

## Emergency contraception: knowledge and attitudes of nursing students



*Anticoncepção de emergência: conhecimento e atitude de acadêmicos de enfermagem*

*Anticoncepción de emergencia: conocimientos y actitud de estudiantes de enfermería*

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### ABSTRACT

This study aims to identify the knowledge and attitude towards emergency contraception among nursing students from a public university in Goiás – a state in Brazil. A descriptive and analytical research methodology with a quantitative approach was used, applying, from February to May 2011 a questionnaire on the sexual knowledge and attitude of students regarding emergency contraception. 178 students participated in the study. Knowledge was confirmed through the high frequency of correct answers to the questions, especially those concerning the correct time and the instructions for use (between 86% – 96%). Although many students use this method, there are still some doubts about the mechanism of action, side effects and access availability (frequency of correct answers lower than 50%). We noticed the need to develop educational policies that encourage the promotion of sex education in schools and universities.

**Descriptors:** Post-coital contraception. Contraceptive behavior. Students. Sexuality.

### RESUMO

Objetivou-se identificar o conhecimento e a atitude em relação à anticoncepção de emergência de estudantes de enfermagem de uma universidade pública de Goiás. Utilizou-se a metodologia descritiva e analítica com abordagem quantitativa, com aplicação de questionário, de fevereiro a maio de 2011, sobre comportamento sexual e o conhecimento dos estudantes acerca da anticoncepção de emergência. Participaram do estudo 178 estudantes. O conhecimento se confirmou pela alta frequência de acertos às perguntas, principalmente as referentes ao tempo correto e as indicações de uso (entre 86% – 96%). Apesar de muitos estudantes utilizarem esse método, ainda persistem algumas dúvidas quanto ao mecanismo de ação, efeitos colaterais e disponibilidade de acesso (frequência de acertos inferior a 50%). Nota-se a necessidade de desenvolvimento de políticas educacionais que estimulem a promoção da educação sexual em escolas e universidades.

**Descritores:** Anticoncepção pós-coito. Comportamento contraceptivo. Estudantes. Sexualidade.

### RESUMEN

El objetivo fue identificar el conocimiento y la actitud frente a la anticoncepción de emergencia de estudiantes de enfermería de una universidad pública de Goiás utilizado la metodología descriptiva y analítica en la investigación con enfoque cuantitativo mediante un cuestionario aplicado de febrero a mayo de 2011 sobre el comportamiento sexual y el conocimiento de los estudiantes acerca de la anticoncepción de emergencia. Los participantes fueron 178 estudiantes. El conocimiento se lo confirma por la alta frecuencia de respuestas correctas a las preguntas, especialmente las relativas a la hora correcta, y a las instrucciones de uso (entre 86%-96%). A pesar de que muchos estudiantes utilizan este método, todavía hay algunas dudas sobre el mecanismo de acción, los efectos secundarios y la disponibilidad de acceso (frecuencia de aciertos inferiores al 50%). Tenga en cuenta la necesidad de desarrollar políticas educativas que fomenten la promoción de la educación sexual en las escuelas y universidades.

**Descriptores:** Anticoncepción postcoital. Conducta anticonceptiva. Estudiantes. Sexualidad.

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## ■ INTRODUCTION

Sexual activity has started increasingly early. A document published by the Ministry of Health in 2008, revealed that in the 15-19 age range between 1996 and 2006, there was a considerable increase in the proportion of sexually active women, exposing, earlier and for a longer period of time, these women to reproductive events (pregnancy and abortion) and sexually transmitted diseases (STD)<sup>(1)</sup>. In this context, emergency contraception (EC) is seen as a breakthrough and became available on the market primarily in Hungary, China and Sweden, in 1970, 1980 and 1984, respectively<sup>(2)</sup>.

This contraceptive method, known as the “morning-after pill,” can prevent unwanted pregnancy, and is indicated for women soon after having unprotected sex, in cases where contraceptive use has failed or in cases of sexual abuse. It consists of a hormonal combination that is able to act by inhibiting or delaying fertilization, fostering a change in the transport of the sperm and ovum, modification of the cervical mucus and interference with sperm capacitation<sup>(3)</sup>.

EC can be offered in two ways. The first, known as the Yuzpe method, is a combination of oral hormonal contraceptives made up of synthetic estrogen and progesterone. In this case, the most recommended by the World Health Organization is that which contains levonorgestrel and ethinyl estradiol, with a total first dose of 1 mg and second dose of 0.2 mg, distributed in analogous doses 12 hours apart. The second form is composed of only isolated progesterone, levonorgestrel, with a total dose of 1.5 mg, taken every 12 hours or two pills of 0.75 mg taken in a single dose. The period for starting EC is not limited to 72 hours, and may be used up to five days after sexual relations. However, studies show that the effect of EC on the fourth and fifth days after having unprotected sex presents significantly lower efficacy rates<sup>(4)</sup>.

Even with the proven contraceptive efficacy of EC, the use of this method is still discreet in Brazil, due to various barriers, such as lack of information, concern from healthcare professionals of improper use, the requirement for a medical prescription, and moral and cultural characteristics of the population regarding the method<sup>(3)</sup>.

A study done in Chile indicates that the profile of most people who use EC consists of young women who are students and single<sup>(5)</sup>. Some of the reasons indicated in Brazilian studies for the use of EC include: lack of other contraceptive methods, uncertainty regarding efficacy and failure of the regular method used<sup>(6-7)</sup>.

Despite the possibility of indiscriminate use being a concern for users and healthcare professionals, a number of works confirm that knowing, being guided and even having a prescription for emergency contraception does not change the sexual behavior of adolescents and adult women<sup>(8)</sup>. However, we can see that in a population group with supposedly more explanations, the use of EC is more widespread, emphasizing the importance of access to information<sup>(7)</sup>.

In Brazil and throughout the world, various studies have been conducted to identify young people's knowledge about EC<sup>(6,9-10)</sup>. In Santa Catarina, it was revealed that 48.8% of university students that were already sexually active had used EC, only 2.9% with a medical prescription, 35.3% had been guided about use at the time of purchase and 15% answered the incorrectly on the issue of non-prevention and sexually transmitted diseases (STD). Furthermore, this study highlighted the importance of making proper information about the method available, in order to prevent people from abandoning regular methods and prioritizing the prevention of STD<sup>(9)</sup>.

The occurrence of unwanted pregnancy in the world is quite high, principally in developing countries, due to deficiency in family planning, failure of contraceptive methods and sexual violence. The consequences are unsafe induced abortion, increased female mortality, rejection of the child and family conflicts. Due to these factors, EC needs to be known by the population in order to prevent these outcomes and consequent human suffering<sup>(4)</sup>.

The hypothesis of this study was that emergency contraception is a method that is superficially known by academics, which generates uncertainty in using it.

Considering the aforementioned, the purpose of this study was to identify the knowledge and attitude toward emergency contraception of nursing students at a public university in Goiás, which the guiding question: “What knowledge and attitude do nursing students have about emergency contraception?”

## ■ METHODOLOGY

A transversal study, developed at the School of Nursing (FEN) at the Federal University of Goiás (UFG), which used questionnaires with open-ended and closed-ended questions.

The research subjects included 246 students enrolled in the nursing program, from the first to the fifth year, selected using an electronic registration available at the Undergraduate Course Registrar in 2011, information considered reliable and updated. The sample was made up of

all the nursing students (n=178), which were present in the classroom when the questionnaire was applied, excluding those who were absent and those who did not agree to answer the questionnaire. The choice to select all students was to guarantee the significance of the data, with a sample that was statistically acceptable for the purpose of the study.

In the curricular programming at FEN/UFG, the course whose syllabus involves contraceptive methods is called Gynecological and Obstetric Nursing I and is taken in the 4th year of undergraduate studies. So, for 4th and 5th year students, this course had already been considered completed.

The instrument for collecting the data consisted of a previously tested questionnaire. Data collection was done from February to May 2011. The researcher responsible obtained from the Undergraduate Registrar the weekly scheduled activities of the course for each class, which contained information about the course taken, the faculty member responsible, and the place/time of the activities. Before visiting the classrooms, the professor that taught the class was sought out by the researcher to explain the research and get prior authorization for the visit. In the classroom, there was a verbal explanation given about the content and purpose of the research and the questionnaire and Statement of Informed Consent were given out.

In the present study, there were two dependent variables: knowledge about EC and the attitude/behavior of students related to the use of EC. The independent variables included: the socio-demographic profile of the students (age, gender, marital status, and use of drugs, alcohol and cigarettes); and sexual behavior (start of sexual activity, current dating status, pregnancy, abortion, sexual relations without the use of condoms, use of some type of contraceptive method during the last sexual act).

Contraceptive behavior was evaluated using questions related to affective and/or sexual relationship. As for the use of EC, we identified the knowledge of the students regarding use of the method.

A statistical analysis of the data was done using the *Sigma Stat* program, version 2.0. The socio-demographic and sexual and contraceptive behavior characterization of the students, as well as the use of and knowledge about EC, was done using proportions and means.

This study was sent to the UFG Research Ethics Committee, and was approved under opinion number 086/10. The ethical precepts regarding Resolution 196/96<sup>(11)</sup>, which refers to research with human beings were observed, and to preserve the anonymity of the participants, they were identified by numbers.

## ■ RESULTS

The average age of the sample was  $20.67 \pm 2.71$  years. Of the university students studied, 2.25% (4) were male and 97.75% (174) were female; 60% (107) reported that they were already sexually active. Of the total sample, 53% (94) said they had a boyfriend/girlfriend or partner. Regarding the use of alcohol, 49% (86) stated that they had used it, 8% (14) reported to having used it during their first sexual experience and 13% (23) in the last one. Only 2% (3) of the students stated that they smoked and 6% (10) had already used some type of illicit drug.

The results regarding the sexual behavior of the students who were sexually active showed that 4% (4) were male and 96% (103) were female. Of them, 4% (8) had already been pregnant, and 37.5% (2) of them reported to having had an induced abortion. We also found that 52% (92) of the students had used some type of contraceptive method last time they had intercourse, where 47% (84) had continued having intercourse without using a condom and 19% (34) had already practiced casual sex.

As for the use of EC, the proportion of students that report to already having used it was 29% (51). Of them, 88% (45) responded to the reason for use, where 22% (10) justified use with uncertainty in the method used, 24% (11) with breakage of the condom, and 53% (24) stated that they used EC due to the absence of another contraceptive during intercourse.

Table 1 shows the results regarding knowledge of the university students about EC. We verified that 96% of them reported to already having heard about the method. 92% of the students did not consider EC a method that is 100% safe and reported that use could not be routine. Only 5% were wrong by reporting that EC could be used before unprotected sex. Although having been previously informed about the content and purpose of this study, there were questions that were unanswered, as can be seen in Table 1.

## ■ DISCUSSION

The choosing of the group was based on the justification of the high educational level and for being a group of students in the area of healthcare. Therefore, the results obtained with this study cannot be applied to the general population of young people, but it is possible to infer that if knowledge regarding EC, within this differentiated group, did not reach 50% correctness for

**Table 1.** Knowledge of students from a public university in Goiás regarding emergency contraception (EC), Goiânia, GO, 2011

QUESTION	YES (n)	NO (n)	NOT REPORTED (n)	CORRECT (n)
1. Have you already heard of EC?	170	6	2	Not applicable
2. Is the use of EC a right of Brazil's population?	112	62	4	112
3. Are all EC available in the country safe and without medical contraindications?	26	144	8	26
4. Is an inter-uterine device considered an emergency contraceptive method?	7	166	5	7
5. To acquire EC from pharmacies, drug stores and healthcare centers, do you need a medical prescription?	25	147	6	25
6. Can EC be acquired through the public healthcare network?	103	63	12	103
7. Is EC 100% safe and can it be used constantly?	7	164	7	164
8. Is EC an abortive method, being able to terminate a pregnancy, even if it has already begun?	74	97	7	97
9. If EC is administered after pregnancy, can it cause malformations of the embryo?	133	31	14	31
10. Is EC most effective when used as soon as possible after intercourse?	156	12	10	156
11. Should EC be used as a regular contraceptive method, being able to replace other methods?	2	170	9	170
12. In the event of sexual violence, is EC an option to prevent unwanted pregnancy?	166	3	9	166
13. Is EC indicated in the event that a male or female condom breaks?	160	13	5	160
14. Can EC be administered before unprotected intercourse?	9	162	7	162
15. Should EC be used within 72 hours after unprotected intercourse?	158	13	7	158
16. With regards to EC, is it correct to say that there is no time limit for its efficacy?	19	153	6	153

Source: Faculdade de Enfermagem – Universidade Federal de Goiás. 2011. (School of Nursing – Federal University of Goiás, 2011)

Notes: (1) EC: Emergency Contraception; (2) The correct answers were based on the document from the Ministry of Health titled "Emergency Contraception: questions and answers for healthcare professionals," from 2006.

some questions, it is even lower for young people with a low educational level.

The frequency with which young people had started to become sexually active was relatively low (60%) when compared with a study done with 1621 young people in Pelotas-RS, which showed that 90% of the population studied was

already sexually active<sup>(12)</sup>. Furthermore, the average age that people had become sexually active in this study (20.67) was higher when compared with the aforementioned study, which presented an average age of 15.7<sup>(12)</sup>.

We noticed that the percentage of young smokers (2%) was low and 49% of the students studied had already con-

sumed alcoholic beverages, and of these, 8% used it during their first sexual experience and 13% in the last one. Among the nursing students from a university in São Paulo, only 6.3% reported to having consumed alcohol the first time they had sexual intercourse<sup>(9)</sup>.

The use of alcohol is characterized as vulnerable behavior in aspects related to sexual health in young people, including a risk for STD/AIDS, unplanned pregnancy and repeated use of EC, since it fosters sexual acts with unfamiliar people and low adherence to condom use<sup>(7)</sup>.

The frequency of young people who had already been pregnant was 4%, and of them, 37.5% had already had an induced abortion. A study conducted in São Paulo with students/adolescents should that 4.8% had been pregnant and of them, 0.7% had had an abortion<sup>(13)</sup>. On the other hand, of 154 Nursing students, also in São Paulo, we verified only one pregnancy and no abortions, which reveals a disproportionate frequency of abortions found in this study<sup>(7)</sup>.

In our study 52% of young people who were already sexually active had used a contraceptive method last time they had intercourse, data also confirmed among university students from São Paulo and Minas Gerais and high school students from public schools in Pernambuco<sup>(7,10,14-15)</sup>.

Regarding the use of condoms, 47% of the sexually active students reported that they did not use condoms every time they had intercourse, a percentage that is considered high, since at any time these young people are putting themselves at risk for unwanted pregnancy and/or contracting an STD when having unprotected sex. The results regarding the use of condoms may be associated with the percentage of students who reported to having a boyfriend/girlfriend or partner (53%), as it is well known that their use decreases in stable relationships, due to a supposed mutual trust and a failure to negotiate on the use of this method<sup>(7)</sup>.

In this study, the proportion of young people who had reported to have already used EC is similar to use nationwide, presented by the Ministry of Health (18.5%), and described in Brazilian literature<sup>(6-7,16)</sup>. The alleged reasons for use were condom breakage, uncertainty of the method used and, in the majority, the absence of another contraceptive method during intercourse. The principal justification stated by some students was the same as that which was found in studies conducted in 2006 and 2007 with university students from five healthcare-related majors, from a public university in Goiás and Rio Grande do Norte: the absence of another contraceptive method during intercourse<sup>(6)</sup>. In other regions, including other

countries, the main reason for using EC was a failure of the method used<sup>(6-8)</sup>.

We noted, in this study, that 96% of the students had already heard about EC, which is different from the results from another national study<sup>(10)</sup>. This result may be justified by the characteristic of the population studied, composed of university students studying in the area of healthcare, who attended a federal public institution. When evaluating the inter-regional differences that existed in relation to the knowledge of young university students from public universities in Brazil about emergency contraception, studies should that the chance that a student from Goiás had heard about emergency contraception was higher than the chance of students from other geographic regions of the country<sup>(6)</sup>.

The rate of correct responses to the questions regarding time for use and situations indicated for EC was high: between 86% and 6%, which differs from the results found in national and international articles. The studies done show that despite the majority of young people claiming to know about EC, there were few who could provide correct information regarding the time for use and situations for which the method is indicated<sup>(4,6,10)</sup>.

When evaluating the knowledge of students regarding the mechanism of action, side effects and availability of access, we noticed that the rate of correct response was less than 50%. This fact is troubling, since the errors can come from possible users, which may incorrectly use or abstain from using when needed the method due to lack of information. The fact is compounded by taking into account that the medication is sold daily in pharmacies without due monitoring by the sanitary authorities for proper monitoring of the sexual and reproductive health of consumers<sup>(17)</sup>.

When asked about the possibility of EC causing an abortion, slightly more than half (55%) were correct when they said no, while university students from five regions of the country showed a higher percentage of responding correctly<sup>(6)</sup>. Studies show that EC is often understood as an abortive method, which could have long-term effects on the health and fertility of women. Access to the benefits of this method is hindered by the conservative culture and social norms. Barriers and gaps in access to the post-coital contraceptive may lead to delay in the use of the medication, which could lead to low efficacy<sup>(18)</sup>.

In a study conducted with students who were approximately 16 years old, where the objective was to verify the attitude toward emergency contraception, it was found that it is generally a question of a subjecti-



ve personal position, which is not based on effective knowledge<sup>(19)</sup>.

In this study we found that the nursing students claimed to know about this method, but few were correctly informed about the mechanisms of action and side effects. Therefore, we noticed that the level of knowledge did not affect the use of EC. This means that practicing EC may be related to other aspects, showing that inadequate knowledge may not be a barrier to its use, even if it shows up occasionally among nursing students. A study conducted with female adolescents showed that although they support the use of this method in various situations, they have concerns regarding its access. Awareness of these factors and possible influences of EC use may guide providers for counseling and interventions intended to increase adolescents' use of EC<sup>(20)</sup>.

## ■ CONCLUSIONS

EC has been shown as quite a widespread method among students studied, since 96% reported to having knowledge of the method and 29% had already used it. The knowledge was confirmed by the rate of correct responses to the questions, mainly regarding the correct time (86%) and situations indicated for use (96%). However, some doubts persisted about the mechanism of action, side effects, public policies and availability of access, important matters for use, health education and family planning guidance.

The results of this study are unsettling, since 19% of young people reported that they had practiced casual sex and 47% stated that they did not use a condom, which are the main reasons given for using EC, showing behavior that puts them at risk for unwanted pregnancy and contracting sexually transmitted diseases and/or aids.

In this study, some questions were not answered by the students, which may appear as a limitation of the study, reinforcing the need for educational strategies and discussions focused on the complete and correct completion of the research questionnaires by the subjects and to better elucidate the composition of the questionnaire by the researcher.

The subjects of the study, university nursing students and future professionals, should not have presented doubts about EC and need to be able to act deftly in actions aimed at family planning. Given this, it is necessary to conduct other studies, based on scientific evidence, which contribute to the construction and adoption of practices that meet the needs of the population regarding the use of EC.

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