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ORIGINAL ARTICLE

PERCEPTION & ATTITUDE OF FEMALE USERS OF ORAL CONTRACEPTIVE PILLS IN MOSUL, IRAQ

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ABSTRACTS

Background: Oral contraceptive tablets are the most popular method used by women to control birth. This study aimed to assess the perceptions and attitudes of female users of oral contraceptive pills (OCPs).

Materials & Methods: A quantitative observational cross-sectional study was conducted at the College of Pharmacy, Tikrit University, Mosul city over two months in 2023. A total of 532 married women aged 20-45 years were recruited through convenience sampling from online communities. Data was collected using a two-part questionnaire to evaluate demographic information and attitudes toward OCPs.

Results: In total, 532 participants contributed to this study, in which we sought to determine their level of knowledge regarding OCPs' side effects. The majority of participants (79.3%) understood that they should take any missed pills as soon as they remember to do so and subsequent pills at the scheduled time if they forgot to take one within 12 hours. Only approximately 30% of participants were aware that they needed to use additional protection for the next seven days if they missed taking their OCP for longer than 12 hours, and about 55.1% of individuals reported.

Conclusion: This study highlights that women in Mosul possess adequate knowledge about OCPs and are capable of evaluating their advantages and disadvantages. This suggests the need for improved educational strategies to further enhance women's understanding and perceptions of family planning options.

KEY WORDS: Knowledge; Oral Contraceptive; Perception; Pregnancy.

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INTRODUCTION

Family planning or contraceptive methods are the most common hormonal and non-hormonal regimens used by partners for their wide range of options for delaying, limiting, and spacing out the births in order to avoid pregnancy as a result of sexual activity, this refers to the use of any techniques that interfere with the natural processes of ovulation, fertilization, and/or implantation.[1]

There are many different types of contraceptive methods, including oral contraceptive pills (OCPs), transdermal patches, vaginal rings, intrauterine devices, injectable progestins, progestin implants, and male or female condoms (non-hormonal type). Around the world, there are at least 200 million women who wish to use safe and effective contraception but are unable to do so, which results in unintended births.[2]

Of the 190 million women who become pregnant each year, more than 50 million have abortions. In developing nations, increasing the use of family planning methods has led to a 40% decrease in maternal deaths over the past two decades, mostly due to a decrease in the number of unplanned pregnancies or abortions.[3] There are about 151 million users of oral contraceptives globally in 2019, making it the second most popular hormonal method of contraception (after IUD). Strong adherence to the recommended OCP daily regimen is crucial for OCP's effectiveness in preventing premature birth.[4]

In addition to age, parity, education, family attitude, and the acceptability of contraception, cultural variables also influence the degree of contraceptive usage.[5] Actually, the primary reason for non-adher-

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ence is a major side effect, although earlier usage of such treatment and educational conversations about the issues with hormone therapy considerably increase the rate of continuance, preventing the different issues for which it was given.[6] Along with education level, a serious issue that reduces OCP compliance and effectiveness is the absence of a healthcare provider's guidance and counseling when it comes to knowing the proper course of action to follow after forgetting a dosage. Along with education level, a serious issue that reduces OCP compliance and effectiveness is the absence of a healthcare provider's guidance and counsel when it comes to knowing the proper course of action to follow after forgetting a dosage.[7,8]

The most commonly used form of oral contraceptives (OC) is a combination of ethinyl estradiol and progestin. Mild consequences of OCPs disappear with persevered use or switching to any other pill formulation.[9] The most common adverse effects of estrogens are breast tenderness, fluid retention, edema, headache or migraine, nausea, and also blood pressure elevation.[10] Progestins may be associated with depressed mode, decreased libido, weight gain, hirsutism, and acne.[11] The present study aimed to assess the perception and attitude of female users towards OCPs in Mosul city.

MATERIALS AND METHODS

Study Design and Setting:

This quantitative observational cross-sectional study was conducted at the College of Pharmacy, Tikrit University, Mosul city. The study was conducted over two months between November and December 2023.

Participants:

The study included 532 married women aged between 20 and 45 years, residing in Mosul City. Participants were selected and recruited through convenience sampling from various online communities and groups related to health and women's issues, ensuring broad demographic representation. The inclusion criteria for the study were married women aged between 20 and 45 years who were current or past users of OCPs and women who provided informed consent. The exclusion criteria included unmarried women, those outside the age range, and those who had never used OCPs.

To estimate the minimum required sample volume, the formula $n = Z^2 \times P \times (1\text{-}P)/E^2$ was used. where n is the sample size, Z is the Z value (1.96 for 95% confidence level), P is the estimated prevalence (0.778 based on previous studies) [12], and E is the margin of error (0.05). Thus, the minimum sample size required for the present study was 265 participants. A total of 532 women were included to increase the statistical power of the study.

Data Collection:

Data were collected using a two-part questionnaire designed and validated in this study. The first part collected basic demographic information, such as age, education level, marital status, residence, number of children, presence of chronic diseases, duration of OCP use, and type of OCP used. The second part focused on assessing attitudes toward and knowledge of the use of oral contraceptives, including closed-ended questions about side effects and open-ended questions to gain deeper insights. The questionnaires were distributed and filled out online to ensure accessibility and ease of participation.

Ethical Considerations:

Ethical approval for this study was obtained from the College of Pharmacy of Tikrit University. Before participation, all participants were provided with brief information about the objectives and benefits of the research and informed consent was obtained. All collected data was kept confidential and used solely for statistical analysis to maintain participant privacy and data integrity.

Statistical Analysis:

The collected data was analyzed using the SPSS software, version 26. Descriptive statistics, such as frequency and percentage, were used to summarize the demographic characteristics and answers to the questionnaire.

RESULTS

The demographic characteristics of the women enrolled in the study are shown in Table 1. The majority of participants were aged 26-30 years, accounting for 147 individuals (27.6%), followed by those aged 31-35 years with 126 participants (23.7%). Regarding education, a significant proportion of the participants held a bachelor's degree, totaling 247 individuals (46.4%). The participants predominantly resided in cities, with 454 individuals (89.3%) reporting urban residences. Most participants were married for 1-5 years, with 155 individuals (29.1%) falling into this category. The number of children among participants showed that 365 individuals (68.6%) had 1-3 children, representing the largest group in this category.

In terms of chronic disease prevalence, the majority of participants reported having no chronic disease, with 453 individuals (86.2%). Among those who reported chronic diseases, hypertension was the most common, affecting 30 participants (5.6%), followed by diabetes in six participants (1.1%), asthma in seven participants (1.3%), epilepsy in three participants (0.1%), heart disease in three participants (0.1%), and other diseases in 30 participants (5.6%) (Figure 1).

Table 1. Demographic information of the participants.

Characteristics	N	(%)
Age (years)		
20-25	122	(22.9%)
26-30	147	(27.6%)
31-35	126	(23.7%)
36-50	82	(15.4%)
41-45	55	(10.3%)
Years of contraceptives taken		
1-6 month	227	(42.7%)
7-12 month	55	(10.9%)
1-2 year	100	(18.8%)
3-4 year	72	(13.5%)
≥5 years	78	(14.7%)
Educational Level		
Primary school	42	(7.9%)
Middle school	66	(12.4%)
High school	78	(14.7%)
Diploma	58	(10.9%)
Bachelor degree	247	(46.4%)
Master's degree	29	(5.5%)
Doctorate degree	10	(1.9%)
No education	2	(0.4%)
Residence place		
Village	28	(5.3%)
Town	50	(9.4%)
City	454	(89.3%)
Years of marriage		
1-5	155	(29.1%)
6-10	144	(27.1%)
11-15	118	(22.2%)
>15	115	(21.6%)
Number of children		
0	34	(6.4%)
1-3	365	(68.6%)
4-6	117	(22%)
>6	16	(3%)

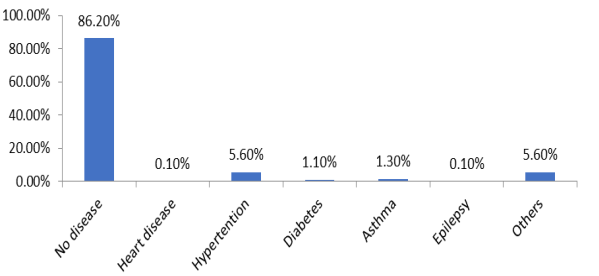

Figure 1: Percentage of chronic diseases among OCP users

The findings on the types of OCPs used indicated that 271 (50.9%) women utilized Microgeon ED, 161 (30.3%) used Yasmin, 11 (2.1%) opted for Zahra, 43 (8.1%) women employed Sunya, 11 (2.1%) chose Katya, 18 (3.4%) selected Marvelon, and 17 (3.1%) utilized Cerazette (Figure 2).

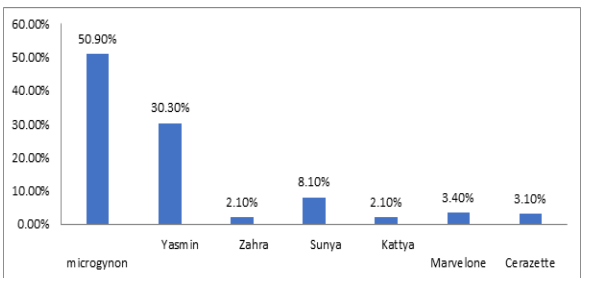

Figure 2: Percentage of OCP types uses

Knowledge of the correct use of the OCP was evaluated using responses to five questions (Table 2). When asked about the appropriate action if a pill was forgotten for less than 12 h, 374 participants (70.3%) knew the correct action to take. Conversely, if a pill was forgotten for more than 12 h, 361 participants (68%) did not know the correct action. Additionally, when asked if they had taken an antiemetic after vomiting within two hours of taking the pill, a majority of 501 participants (94.2%) reported not taking any medication. Regarding social relationships, 307 participants (57.7%) reported that they were not affected by OCP use. Only 51 participants (9.1%) reported pregnancy during OCP use. In terms of learning about side effects, 293 participants (55.1%) discovered side effects on their own, which was the most common method, followed by reading the package list, reported by 141 participants (26.5%).

The responses indicated that only 30.3% suffered from nausea within 2 h of taking OCP, while only a few (5.8%) of them used medication to reduce this problem. The most prominent reported side effects (Table 4) experienced by OCP users were mood changes and/or depression 431 (81%), weight gain 273 (51.3%), nausea 161 (30.3%), hirsutism or increased hair growth 184 (34.6%), and facial cane pimples 171 (32.1%) (Table 3).

Table 2: Knowledge of OCP

Questions/responses to compliance questions among OCP users.	N	%
If you forgot to take your pill less than 12 hours ago, what do you do? N=532		
Did not know the correct action to take	158	39.7%
Knew the correct action to take	374	70.3%
If you forgot to take your pill more than 12 hours ago, what do you do? N=532		
Did not know the correct action to take	361	68%
Knew the correct action to take	170	32%
If you vomit within 2 hours of taking the tablet, have you taken any antiemetic? N=532		
Yes	31	5.8%
No	501	94.2%
Have your social relationships effected due to use of OCPs? N=532		
Yes	225	43.3%
No	307	57.7%
Have you been pregnant during using period? N=532		
Yes	51	9.1%
No	481	90.4%
How did you learn about side effects of OCPs? N=532		
I read the package list	141	26.5%
The doctor illustrates the side effects	98	18.4
I discovered it by myself	293	55.1%

Table 3: Most common side effects

Side effects appear by users	N	%
Nausea N=532		
Yes	161	30.3%
No	371	69.7%
Depression and mood change N=532		
Yes	431	81%
No	101	19%
Weight gain N=532		
Yes	273	51.3%
No	259	48.7%
Hair growth N=532		
Yes	184	34.6%
No	348	65.4%
Acne N=532		
Yes	171	32.1%
No	361	67.9%

DISCUSSION

The present study aimed to determine the basic knowledge of women regarding OCP in Mosul City. This cross-sectional study, which focused on Iraqi women in Mosul, was conducted to evaluate awareness and attitude practices among oral contraceptive pill utilization, and the side effects that appear in women of a wide age range (18–45 years) (Table 2). Females of all age groups of the study population showed higher rates of using contraception at any time (92.8%), which was higher than a previous study in northern Iraq.[13]

Because OCPs neither induce addiction nor have narrow therapeutic index (safe and nontoxic drugs), women can take the medication effectively without instructions from a medical professional as they can self-screen for contraindications as a result OCPs are available as OTC in the majority of countries.[14, 15] Although the majority of women do not take enough information about OCP from the physician (only 18.4 %of the participating women received consultation from the physician), the results of this study showed that the majority of Mouslawi women had positive perceptions about OCP Table 3. We compared it with another study conducted in Jordan to prove that the

Mouslawi women had higher levels of perception about OCP than Jordanian women (only 54%).[16] It is noteworthy that preceding research had been carried out via face-to-face interviews, at the same time as our look at turned into carried out through a web survey, which could explain for variations in the occurrence and expertise of OCP usage. Regarding Saudi women, the majority of participants appeared to have a solid understanding of the OCP, and around 95% of the women reported that they were familiar with how to use it.[12]

In order to encourage the use of contemporary contraceptive techniques, females with lower levels of education need to be continuously educated and regularly communicated about the need for birth control.[5] In this study we asked about the reverse effects of OCP and side effects, the majority of women expressed that mood changes and depression increased on OCP (about 81%); this was the most common side effect reported in Mouslawi women, also, the study conducted in Saudi Arabia showed that the mood changes increased in high levels among OCP usages (69.2%).[1] About 41.1% of the participants in the research said that OCCPs promote acne and/or unwelcome hair growth based on earlier studies on Turkish women.[17] Low-dose oral contraceptives are now known to not only be free from such side effects but also to frequently lessen hirsutism and acne, similarly only 34.6% of Mouslawi women said yes when asking them if they suffered from hair growth, and about 32.1% suffering from acne and pimples.[18]

CONCLUSION

The study highlighted that the majority of the participants demonstrated an understanding of OCP use. Commonly reported side effects such as mood changes, depression, weight gain, and skin issues such as acne were prevalent; however, most participants did not seek medical advice for these concerns. This study underscores the need for improved education and communication, especially for women with lower educational levels, to enhance the understanding of OCPs and mitigate potential side effects. Additionally, this suggests the need for improved educational strategies to further enhance women's understanding and perceptions of family planning options. The findings also suggest that cultural and regional differences may influence perceptions and usage patterns, indicating the importance of localized health education initiatives.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
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AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design:	BAY, RAS
Acquisition, Analysis or Interpretation of Data:	BAY, RAS
Manuscript Writing & Approval:	BAY, RAS

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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