, 42.5%). By contrast, the majority of the respondents' attitude toward contraceptive methods was poor (n=147, 73.5%). Therefore, based on the score results it was obvious that the majority of the respondents' attitude toward these aspects were poor (n=113, 56.5%). (Table 2)

Table 3. Distribution of respondents based on their behavior toward changes in sexual organs and sexual behavior, unwanted adolescent pregnancy and its impacts, and contraceptive methods.

Behavior	Total	Percent
Sexual organs & Sexual behavior changes		
Good	25	12.5
Moderate	73	36.5
Poor	102	51.0
Unwanted adolescent pregnancy and its impacts		
Good	132	66.0
Moderate	57	28.5
Poor	11	5.5
Contraceptive methods		
Good	20	10
Moderate	137	68.5
Poor	43	21.5
Score result of behavior		
Good	19	9.5
Moderate	98	49.0
Poor	83	41.5

The majority of the respondents' behavior regarding sexual organ and sexual behavior changes was poor (n=102, 51.0%). Half of the respondents' behavior regarding unwanted pregnancy and its impact was good (n=132, 66%). On the other hand, the majority of the respondents' behavior regarding contraceptive methods was moderate (n=137, 68.5%). Thus, based on the score results of behavior, the majority of the respondents' behavior was moderate (n=98, 49%). (Table 3)

Table 4. Comparison between OR bivariate and multivariate in a number of factors with respect to the respondents' behavior

Determinant factors	Bivariate			Multivariate		
	OR	CI 95% Min - Max	p	OR	CI 95% Min - Max	p
SI sexual organs from teachers	1.97	1.022 - 3.795	0.041	1.381	0.657 - 2.900	0.394
SI most impressive from teachers	3.914	1.629 - 9.401	0.001	3.441	1.342 - 8.822	0.010
SI impact of pregnancy from the media	0.376	0.189 - 0.749	0.005	0.324	0.154 - 0.683	0.003
Respondents' behavior	3.821	2.065 - 7.068	0.000	3.396	1.764 - 6.539	0.000

SI: Source of information

From the above table, it is obvious that the comparison between OR bivariate and multivariate in a number of factors toward the respondents' behavior showed the result of determinant factors in the respondents' behavior. The results showed that the most impressive source of information was from teachers (p=0.010), information from the mass media (p=0.003), and the respondents' attitude (p=0.000), with R^2 0.170. This means that 17 percent of the respondents' behavior could be explained by the variable of the most impressive source of information, from teachers, the mass media, and the respondents' attitude, while the rest (83%) could be explained by other causal factors.

DISCUSSION

According to Pardede (2001), the adolescent period constitutes a period of transition characterized by the changes and acceleration of physical growth, either visible or invisible from outside. The emotional changes are reflected in the attitudes and behavior, and in psychological and social changes. The development of personality during this period is not only influenced by parents and family environment, but also by school environment, or peer friends outside school setting.[4] The changes are the main characteristics of the biological process of puberty. Hormonal changes occur qualitatively and quantitatively between the period of pre-puberty and the period of adulthood, to the extent that a growth occurs rapidly in the body composition and body tissues as well as the onset of characteristics of secondary sex, which result in the growth of boy into a man, and a girl into a woman. The characteristics of primary sex in the female teenagers include ovulation marked by the growing and releasing of ovum cells and ovarian follicle, and the beginning of follicle stimulating hormone (FSH). The beginning of the maturation of the ovaries and production of estrogen results in the thickening and differentiation of endometrium, in addition to the preparation for menstruation and pregnancy. The period of menarche is associated with other puberty aspects.

Teenagers need to understand the above-mentioned changes in order to be able to control their behavior. Teenagers should understand the fact that if they have already experienced menstruation, then physically they are able to get pregnant. Whether or not the female teenagers may get pregnant does not depend on how many times they experience sexual intercourse, but on when they have the sexual relationship associated with the fertility cycle.[4,25] Many teenagers did not have any knowledge on these aspects. This was reflected in this study in which approximately only 44% of the teenagers responded that they knew that one-time sexual intercourse may lead to pregnancy, while the rest (46%) did not know, and 10% responded that they would not experience pregnancy. On the other hand, the majority of the respondents have already had an understanding of contraceptive methods and the characteristics of biological maturation. The behavior of pre-marital sexual relationship was considered as normal by teenagers today. Therefore, many of them were engaged in pre-marital sexual relationship. As shown by the study performed by Situmorang (2001) in Medan, it was found that 18% (9% of females and 27% of males) of the single young people aged 15-25 years had been engaged in sexual relationship.[26] The first sexual relationship at young age associated with unsafe sexual behavior was caused by the lack of knowledge, the lack of access to contraceptive methods, and the poor knowledge of contraceptive methods.[27,28] During the period of 1991-2001, the percentage of senior high school students in the United States who have been engaged in sexual relationship decreased. This may be due to the fact that they were worried about the transmission of HIV/AIDS and the increased use of contraceptive methods. While other determining factors included the role of education program in health.[27,28]

The majority of Indonesian teenagers had poor knowledge of reproductive health, and the lack of such knowledge contributed to the fact that young people were closely associated with high-risk sexual behavior.[26] The risks faced included adolescent pregnancy and its possible impacts. In Indonesia, where pre-marital sexual relationship occurred, female teenagers were usually faced with two options, getting married or getting an abortion. Other problems that may occur included adolescent pregnancy and social-economic conditions that may have adverse impacts on young mothers and their fetuses. According to Drife in 2004, babies delivered by teenage mothers were in poor condition. In the United States, the mortality of fetuses was higher in mothers aged 15 years or younger, and neonatal mortality was higher in mothers aged 15 years or younger.[16] Based on this study, it was found that the majority of the respondents had poor knowledge of adolescent pregnancy and its impacts (n=159, 79.5%). It is also found that

the majority of the respondents (53%) did not know about the effects of adolescent pregnancy on their health. Nevertheless, the majority responded that abortion was one of the medical impacts of the unwanted adolescent pregnancy (71%). In this study, we also divided the respondents into two age groups (11-14 years and 15-17 years), and found that in both age groups of 11-14 years and 15-17 years, the knowledge of the respondents was poor (85.9% and 60%). One study conducted by Shittu et al in 2006 in Nigeria suggested that approximately 51% of teenagers had poor basic knowledge of sexual behavior and its impacts on the sexually transmitted diseases and HIV/AIDS.[29]

As already indicated, unsafe sexual behavior was associated with the lack of access to contraceptive methods and the poor knowledge of contraceptive methods. In the current study, the majority of the respondents' knowledge of contraceptive methods was poor (n=124, 62%). The respondents who answered correctly regarding the definition of contraceptive methods were reasonably numerous (65.5%). However, in terms of the purposes of contraceptive methods for teenagers, only 30.5% of them could respond correctly. According to Situmorang (2001), there was a study conducted by *Lembaga Demografi* - FEUI in 1999 which demonstrated that the majority of young people had limited knowledge of contraceptive methods. The ability to mention one or more of the contraceptive methods was not accompanied by the understanding on how to use them, or access to these methods.[26] Overall, it was evident that the majority of the respondents had poor knowledge (n=142, 71.0%).

A study conducted by Dawam in 2003 in West Java, West Nusa Tenggara, and Jambi showed that teenagers who had poor access to the knowledge of adolescent reproductive health was those in the age group of 12-14 years, and the teenagers residing in rural areas/districts, in which there was a lack of knowledge on the subject regarding the adolescent reproductive health. The lack of medical experts (medics, paramedics, psychologists) and the supporting facilities (equipment, models, leaflets, brochures) posed an operational obstacle in carrying out counseling. Of particular interest in this study was the fact that the teenagers residing in the capital city of the Greater Jakarta also had an poor knowledge, although the sources of information available were more numerous and varied, such as those from the mass media, family, friends/neighbors, teachers/schools, religious leaders, private medical practitioners, hospital/community health center medical practitioners, seminar, or associations. Based on this study, it was found that the most impressive source of information was the mass media (45%), teachers/schools (19%), and family (33%). Of all these sources of information, the information from the mass media constituted the most frequently accessible source by the respondents, either on the changes in sexual organs and sexual behavior (74.5%), adolescent pregnancy (87.5%), the impacts of pregnancy on teenagers (72.5%), and the types of contraceptive methods (57%). According to Ojo and Fasuba (2005) in their study, the source of information on the education of family life at schools constituted the most important solution to the problems of adolescent sexual behavior.[31] On the other hand, according to Sharma, Mahajan and Samkaria (2004), the education of sex and family planning could help teenagers live a healthy life, because teenagers were in fact looking for information but they did not find it from the accurate source, such as the mass media.[32] In the study conducted by Sharma (2005) among female teenagers, it was found that mothers were reluctant in providing sex education for their daughters because according to them it was embarrassing to discuss such topics.[33] According to Situmorang (2003), young people, particularly those who were unmarried, did not have sufficient access to the information on the problems of reproductive health. The information on puberty and reproductive health, particularly from friends, the mass media, and teachers apparently was incomplete, not very informative, or hampered by moral and religious messages. The majority of parents still clung on to conservative norms. They did not feel comfortable to discuss sexual problems with their daughters. Sex education was also rarely found in the school curricula. Discussing sex was still considered taboo, and they believed that sex was a private matter and not for public consumption. Thus, sexuality was not considered to be part of the agenda in health education.[26]

Based on the results of the study, it was obvious that the respondents' attitudes toward sexual organs and sexual behavior changes was good (n=81, 40.5%). On the other hand, the respondents' attitude in the age group of 11-14 years was poor (69.2%). Likewise, in the age group of 15-17 years, such attitudes were poor (47.85). Seventy six point five percent of them responded that they did not agree to the idea that teenagers who were in the puberty period may watch porn movies, while 11% responded that they agreed. In terms of the questions on pre-marital sexual relationship, 2.5% (5 respondents) responded that they agreed. Half of the respondents' attitudes toward unwanted pregnancy and its impacts were good (n=85, 42.5%). On the questions of whether they would agree that adolescent pregnancy was the result of unrestrained freedom in social interaction, 78.5% of them responded that they agreed, while 15.5% did not agree. The question on whether they would carry out abortion in unwanted pregnancy showed that 86.5% of the respondents did not agree, and only 2.5% of them agreed. By contrast, the majority of the respondents' attitudes toward contraceptive methods were poor (n=147, 73.5%). Meanwhile, the question on whether the provision of emergency contraceptive methods for the sexually active teenagers showed that majority of the respondents said that they did not know (42%), those who said they did not need was 30.5%, and those who said they need was 27.5%. In England, the teenagers encountered difficulties in accessing health services on family planning in the clinics of general practitioners out of fear and embarrassment, to the extent that they were more willing to come to medical specialists or family planning clinics, even though they were located far away. The most important aspects in the contraceptive services in teenagers were the fact that it was free-of-charge and confidential.[34] Based on the score results, it was evident that the attitudes of the majority of the respondents were poor (n=113, 56.5%).

According to Situmorang (2003), the behavior of pre-marital sexual relationship was considered all the more normal nowadays. That was the reason why many young people were engaged in sexual activity before marriage. Indonesian teenagers experienced changes too rapidly in norms, attitudes, and behavior toward sexuality. They have become more liberal, particularly those who resided in the urban areas. Access to entertainment facilities, including night club, discotheque, and porn movies from videos, magazines, books, and the internet has affected teenagers and encouraged them to experiment with their enormous curiosity.[26] The study conducted by Permata in 2003 in Bengkulu with respondents from the third graders of Senior High Schools demonstrated positive attitude toward reproductive health, pregnancy and family planning. However, there was a disparity in attitudes between female teenagers and male teenagers toward decision making, which was thought to be due to gender-related inequality.[35]

From the results of the study, it was evident that the behavior of most respondents toward sexual organs and sexual behavior changes was poor (n=102, 51.0%). On the other hand, the behavior of the combined age group of 11-14 years was moderate (55.3%), and in the age group of 15-17 years was poor and moderate (44.3%). On the question of sexual behavior which has been exercised by the respondents, 51% of the respondents came up with the answer of holding hand with their opposite sex, and only 1% of them had sexual intercourse with their opposite sex. On the other hand, on the question of what to do when in high sexual drive, 70.5% of the respondents carried out other activities, such as physical exercise, reciting The Koran, and other activities, while 1% of the respondents had sexual intercourse with their partners, and only 0.5% resorted to masturbation.

As a result of the widespread sources of information and access to pornography, a great number of teenagers were engaged in high-risk sexual behavior, such as unsafe sexual relationship, multiple sexual relationship resulting in unwanted pregnancy, abortion, and sexually transmitted diseases, including HIV/AIDS.[26] The results of the study on the respondents' behavior toward unwanted pregnancy and its impacts showed that half of the respondents had good behavior (n=132, 66%). Of 200 res-pondents, only 5.5% had a predilection to go to bars or discotheque and no respondent had experienced pregnancy. By contrast, on the question regarding the history of infection in the genitals, 2.5% of the respondents replied that they had ever had. On the question of the respondents' behavior toward contraceptive methods, the majority of the respondents had moderate behavior (n=137, 68.5%). Only 0.5% of the respondents who replied that they had ever used contraceptive methods, while 75.5% never sought information on the contraceptive methods, and 91.5% replied that they had never sought places where they could obtain contraceptive methods, while 8.5% answered they had ever sought. The study performed by Hannah et al in 1995 in the United States showed that 20% of female teenagers had attempts to prevent pregnancy, while 8% let themselves pregnant, and 14% were still confused about the issue of pregnancy.[36]

From the results of the study, it was evident that the division into groups of education affected the knowledge on contraceptive methods, the knowledge of combined respondents, attitudes toward pregnancy and its impacts, and the attitudes of combined respondents. This may be due to the fact that the age group of 11-14 years was more innocent and younger than the age group of 15-17 years in grasping the information on the issues of reproductive health. Thus, it may be possible that the material regarding the issues of reproductive health needs to be distinguished according to the age groups. Teenagers could be divided into early teenagers (female children aged 10-13 years), middle teenagers (female children aged between 11 and 14 years), and high teenagers (female children aged between 13 and 17 years).

As previously explained, according to Situmorang (2003), teenagers did not have adequate information on the problems of reproductive health. Information on the puberty and sexual health, particularly from friends, the mass media, and religious teachers was not complete, not informative, or was hampered by the religious issues and moral messages.[26] In accordance with the results of this study calculated bivariately, multivariately, or comparatively, it was found that the sources of information that became a determinant factor or the most influencing factor on the respondents' behavior was the information from teachers (p=0.010) in terms of the most impressive source of information. This was followed by the mass media (p=0.003 in terms of source of information on pregnancy impacts, and p=0.012 in terms of the source of information on the changes in sexual organs), and family (p=0.035 in terms of the source of information on pregnancy impacts).

According to Ojo and Fasubaa (2005) in their study, education on the family health at school constituted the main key in providing solution to the adolescent problems.[31] In addition, in the calculation of OR bivariate and multivariate comparison in the present study showed that religion (p=0.001) and respondent's knowledge (p=0.050 in terms of adolescent pregnancy, and p=0.000 in terms of attitudes of the score results) are the determinant factors or the most influencing factors on the respondents' behavior. This may be due to the fact that in Indonesia religion, family, or parents and teachers were still the sources of information that they relied on, so in order to improve knowledge, attitudes, and behavior interventions from the school, teachers, or religious leaders were still necessary. Attitudes and opinions that formed the behavior came from the early period of life, to the extent that sex education would exert enormous impacts if it was directed at the group of teenagers. Based on the results of the study conducted by Permata (2003), the majority of respondents consisting of Senior High School students used various sources of information in the efforts to understand reproductive health, pregnancy and family planning. The sources of information used include parents, friends, teachers, and the mass media, either printed or electronic. However, the majority of teenagers used printed media and elec-

tronic media as the main sources of information. On the other hand, parents, friends, and teachers constituted the least sources of information used. Thus, the aspects that should be anticipated by parents and teachers were how to direct teenagers in such a way that they could get the correct information. This may be due to the fact that they may not understand all the information they received from various media, hence the role of parents and teachers became important.[35]

From the results of OR bivariate and multivariate comparison, it was found that R square (R^2) was low, i.e. 0,170 (17%) in the comparison of several factors on the respondents' behavior, and 0.216 (21.6%) in the comparison of several factors on respondents' behavior toward sexual organs, 0.046 (4.6%) in the comparison of several factors on the respondents' behavior toward adolescent pregnancy and its impacts, and 0.166 (16.6%) in the comparison of several factors on the respondents' behavior toward contraceptive methods. On the other hand, the remaining represented aspects could be explained by other causes. This may be due to the fact that the process of formation and/or changes in behavior was affected by factors from the inside and outside of the individual, such as the central nervous system, intelligence, perception, motivation, emotion, learning process, and others which worked to process the stimulation from the outside. Meanwhile, factors from the outside included the environment, either physical or non-physical, such as climate, sosial, economic, and cultural aspects.[24]

CONCLUSION

This study showed that female teenager's knowledge about sexual organs and behavior changes, unwanted pregnancy and its impacts, and also contraceptive methods was poor.

This poor knowledge gave rise to poor attitude in contraceptive methods but not in sexual organs and behavior changes, and unwanted pregnancy.

However, the behavior towards unwanted pregnancy and its impact is still good.

The determining factor contributes to this level of behavior is the information taken from their teachers/school.

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