

Knowledge of combined oral contraceptives among young females in Riyadh

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ABSTRACT


Background: Combined oral contraceptives (COCs) are a common and effective method of contraception. Good knowledge of COCs use can improve their efficacy as well as reduce chances of associated risks and side effects. **Objectives:** To assess knowledge on COCs use among young females in Riyadh, Saudi Arabia. **Materials and Methods:** A cross-sectional study in the form of online survey was conducted in Riyadh city. A structured self-administrated questionnaire was electronically disseminated; utilizing social media, among young females aged 18-40 living in Riyadh. Demographic data as well as responses to the questionnaire assessing five domains (type, risk, side effects, contraindications, and use of COCs) were collected and then analyzed. **Results:** A total of 426 females living in Riyadh completed our survey during the month of September 2016. Of those, 67.1% were aged between 18 and 30 years old, 64% were married, 81.46% of them had a university degree, and 60% were current or previous users of contraceptive pills. Our sample scored well below average for all of the five domains in the questionnaire, and poor knowledge level was noted across all domains of the questionnaire. **Conclusion:** This survey clearly indicated a poor level of knowledge on COCs among young females in Riyadh.

KEY WORDS: Oral Contraceptives; Knowledge; Young Females; Riyadh

INTRODUCTION

High fertility level is a major concern, and regulation of fertility plays an important role in improving both maternal and child health.^[1] The Saudi community has seen a recent change in the sociodemographic pattern related to women's education and career. These changes have played a role in tendencies toward fertility regulation behaviors such as birth spacing and the use of contraceptives.^[2] Oral contraceptive pills are considered effective, with a low pregnancy rate

theoretically if taken consistently and correctly, but with higher actual pregnancy rates due to inconsistent or incorrect use.^[3] Oral contraceptives are hormonal preparation pills that may contain progestin alone or combination of both hormones estrogen and progestin. The combined pill has both contraceptive and noncontraceptive benefits such as reductions in dysmenorrhea, acne, ovarian cancer, and endometrial cancer.^[3,4] As much as combined oral contraceptives (COCs) can be beneficial, they carry a number of risks. These include increased chance of developing venous thromboembolism, myocardial infarction, stroke, breast cancer, and cervical cancer.^[5] COCs are absolutely contraindicated in case of thromboembolic disorders, cerebrovascular or coronary artery disease, estrogen-dependent neoplasia, undiagnosed abnormal genital bleeding, or history of liver tumors.^[6] Side effects from COCs include breakthrough bleeding, weight gain, mood changes, breast tenderness, headaches, and nausea.^[5,7] The purpose of this study was to assess the

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knowledge of COCs among young females in Riyadh, which in turn can help planning strategies for improvement.

MATERIALS AND METHODS

Subjects and Setting

In this cross-sectional study, a structured online questionnaire was electronically disseminated; utilizing social media, among young females aged 18-40 living in Riyadh who were willing to participate in the survey. Demographic data, as well as responses to the questionnaire assessing five domains (type, risk, side effects, contraindications, and use of COCs), were collected and then analyzed. The questionnaire was initially developed in English, translated to Arabic, made available online (https://www.surveymonkey.com/r/contraception_Riyadh) during the month of September 2016 and invitations to participate in the survey were sent through social media.

Sample Size and Data Analysis

Assuming a margin of error of 5%, population proportion of 50% and confidence interval of 95%, a sample size of 384 was targeted in this study.^[8] 426 complete responses were collected during the survey period and were all included in the analysis. A descriptive analysis was used to present the data and frequency (%) was used for categorical variables.

RESULTS

During the month of September 2016, 426 females living in Riyadh completed our survey. Of those, 67.1% were aged between 18 and 30 years old, while 32.9% were between 31 and 40 years old. 64% of respondents were married and about 60% were current or previous users of contraceptive pills. Our sample was well educated with 81.46% of them holding a university degree, whereas the majority of them (85.92%) had a monthly income of <15000SR (Table 1).

The scoring system used and scores for individual questions in the survey are detailed in Tables 2 and 3. Our sample scored well below average for all of the five domains in the questionnaire, and poor/very poor knowledge level was noted across all domains of the questionnaire (Figure 1 and Table 3).

DISCUSSION

Sixty four percent of couples worldwide are using some form of contraception. The percentage varies across different countries and regions and is lower in the least developed countries.^[9] Studies conducted in Saudi Arabia showed variable levels of use of contraception in different geographic

Table 1: Baseline characteristics of female responders (n = 426)

Parameter	Percentage
Age	
18-30	67.1
31-40	32.9
Marital status	
Married	64.08
Single	35.92
Highest education	
University degree	81.46
High school degree	17.14
Below high school	1.4
Income	
Above 15000SR	14.08
8000-15000SR	34.27
Below 8000	51.64
Current or previous user of oral contraceptives	
Yes	59.39
No	40.61

Table 2: Scoring system used for rating respondents' answers

Percentage of correct answers per question (%)	Equivalent score	Description
≥90-100	5	Excellent knowledge
≥70-89	4	Good knowledge
≥50-69	3	Average knowledge
≥30-49	2	Poor knowledge
<30	1	Very poor knowledge

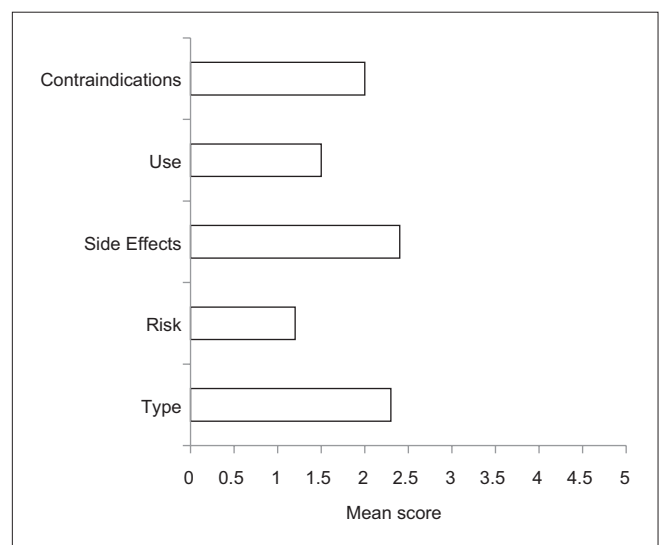


Figure 1: Overall mean scores per domain.

areas. For example, low levels of use of contraceptives were observed in Abha and Qassim (27% and 44%, respectively),

Table 3: Scores for individual questions in the questionnaire (n=426)

Domain	Question	Percentage of correct answers (%)	Equivalent score	Mean score for domain
Type	All COCs are made of the same hormone	32.86	2	2.3
	All COCs work in the same way	42.96	2	
	Some COCs have one hormone while others have two	46.95	2	
	Hormone concentration varies between COCs	71.13	4	
	My doctor can adjust the strength of hormones of COCs if I develop side effects	54.46	3	
	COCs are the most prescribed type of oral contraceptives to Saudi women	28.87	1	
Risks	COCs can cause breast cancer	22.07	1	1.2
	COCs can cause cervical cancer	18.31	1	
	COCs can cause clotting in legs and lungs	38.03	2	
	COCs can cause ovarian cancer	12.68	1	
	COCs can cause osteoporosis	11.50	1	
Side effects	COCs can cause weight gain	64.79	3	2.4
	COCs can cause hypertension	38.5	2	
	COCs can cause infertility	20.19	1	
	COCs can cause depression	65.96	3	
	COCs can affect lactation during breastfeeding	59.15	3	
Use	I should immediately stop COCs if I develop any side effects	6.57	1	1.5
	COCs work by killing sperms	36.62	2	
	COCs work by preventing ovulation	47.89	2	
	COCs prevent sexually transmitted infections	44.37	2	
	Best day to start COCs when using for the first time is during the first day of period	16.67	1	
	COCs can be used to treat acne and heavy menstrual bleeding	40.61	2	
	Using antibiotics while on COCs can reduce their efficacy and lead to pregnancy	60.33	3	
	Vomiting and diarrhea can reduce COCs efficacy and lead to pregnancy	24.88	1	
	I have to use the hormone pills for 21 days followed by sugar pills for 7 days and then start a new pack	27	1	
	During the sugar pill week, I must wait for my period to finish before starting hormone pills	19.72	1	
	I am aware of the 7-day rule	21.13	1	
Contraindications	I can immediately start COCs after giving birth	41.31	2	2
	I must wait at least 6 weeks after giving birth before starting COCs	42.49	2	
	I must stop COCs if I develop migraine with aura	50.94	3	
	Smoking while taking COCs increases the risk of heart attacks	36.85	2	
	I shouldn't use COCs if I have severe hypertension	40.85	2	
	I shouldn't use COCs if I have morbid obesity	24.18	1	

COCs: Combined oral contraceptives

while high levels of contraceptives use among Saudi females were observed in Al-Khobar with a rate of 74.8%.^[10,11] In Riyadh, Mahboub *et al.* found that 86.6% of Saudi women have ever used contraception, and the most commonly used method was contraceptive pills (64.9%).^[12] Working status of women as well as husband approval were found to be significant factors affecting women's attitude toward the use of contraception.^[12] Al-Sheeha also concluded that being a

working woman as well as education level were important determinants of using contraceptives (odds ratio 2.6 and 2.1, respectively).^[2]

Five domains were used in our questionnaire in assessing the level of knowledge on COCs among women in Riyadh, namely, type of available oral contraceptives, risks of using COCs, side effects, appropriate use, and contraindications

(Table 3). Our study population consisted of 426 females aged 18-40. Most of them were married (64.08%), well-educated (81.46%) and have used or currently using OCPs (59.39%). However, overall mean scores were low (<2.5), indicating poor level of knowledge and awareness in all of the five domains. The study sample scored highest in side effect domain (2.4), and lowest in risk domain (1.2) (Figure 1).

Possible reasons for the poor score include limited information given by physicians at the time of prescribing COCs as well as the fact that some women initiate COCs over the counter without a physician consultation. Only 1.4% of our sample had low education (below high school), while over 81% of them had a university degree but still scored below average in the questionnaire, which makes "level of education" a less likely contributing factor, although a direct relationship was not examined in our study. In contrast, Al-Shamrani *et al.* found that higher levels of education were associated with better knowledge of contraceptive pills among Saudi women ($P < 0.001$).^[13]

Our results are comparable to Al-Sheeha who conducted a study in Al-Qassim, examining the perception regarding the use of different types of contraceptives among Saudi women attending primary care clinics in 2010. Participants had low knowledge level regarding the variety of contraceptive methods.^[2] Similar findings were also reported by Al-Mansour *et al.* in their study of contraceptive use among 388 women in Al-Khobar.^[14] The majority of women in their study (68.3%) had poor knowledge on contraceptives.^[14] In addition, in Jeddah, Iftikhar and Aba Al Khail studied 357 women and also found that women in their study group had poor level of knowledge on OCPs.^[15]

Physicians have a central role in explaining available types of contraceptive pills, screening for contraindications, explaining risks, and potential side effects as well as advising on appropriate use of contraceptives to women seeking contraception. Oral contraceptives should not be dispensed over the counter without a valid prescription. Moreover, educational campaigns can assist in improving women's knowledge on the topic.

Our study was cross-sectional, which was relatively easy to conduct as well as helpful in generating and supporting a hypothesis for poor knowledge of COCs among young women in Riyadh. Limitations of our study include recall bias among respondents as well as using social media, which could have potentially created "closed loop responses" and therefore, may have affected our sample representation. Moreover, correlation between poor knowledge and other parameters was not specifically examined in our study.

CONCLUSION

This survey clearly indicated a poor level of knowledge on COCs among females in Riyadh. Increasing awareness through health education campaigns as well as family planning clinics with a focus of contraceptive counseling is recommended.

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