Knowledge and Attitude Towards Contraceptive Methods Among First-Year Nursing Students in Da Nang, Vietnam

Tran Anh Ngoc1, Hoang Thi Ngoc Sen1
1 Faculty of Nursing, Da Nang University of Medical Technology and Pharmacy, Da Nang, Vietnam

Background: Contraceptive methods have still been the sensitive topic in some Asia countries, including Vietnam. Improvement knowledge and attitude towards contraceptive methods would lead to better prevent unintended pregnancy and sexually transmitted disease as well as contributes to advance quality of life of young people even nursing students.

Objectives: To investigate knowledge and attitudes towards contraceptive methods, and identified the association between social demographic characteristics, attitudes, and knowledge towards contraception among first-year nursing students.

Methods: The cross-sectional study was conducted on 170 first-year nursing students, Da Nang University of Medical Technology and Pharmacy, Vietnam. Participants were selected according to the convenient sampling method. Data were collected from March to April 2021 through the questionnaire that consists of 2 parts including the sociodemographic characteristics and the set of questionnaires that assessed the participants’ knowledge and attitudes about contraceptive methods. Data were analyzed using descriptive statistics, chi-square test, Fisher exact test, and Spearman correlation test.

Results: Of 170 first-year nursing students, mean (SD) of contraceptive methods knowledge was 45.2 (8.5) (range, 25 - 62), illustrating a medium level. Attitude regarding contraceptive methods among first-year nursing students was negative (mean, 82.6; range, 49 - 95). The finding demonstrated a weakly positive correlation between attitude and knowledge (P < .05). There was no significant association between social demographics and knowledge (P > .05).

Conclusions: Knowledge and attitude towards contraceptive methods of first-year nursing students should be improved. Improvement knowledge and attitude contraception through education should be necessary for students.

Keywords: Contraceptive methods, Nursing students, Knowledge, Attitude

Corresponding Author:
Hoang Thi Ngoc Sen
Faculty of Nursing,
Da Nang University of Medical Technology and Pharmacy,
99 Hung Vuong Street,
Da Nang 550000, Vietnam.
Telephone: +84 977 103 405
E-mail: hoangngocsen@dhktdyduoccdn.edu.vn
Introduction

Currently, the contraceptive methods are known as the key solutions for avoiding sexually transmitted infections and unintended pregnancy. Nearly half of all pregnancies on the world are unintended pregnancies (121 million cases), in that 6 over 10 the pregnancies want an abortion. This illustrates that abortions is still a global problem. According to the World Health Organization report in 2017, the use of modern contraceptives prevented almost 308 million abortion cases.

According to the statistics of the World Population Review, Vietnam was ranked in the top countries with the highest abortion rates in the world. Annually, there were about 300 to 400 thousand abortions at the aged from 15 to 19 officially reported in Vietnam, of which 60% to 70% were students. Furthermore, although the abortion rate in Vietnam in last 10 years has decreased, abortion rate among minors and young people had still been increasing - accounting for more than 20% of abortions.

Lack of contraceptives knowledge and inappropriate attitude in practice of adolescence cause some high risks such as unintended pregnancy, abortion, and sexually transmitted infections. Young people’s knowledge and access to reproductive-health services were limited, it also posed a serious risk to health and life. Thus, preparing the young generation with knowledge and attitudes towards contraceptives is a matter of urgency.

A report on contraceptives knowledge of minors who had an abortion showed that up to 76.5% of them were poor. Phong NT showed that up to 89.5% of students do not have good attitudes toward contraceptives. Particularly, results from Nguyen Tat Thanh University, Ho Chi Minh City, Vietnam in 2019 indicated only 15.9% of pharmacy students had good knowledge of contraceptive methods.

As reported by the United Nations Population Fund on reproductive health and sexual health of Vietnamese youth in 2016 among 83% of young people who have heard of condoms but only 26% of them know how to use condoms properly. The report also found that the most common barriers of young people buying condoms were shame (76%) and the feeling of doing something wrong (18%).

In addition, the knowledge and attitude of nursing students about contraceptive methods was not really good, especially first-year students. Investigation at a private university in Vietnam found that up to 70% of nursing students there had poor knowledge of reproductive health and up to 78.4% of students had poor attitudes. Therefore, this study was conducted to better understand nursing students’ knowledge and attitudes about contraception.

This study aimed to investigate knowledge and attitudes towards contraceptive methods, and identified the association between social demographic characteristics and attitudes towards the knowledge of contraception among first-year nursing students of Da Nang University of Medical Technology and Pharmacy.

Methods

Participants

The cross-sectional study was conducted on 170 first-year nursing students of Da Nang University of Medical Technology and Pharmacy, located in the coastal central city of Vietnam. The inclusion criteria were first-year nursing students of Da Nang University of Medical Technology and Pharmacy and agree to participate in the study. Participants were selected according to the convenient sampling method.

Ethics

The study was approved by the Ethics Council in Biomedical Research of Da Nang University of Medical Technology and Pharmacy, No.01/QD HDDD dated March 1, 2021. The data collected was anonymous and used for research purpose only. The information provided by participants was assured regarding the confidentiality.

Instruments

The questionnaire consisted of 2 parts. Part A was the sociodemographic characteristics including of
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There were 26 items that assessed knowledge of contraceptive methods with a total score of 71. Participants had good contraceptive knowledge when they got the score of 57 points or more. Participants were rated of medium level when scored between 43 and 56 points. The poor contraceptive knowledge was when grades were 42 or lower.

There were 23 items of attitude scored on a 5-point Likert rating scale. The total score was 115 points. Participants had positive attitude when got a score of 92 points or more. On the other hand, participants had the score less than 92 points that were considered as negative contraceptive attitude.

The original questionnaire was tested reliability by the author with Cronbach α recorded was 0.75, and the retest in this study indicated Cronbach α coefficient equaled 0.77 and the consent validity was stable.

Results

Sociodemographic Characteristics

The primary sample included of 170 first-year nursing students, with the mean (SD) age of 19.11 (0.41) (range, 19 - 22) (Table 1).

Knowledge Towards Contraceptive Methods

The mean (SD) of contraceptive methods knowledge was 45.2 (SD) (range, 25 - 62), illustrating a medium level. There were just 7.1% of participants who had good knowledge of contraceptive methods, whereas the higher rates were accounted for participants had knowledge at medium and poor level (57.6% and 35.3%, respectively). Knowledge regarding combined oral contraceptive pill was scored at the lowest with mean (SD) of 8.2 (4.0) (range, 2 - 15) (Table 2).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, mean (SD), y</td>
<td>19.11 (0.41)</td>
</tr>
<tr>
<td>Male</td>
<td>12 (7.1)</td>
</tr>
<tr>
<td>Female</td>
<td>158 (92.9)</td>
</tr>
<tr>
<td>Ethnic groups</td>
<td></td>
</tr>
<tr>
<td>Vietnamese</td>
<td>160 (94.1)</td>
</tr>
<tr>
<td>Others</td>
<td>10 (5.9)</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>137 (80.6)</td>
</tr>
<tr>
<td>Buddhism</td>
<td>26 (15.3)</td>
</tr>
<tr>
<td>Christian</td>
<td>7 (4.1)</td>
</tr>
<tr>
<td>Having a partner</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>89 (52.4)</td>
</tr>
<tr>
<td>Yes</td>
<td>81 (47.6)</td>
</tr>
</tbody>
</table>

Abbreviation: SD, standard deviation.
Almost all participants knew that condom, contraceptive pill, and intrauterine device were 3 of contraceptive methods (95.9%, 87.6%, and 62.8% respectively). Unintended pregnancy was commonly known as the consequence of using contraceptive methods not according to the instruction of healthcare workers (82.9%). However, more than a half of participants considered that using contraceptive methods caused health problems with some methods or in some cases (61.2%). The majority of participants recognized that condom was the temporary contraceptive method (74.7%). Most of them knew condom for male (88.2%), whereas less than a half had knowledge about condom for female (47.1%). Most participants (72.4%) stated that people should use emergency contraceptive immediately if condom broke when using. To emergency contraceptives, the rate of participants who knew this method was 90%, but only 9.4% of them could identify the period of time for using that it was as soon as possible within 120 hours after unprotected sexual intercourse. In addition, the percentage of participants realized combined oral contraceptive pill was 81.8%, and 60% of participants thought that the adolescents were the suitable group of age used it. Particularly, just 5.3% of them knew the first day of menstrual cycle was the most appropriate time for taking this pill, 15.3% participants assured its impact on avoiding pregnancy, and 15.9% of them identified to take this pill in the exact time per day.

### Knowledge Towards Contraceptive Methods

<table>
<thead>
<tr>
<th>Variable</th>
<th>Possible Range</th>
<th>Actual Range</th>
<th>Mean (SD)</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>0 - 71</td>
<td>25 - 62</td>
<td>45.2 (8.5)</td>
<td>-</td>
</tr>
<tr>
<td>Good</td>
<td>57 - 71</td>
<td>57 - 62</td>
<td>58.6 (1.6)</td>
<td>12 (7.1)</td>
</tr>
<tr>
<td>Poor</td>
<td>43 - 56</td>
<td>43 - 56</td>
<td>49.4 (3.9)</td>
<td>98 (57.6)</td>
</tr>
<tr>
<td>General knowledge</td>
<td>0 - 42</td>
<td>25 - 42</td>
<td>35.7 (5.1)</td>
<td>60 (35.3)</td>
</tr>
<tr>
<td>Knowledge regarding condom</td>
<td>0 - 17</td>
<td>8 - 17</td>
<td>13.3 (2.0)</td>
<td>-</td>
</tr>
<tr>
<td>Knowledge regarding emergency contraception</td>
<td>0 - 18</td>
<td>5 - 18</td>
<td>11.6 (3.4)</td>
<td>-</td>
</tr>
<tr>
<td>Knowledge regarding combined oral contraceptive pill</td>
<td>0 - 18</td>
<td>2 - 15</td>
<td>8.2 (4.0)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Abbreviation:** SD, standard deviation.

### Attitude Towards Contraceptive Methods

Attitude regarding contraceptive methods among first-year nursing students was negative (mean, 82.6; range, 49 - 95) (Table 3). According to general attitude, 70% of participants agreed that no methods had completely

<table>
<thead>
<tr>
<th>Variable</th>
<th>Possible Range</th>
<th>Actual Range</th>
<th>Mean (SD)</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>20 - 115</td>
<td>49 - 95</td>
<td>82.6 (9.1)</td>
<td>-</td>
</tr>
<tr>
<td>Positive</td>
<td>92 - 115</td>
<td>92 - 95</td>
<td>92.7 (1.1)</td>
<td>9 (5.3)</td>
</tr>
<tr>
<td>Negative</td>
<td>20 - 91</td>
<td>49 - 91</td>
<td>82.1 (9.0)</td>
<td>161 (94.7)</td>
</tr>
<tr>
<td>General attitude</td>
<td>8 - 40</td>
<td>11 - 39</td>
<td>29.0 (4.1)</td>
<td>-</td>
</tr>
<tr>
<td>Attitude regarding condom</td>
<td>5 - 25</td>
<td>8 - 25</td>
<td>19.9 (3.6)</td>
<td>-</td>
</tr>
<tr>
<td>Attitude regarding emergency contraception</td>
<td>5 - 25</td>
<td>9 - 19</td>
<td>14.2 (2.1)</td>
<td>-</td>
</tr>
<tr>
<td>Attitude regarding combined oral contraceptive pill</td>
<td>5 - 25</td>
<td>8 - 25</td>
<td>19.6 (2.7)</td>
<td>-</td>
</tr>
</tbody>
</table>

**Abbreviation:** SD, standard deviation.
effective, 81.2% students consented that using contraceptive methods was the best choice for teenagers/adolescents who had sexual intercourse. However, there were 48.2% of participants did not assure for the answer that it was too difficult for teenagers/adolescents to use contraceptive methods in the first intercourse. On the other hand, there were 17.1% of participants felt embarrassed when buying condom. Over two-thirds were not certain that condom reduced sex pleasure (61.2%). Additionally, slightly more than a half of participants disagreed with using emergency contraceptive to express the responsibility and concern to partner (54.7%). Among 47% of participants opposed emergency contraceptive was the best way for sexual intercourse and most of participants believed that this method would influence the reproductive ability (70.6%).

For attitude regarding using combined oral contraceptive pill, 56.4% of participants did not think that the person was indecent when using this method. Above one quarter believed that using the method everyday would make skin worse (27%). Furthermore, 57.1% of them trusted this method would decrease reproductive ability.

Correlation Between Sociodemographic Characteristics, Attitude and Knowledge Regarding Contraceptive Methods

Table 4. Correlation Between Sociodemographic Characteristics, Attitude and Knowledge Regarding Contraceptive Methods

<table>
<thead>
<tr>
<th>Variable</th>
<th>Knowledge Correlation</th>
<th>P Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>4.71a</td>
<td>.09</td>
</tr>
<tr>
<td>Ethnic groups</td>
<td>0.65b</td>
<td>.77</td>
</tr>
<tr>
<td>Religion</td>
<td>1.91b</td>
<td>.74</td>
</tr>
<tr>
<td>Relationship status</td>
<td>1.07a</td>
<td>.59</td>
</tr>
<tr>
<td>Age</td>
<td>0.03c</td>
<td>.66</td>
</tr>
<tr>
<td>Attitude</td>
<td>0.13d</td>
<td>&lt;.01</td>
</tr>
</tbody>
</table>

* Chi-square test.

b Fisher exact test.

c Spearman coefficient correlation.

* Significance for the test was determined at P < .05.

Contraceptive Methods Knowledge

Knowledge toward contraceptive methods among first-year nursing students was at moderate level. The result was lower than the findings of other studies on young university students.10, 13, 14 The reason for this difference was possibly that the study only focused on first-year students who had not approached or learnt about reproductive health yet. However, the finding was consistent with the study what was conducted on 229 first-year medical students in Northern Cyprus.15 They showed that knowledge of these students was inadequate.15 The evidence pointed out the special feature of first-year nursing students was that most of their knowledge about contraceptive methods just stop in general, without deeply understand about it.15

The current finding revealed most of participants had known at least one kind of contraceptive method. Preferably, condom was well known (95.9%), follow by contraceptive pill (87.6%). This finding was slightly higher than Phong NT,7 but similar to the study carried out among students of Duy Tan University, Vietnam.9 The accomplishment might come from sex education and propaganda campaigns by social communication and government that were given such wide publicity.9

Discussion

There were 170 first-year nursing students at a public medical university participated in this study. The study illustrated the range of age of participants between 19 and 22. This was similar to the studies in Spain,10 and South Africa.11 Most of them were female that perfectly reflected the specific of nursing major. This rate was similar to the study on 178 nursing students in Brazil with 97.75% of female.12
This finding was also consistent with other previously studied elsewhere. The research on 424 female undergraduate students in Nigeria illustrated the same result that knowledge of contraceptive pill and condom was higher than other methods. On the other hand, the study demonstrated that participants had limited knowledge about spermicides. A few participants had awareness of spermicides that was much less than Phong NT (54%). The knowledge about this method had still been low in some previous studies. This proposed that participants might not be sufficiently informed about some modern contraceptive methods, or the information sources were not possibly effective.

The finding revealed that knowledge towards combined oral contraceptive pill of participants was low. This was inconsistent with some previous studies. The highest rate of 261 first-year female students in the study conducted in South Africa thought that combine oral contraceptive pill was the most effective contraception by hormone to prevent pregnancy. The higher number of Indian students acknowledged combined oral contraceptive pill, even if the majority of them knew the failure/effectiveness rate of this method.

Through the above findings, although knowledge of first-year nursing students of the university was at moderate level, it was lower than the results from other countries. Maybe social and cultural factors played an important role to make one’s awareness of contraceptive methods. According to educational curriculum, because they were the first-year students, they had not yet approached the specialized subjects like reproductive health care. Therefore, knowledge gap of these nursing students should be filled in and improved in the next semesters.

Attitude Toward Contraceptive Methods

In the study, attitude toward contraceptive methods was negative with 94.7% of participants. This finding was not consistent with some studies. Nearly half of Spanish young nursing students showed favorable attitude, whereas only 5.9% of participants had unfavorable. More than a half of participants in Tanzania had positive attitude toward contraceptive methods. The result was also much higher than the finding of the study carried out first- and second-year nursing students in South Africa with 58.3% of them had unfavorable attitude.

According to current study, majority of participant disagreed that contraceptives such as condom reduced sex drive. This was opposite to a research in Tanzania where nearly two-thirds of participants stated that contraceptive methods decreased sexual desire as well as they recognized that condom could slip off when doing intercourse. Furthermore, 17.1% of participants in the study felt embarrassed when buying condoms. Its reason would be that condom had still been culturally sensitive and the relevant concept of sex as a taboo issue in Vietnam. Particularly, female Vietnamese youths conceded that they had sex or they were afraid of meeting their acquaintance when buying any contraceptive method.

Attitude toward emergency contraception of participants was lowest in 3 sets of content (mean [SD], 14.2 [2.1]; range, 9 - 19). This finding was contrary to some preceding studies. The study on 478 Spanish nursing students showed 100% of them had favorable attitude with emergency contraception. About 77.4% of 262 female Ethiopian students aged 16 to 19 years had positive attitude toward this topic. However, a comparable study in India demonstrated about 59% of college students had unfavorable attitude, an 71% of Indian participants disagreed that emergency contraceptive was morally wrong and led to infertility for woman, whereas the current study proved the other perspective that this method affected to infertility.

Combined oral contraceptive pills was considered as the most effectively hormonal product to prevent unintended pregnancy. However, attitude toward this method in the study was quite low (mean [SD], 19.6 [2.7]; range, 8 - 25). The result differed from the study conducted in Pakistan on nursing and midwife students. That study revealed that there were 59% of participants had positive attitude regarding combined oral contraceptive pills.
Correlation Between Sociodemographic Characteristics, Attitude and Knowledge Toward Contraceptive Methods

There were no correlation between social demographic variables and knowledge toward contraceptive methods. This was not comparable with the previous findings.\textsuperscript{7, 9, 10} Previous studies revealed that students who were older had knowledge about contraception better than younger.\textsuperscript{7, 9} First-year medical students in Northern Cyprus showed age group of 20 and more had significantly related to knowledge of emergency contraception.\textsuperscript{15} The study of Spanish young medical and nursing students showed older respondents had a higher level of knowledge.\textsuperscript{26}

There was a significant difference of gender regarding knowledge of contraception in the study in Spain.\textsuperscript{10} Female nursing students were more knowledgeable about contraceptive methods than male.\textsuperscript{18} In the study of Luc PV et al\textsuperscript{27} done in a high school in a southern province in Vietnam showed that female students had common knowledge about contraception higher 1.32 times than male, but in contrast, their knowledge regarding to condom was limited than male.

Previous study in Tanzania displayed the relationship between religion and knowledge about family planning including of contraception.\textsuperscript{28} The study conducted in Ethiopia reported that religion influenced contraceptive knowledge of reproductive age women.\textsuperscript{29} Religion pressure was barrier for them to approach contraception that had still been a taboo topic in Vietnam. Additionally, non-correlation between ethnic groups and knowledge toward contraceptive methods was consistent with the study of Mi VTK et al.\textsuperscript{9}

Also, there was a relationship between having a partner and knowledge in the previous research of Phong NT in Hanoi, Vietnam.\textsuperscript{7} He demonstrated the group of students who used to have or had a partner had better knowledge toward contraceptive methods than the ones who were never.\textsuperscript{7} The same finding was found in Ugandan men were less likely to concern about contraceptive knowledge, but their knowledge about contraception was provided from experience of partner about side effects and information of this methods.\textsuperscript{30} However, the research on 303 Spanish nursing students showed the comparable result to the current study.\textsuperscript{26} The Spanish study stated that there was no significant difference of knowledge regarding contraception between students having a partner and the others.\textsuperscript{26}

The finding revealed the weakly significant relationship between attitude and knowledge. This result was consistent with some prior studies in India.\textsuperscript{19} Sanz-Martos et al\textsuperscript{10} found that providing scientific knowledge could develop favorable attitude among young students. This author emphasized the importance of having right knowledge as a way to enhance positive attitude regarding to contraceptive practice. Furthermore, shame and feeling of shyness were the important barriers preventing the young people to access health services to get information about reproductive health.\textsuperscript{21}

The main limitation of the study was concerned about contraceptives for sensitive topic, so, there were some cultural barriers influenced to fill in the questionnaire of participants. Furthermore, data collection was implemented in the break time of class. As a result, some of participants finished the questionnaire quickly and hastily.

Conclusions

The current study found that female nursing students had medium level knowledge of contraceptive methods, but negative attitude. Sex education and propaganda should be promoted to somewhat change their attitude towards contraceptive methods because good knowledge and positive attitude regarding contraception have significantly affected to one’s behavior to prevent unintended pregnancy and sexually transmitted diseases. It was essential to educate and counsel nursing students on modern contraceptive methods and regard to access to contraception as a basic human right.

Acknowledgments

We appreciate all participants and Da Nang University of Medical Technology and Pharmacy for the cooperation.
References


8. Thu TH, Quynh NTN. *A Survey on the General Knowledge and Attitude Regarding Prevention of Unplanned Pregnancy of Pharmacy Students in Nguyen Tat Thanh University.* Nguyen Tat Thanh University; 2019.


Knowledge and Attitude Towards Contraceptive Methods Among First-Year Nursing Students in Da Nang, Vietnam


บทความ: วิธีการคุมกำเนิดต้องลงเป็นประเด็นที่จะถูกถกในบางประเทศในเอเชีย รวมทั้งในเวียดนาม การปรับปรุงความรู้และทัศนคติในวิธีการคุมกำเนิดจะช่วยป้องกันการตั้งครรภ์โดยไม่ได้ตั้งใจและโรคติดต่อทางเพศสัมพันธ์ได้ดีขึ้น รวมทั้งช่วยเสริมคุณภาพชีวิตของวัยรุ่น

วัตถุประสงค์: เพื่อศึกษาความรู้และทัศนคติการคุมกำเนิด และความสัมพันธ์ระหว่างความรู้และทัศนคติต่อการคุมกำเนิด ของนักศึกษาพยาบาลชั้นปีที่ 1

วิธีการศึกษา: การวิจัยแบบภาคตัดขวางในกลุ่มตัวอย่างนักศึกษาพยาบาลชั้นปีที่ 1 ของมหาวิทยาลัยเทคโนโลยีการแพทย์และเภสัชกรรมแห่งดานังประเทศเวียดนาม จำนวน 170 คน โดยวิธีการคัดเลือกด้วยแบบดั้งตามลำดับ เท่ากับระบบข้อมูลตั้งแต่เดือนมีนาคมถึงเดือนเมษายน พ.ศ. 2564 ใช้แบบสอบถามที่ประกอบด้วย 2 ส่วน ได้แก่ ลักษณะทางสังคมวิทยา และแบบประเมินความรู้และทัศนคติเกี่ยวกับวิธีการคุมกำเนิด การวิเคราะห์ข้อมูลใช้สถิติเชิงพรรณนา, Chi-square test, Fisher exact test, และ Spearman correlation test

ผลการศึกษา: กลุ่มตัวอย่างนักศึกษาพยาบาลชั้นปีที่ 1 จำนวน 170 คน มีความรู้เกี่ยวกับการคุมกำเนิดในระดับปานกลาง (mean [SD], 45.2 [8.5]; range, 25 - 62) มีทัศนคติเชิงบวกต่อวิธีการคุมกำเนิด (mean, 82.6; range, 49 - 95) และพบความสัมพันธ์เชิงบวกระหว่างทัศนคติและความรู้ (P < .05) แต่ไม่พบความสัมพันธ์ระหว่างทัศนคติและความรู้ (P > .05)

สรุป: นักศึกษาพยาบาลชั้นปีที่ 1 มีความรู้และทัศนคติต่อวิธีการคุมกำเนิดไม่เพียงพอ การปรับปรุงความรู้และทัศนคติจะช่วยในการคุมกำเนิดได้ให้การศึกษามีความจำเป็นอย่างยิ่งสําหรับนักศึกษา

คําสั่งจํานวน: วิธีการคุมกำเนิด นักศึกษาพยาบาล ความรู้ ทัศนคติ

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