ORIGINAL ARTICLE

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Knowledge and attitudes of emergency contraception among Medical Sciences Students

Introduction: Emergency contraception (EC) has been available in Iran, however there has been little research into the extent of knowledge of the actions, effectiveness and attitudes of students about it .The aim of this study was to detect the
Knowledge and attitudes of university students towards emergency contraception .

Methods: A survey of 130 university students was conducted at Shahrekord university of Medical Sciences in Iran during the 2009-2010 . A predesigned questionnaire was distributed to students who had passed the family planning subject and asking about their knowledge and attitudes towards emergency contraception.

Findings: Ninety-four of students had heard of emergency contraception . About of 85% of them, explained the contraceptive pills and 10% stated the intra uterine device (IUD) for EC . Seventy-one percent didn,t know the mechanism of action of EC pills and 29% believed that EC worked by disrupting a newly implanted ovum and would interrupt an ongoing pregnancy. Kind of method was reported OCP in 85.2%, OCP and IUD in 5.3% of students . Finally, The awareness of students was insufficient in 15.4% of them. 76.9% of them had moderate and 7.7% had sufficient knowledge . More than 80% of students had positive attitudes towards emergency contraception .

Conclusion: The level of knowledge in university students' about emergency contraception was low and there is a clear need for ECP as a pregnancy prevention method among university students and for better education about it with considering the details for each method and insertion of IUD for emergency contraception .

Keywords: students , knowledge, attitude, Contraception, Postcoital

لمعرفه و الرؤیه عند طلاب جامعه شهر کرد للعلوم الطبیه فی مجال استعمال اسالیب الطواری فی منع الحمل.

المقدمه: أن استعمال اسالیب منع الحمل بشکل طارئ متوفرفی فی ایران ، لم تکن هناك دراسات کافیه لمعرفته مستوی الرؤیه و الوعی عندالطلاب إن هدف هذه الدراسه هو تعیین مستوی المعرفه و الوعی عند الطلاب تجاه اسالیب الطواری فی مجال منع الحمل.

الأسالیب: تمت الدراسه علی ۱۳۰ طالبه فی تخصصات التمریض و الصحه و الولاده فی جامعه شهر کرد الطبیه فی سنوات ۱۳۸۸-۱۳۸۹ ه.ش الذین کانوا قد درسوا درس «تنظیم العائله و المجتمع» تم تجمیع المعطیات عبراستمارات .

النتائج: کان هناك مایقارت من ۹٤٪ من الطلاب لدیهم المعلومات الکافیه فی مجال اسالیب الطواری فی منع الحمل.
اعتبر ۸۵٪ من الطالبات الاقراص الترکیبیه و ما یقارب ۱۰٪ الد IUD اسالیب طواری. ۷٪ من الطالبات لم یکن لدیهم ای معلومات عن مکانیزم اثر اقراص منع الحمل. ۲۹٪ کانوا یعتقدون أن اسالیب منع الحمل التی تستعمل بشکل طارئ قد تعمل علی تخریب البویضه المزروعه داخل الرحم.
۸۵.۲٪ کانوا یعتقدون ان افضل اسلوب هو الاقراص و ۵.۳٪ الاقراص و IUD. کانت نسبة المعرفه عند ۷.۷٪ کافیه و عند ۷٦.۹٪ متوسطه و ۱۵.٤٪ لم تکن کافیه اکثر من ۸۰٪ من الطالبات کانت لدیهم رؤیه ایجابیه تجاه اسالیب الطوارئ.

الأستنتاج: اعتبرت هذه الدراسه ان مستوی المعرفه کان متدنیا فی المجال المذکور عند الطالبات و اعتبرت الدراسه ان هناك ضروره لتعلیم الطلاب فی هذالمجال خصوصا من الافضل ان یکون الترکیز علی اسلوب الد IUD.

الکلمات الرئیسیه: المعرفه، الرؤیه، اسالیب الطوارئ فی منع الحمل، طلاب علوم الطب.

حمل روکنے کی اضطراری روشوں کے بارے میں شہر کرد کی مڈیکل یونیورسٹی کے طلبا کی آگہی و نظریات.

بیک گراونڈ: حمل روکنے کی اضطراری روشیں ایران میں دستیاب ہیں. گرچہ اس شعبے میں بہت کم تحقیقات انجام دی گئي ہیں تاہم ان روشوں کے بارے میں میڈیکل طلباء کے نظریات معلوم کئے گئے. اس تحقیق کا هدف ان روشوں کے بارے میں طلباء کی آگہی اور نظریات کا جائزہ لینا ہے.

روش: اس تحقیق میں شہر کرد کی میڈیکل یونیورسٹی کے نرسنگ، مڈوائفری، حفظان صحت، اور پیرا میڈکس شعبوں کی ایک سو تیس طالبات نے شرکت کی. ان طالبات نے دوپزار نو میں فیملی پلاننگ کی بھی ٹریننگ حاصل کی تھی. تحقیق کےلئے سوالنامہ دیا گیآ تھا.

نتائج: چورانوے فیصدی طالبات حمل روکنے کی اضطراری روشوں سے آشنا تھیں. ان میں پچاسی فیصد نے کمپاونڈ گولیوں اور تقریبا دس فیصد نے آئي یوڈی کی روش کو اضطراری روشوں میں شمار کیا. اکہتر فیصد طالبات کو گولیوں انسداد حمل کی گولیوں کی کارکردگي کے بارے میں کچھ معلوم نہیں تھا. انتیس فیصد طالبات کا کہنا تھا کہ اضطراری روشوں سے تلقیح شدہ نطفہ خراب ہوجاتا ہے . بیاسی اعشاریہ دوفیصد کی نظر میں گولیاں اور پانچ اعشاریہ تین کی نظر میں آئي یو ڈی انسداد حمل کی روشیں تھیں. سات اعشاریہ سات فیصد طالبات ان روشوں سے ا چھی طرح واقف تھیں جبکہ چہتر اعشاریہ نو فیصد کی آگہی درمیاني درجے کی تھی اور پندرہ اعشاریہ چار فیصد طالبات کی آگہی ناقص تھی. اسی فیصد طالبات حمل روکنے کی ایمرجنسی روشوں کے بارے میں مثبت نظر رکھتی تھیں.

سفارشات: حمل روکنے کی ایمرجنسی

آگاهی و نگرش دانشجویان دانشگاه علوم پزشکی شهر کرد در مورد روشهای اضطراری پیشگیری از بارداری

زمینه و هدف: پیشگیری اورژانسی در ایران در دسترس است، اگرچه تحقیقات کمی در مورد وسعت آگاهی، نگرش و عملکرد دانشجویان نسبت به آن انجام شده است. هدف مطالعه حاضر تعیین آگاهی و نگرش دانشجویان در مورد روشهای اورژانسی پیشگیری از بارداری بود.

روش: در یک مطالعه تعداد ۱۳۰ دانشجوی دختر رشته های پرستاری، مامائی، بهداشت و پیراپزشکی در دانشگاه علوم پزشکی شهرکرد در طی سالهای ۱۳۸۹-۱۳۸۸ که واحد جمعیت و تنظیم خانواده را گذرانده بودند، مورد بررسی قرار گرفتند. گردآوری داده با پرسشنامه انجام و آگاهی و نگرش آنان در مورد روشهای اورژانسی پیشگیری از بارداری سنجیده شد.

یافته ها: حدود ۹۴ درصد دانشجویان از روشهای اورژانسی پیشگیری از بارداری مطلع بودند. حدود ۸۵ درصد آنان ، قرصهای ترکیبی و حدود ۱۰ درصد IUD را بعنوان روش اورژانسی عنوان کردند. حدود ۷۱ درصد دانشجویان هیچ اطلاعی از مکانیسم اثر قرصهای پیشگیری نداشتند و حدود ۲۹ درصد اعتقاد داشتند که روشهای اورانسی پیشگیری از بارداری سبب خراب شدن سلول تخم کاشته شده در رحم می شود. نوع روش پیشگیری در ۸۵/۲ درصد موارد قرص پیشگیری و در ۵/۳ درصد موارد قرص و IUD عنوان شد. در کل میزان آگاهی در ۷/۷ درصد افراد کافی، در ۷۶/۹ درصد متوسط و در ۱۵/۴ درصد ناکافی بود. نگرش بیش از ۸۰ درصد افراد در مورد روشهای اورژانسی مثبت بود.

نتیجه گیری: سطح آگاهی دانشجویان در مورد روشهای اضطراری پیشگیری از بارداری در حد پائین گزارش شد و ضرورت آموزش این روشها به دانشجویان وجود دارد. آموزش بهتر این روشها با تاکید بر جزئیات اختصاصی هر روش و همچنین کاربرد IUD بعنوان یک روش اورژانسی، پیشنهاد می گردد.

واژه های کلیدی: آگاهی، نگرش، روشهای اضطراری پیشگیری از بارداری، دانشجویان علوم پزشکی

INTRODUCTION

One of the issues in primary health care, is the family planning has the effective role in the reduction of unwanted pregnancy (1). Unwanted pregnancies poses a major public health problems in the developed and developing countries(2). About 3 million unwanted pregnancies occur in the United States. Most of these results are from nonuse of contraception or from noticeable contraceptive failure, (such as broken condom) which could be prevented with the use of EC (3) .In 2004, there were nearly 6.4 million pregnancies in the United States; 1.22 million ended in abortion . The greatest number of unintended pregnancies and induced abortions occur in women between the ages of 18 and 30. In 2001, it was estimated that 79% of pregnancies occurring in 18- to 19-year-olds were unintended, as were 60% in 20- to 24-year-olds (4) . Among the contraceptive methods, Emergency contraception (EC) is a method of contraception that can be used to prevent pregnancy after an unprotected act of sexual intercourse(3). In use of emergency contraceptive methods, risk of pregnancy can be reduced to 75 and 99.9%(5) . Emergency contraceptive methods are conveince and the majority of women accept them . WHO reported no contraindication for EC and there is not report for their teratogenicity in the failure of them(6,7). Emergency contraception or postcoital contraception provides an additional support whenever there is a breach in the Regular contraceptive use. A number of studies are available from the west regarding the use of emergency contraception (2). The main reasons for needing emergency or postcoital contraception are the non-use of condom , condom breakage, coitus interruptus and rhythm methods (5). Knowledge and attitudes of medical students in the giving health care is important . One study reported that the Seventy-four percent of the students had heard of emergency contraception (EC); however, less than one-third knew the prescription status, common side effects or mechanisms of ECP (8). Another study reported that the awareness and knowledge of EC was low among the students of Mersin University in Turkey and the males are less aware about EC when compared to females(9). In recent years, the family planning subject put on the school based curriculum in all of university courses. Medical students due to the nature of courses, should be aware of contraceptive methods until they would be able to consult with clients about the family planning. In addition, they are in reproductive age and recognition of contraceptive methods, especially emergency contraception is nessessary for them. Although the EC is safe and effective, but use of this method is low and this ratio in Tehran was 5.2% (7) . In regards to ethical considerations in relation to abortion in Iran, emergency contraception is the only legally method for prevention of unwanted pregnancy and medical students should be aware of this . The aim of this study was to detect the knowledge and attitudes of university students about EC in Shahrekord university Of Medical Sciences in 2009-2010.

METHODS

A descriptive and cross-sectional study on knowledge and attitudes about emergency contraception was conducted among 130 of nursing, midwifery, health and paramedical students in last year of education, who had passed the population and family planning subject in Shahrekord university Of Medical Sciences. The guest and transfer students due to special conditions, were excleded the study. The 36-item survey instrument used for this study was developed by the author, based on results of a previous study (10) . The current survey instrument comprised eight demographic items, eleven knowledge items , fifteen attitudes items and one information resourse item . The awareness of students was classified to low, moderate , and high and a likert scale was used to assess the attitudes of students and positive, disorderly and negative attitudes were detected. The validity of questionnaire was detected by content validity and its reliability was determined by alpha-cronbakh ($r=0.82$) .Cronbach's alpha is "a measure of internal consistency, that is, how closely related a set of items are as a group. A 'high' value of alpha is often used as evidence that the items measure an underlying (or latent) construct. A reliability coefficient of .70 or higher is considered 'acceptable' in most social science research situations" (7) . Data were collected in person by the researcher. After permission was granted by each class professor, the researcher asked the students for their participation in the study. The researcher distributed the survey instrument and an informed consent form to all participants. The participants were reminded that participation in the study was voluntary and anonymous and were then instructed to sign the informed consent form and to complete the survey instrument if they agreed to participate in the study. The letter of approval from a Human Subjects Committee :The Institutional Review Board of University Medical Center of Shahrekord approved the study protocol and all subjects gave written informed consent . Data were analyzed using SPSS 16.0 for Windows and $P<0.05$ was considered significant. We answered to the questions of students about the emergency contraception after that they answered to questionnaire .

RESULTS

We distributed the total of one-hundred-thirty questionnaires to female students. All of them agreed to participate in the study and completed the questionnaire. The average age of participants was 22.3 ± 2 , although respondents ranged in age from 19 to 32, all of them were in third or fourth year of study . Seventy-two percent of participants were nursing students, 12.3% were midwifery students, 4.5% were operation room students, 8.5% were paramedical students, and 3.1% were health students .The majority of respondents (95.4%) reported that they had heared of emergency contraception before. Kind of method was reported oral contraceptive pills (OCP) in 85.2%, OCP and intra uterine device (IUD) in 10.1% of students . OCP and Depo-Medroxy –Progesteron Acetate (DMPA) in 4.7% of students . Only 48.5% of students knew that a woman must taken the first dose within the first 72 hours after unprotected sex and more of them believed a woman had less time after unprotected sex to initiat ECPs . Regarding to the number of high-dose pills (HD), 59.2% of students reported 2 pills in first and repeat after 12 hours and others

had incorrect answers . In about the number of low dose pills (LD), 54.6% of students reported 4 pills in first and repeat after 12 hours and others had incorrect answers . In about of distance between two doses of pills , 57.7% of participants reported the 12 hours and others didn,t know . The adverse effects of emergency pills, that the students linked with EC, were nausea and vomiting, vaginal bleeding, obesity, infertility and increasing the weight . Seventy-One percent of students didn,t know the mechanisms of action of emergency contraceptive pills and 29% believed that EC worked by disrupting a newly implanted ovum and would interrupt an ongoing pregnancy. In about of intra uterine device (IUD), for emergency contraception, nearly 90% of students were not aware of this method and only 10% of them knew this. From those, 3.8% said 3 days, 2.3% reported 7 days and 1% reported 5 days for insertion the IUD after unprotected sex. In about of mechanism of action of IUD, deterioration the endometrium was reported by 4.6%, prevention of fertilization was reported by 2.3% of students and others didn,t answere the question. Regarding to the other benefits of IUD, except the emergency contraception, 3.1% of participants believed that the woman can keep the device to prevent of pregnancy for all times, 3.1% reported that the this method has not the adverse effects of pills. The mean and standard deviation of students awareness towards emergency contraction in different faculties and shown in table 1.

There was no significant association between the knowledge of emergency contraception and age of respondents and year of study. A significant correlation was found between the course and the knowledge of participants. The midwifery students had the most and the Operation Room and health students had the least knowledge about the emergency contraception (P=0.003). The attitudes of participants about the emergency contraception is showed in table 2.

Table 1. The awareness of students about the emergency contraception in different courses

Awareness / University courses	insufficient n(%)	Moderate n(%)	sufficient n(%)	Total n(%)
Nursing students	10(12.5)	65(81.3)	5(6.2)	80(100)
Midwifery students	0(0)	71(68.8)	5(31.2)	76(100)
Operation Room students	3(42.9)	4(57.1)	0(0)	7(100)
Paramedical students	2(28.6)	21(71.4)	0(0)	23(100)
Health students	0(0)	4(100)	0(0)	4(100)
Total	15(7.9)	165(86.6)	10(5.3)	190(100)

Table 2. The attitudes of participants towards emergency contraception

Attitudes	Agreement (%)	disorderly (%)	Dis- agreement (%)
EC must be educated to all woman	95.4	0	4.6
EC must be considered to abortion	17.5	20.8	61.7
Adveres effects must be doubted in using of EC	26.9	26.2	46.9
EC has ethical problems	6.7	16.9	76.4
EC is ideal for woman who have no contraception	35.66	4.8	59.6
EC didn,t have enough certainly	54.6	21.7	23.7
If within the use of EC, pregnancy occurred, it is tertogen for fetus	31.6	26.9	41.5
EC is inexpensive	82.3	11.5	6.2
EC is conveince and possible without reffering to physician	81.7	12.3	6
EC encourage the non-responsible behavior	27.3	33	43.7
EC doesn,t prevent the transmitted infections	47.1	23.1	29.8
I like use of EC	65.6	21.5	12.9
If pregnancy occurred during use of EC , abortion must be considered	29.2	23	47.8

The majority of students first learned about the emergency contraception from a variety of sources, including population and family planning subject (56.2%), family planning subject and clinical education (18.5%), health care providers (6.2%), and family members and friends (6.4%) and the others learned from multiple sources. To detect the association of knowledge and attitudes of students, the Knowledge was considered to adequate and in-adequate and the findings showed a significant association between the knowledge and attitudes of university students towards emergency contraception and those with adequate knowledge, generally showed favourable attitudes with regard to emergency contraception ($P<0.05$).

DISCUSSION

Although emergency contraception (EC) has been available in Iran, there remains clear evidence of the need for continued health education about EC. Findings from this study support those from previous studies on emergency contraception knowledge and use to show that, although most university students had heard of ECP, they generally lack sufficient knowledge about what it is, how it works (10, 11 and 12) . The results for the knowledge questions indicated that the students of Shahrekord University Of Medical Sciences have a moderate of knowledge about emergency contraception. These findings are similar to the findings from Faraj Khoda and etal . In their study the awareness of students in medical university in Yazd was adequate in 30.7% and moderate in 50% of students (13). Khalid and etal reported that the most of students have enough awareness about emergency contraception (14).In pakistan, Abdulghani and etal reported that the majority of gynecologists, general physicians and medical students have a little of knowledge about emergency contraception(15). Since all of contraceptive users can,t use the oral contraceptive pills for emergency contraception , use of intra uterine device (IUD) is a ideal method for EC. However a woman must take the pills in the first 72 hours after unprotected sex, use of IUD is possible in the first 5 days after unprotected sex (5), thus the awareness of students of this method is nessessary . In present study less than half of the participants failed to identify the correct time frame for which ECP should be taken to be effective . This is particularly troubling, given that efficacy is higher the earlier that ECP is taken, and that the effectiveness of ECP is markedly decreased after 72–120 h (16, 17, 18) . Awareness of the correct time frame for which ECP should be taken to be effective was 28% In Khalid study (14), 9% in Foster study (19) and 38% in Takker study (20). Almost 80% of the students did not know how ECP actually worked, and two-thirds of them failed to identify the most common side effects or the effectiveness rate of ECP. The adverse effect of OCP pills are different, but the most common is nausea and vomiting that could be resulted to dis-continue the second dose, thus reduces the effectiveness (5,21). For this reason some of physicians usually administer the anti-emetic drugs (5). In Graham study, the adequate knowledge of side effects of OCP was reported 59% (22), Faraj-Khoda and etal reported 39.2% (13) . This difference maybe due to the students were in first and second year of study in other studies. For example in Khalid study, most of respondents were in their first or second year of study (14) and in present study, most of students were in their third or fourth year of study and their awareness was greater. In present study most of respondents knew the correct number of contraceptive pills which be used for emergency contraception. Faraj-Khoda and etal reported the similar findings(13). In our study, however 90% of students were aware of emergency contraception, but only 10% of them knew about the intra uterine device (IUD) for EC, mechanism of action and other benefits except the emergency contraception . Since all of the contraceptive users can not use the OCP for emergency contraception due to adverse effects, use of IUD is ideal method for them. other studies have reported that the most of health care providers are not aware of IUD for emergency contraception (8). More than 80% of respondents had positive attitudes to EC and believed that is nessessary to educate the womem about this method, emergency contraception are not abortion and must not be doubt in use of them. In Khalid study, more than 50% of students described the ECPs as “a good method” (14). positive attitudes to emergency contraception were reported 61% in Jamaly study (8). Faraj-Khoda and etal also reported that 100% of married students and their partners have positive attitudes to EC (13). In present study, approxymaitly 75% of students obtained informations about EC from the school-based curriculum, 20% from health care providers and 5% from friends and family members. These findings are similar to the other studies (23, 24, 25) . There were several limitations to this study that may affect the validity of the findings. The participants for this study consisted of a convenience sample of students and may not reflect the knowledge or opinions of university students in general. A second limitation is that of any survey research, as the results of this study are dependent on the accuracy of the participants' responses, and response or recall bias is certainly a possibility.

This study indicated that the university students have low practical knowledge about emergency contraception pills, how its works, how effective it is . Nonethless, many students had incorrect information about important specific details of the method such as its time frame, effectiveness, mechanism of action and adverse effects. We recommend the better educational program about emergency contraception with clear detaild information for each method and insertion of IUD for EC. Strategies to promote the awareness of EC should be focused on spreading accurate information through informational sourses, which have been found to be reliable and associated with good knowledge on emergency contraceptive methods .

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