

KNOWLEDGE OF CONTRACEPTION AND SAFE SEX AMONG STUDENTS AT CANTHO UNIVERSITY OF MEDICINE AND PHARMACY, VIET NAM

Nguyen Phuc Hong Ngoc*, Nguyen Quoc Tuan, Ba Tho Ngoc Chuyen,
Le Dai Khanh Duy, Nguyen Thi Cam Tien, Nguyen Thuy Duong

Can Tho University of Medicine and Pharmacy

*Corresponding author: 1953010736@student.ctump.edu.vn

ABSTRACT

Background: Viet Nam was one of the countries with the highest abortion rate in the world, of which about 70% were of the adolescents. Nowadays, students at Can Tho University of Medicine and Pharmacy are facing many problems related to reproductive health such as unwanted pregnancy, abortion, sexually transmitted diseases, homosexuality... **Objectives:** To determine the proportion of medical students at Can Tho University of Medicine and Pharmacy have correct knowledge about contraceptive methods and safe sex and its related factors. **Materials and methods:** A cross-sectional descriptive study with analysis was carried out on 370 first-year, second-year and third-year general medicine students who were studying at Can Tho University of Medicine and Pharmacy at the age of 18-24. **Results:** The results showed that the rates of students had a high knowledge of contraception and practicing safe sex were 8.38% and 28.65% respectively. The statistically significant factors include: For students with high knowledge about contraception: having already taken a Reproductive Health module, learning from internet by themselves and joining Union/Association activities; For students with high knowledge about safe sex: having a hometown in an urban area; learning from newspaper and books, home schooling, friends and general knowledges. **Conclusion:** Students' knowledge about contraceptive methods was not good. Students' knowledge about safe sex was quite good. Related factors to high knowledge about contraception and safe sex of students: having already taken a Reproductive Health module, having a hometown in an urban area, joining Union/Association activities, learning from internet, newspaper and books, home schooling, friends and general knowledges.

Keywords: contraception, safe sex, student, Vietnam.

I. INTRODUCTION

According to statistics of The Institute for Reproductive & Family Health, Vietnam was one of the countries with the highest abortion rate in the world, of which about 70% were of the adolescents and young adults [4]. On the other hand, Vietnam was a country with the high proportion of young people aged 10 – 24 years in the population structure in Asia, young people account for about 21% of the population [3]. Nowadays, students at Can Tho University of Medicine and Pharmacy are facing many challenges related to reproductive health such as unwanted pregnancy, abortion, sexually transmitted diseases, homosexuality, etc.

Alarmingly, among those who were newly tested for HIV infection, sexual transmission accounted for nearly 82%. Mainly concentrated in the age group from 16 to 39 years old and showed signs of increasing in the age group from 16 to 29 years old, meaning in pupils and students [7]. This showed that adolescents and young people still lack knowledge and attitudes about reproductive health care and were at high risk of sexually transmitted infections.

Given the above situation, the question is how are students' knowledge about contraception and safe sex today? What factors are related to students' lacking knowledge of contraception and safe sex? What is student's viewpoint in reproductive health? To answer these questions, we conducted the project: "*Study on knowledge of contraception and safe sex among students at Can Tho University of Medicine and Pharmacy*". The aim of this study was to determine the proportion of students have correct knowledge about contraceptive methods and safe sex and its related factors.

II. MATERIALS AND METHODS

2.1. Materials

2.1.1. Study participants

The study participants were the first-year to third-year medical students of Can Tho University of Medicine and Pharmacy.

Inclusion criteria: Medical students aged 18 to 24 years. Students agreed to participate in the study.

Exclusion criteria: Students did not complete the survey form.

2.1.2. Time and place of the study

The study was conducted at Can Tho University of Medicine and Pharmacy in Can Tho city from June 2021 to June 2022.

2.2. Methods

2.2.1. Study design: The study was conducted a cross-sectional description.

2.2.2. Sample size: The study utilized the sample size calculation formula:

$$N = \frac{Z_{(1-\alpha/2)}^2 \times p \times (1-p)}{d^2} = \frac{1.96^2 \times 0.412 \times (1-0.412)}{0.05^2} \approx 372$$

n: the sample size required.

$Z_{(1-\alpha/2)} = 1.96$.

d: the acceptable error. We chose $d = 0.05$.

p: the ratio of students with correct knowledge about reproductive health in Ton That Chieu's research (2017) was 41.2% [2] so we chose $p=0.412$, then $n=372$. In fact, after filtering the sample according to the exclusion criteria, sample size was 370.

2.2.3. Sampling method

We sent online survey form and invited students to participate in the study by convenience sampling until the number of participants was sufficient.

2.2.4. Study contents

Characteristics of participants included 4 variables: age, gender, year of study and hometown.

The number of contraceptive methods students knew included 4 variables: 1; 2; 3-4 and ≥ 5 .

The optimal contraception for students included 7 variables: condom, contraceptive pills, intrauterine device (IUD), using the rhythm method, coitus interruptus, not having sex, not knowing about contraception.

Definition of safe sex included 4 variables: About both-side consent, preventing unwanted pregnancy, preventing STDs and HIV/AIDS, not affecting on fertility.

Dealing with being a victim of a rape included 4 variables: Asking help from family and medical profession, gynecological examination check for complications, criminally denounce the perpetrator, keeping secret.

Sexually transmitted diseases (STDs) included 6 variables: Syphilis, gonorrhea, genital warts, genital herpes, phthisis and measles.

Related factor to knowledge of students about contraception and safe sex included 10 variables: age, gender, year of study, hometown, have already taken a Reproductive Health Module, joining Union/Association activities, learning from Internet, newspaper and books, home schooling and friend, general knowledges.

2.2.5. Measurements

A self-administrated structured questionnaire was used to collect information about knowledge of contraception and safe sex. We calculated the total score of the questionnaire, then rated level of knowledge on contraception and safe sex according to Bloom’s Taxonomy.

2.2.6. Statistical analysis: This study used SPSS 20.0 for analysis.

III. RESULTS:

3.1. Characteristics of participants:

Table 1. Some characteristics of participants:

Variables		Number	Rate (%)
Age	< 20	90	24.3
	≥ 20	280	75.7
Gender	Male	153	41.4
	Female	217	58.6
Year of study	First year	104	28.1
	Second year	170	45.9
	Third year	96	25.9
Hometown	Urban area	140	37.8
	Rural area	230	62.2

The mean age of the study group was 20.2 ± 1.064 years old; females accounted for 58.6%; the percentage of the second-year students accounted for the largest with 45.9%; 62.2% of students were from a rural hometown.

3.2. Knowledge of contraceptive methods

Table 2. Percentage of students knew about contraceptive methods

Number of contraceptive methods students knew	Number (n= 370)	Rate (%)
1	6	1.6
2	11	3
3- 4	71	19.2
≥ 5	282	76.2
Average	3.7 ± 0.606	

100% of students knew at least 1 method of contraception. The average number of contraceptive methods students knew was 3.7 ± 0.606 .

Table 3. Optimal contraception for students

Optimal contraception for students	Number (n= 370)	Rate (%)
Condom	313	83.9
Contraceptive pills	23	6.2
Intrauterine Device (IUD)	7	1.9
Using the rhythm method	2	0.5
Coitus interruptus	14	3.8
Not having sex	10	2.5
Not knowing about contraception	2	0.5

83.9% of students chose condom as the optimal contraception; 0.5% didn't know any contraception.

3.3. Knowledge of safe sex

Table 4. Knowledge of students about safe sex

		Number (n=370)	Rate (%)
Definition of safe sex	It is about both-side consent	326	88.1
	It is about preventing unwanted pregnancy.	280	75.7
	It is about preventing STDs and HIV/AIDS	348	94
	It is about not affecting on fertility	319	86.2
Dealing with being a victim of a rape	Asking help from family and medical profession	352	95.1
	Gynecological examination check for complications	341	92.1
	Criminally denounce the perpetrator	328	88.6
	Keeping secret	13	10
Sexually transmitted diseases (STDs)	Syphilis	363	98.1
	Gonorrhea	358	96.8
	Genital warts	347	93.8
	Genital Herpes	308	83.2

3.4. Level of knowledge on contraception and safe sex

Table 5. Level of knowledge on contraception and safe sex

Knowledge of students about	High knowledge	Low knowledge	
	≥80%	60%<<80%	≤60%
Contraception	8.38%	46.22%	45.4%
Safe sex	28.65%	55.13%	16.22%

8.38% of students had high knowledge about contraception; 28.65% of students had high knowledge about safe sex.

3.5. Related factor to high knowledge about contraception and safe sex of students**Table 6.** Related factor to high knowledge about contraception and safe sex of students

	Related factor	Comparison group	OR (95%CI)	p
Related factor to high knowledge about contraception of students				
1	<i>Have already taken a Reproductive Health Module</i>	<i>No</i>	3.239 (1.154-9.378)	p = 0.023
2	<i>Learning from Internet by themselves</i>	<i>No</i>	1.069 (1.04-1.1)	p = 0.001
3	<i>Joining Union/Association activities</i>	<i>No</i>	3.182 (0.739-13.693)	p = 0.026
Related factor to high knowledge about safe sex of students				
1	<i>Urban hometown</i>	<i>Rural hometown</i>	1.634 (1.033-2.585)	P = 0.04
2	<i>Learning from newspaper, books by themselves</i>	<i>No</i>	0.555 (0.351-0.878)	p = 0.011
3	<i>Learning from home schooling, friends</i>	<i>No</i>	0.6 (0.381-0.945)	p = 0.028
4	<i>Learning from general knowledges</i>	<i>No</i>	0.536 (0.329-0.873)	p = 0.009

Related factor to high knowledge about contraception of students: Have already taken a Reproductive Health Module, learning from Internet by themselves and joining Union/Association activities. Related factor to high knowledge about safe sex of students: Having a hometown in an urban area; learning from newspaper and books, home schooling, friends and general knowledges.

IV. DISCUSSION**4.1. Characteristics of participants**

The average age of the study participants was 20.2 ± 1.064 years old. Participants ≥ 20 years old accounted for 75.7%. The average age of students surveyed in this research (20.2) was higher than that of Nguyen Thanh Phong's research (19.76) [8] and lower than Hoang Thi Bac's research (20.38) [1].

In our study, female students accounted for 58.6%, more than male students. In other studies, female students also accounted for a higher proportion than male students (58.9% in the study of Vo Thi Thuy Linh [5] or 55.3% in Prem Davis's study [11]). This showed that women have a special interest in contraception because they were directly affected by the consequences of bad reproductive health care.

Second-year students accounted for the most with 45.9%; followed by first-year, third-year students with 28.1% and 25.9%. This rate was rather similar to the study of Duong Hong Phuc [9] which only focused on first-year general medicine participants, this study had a broader view between courses in the specialty of General Medicine, but it did not have an overview of other industries as in the study of Vo Thi Thuy Linh [5].

Our study showed that the majority of students have their hometown in rural (62.2%). In the study of Vo Thi Thuy Linh, students lived in rural areas were also quite high (71.8%)[5].

4.2. Knowledge of contraceptive methods

In this study, 100% of students knew at least 1 method of contraception. This rate was similar to the study of Vo Thi Kieu Mi and her partners (100%) [6].

There were 83.9% of students knew that condom was the optimal contraceptive method for their age. In another study in Laos, adolescents also considered condoms in general the safest method of preventing unwanted pregnancy and sexually transmitted diseases [10] or in Vo Thi Kieu Mi's study, 94,5% students assumed condoms were the best contraceptive for them [6]. This indicated that condoms have been widely promoted in educational and social marketing campaigns in Vietnam, Laos and other countries in the region. However, in our study, there were still some students who think that traditional contraceptive methods such as coitus interruptus (3.8%) or using the rhythm method (0.5%) were optimal and about 0.5% of students still did not know which contraceptive method was optimal for them.

4.3. Knowledge of safe sex

Definition of safe sex: 94% of students knew it was about preventing STDs and HIV/AIDS; 88.1% knew both-side consent; 86.2% knew not affecting on fertility; 75.7% knew preventing unwanted pregnancy.

Dealing with being a victim of a rape: 95.1% of students ask help from family and medical profession; 92.1% have gynecological examination check for complications; 88.6% criminally denounce the perpetrator. However, there were still some students (10%) keep secret when they were a victim of a rape.

Knowledge about sexually transmitted diseases: 98.1% of students knew syphilis; 96.8% knew gonorrhea; 93.8% knew genital warts; 83.2% knew genital herpes.

4.4. Level of knowledge on contraception and safe sex

4.4.1. Level of knowledge on contraception

Study results showed that only 8.38% of students had high knowledge about contraception, up to 45.4% of students had low knowledge. The percentage of students with high knowledge was quite low compared to the research of Nguyen Thanh Phong (10.1%)[8] and the research of Vo Thi Thuy Linh (16.5%) [5]. This difference was explained by the fact that students of general medicine in the early years did not have access to knowledge about reproductive health and extracurricular activities providing reproductive health knowledges were quite limited.

4.4.2. Level of knowledge on safe sex

The percentage of students who had high knowledge about safe sex was 28.65%. There were 16.22% students who had weak knowledge. In general, most students had the correct knowledge about safe sex. This was completely explainable because safe sex was a popular and well-known topic. Students have been provided with knowledge about safe sex since they were high school students.

4.5. Related factor to high knowledge about contraception and safe sex of students

4.5.1. Related factor to high knowledge about contraception

This study showed that the percentage of students who have already taken a reproductive health module was 3.239 times higher than that of students who have not taken, with statistically significant differences ($p < 0.05$; 95% CI was 1.154 – 9.378). The study of Duong Hong Phuc showed that most of freshman medical students did not have proper knowledge on common contraceptive methods [9]. Therefore, students who have taken a reproductive health module had correct and relatively complete knowledge compared to students who have not learned or have not been able to access such knowledge from the curriculum.

In addition, the percentage of students who learned reproductive health from the Internet with high knowledge was 1.069 times higher than that of other students, the difference was statistically significant ($p < 0.05$; 95% CI was 1.04 - 1.1). Internet also was considered as the most common source of information used to obtain information on contraception in the study of Sebastián Sanz-Martos (47.2%)[12] or in Prem Davis's study (49.7%) [11]. Students had high demand for using the Internet to quickly find information for their learning process, so the Internet was an effective and useful source of information access more widely than other sources.

Through the study result, we found that the percentage of students who participated in Union/Society activities had the high knowledge about contraceptive methods was 3.182 times higher than students who did not participate in, the difference was statistically significant ($p < 0.05$; 95%CI was 0.739-13.693). This was also mentioned in the study by Nguyen Thanh Phong: "The percentage of students at schools with reproductive health clubs having high knowledge about contraceptive methods is 1.4 times higher than other students"[8].

4.5.2. Related factor to high knowledge about safe sex of students

The percentage of students from urban areas was 1.634 times higher than students from rural areas, the difference was statistically significant ($p < 0.05$; 95% CI was 1.033 – 2.585). This can be explained that urban areas were places where students had the opportunity to be accessed media efficiently and fastly, moreover, urban schools were able to organize many educational activities for students than in rural areas.

Table 6 showed that the sources of information about safe sex from books, family, friends and general knowledge related to the percentage of students's high knowledge about safe sex ($p < 0.05$). In the study of Tatenda Mutsindikwa, 45.9% participants had learnt about safe sex through their friends, 29.5% through family [13].

V. CONCLUSION

Students' knowledge of contraceptive methods was not good: Only 8.36% of students got a good grade, up to 45.4% of students had weak knowlegde. Related factor to high knowledge about contraception of students: Have already taken a reproductive health module, learning from internet by themselves and participating in Union/Association activities.

Student's knowledge of safe sex was quite good: There were 28.65% of students got a good grade. Related factor to high knowledge about safe sex of students: Having a hometown in an urban area; learning from books and related topics, home schooling, friends and general knowledge.

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