Knowledge And Attitudes About The Use Of Emergency Contraception Among Adult Females In KSA: A Cross-Sectional Study

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Abstract:

Background: Although many females are aware of different methods of contraception, emergency contraception use is relatively low. The present study aims to evaluate the knowledge and attitudes of Saudi females towards emergency contraception and identifying factors influencing this level and behavior.

Design and Setting: This was a cross-sectional survey study that included an electronic survey distributed to married females aging between 18 to 45 years old. Participants were females visiting the Obstetrics and Gynecology clinics/ Family Practice Clinics. The survey included information about participants' demographics, emergency contraception availability, and knowledge and attitude towards emergency contraception. Statistical analysis was done via SPSS version 26.

Results: 404 women responded to this questionnaire; of them, 254 were eligible for inclusion. 43.3% were in the age group between 26 to 35 years old, 45.7% had a monthly income between 10000 to 20000, 62.6% of the responders had a university degree, and 54.3% had less than or equal three children. Doctors were the most common source of information among 86.2%. 98.4% mentioned that emergency contraceptives were oral contraceptive pills; the most common suggested reason for using emergency contraception was family control among 62.6%. The mean score for the knowledge section was 3.7±2.2 points out of twelve, while the mean score for attitude was 3.1±1.7 points out of nine. Improved knowledge and attitudes were significantly correlated to high monthly incomes, higher educational levels, doctors as a source of information.

Conclusion: the knowledge and attitude of married females in Saudi Arabia are inadequate.

Keywords: Emergency, contraception, females, Saudi Arabia.

Introduction

Unplanned/unintended pregnancy is a common health problem among women worldwide [1]. Unprotected sexual intercourse, misusing of contraceptive method, or improper use of contraceptive methods might lead to unintended pregnancy [2]. Unintended pregnancy is considered one of the most common reasons leading to unsafe abortions, especially among women in the Middle East and North Africa (MENA) region [3]. Emergency contraception (EC) is a common among women to control pregnancy (birth spacing) [4]. Using EC correctly could prevent pregnancy occurrence with 98% after unprotected intercourse [5].

Emergency contraception includes taking a hormonal contraceptive or mifepristone, and intrauterine device' insertion [6]. Several studies were carried out in Saudi Arabia and reported poor knowledge of EC among women [7]. Additionally, Saudi women with higher educational level had a better knowledge about EC use methods, while they didn't know any information about its costs and its availability [8]. Most Saudi women use the alternative methods, such as; remedies and medicines that might be dangerous [9].

Therefore, women must receive more health information about the proper use of EC, its benefits; they must know when it be used and where they could obtain it, to receive benefits from EC [10]. Therefore, the current study aims to assess knowledge and attitudes about the use of emergency contraception among adult females in the Saudi Arabia.

Materials and Methods

- *Study design:* A cross-section study.
- *Settings:* Obstetrics and Gynecology clinics, Family Practice Clinics Saudi Arabia
- *Period:* Three months from January to March 2021.
- *Study population:* Saudi married fertile women
- *Participant's age:* 18 - 45 years (childbearing age).
- *Inclusion criteria:* Saudi adult females aged above 18 years who attended Obstetrics and Gynecology clinics/ Family Practice Clinics during the study period, who agreed to participate in the study
- *Exclusion criteria:* Participants who didn't meet the inclusion criteria
- *Sample technique:* A random sampling technique.
- *Sample size:* A convenient sample size was collected among Saudi women aged from 18-45 years.
- *Study Tools:*

Across-sectional study was conducted among Saudi married women aged from 18 to 45 years old. The study was

performed using a self-administrated questionnaire that was sent electronically. After the approval of the institutional review board (IRB), the participants were asked to sign the consent at the first page of the questionnaire and answer the questions. The questionnaire was included questions regarding the demographic characteristics (age, educational level, economic status, occupational status, and number of children). The questionnaire was included other questions about knowledge and attitudes about the use of emergency contraception among adult females in Saudi Arabia.

Ethical consideration:
Confidentiality was assured to all participants who were participate in the study. The privacy and confidentiality of the data and study results were secured by restricting unauthorized access. The respondents were received a brief description of the study and its objectives.

Statistical Analysis:
Data was analyzed using IBM SPSS, version 22. A P value lower than 0.05 was considered significant. Numbers and percentages were used to presents all categorical variables.

Results
Four hundred and four responses were received for this survey. Only two hundred and fifty-four responders were eligible for inclusion. Responses from females who aged less than 18 years old (N=1) or above 45 years old (N=65), and marital status other than "married" were excluded (N=99), based on the approved inclusion and exclusion criteria.

General Characters of responders:
Out of 254 participants, age was classified into three age groups, the most prevalent one was between 26 to 35 years old (43.3%). The monthly income ranged from less than 10000 to more than 30000, 45.7% had a monthly income between 10000 to 20000. Educational level varied from primary school education to postgraduate degrees, where 62.6% of the responders had a university degree. As for the number of children, 54.3% had less than or equal three children, while 12.6% did not have any children, as described in table 1.

Sources of information
Responders were asked about their sources of information about emergency contraception. It has been shown that doctors were the most common source of information among 86.2%, followed by the internet by 68.9%, while radio was the least source of information, used among only two responders, as described in table 2.

Medications used for emergency contraception.
Responders were asked some questions about sources and availability of emergency contraception. 98.4% of the females mentioned that emergency contraceptives were oral contraceptive pills, 87.8% mentioned that they are available in pharmacies, while 57.1% mentioned that their price is less than 100 Saudi riyals. The most common suggested reason for using emergency contraception was family control, among 62.6%. It is worth mentioning that more than a quarter of the responders did not know the types of emergency contraceptives and their average price, as described in table 3.

Knowledge about emergency contraception:
The women were asked twelve questions to assess their knowledge of emergency contraception. A total score was calculated such that each correct answer for a question was given one point, with a total score out of twelve. The mean score was 3.7±2.2 points, with a minimum score of zero and a maximum score of ten. It has been shown that more than one-third of the responders did not know if emergency contraceptive can protect against sexually transmitted disease, can affect pregnant females, are similar to abortion pills, number of doses and spacing between them, number of doses within one month, and appropriate timing to use intrauterine devices for emergency contraception, as described in table 4.

Attitudes towards emergency contraception
Similar to knowledge questions, a total score was calculated for nine questions evaluating attitudes of participants towards emergency contraception. Positive attitudes were given one point, while negative attitudes were given zero points. A total score out of nine was calculated.

The mean score for the attitude section was 3.1±1.7 points, with a minimum score of zero and a maximum score of eight. It has been shown that more than one-third of the responders thought that emergency contraceptives promote unethical mixing, encouraging abortion, is wrong, results in infertility, and encourage high-risk behaviors, as described in table 5.

Factors influencing knowledge and attitude towards emergency contraception:
To assess the factors contributing to improved levels of knowledge and attitudes among Saudi females, mean scores for both knowledge and attitudes were compared over different demographic variables, using a one-way ANOVA test at a level of significance p-value<0.05.
It has been shown that improved knowledge levels were significantly correlated to high monthly incomes (p-value=0.031), higher educational levels (p-value=0.040), doctors as a source of information (p-value=0.002).

As for attitudes, more positive attitudes were correlated to high monthly incomes (p- value=0.025) and doctors as a source of information (p-value=0.021), as described in table 6.

Discussion

Emergency contraception can be used to prevent unwanted pregnancy before it starts for many reasons [11]. It reduces the risk of abortion, which also exposes females to a significant hazard. However, the effectiveness of emergency contraception depends mainly on the accuracy of its use [12]. Hence, females must have good awareness levels about emergency contraceptives to be able to use them whenever needed effectively [13].

The present study evaluated the knowledge and attitudes of married females within fertile age and living in Saudi Arabia towards emergency contraception. The study demonstrated that the knowledge and attitudes of the included cohort were inadequate. This has been demonstrated through below-average mean knowledge and attitudes scores for the included cohort.

Additionally, more than a third of the responders did not know most of the information about an emergency contraceptive, with a similar proportion having negative attitudes towards most related aspects. It has also been shown that attitudes and knowledge about emergency contraception among the Saudi community can be influenced by demographic variables. Higher levels of knowledge and attitudes were significantly associated with high socio-economic levels, educational levels, and information sources about emergency contraception.

Knowledge and attitudes about emergency contraception have been evaluated through different studies in variable settings. In Saudi Arabia, Alharbi et al. [14] evaluated the knowledge and attitudes of women living in Saudi Arabia towards emergency contraception at childbearing age. Alharbi et al. [14] included females at the same age as the women in the present study. Alharbi et al. [14] demonstrated that only 16% knew about emergency contraception. Additionally, 48.4% of the females would not use emergency contraception for different medical reasons. Alharbi et al. [14] also demonstrated that monthly income, education, and employment of women were significant factors correlated to improved knowledge and attitude towards emergency contraception.

Similar to Alharbi et al. [14], the present study demonstrated an inadequate knowledge and attitude about emergency contraception. However, the present study used a more objective method to evaluate the knowledge and attitude levels through calculating scores, which is more reliable than asking females if they know about emergency contraception. The present study was also compliant with Alharbi et al. [14] in the factors influencing knowledge and attitudes towards emergency contraception, while the present study also demonstrated that doctors as a source of information for females would improve their knowledge and attitudes.

Furthermore, another study in Saudi Arabia, by Karim et al. [15], included 242 Saudi females at childbearing age assessed the knowledge and attitudes towards emergency contraception. Karim et al. [15] highlighted an insufficient level of knowledge, with only 6.2% knew some information about emergency contraception. In the present study, more than a third of the included females did not know about essential attributes for using emergency contraception. Unsatisfactory knowledge was reflected in the attitudes of females towards emergency contraception.

Additionally, Alsabaa et al. [16] evaluated knowledge and attitudes towards emergency contraception in Egypt. Alsabaa et al. [16] included only 151 females aging between 19 and 49 years old. Alsabaa et al. [16] demonstrated that almost three-quarters of the responders did not know about emergency contraception. In contrast, the use of emergency contraception was only among 21.5%. Although the present study did not describe the use of emergency contraception among Saudi females, our findings support the inadequate knowledge and attitudes towards emergency contraception, as demonstrated by Alsabaa et al. [16].

Some issues limited the present study. The responses of the females to the knowledge and attitudes questions were based on their opinions and preferences. Also, responses on different types and availability of emergency contraception were based on the guessing and suggestions of females since the study did not ask them if these responses were based on previous use of emergency contraception or not. These limitations should be considered in future studies.

Conclusion

Knowledge and attitudes of Saudi married females towards emergency contraception are inadequate, explaining lower emergency contraception use in the gulf area. Low educational and income levels are more associated with insufficient knowledge and attitudes. Accordingly, public health decision makers should consider these findings and improve public awareness about emergency contraception through public awareness campaigns in public venues and patient education sessions in healthcare institutes. Future studies should evaluate the use of emergency contraception among females of different demographic attributes.

References

1. Saleem S, Fikhree FF. The quest for small family size among Pakistani women is voluntary termination of pregnancy a matter of choice or necessity. J Pak Med Assoc. 2005;55(7):288-291.
2. Williams SP, Frank ML, Ilegbodu A, Sangi-Haghpeykar H, Corboy JE, Poindexter AN. Factors associated with unintended pregnancy. Adv Contracept 1997;13(4): 429–38.
3. Dabash R, Roudi-Fahimi F. Abortion in the Middle East and North Africa Population Reference Bureau. Available from: http://www.prb.org/pdf08/MENAabortion.pdf. Accessed on 27 Nov. 2014.
4. Cleland K, Raymond EG, Westley E, Trussell J. Emergency contraception review: Evidencebased recommendations

for clinicians. Clin Obstet Gynecol 2014;57:74150
5. World Health Organization: Contraception: Issues in adolescent health and development. Geneva: World Health Organization; 2004. Available from: http://whqlibdoc.who. int/publications/2004/9241591447_eng.pdf. [Last accessed on 2018 May 18].
6. ICEC. Emergency contraceptive pills: medical and service delivery guidelines. http://www.sexualityandu.ca/uploads/files/Medical_and_Service_Delivery_Guidelines_ Eng_2012.pdf; 2012. Published. Accessed December 30, 2012.
7. Irfan F, Karim SI, Hashmi S, Ali S, Ali SA. Knowledge of emergency contraception among women of childbearing age at a teaching hospital of Karachi. J Pak Med Assoc 2009;59:23540
8. Adewunmi AA, Rabiu KA, Tayo AO, Ottun TA, Adeboye BS. Knowledge of emergency contraception among students in a tertiary institution in a developing country. Open Access J Contracept 2012;3:236.
9. AlHujailan M. Health options for Saudi women. Published on Arab News February 9, 2007. Available from: http:// www.arabnews.com/node/294219. [Last accessed on 2018 May 18].
10. After the morning after and the morning after that. Lancet 1995;345(8962):1381–2.
11. Nivedita K. Knowledge, attitude and practice of emergency contraception on nursing personnel. Journal of clinical and diagnostic research: JCDR. 2014 Sep;8(9):OC20.
12. Thapa B. Knowledge and attitude regarding emergency contraception among nursing personnel. Journal of Chitwan Medical College. 2013 Aug 22;3(1):46-50.
13. Khan ME, Dixit A, Bhatnagar I, Brady M. Medical barriers to emergency contraception: a cross-sectional survey of doctors in North India. Global Health: Science and Practice. 2014 May 1;2(2):210-8.
14. Alharbi MS, Almujil AS, Alreshid FF, Kutbi EH. Knowledge and attitude about emergency contraception among Saudi women of childbearing age. J Family Med Prim Care 2019;8:44-8.
15. Karim SI, Irfan F, Al Rowais N, Al Zahrani B, Qureshi R, Al Qadrah BH. Emergency contraception: Awareness, attitudes and barriers of Saudi Arabian Women. Pak J Med Sci 2015;31:15005.
16. El-Sabaa HA, Ibrahim AF, Hassan WA. Awareness and use of emergency contraception among women of childbearing age at the family health care centers in Alexandria, Egypt. Journal of Taibah University Medical Sciences. 2013 Dec 1;8(3):167-72.

Tables

Table 1. *Demographic data of responders.*

		Count	Percent
Age group	18 to 25	37	14.6
	26 to 35	110	43.3
	36 to 45	107	42.1
Monthly income	Less than 10000	107	42.1
	10000 to 20000	116	45.7
	20000 to 30000	14	5.5
	More than 30000	17	6.7
Educational level	Primary	3	1.2
	Secondary	56	22.0
	Intermediate	4	1.6
	University	159	62.6
	Postgraduate	32	12.6
Number of children	None	32	12.6
	Less than or equal 3	138	54.3
	4 to 7	81	31.9
	More than 7	3	1.2

Table 2. *Source of information.*

	Count	Percent
Doctors	219	86.2
Internet	175	68.9
Social media	120	47.2
Family	114	44.9
Books	56	22.0
Nurses	26	10.2
Radio	2	0.8

Table 3. *Medications used for emergency contraception.*

		Count	Percent
Type of medications	Oral contraceptive pills	250	98.4
	Intrauterine device	85	33.5
	Progesterone only pills	48	18.9
	Antibiotics	5	2.0
	I do not know	93	36.6
Available in	Pharmacy	223	87.8
	Private hospital	94	37.0
	Public hospital	64	25.2
	I do not know	32	12.6
	Supermarket	3	1.2
Price	Less than 100	145	57.1
	100 to 200	14	5.5
	200 to 300	26	10.2
	I do not know	69	27.2
Reasons for use	Family control	159	62.6
	Failure of contraception	30	11.8
	Sexual assault	20	7.9
	I do not know	45	17.7

Table 4. *Knowledge about emergency contraception.*

		Count	Percent
Is consulting a doctor necessary before using emergency contraception?	Yes	205	80.7
	No	34	13.4
	I do not know	15	5.9
Emergency contraception protects against sexually transmitted diseases	Yes	33	13.0
	No	110	43.3
	I do not know	111	43.7
Pregnancy test should be done before taking emergency contraception	Yes	155	61.0
	No	45	17.7
	I do not know	54	21.3
The emergency contraceptive pill can be taken	Before intercourse	83	32.7
	Within 24 hours of intercourse	74	29.1
	Within 72 hours of intercourse	22	8.7
	Within 5 days of intercourse	6	2.4
	I do not know	69	27.2
The emergency contraceptive pill can affect a pregnant woman	Yes	154	60.6
	No	18	7.1
	I do not know	82	32.3
The emergency contraceptive pill is effective at preventing pregnancy	Yes	123	48.4
	No	13	5.1
	May be	118	46.5
Emergency contraception is the same as the abortion pill	Yes	9	3.5
	No	106	41.7
	I do not know	139	54.7
The number of suggested doses at one time	One dose	142	55.9
	Two doses	18	7.1
	Three doses	2	0.8
	I do not know	92	36.2
The recommended time between doses	12 hours	35	13.8
	24 hours	107	42.1
	48 hours	1	0.4
	Not to be taken with oral contraceptives	4	1.6

	I do not know	107	42.1
Number of doses within one month	Once	32	12.6
	Twice	8	3.1
	Daily	84	33.1
	Weekly	10	3.9
	3 times a week	2	0.8
	I do not know	118	46.5
Intrauterine device can be used for emergency contraception	Yes	129	50.8
	No	56	22.0
	I do not know	69	27.2
Timing of intrauterine device as emergency contraception	Within 5 days	47	18.5
	Within 7 days	19	7.5
	I do not know	188	74.0

Table 5. *Attitudes towards emergency contraception*

		Count	Percent
Emergency contraception promotes unethical mixing	Agree	59	23.2
	Disagree	129	50.8
	Neutral	66	26.0
Emergency contraception is a way to encourage abortion	Agree	36	14.2
	Disagree	139	54.7
	Neutral	79	31.1
Emergency contraception is wrong	Agree	50	19.7
	Disagree	122	48.0
	Neutral	82	32.3
Use of emergency contraception will result in infertility	Agree	47	18.5
	Disagree	98	38.6
	Neutral	109	42.9
Emergency contraception may affect the baby if not working	Agree	92	36.2
	Disagree	70	27.6
	Neutral	92	36.2
Emergency contraception will affect the next menstrual period	Agree	124	48.8
	Disagree	46	18.1
	Neutral	84	33.1
Would you advise others to use emergency contraceptives	Agree	85	33.5
	Disagree	54	21.3
	Neutral	115	45.3
Use of emergency contraception will encourage high-risk behaviour among young people	Agree	91	35.8
	Disagree	78	30.7
	Neutral	85	33.5
Information and knowledge about emergency contraception must be provided in educational institutions	Agree	197	77.6
	Disagree	11	4.3
	Neutral	46	18.1

Table 6. *Factors affecting knowledge and attitudes towards emergency contraception.*

		Knowledge			**Attitude**		
		Mean	**SD**	**P-value**	**Mean**	**SD**	**P-value**
Age group	18 to 25	3.7	2.1	0.976	2.5	1.4	0.192
	26 to 35	3.7	2.2		3.1	1.8	
	36 to 45	3.8	2.3		3.1	1.8	
Monthly income	Less than 10000	3.6	2.1	0.031	3.0	1.6	0.025
	10000 to 20000	3.0	2.3		3.0	1.9	
	20000 to 30000	3.9	1.7		3.1	2.1	
	More than 30000	4.0	2.2		3.3	1.4	
	Primary	3.0	1.0		3.3	1.5	

Educational level	Secondary	3.8	2.2	0.040	3.3	1.9	0.800
	Intermediate	3.2	3.7		2.5	1.0	
	University	3.6	2.2		3.0	1.8	
	Postgraduate	5.0	2.2		3.0	1.8	
Source of information	Doctors	4.1	2.2	0.002	3.7	1.6	0.021
	Internet	3.5	2.1		3.2	2.4	
	Social media	3.1	2.3		3.4	1.7	
	Family	3.8	2.5		2.7	1.4	
	Books	2.7	1.5		2.7	1.5	
	Nurses	3.7	0.6		3.0	0.6	
	Radio	2.7	2.1		1.0	1.4	