

# Medical Students' Knowledge, Awareness, Perceptions, and Practice Regarding Contraceptive Use in Vietnam

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## Abstract

**Context:** The danger of unintended pregnancies and the difficulties associated with abortions remain high due to the inefficiency in terms of contraceptive use that results from a lack of general knowledge and awareness coupled with misconceptions on the part of health-care providers. **Aims:** This study, therefore, aimed to explore the knowledge, awareness, perceptions, and practice regarding contraceptive use among Vietnamese medical students. **Settings and Design:** A cross-sectional study was conducted among 695 medical students, including 311 students attending public universities and 384 students attending private universities, in Vietnam between January 2017 and April 2017. **Materials and Methods:** The utilized questionnaire was divided into five parts, namely, the students' demographic data as well as their knowledge, attitudes, perceptions, and practice regarding contraception. **Results:** Among the 695 participating medical students, there were 225 (32.4%) males and 470 (67.6%) females. Some 585 (84.5%) students were studying at the bachelor's level, while only 110 (15.8%) were studying at the diploma level. The contraceptive-related knowledge was comparatively higher among the 5<sup>th</sup>-year students ( $P < 0.001$ ), the students studying at the bachelor's level ( $P < 0.001$ ), and the students attending public universities ( $P < 0.001$ ) when compared to their respective counterparts. The mean knowledge score was  $5.18 \pm 1.30$ , while the average awareness score was  $19.55 \pm 3.51$ . A large proportion of participants agreed or strongly agreed (86.6%) that healthcare providers should provide counseling concerning contraceptive methods. More than half of the students (55%) agreed that there had been a general change in the male attitude toward using contraceptives, while only 66 (9.5%) agreed that using contraceptive methods is complicated. Further, 177 (25.5%) students had previously used contraception, with condoms (132) being the most commonly used method. **Conclusions:** Overall, it was observed that the majority of Vietnamese medical students exhibited great knowledge, perceptions, awareness, and practice regarding contraception. This study, hence, suggests that future studies should be conducted in different medical schools nationwide to bolster the present findings.

**Key words:** Awareness, contraception, knowledge, medical student, perception, practice, Vietnam

## INTRODUCTION

Contraception impacts on the bodily processes of ovulation, fertilization, and implantation to prevent pregnancy.<sup>[1]</sup> The various available contraceptive methods act at different points during the process, and hence they can be grouped according to how they work, including barrier methods, hormonal methods, emergency contraception, intrauterine methods, and sterilization. Each method has its own associated side effects and risks.<sup>[2]</sup> The selection of appropriate contraceptive methods depends on the patient's health, age, frequency of sexual activity, desired timing of having

babies, and the need to prevent sexually transmitted infections (STIs).<sup>[2]</sup>

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The risk of unintended pregnancies, ectopic and molar pregnancies, as well as STIs, can be reduced by using contraception.<sup>[3]</sup> Although the availability of contraceptives is increasing, unintended pregnancies remain a global problem, accounting for up to 30% of all known pregnancies.<sup>[4]</sup> In developing countries, there are approximately 74 million unwanted pregnancies each year, with contraceptive failure being responsible for a significant proportion (30%) of all unwanted pregnancies.<sup>[5]</sup> Unintended pregnancies (excluding miscarriages) often result in abortion. Recently, Sedgh *et al.* reported that among 85 million unintended pregnancies worldwide, up to 50% ended in abortion.<sup>[6]</sup> Another study by Sedgh *et al.* estimated that for every 1000 women aged 15–44 worldwide, there were 35 cases of abortion during the period 2010–2014.<sup>[7]</sup> The World Health Organization (WHO) has estimated that 22 million unsafe abortions take place annually, with a large proportion of them occurring in developing countries.<sup>[8]</sup> Vietnam is a developing country situated in Southeast Asia. In 2016, it had a population of 90 million.<sup>[9]</sup> In 2012, the number of abortions conducted in Vietnam was the highest of any country in Southeast Asia, with a rate of 18 cases per 100 live births.<sup>[10]</sup> Unsafe abortions have contributed significantly to the global rate of maternal mortality, which has also been the case in Vietnam. According to the WHO, the maternal mortality rate in Vietnam is around 690/100,000 live births, with complications stemming from unsafe abortions being one of the major causes of maternal deaths.<sup>[8]</sup>

One of the barriers that prevent access to contraception is health-care workers who are not sufficiently trained, insufficient in number, and ineffectively managed.<sup>[11]</sup> Indeed, the absence of knowledge and awareness, coupled with the false perceptions of health-care workers, could contribute toward the ineffective and insufficient use of contraception in society. Furthermore, medical students will be health-care workers in the future; thus, the knowledge regarding contraception that they gain while at university is vital. However, Hogmark *et al.* noted that medical students in Maharashtra, India, commonly exhibit misconceptions about modern methods of contraception.<sup>[12]</sup> Likewise, the research conducted by Sychareun *et al.* reported that the level of knowledge regarding emergency contraceptive pills among young adults in Vientiane, Lao, was relatively low, while the number of misperceptions was high.<sup>[13]</sup> A study conducted in Malaysia by Elkalimi *et al.* showed that the knowledge, awareness, and perceptions of pharmacy students were subpar since they lacked in-depth knowledge concerning the importance and effectiveness of contraceptive measures.<sup>[14]</sup> Reducing the number of unintended pregnancies and abortions as well as improving young people's sexual and reproductive health are targets of the National Strategy on Population and Reproductive Care 2011–2020 launched by the Vietnamese government.<sup>[15]</sup> To achieve these targets, the role of health-care workers in providing counseling concerning contraception as well as medical students who

will be health-care workers in the future is important. This study, therefore, explores the knowledge, awareness, perceptions, and practice (KAPP) of using contraception among medical students in Vietnam.

## MATERIAL AND METHODS

### Study setting

A cross-sectional study was conducted among 695 medical students, including 311 students attending public universities and 384 students attending private universities, in Vietnam during the 4-month period from January 2017 to April 2017. The objective of the study was to determine the level of KAPP regarding contraception among medical students in Vietnam. In addition, the study sought to evaluate the relationship between the KAPP regarding contraception and the sample characteristics of medical students in Vietnam. Based on the study's findings, solutions will be suggested for improving the KAPP regarding contraception among Vietnamese medical students.

### Instruments

The questionnaire used in the present study was developed based on those used in the earlier studies of Elkalimi *et al.*<sup>[14]</sup> and Somba *et al.*<sup>[16]</sup> after they had been translated into Vietnamese and modified. An online survey questionnaire was designed using Google Forms. The pretesting of the questionnaire was conducted with 15 students from different medical universities to recognize any problems and edit the questionnaire. The students who participated in the pretest were not included in the main research. Some edits were made to certain statements in the awareness and perception sections so as to help the participants better understand them. The questionnaire comprised five sections, namely, personal information, KAPP. Section 1 explored the participants' sociodemographic characteristics including their age, gender, place of birth, year of education, and religion. Section 2 included true/false statements concerning contraceptives. Section 3 and section 4 included statements intended to evaluate the participants' awareness and perceptions, respectively. Section 5 included questions about the practice of using contraceptive methods.

### Data collection

A simple random sampling method was used to select the study sample. Medical students were invited to complete a web-based questionnaire. The link to the questionnaire was shared in the Facebook groups of Vietnamese medical universities. All the participants filled out and submitted

their responses regarding their KAPP of using contraception through a web-based questionnaire. Their knowledge and attitudes were assessed on a scale based on the research of Elkalmi *et al.*<sup>[14]</sup> In terms of knowledge, one point was given for the correct answer and zero for an incorrect answer. The scale measured knowledge from a maximum of nine to a minimum of zero. A score of  $\geq 5$  was taken to indicate a good level of knowledge, while a score of  $< 5$  was considered to indicate a poor level of knowledge. With regard to attitudes, a score of one was assigned to “strongly disagree,” two to “disagree,” three to “not sure,” four to “agree,” and five to “strongly agree.” Reverse coding was performed for negatively worded questions. The scale measured the participants' attitudes from a maximum of 35 to a minimum of seven. Scores  $< 25$  were taken to indicate low awareness, while scores  $\geq 25$  were considered to indicate high awareness.

### Statistical analysis

All data were analyzed using Microsoft Excel 2013. A descriptive statistical analysis was used to describe the participants' sociodemographic characteristics as well as their KAPP of using contraceptive methods. Student's *t*-test was used to compare the means between the groups for the normally distributed continuous variables. The Chi-square test was used to determine the association between the sociodemographic variables and the participants' awareness as well as their perceptions of using contraception.

### Ethical considerations

Knowledge of the participants ( $P < 0.001$ ) with regard to the level of education, the mean contraceptive knowledge score of the students studying at the bachelor's level was higher than that of those studying at the diploma level (5.26 and 4.74, respectively). Similarly, the mean contraceptive knowledge score of the students attending public universities was higher than that of those attending private universities (5.50 and 4.92, respectively). The 5<sup>th</sup>-year students were found to be the most knowledgeable regarding contraceptive use among all the students, with a mean knowledge score of 5.75. All the participants had previously heard of certain contraceptive methods, with condoms being known by 100% of the students. Nearly 90% of participants ( $n = 602$ ) believed that male condoms could protect against STIs and hence gave the correct answer. However, for the statement “In order to get birth control pills, a woman must undergo a pelvic exam,” more than 90% ( $n = 620$ ) of participants gave an incorrect answer. In terms of the question regarding whether or not the risk of getting certain types of cancer in due to the sensitivity of this study, the students who participated did so entirely voluntarily. They were not required to provide their name on the questionnaire; therefore, their information was treated with the highest level of confidentiality. The responses given

by the participants were only used for the research purposes of the present study.

## RESULTS

Over the 4-month study period, responses were collected from a total of 695 participants. There were 470 female participants (67.6%) and 225 male participants (32.4%). The majority of participants were of Kinh ethnicity (94.5%,  $n = 657$ ) and followed no religion (66.8%). More than 90% of participants were single. The majority of the students were studying at the bachelor's level (84.2%). The percentages of students who attended public universities and private universities were nearly equal, being 44.7% and 55.3%, respectively. Some 267 participants were 3<sup>rd</sup>-year students, which accounted for the highest proportion of students (38.4%). The participants' demographic characteristics are presented in Table 1.

Table 1 also indicated the association between the mean knowledge scores and the participants' demographic variables. The mean knowledge score of all the participants was  $5.18 \pm 1.30$ . There was a significant association between the level of education, type of university, year of study, and women can be reduced using birth control pills, only 159 participants (23.2%) gave the correct answer. The responses given by the participants in relation to their knowledge of contraception were detailed in Table 2.

Tables 3 and 4 reflected the awareness of the participants regarding contraceptive use. Some 434 participants (62.4%) strongly disagreed that only women are responsible for using contraceptive methods, of which more female students strongly disagreed than male students (73.3% females and 26.7% males,  $P < 0.001$ ). Similarly, 60.9% of participants disagreed or strongly disagreed that contraceptive methods cause more damage than benefits to health, with 53.3% of students attending public universities and 44.7% of students attending private universities either disagreeing or strongly disagreeing ( $P < 0.001$ ). Some 167 3<sup>rd</sup>-year students (50.2%) agreed or strongly agreed that the use of contraceptive methods among young people will increase the risk of infertility in the future as compared to their counterparts ( $P < 0.001$ ). A large proportion (80.3%) of participants disagreed or strongly disagreed that discussion about contraception with a spouse is embarrassing, with it being more common for students who were single than for those who were married ( $P < 0.001$ ). In general, the mean awareness score of the participants was  $19.55 \pm 3.51$ .

Tables 5 and 6 summarized the perceptions of the participants regarding contraception. More than half of participants (53.2%) were not sure whether using condoms would create less sexual pleasure during sexual intercourse although the female students expressed greater doubt in

**Table 1:** Association between the mean knowledge scores and the demographic variables (*n* [%])

Characteristics	Number (%) of participants	Mean (SD) of the knowledge score	P value*
Gender			
Male	225 (32.4)	5.19 (1.27)	0.429
Female	470 (67.6)	5.17 (1.32)	
Ethnicity			
Kinh	657 (94.5)	5.14 (1.28)	0.101
Other (Tay, Hoa, Nung)	38 (5.5)	5.79 (1.61)	
Religion			
Buddhism	143 (20.6)	5.04 (1.39)	0.280**
Roman Catholicism	75 (10.8)	5.24 (1.09)	
None	464 (66.8)	5.20 (1.29)	
Other (Tin Lanh, Cao Dai, Ba La Mon)	13 (1.9)	5.69 (1.80)	
Marital status			
Single	670 (96.4)	5.18 (1.29)	0.330
Married	25 (3.6)	5.04 (1.59)	
Education level			
Bachelor	585 (84.2)	5.26 (1.32)	<0.001
Diploma	110 (15.8)	4.74 (1.14)	
Type of university			
Public	311 (44.7)	5.50 (1.32)	<0.001
Private	384 (55.3)	4.92 (1.23)	
Year of study			
1	18 (2.6)	4.56 (1.42)	<0.001**
2	128 (18.4)	4.90 (1.15)	
3 <sup>rd</sup>	267 (38.4)	4.88 (1.28)	
4 <sup>th</sup>	162 (23.3)	5.60 (1.25)	
5 <sup>th</sup>	81 (11.7)	5.75 (1.32)	
6 <sup>th</sup>	39 (5.6)	5.46 (1.19)	
Total	695	5.18 (1.30)	

\*Calculated using the *t*-test: Two-sample assuming unequal variances, \*\*calculated using an ANOVA: Single factor

this regard than the male students (77.9% females and 22.1% males,  $P < 0.001$ ). The majority of students (86.6%) agreed or strongly agreed that health-care providers should provide counseling concerning contraceptive methods, the mechanism of action, the best time for use, and possible side effects to all women, with 69.3% of female students agreeing or strongly agreeing with the statement ( $P < 0.001$ ). Some 382 students (55%) agreed that changes in male attitudes toward using contraceptive methods may increase the use of contraception in some areas, while only 66 (9.5%) agreed that using contraceptive methods is complicated.

The practice of using contraception among the participants was detailed in Table 7. Some 177 (25.5%) students had previously used contraception, with condoms ( $n = 132$ ) being the most commonly used method. The other contraception methods used included vaginal diaphragm, emergency oral

contraceptive, vasectomy, spermicides, etonogestrel implant, and intrauterine device (IUD). In terms of choosing a method of contraception, among the students who had previously used contraception, the main reason for choosing a particular method was convenience of use ( $n = 166$ ), followed by no side effects ( $n = 94$ ), difficult to forget ( $n = 59$ ), low cost ( $n = 67$ ), and long-lasting effectiveness ( $n = 23$ ). The most common reasons for using a contraceptive method were fear of pregnancy ( $n = 161$ ) and a desire to avoid STIs ( $n = 111$ ).

## DISCUSSION

The aim of this study was to explore the KAPP of using contraception among medical students in Vietnam. A large number of the participants in this study had prior knowledge regarding contraception. We also found that gender, ethnicity,

**Table 2: Knowledge of contraception among participants (n=695)**

Statements	Correct responses	Incorrect responses
Have you ever heard of contraceptive methods?	695 (100.0)	-
The risk of some types of cancer in women can be reduced using oral contraceptives	159 (23.2)	526 (76.8)
A woman will not get pregnant within at least 2 months after having ceased taking birth control pills	395 (57.7)	290 (42.3)
Male condoms can protect against sexually transmitted diseases	602 (87.9)	83 (12.1)
Common side effects of birth control pills include weight gain and mood swings	419 (61.2)	266 (38.8)
It is safe to have sex during the period of infertility	314 (45.8)	371 (54.2)
There is an increased risk of breast cancer in women taking estrogen-containing oral contraceptives	263 (38.4)	422 (61.6)
To get birth control pills, a woman must undergo a pelvic examination	65 (9.5)	620 (90.5)

Data are presented as the number (%) of participants

**Table 3: Awareness of contraception among participants (n=695)**

Symbol	Question	Participants' response				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
A1	Only women take responsibility for using contraceptive methods	8 (1.2)	3 (0.4)	13 (1.9)	237 (34.1)	434 (62.4)
A2	Contraceptive methods are more harmful than beneficial to health	38 (5.5)	138 (19.8)	96 (13.8)	321 (46.2)	102 (14.7)
A3	Contraceptive methods can protect the health of family and society	147 (21.2)	372 (53.5)	53 (7.6)	61 (8.8)	62 (8.9)
A4	The use of contraceptive methods among young people will increase the risk of infertility in the future	69 (9.9)	264 (38.0)	128 (18.4)	162 (23.3)	72 (10.4)
A5	Contraceptive pills do not 100% guarantee the avoidance of pregnancy	174 (25.0)	324 (46.6)	73 (10.5)	72 (10.4)	52 (7.5)
A6	Women experience side effects related to changes in the usage of contraception that is changing to a safer form of contraceptive	31 (4.5)	264 (38.0)	207 (29.8)	135 (19.4)	58 (8.3)
A7	Discussion about contraception with a spouse is embarrassing	13 (1.9)	32 (4.6)	73 (10.5)	339 (48.8)	238 (34.2)

Data are presented as the number (%) of participants

religion, and marital status were all independently associated with knowledge of contraception. The contraception-related knowledge was found to be highest among students studying at the bachelor's level, 5<sup>th</sup>-year students, and those attending public universities.

Some 100% of participants had previously heard of contraceptive methods, with condoms being the most commonly known method. In Vietnam, condoms are easy to access, since they are sold in many places, such as

drugstores, supermarkets, and convenience stores and they are distributed for free in sex education programs. Yet, for medical students, it is not only important to know about condoms but also to learn about other effective and popular methods of contraception, including IUD, oral contraceptive pills, and so on. Olugbenga *et al.* noted that condoms represent one of the most effective methods of protection against STIs.<sup>[17]</sup> In this study, the majority of participants gave the correct answer in relation to this statement. However, most participants answered wrongly in relation to the statement

**Table 4: Association between awareness and the demographic variables**

Questions	P value*			
	Year	Gender	Marital status	Type of university
P1	0.025	0.435	0.120	0.016
P2	0.792	0.008	0.218	0.690
P3	0.017	<0.001	0.005	0.035
P4	0.191	0.036	0.401	0.012
P5	0.153	0.023	0.338	0.045
P6	0.624	0.153	0.288	0.005
P7	0.014	0.017	0.227	0.047
P8	0.240	0.172	0.296	0.080
P9	0.286	<0.001	0.198	0.023

Data are presented as the number (%) of participants

**Table 5: Perceptions of contraception among participants (n=695)**

Question	P value*			
	Year	Gender	Marital status	Type of university
A1	0.849	<0.001	0.124	0.123
A2	<0.001	0.648	0.572	<0.001
A3	0.598	0.049	0.548	0.231
A4	<0.001	0.029	0.372	<0.001
A5	0.017	0.884	0.041	0.059
A6	0.429	0.141	0.891	0.132
A7	0.106	0.027	<0.001	0.588

\*Calculated using the Chi-square test.

“In order to get birth control pills, a woman must undergo a pelvic exam.” The American College of Obstetricians and Gynecologists states that the first visit for oral contraceptives does not have to include a pelvic exam if the patient prefers to postpone it, while Planned Parenthood states that a pelvic exam may be postponed for up to 13 months after starting taking birth control pills.<sup>[18]</sup> Fewer students knew about this statement because there is hardly any research on this issue. There is an increased risk of breast cancer among women taking estrogen-containing oral contraceptives, which was corroborated by the research of Beaber *et al.*, who suggested that recent use of contemporary oral contraceptives is associated with an increased breast cancer risk among women aged 20–49 years.<sup>[19]</sup> The participants in this study showed relatively poor knowledge in this regard, with 61.6% of participants wrongly answering this question.

The awareness of the participants in this study concerning contraception was relatively low ( $19.55 \pm 3.51$ ), lower than the level of  $23.88 \pm 3.06$  found in the study by Elkalmi *et al.* conducted among pharmacy students in Malaysia.<sup>[14]</sup> Nsubuga *et al.* noted that 6% of participants believed that

contraceptives were only for females.<sup>[20]</sup> This result is similar to the finding of the present study, which reported that nearly 100% of respondents disagreed or strongly disagreed with this statement. Approximately half of the participants believed that contraceptive use leads to infertility in the future. This rate contrasts with that found in the study by Hagan *et al.*, who indicated that only 18% of participants supported such a statement,<sup>[21]</sup> although it is similar to that found in a study conducted in Nigeria, which reported that a high proportion of students perceived contraceptive use to cause infertility.<sup>[22]</sup> The surprising finding in this study is that the majority of participants (83%) did not consider discussing contraception with a partner to be embarrassing. This statement was also supported by the majority of participants in the study of Elkalmi *et al.*<sup>[14]</sup> A report by Planned Parenthood stated that the pill is 99% effective if used properly, but in reality, the pill is about 91% effective because it can be hard to follow the perfect procedure.<sup>[23]</sup> More than half of the students in this study exhibited a good level of awareness of this statement.

The study conducted by Kallner *et al.* indicated that when women postpone childbirth, they achieve higher levels of education and higher incomes.<sup>[3]</sup> The result in this regard was relatively similar in the present study since more than half of all participants agreed with this statement. A study by Free *et al.* conducted among young women reported that women can freely enjoy a sexual relationship by means of using contraception.<sup>[24]</sup> Approximately one-third of participants in the present study disagreed or strongly disagreed with this statement. The majority of our participants agreed with the significance of introducing sex education, including contraception, at an early age as well as the significance of health-care providers providing counseling services concerning contraception. This finding was also supported by Ramathuba *et al.*<sup>[25]</sup> in their study. Binh *et al.* noted that using condoms can reduce the pleasure experienced when having sex,<sup>[26]</sup> although nearly 53% of students in the present study expressed great doubt in this regard.

Among the 695 participants, only a quarter had previously used contraception, which is a lower rate than that reported in the study of Somba *et al.*<sup>[16]</sup> The findings of this study revealed that the most commonly used method of contraception was condoms. This result is the same as the outcome noted in the study by Hoque *et al.*<sup>[27]</sup> although a study conducted in Ethiopia indicated that the most commonly used contraceptive method was the pill.<sup>[28]</sup> There are many reasons for choosing a particular contraceptive method, with convenience being the most common reason given by participants in the present study. Yet, among undergraduate female students in China, the primary consideration when choosing contraception was the safety of the method.<sup>[29]</sup> Our study found that the main reason for using contraception was to avoid pregnancy, followed by a desire to avoid sexually transmitted diseases. This finding

**Table 6:** Association between perceptions and the demographic variables

Symbol	Question	Participants' response				
		Strongly agree	Agree	Not sure	Disagree	Strongly disagree
P1	It is unnecessary to purchase contraceptives	31 (4.5)	154 (22.2)	370 (53.2)	102 (14.7)	38 (5.5)
P2	Courage is needed to purchase condoms from pharmacies, conventional shops, or dispensaries	18 (2.6)	119 (17.1)	135 (19.4)	296 (42.6)	127 (18.3)
P3	Using condoms will generate less sexual pleasure during sexual intercourse	31 (4.5)	154 (22.2)	370 (53.2)	102 (14.7)	38 (5.5)
P4	Changes in male attitudes mean that participation in contraception may increase in some areas	212 (30.5)	382 (55.0)	46 (6.6)	7 (1.0)	48 (6.9)
P5	Contraceptive can reduce the fear of unwanted pregnancy and afford woman the freedom to enjoy a sexual relationship	75 (10.8)	270 (38.8)	124 (17.8)	160 (23.0)	66 (9.5)
P6	Contraceptives allow women to pursue higher education by delaying pregnancy and hence to achieve some measure of economic security	95 (13.7)	435 (62.6)	73 (10.5)	51 (7.3)	41 (5.9)
P7	It is complicated to apply contraceptive methods	8 (1.2)	66 (9.5)	130 (18.7)	436 (62.7)	55 (7.9)
P8	Sex education, including contraception, should be introduced at an early age	149 (21.4)	277 (39.9)	58 (8.3)	166 (23.9)	45 (6.5)
P9	Health-care providers must provide counseling concerning contraceptive methods, the mechanism of action, the best time for use, and possible side effects to all women	313 (45.0)	289 (41.6)	31 (4.5)	10 (1.4)	52 (7.5)

\*Calculated using the Chi-square test

is supported by previous studies conducted in Tanzania<sup>[16]</sup> and Madagascar.<sup>[30]</sup>

It must be acknowledged that this study had a number of limitations. The research was conducted in a number of medical universities, but not all the medical universities in Vietnam. In addition, due to the small sample size, the findings of this study may not be representative of all medical students throughout Vietnam. Hence, this study contributes a significant understanding of the KAPP regarding contraception among medical students. Further research should be conducted in the future to confirm and expand our findings.

### CONCLUSION

This study underscores that the KAPP of Vietnamese medical students regarding contraception were below

average. They exhibited some knowledge concerning the importance and effectiveness of contraceptive methods although that knowledge was inadequate and lacked depth. This study could form the basis for a nationwide study investigating the KAPP of all medical students regarding contraception. Advanced contraceptive education in medical universities is necessary to ensure the provision of the best counseling for patients by future health-care workers.

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**Table 7: Practice of using contraception among participants (n, [%])**

Question	Frequency (%)
Ever used contraception (n=695)	
Yes	177 (25.5)
No	518 (74.5)
Type of contraceptive used (n=177)	
Condom	132 (74.6)
Vaginal diaphragm	63 (35.6)
Emergency oral contraceptive	55 (31.1)
Vasectomy	16 (9.0)
Spermicides	4 (2.3)
Etonogestrel implant	5 (2.8)
IUD	6 (3.4)
Reason for choosing contraception (n=177)	
Convenient to use	166 (93.8)
It has no side effects (weight gain, nausea, etc.)	94 (53.1)
Difficult to forget	59 (33.3)
Low cost	67 (37.9)
Long-lasting effectiveness	23 (13.0)
Other	3 (1.7)
Reason for using contraceptive method (n=177)	
Fear of pregnancy	161 (91.0)
Health worker advised	19 (10.7)
Avoid sexually transmitted diseases	111 (62.7)
Delaying menstrual cycle	7 (4.0)
Treat acne	9 (5.1)
Followed partner's advice	10 (5.6)
Other	3 (1.7)

IUD: Intrauterine device

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