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Research Article

Impact of Intrauterine Device and Oral Contraceptive Pills on the Quality of Life of Women in Saudi Arabia

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Abstract

Background: Despite family planning, there are still a lot of unintended pregnancies and abortions. The process of family planning counseling involves both the patient and the physician, with the physician playing a crucial part in encouraging the patient to use a safe method of contraception and enhancing the quality of life for women. Thus, the current study was designed to determine the impact of the Intrauterine Device (IUD) and Oral Contraceptive Pills (OCP) on enhancing Saudi women's quality of life. **Methods:** Women in Saudi Arabia who were 18 years of age or older and had used contraception for at least one month were the focus of a cross-sectional descriptive study. Using the World Health Organization Quality of Life questionnaire (WHOQOL-BREF), a 26-question variation of the WHOQOL-100 that evaluates the participant's quality of life across four life domains (Physical health, Psychological, Social Relationships, and Environment). All statistical data were analyzed by Statistical Package for the Social Sciences (SPSS) software. **Results:** Total 175 women participated in the study with a mean age of 33.7 ± 6.73. Among them, 61 women were using IUD as a contraception method that includes copper and hormonal IUD. Whereas 91 women were using the pills as contraception. The mean duration of using contraception in months is 32.89 ± 32.95. Overall, the highest average score in both groups was domain 1 which represents physical health; moreover, domain 2 is the lowest score, and it represents the psychological aspect of the questionnaire. Statistically, there was no significant difference between the two groups in the four domains, and the p-value was (0.158, 0.773, 0.257, and 0.2274), respectively. A significant difference between the IUD and OCP groups (p= 0.019) in terms of quality of life, while there was a non-significant difference between the groups in terms of satisfaction of life. There were four domains in the questionnaire and questions related to physical health, physiological health, social relationships, and Environment. Statistically, there was a non-significant difference between the groups, while the overall majority of the participants were satisfied and extremely satisfied with the questions. **Conclusion:** According to this study, a sizable portion of Saudi women who have used various forms of contraception are happy with their lives. This suggests that individuals lead fulfilling lives even after using contraceptives, but better comparisons should be made using randomized controlled trials.

Keywords: Contraceptives; Prevalence; Family planning; Birth control; Quality of life

Background

A significant component in couples' lives that impact their overall health, mental health, and quality of life is sexual health [1]. In addition, sexual life is influenced by various factors such as internal and external stimuli, biological, hormones, and social and individual factors [2,3]. Despite family planning, the rate of unwanted pregnancies and abortions are still high [4]. It is documented that there are 210 million pregnancies worldwide; 38% were unplanned, and 22% ended in abortion. Statistics show that every three minutes, a woman dies from abortion-related complications, which account for 13% of all maternal fatalities worldwide, and preventing unintended pregnancy and its complications can prevent 25% of maternal deaths [5,6]. Notably, contraception prevents unwanted pregnancies and ensures a fulfilling sexual life free from procreative risks [7]. The use of contraception methods is one aspect that has an impact on women's sexual health and quality of life [8].

The Quality of Life (QoL) of women is becoming significant with the development of the social economy and the raising of the standard of living. Our role as family physician is to help improve the QoL [9]. To help women pick the appropriate form of contraception, doctors should speak in plain, clear terms when discussing potential risks, advantages, and uncertainties. Because the choice of contraception can impact a women's QoL, counseling primarily supports women in their decision-making [10]. There are various contractive methods such as implants, Intrauterine Devices (IUD), Tubal Ligations (TL), contraceptive injections, Oral Contraceptive Pills (OCPs), and female sterilization [11]. Women choose contraception based on personal subjective experience, sexual life, efficacy, and side effects [11].

Regarding the public health perspective, the most commonly used contraceptive method is an IUD; that application range is 2% in Suh-Saharan Africa and 80% in Asian countries. However, different clinical factors including insertion and removal costs, accessibility, past history of application, side effects, physicians' recommendation, and individual factors including adopting this method concerning social, economic, cultural, and religious consideration, affects its applications [12]. For instance, Iranian women are also reluctant to adopt this treatment because of false impressions, such as pain phobia, the IUDs' size relative to genitalia, and sexual dysfunction. In addition, few studies have revealed the impact of OCPs on the QoL of patients [13]. Thus, family planning counseling may greatly help altering such perceptions [14]. Family planning counseling is a two-way process between the patients and the consultant in which the consultant plays a very important role and encourages the patient to use a safe contraception method [15].

It was clear that the Saudi community desired a large family [16] as compared to other developing nations. In many developing nations, the use of contraceptives are acknowledged as a crucial factor in lowering fertility across all age groups [17], which ultimately has significant effect on women's QoL. In addition, the overall rapid change in the sociodemographic makeup of the Saudi Arabian community, particularly the changes affecting women's employment and education, will play a significant role in altering conceptional attitudes and practices, leading to an increase in the spacing of births and, as a result, in the use of contraceptives [18]. As reported by Saudi Household Health Survey, the occurrence of contraceptive use was 30.4% in 2018 [19]. In addition, contraceptive use was affected by various factors such as maternal age, family size, and gender of the last child [20,21]. The most commonly used in Saudi Arabia were OCPs and IUDs [22]. The QoL program is one of the important health-related programs in vision 2030. It focuses on contraception and is considered important in enhancing and improving the reproductive and individual's QoL [23]. Saudi people use family planning less frequently than other developing nations, and the use of contraception is less common [19]. Furthermore, a previous study showed a significant difference between different types of contraception and their impact on the QoL [11,24]. To our knowledge, there was no study that has been done in Saudi Arabia to measure the impact of contraception methods on the QoL of Saudi women. Knowing the impact of different contraception will help us improve women's QoL and be a part of achieving the Vision 2030 QoL program. The current study aimed to improve the QoL in women who use contraception in Saudi Arabia.

This study has the following objectives:

1. To assess the QoL in women who have an intrauterine device
2. To assess the QoL in women who take oral contraceptive pills
3. To compare two different contraception methods in their Impact on QoL
4. To improve the QoL in women who use contraception

Research question: Do women with an intrauterine device have a better QoL in comparison to women who take oral contraceptive pills?

Literature Review

Alyahya conducted a cross-sectional study in Jordan, where they interviewed 548 women aged between 18 and 49 using the WHOQOL-BREF scale. Their aim was to measure the quality of life in women who use different contraception's. The result was that women who used IUDs or their husbands were using condoms had a better quality of life in comparison to women who used oral contraceptive pills or underwent sterilization. The IUD group was the highest physical health score with a probability of (β=1.29) [24]. In another study, 259 women measure their quality of life while using different contraception methods. The WHOQOL-BREF scale was used. They found that women who have difficulty using contraception have a low quality of life ($p<.05$) [25]. Another study was conducted by, Güngör Gürbüz to determine the impact of different contraceptive methods on female sexual function and quality of life [26]. In this study, 228 female patients participated

with a mean age of 30.32 years, and the Female Sexual Function Index (FSFI) and quality of life scale (SF-12) were used. They concluded that the FSFI score was significantly lower for women using contraceptive methods than those who did not. In addition, the contraceptive methods significantly impacted the sexual function of women but did not affect their QoL. Carreiro compared two types of intrauterine devices, the copper, and the hormonal, in their impact on the quality of life [27]. They used the WHOQOL-BREF scale, which has also been used in the Jordanian and Turkish study. They found that women who use the hormonal IUD have a better score in some domains of the questionnaire in comparison to the women who use the copper IUD. However, Najmi determined the prevalence of depression among hormonal contraceptive users in Jazan [28]. In this study, a self-administrated scale was used to collect survey data. They demonstrated that mood disturbance symptoms were present in almost one-third of women who used hormonal contraception. In addition, Alqahtani conducted a study in all regions of Saudi Arabia to determine the association between hormonal contraception use and depression among women [29]. All participants were women between the ages of ≥21 and ≤45 years old with no depression history. The prevalence of depression rate was higher in hormonal contraceptive users than in non-hormonal contraceptive users. Another study attempted to compare the self-reported health-related quality of life (HRQoL) scores of adolescents who used hormonal contraceptives for three months. A total of 431 young women aged between 14 and 20 participated. The self-scoring SF-36 was used. After the 3-month of using a hormonal contraceptive, the time of bleeding and the need for painkillers were cut down, and menstruation's effect on daily living was enhanced. However, no negative effect on HRQoL evaluations were observed [30].

In addition, a study conducted on 201 women in reproductive age did not specify the age group. They used the SEC-QoL questionnaire. Data were collected at the start of the study; 12 months later, women refilled the same questionnaire. There was improving in the quality of life in all the 5 domains of the questionnaire, and women stated that their quality of life improved after the IUD insertion because of the efficacy of it as contraception, and 94.6% of them enjoyed other benefit like improving pain during menstruation and decrease bleeding [31]. Parisi conducted a study with RAND-36 questionnaire, which is used to measure health-related quality of life [3]. They found that women who used contraception have the likelihood to get an average or better score in the mental domain than women who did not. Moreover, women who use injectable contraception are likely to have lower mental and physical scores than those who use oral contraception [3]. Farris measured the quality of life using LNG-IUS in 156 women who came to the family planning clinic asking for contraception [32]. The study was planned to include 200 women with 7 years and half duration, 2 years and half for including women in the study, and the other 5 years was to follow up the patient. However, because there was no acceptance of the IUD in society, the recruitment phase was extended. Only 126 women completed the 5 years follow-up. The Euro Quality of Life-5D questionnaires was used. The result was noticeable decrease of the menstrual bleeding and there was improvement in quality of life. Dueñas carried out a study to investigate the effect of the contraceptive method on QoL of women [33]. In this study, 453 women aged between 28-33.6 years were included. The Spanish Society of Contraception Quality of Life (SEC-QoL) questionnaire was used. They found that the SEC-QoL is appropriate for ongoing research initiatives and routine clinical practice to evaluate the HRQoL of women using contraception. The importance and effects of premenstrual symptoms on women of reproductive age's HRQoL were also highlighted by this study. Another prospective cohort study done by [34] at Jiangsu province in China. In this study, 84 women who used combined oral contraception and 910 women who used IUD took The Quality-of-Life Enjoyment and Satisfaction Questionnaire before and after taking the contraception. They found that there is the significant improvement of most of the domains like physical, work, and improvement of overall satisfaction [34].

The study group consisted of 52 women who used the levonorgestrel-releasing intrauterine device, the other control group was divided into two groups. The first group included 48 women who used other contraception, the second group included 50 women who did not use any contraception. They found that the quality of life in the study group is better than the control group in the aspect of general health, energy/fatigue, and emotional well-being [35]. Matsumoto wanted to measure the quality of life before and after taking the contraception using the WHOQOL questionnaire, but only 110 completed the questionnaire [36]. They were divided based on the reason of taking the contraception like: contraception, dysmenorrhea, regulation of menstrual cycles, improvement of acne, remission of menorrhagia, and improvement of Premenstrual Tension Syndrome (PMS). Matsumoto stated that all participants had improved quality of life when using the OCP except for the social domain [36].

Moreover, there were other benefits noticed by women with dysmenorrhea or hormonal changes as it improves their symptoms. Li investigated the impact of oral contraception pills and intrauterine devices on the quality of life [11]. Three hundred sixty-one women took the WHOQOL questionnaire before and after taking the common contraceptive methods: sterilization, injectables, oral contraception pills, and IUD. Women in the study were taking this contraception for the first time. The result was that women who underwent sterilization have better score in the social domain only. However, there was no change in the result before and after in women who took the injectables, oral contraception pills, and IUD. Similarly, the participant women's degree of awareness about the various forms of contraception was low in Al-Qasim. The majority of participants and their husbands exhibited acceptance of using contraceptives to space out births. Births should be spaced out by two to three years. Women who were working, older than 30, more educated, and those who had a lot of children showed a considerable rise in the usage of contraceptives [37]. Meanwhile, in Jordanian women the three conditions $F(2193) = 6.0$ and $p = 0.003$ showed a significant difference in QoL according to the approach utilized. According to

post hoc analysis, IUD users had significantly higher overall QoL than people who used natural techniques (M=50, SD=9.0, p>0.01) (M=55.7, SD=9.6, respectively) [38]. In addition, a systematic review of thirteen research demonstrated that awareness of and usage of contraception in KSA were at relatively low levels [39]. Similarly, 75% of women in Sabya City_Jazan, Saudi Arabia, used contraceptives regularly. The most popular approach was using pills; most users bought contraceptives at pharmacies. The majority of participants (84%) had little awareness of contraceptive procedures, yet a large percentage (82.3%) of them accepted utilizing contraception [40].

Methodology

Study design and setting

A cross-sectional descriptive study targets women in Saudi Arabia aged 18 and above who have been using contraception for at least 1 month after filling out the questionnaire. Women who were not using contraception were excluded. Full Consent was obtained from women prior to entering the study. We ensured the confidentiality of the patient information, and they were informed that the data collected from this study would only be used for this research.

Ethical Considerations

IRB approval was taken from Medical Services Department for Armed Forces Scientific Research Center Research Ethics Committee.

Data collection tool

Using the Arabic version of WHOQOL-BREF [41,42], which is the short version of the WHOQOL-100 consisting of 26 questions, that asses the quality of life of the participant in four life domains (Physical health, Psychological, Social Relationships, and Environment). The questionnaire was distributed via an online link and used a QR code to be scanned by the patients in Primary healthcare centers. A cultural modification was done to the questionnaire, and question number 21 was deleted from the WHOQOL-BREF. In addition, we added a question about the duration of the use of contraception.

Another question asked about the type of contraception the options was (combine oral contraception pills, progesterone-only pills, copper intrauterine devices, intrauterine hormonal devices, and others).

Sampling technique and sample size

Nonprobability comprehensive sample, the samples size was calculated using one proportion formula $X = Z\alpha/22 *p*(1-p) / MOE2$, $Z\alpha/2$ is the critical value of the Normal distribution at $\alpha/2$ (e.g., for a confidence level of 95%, α is 0.05, and the critical value is 1.96), MOE is the margin of error, p is the sample proportion, and N is the population size). P= 12.04%= 0.12 (34). The sample size was: 162, we added 15 for missing cases.

Statistical analysis

All statistical data were analyzed using the Statistical Package for the Social Sciences (SPSS) software, version 26.0 (IBM, Chicago, IL). Means, standard deviations, and the median was used as Descriptive statistics to describe the sample studied. Quantitative data were analyzed by t-test. A P-value of less than 0.05 was considered statistically significant. Multivariate analysis was adopted based on the significant correlations revealed from the univariate analysis.

We started with a frequency table, a description of the study population. We divided the data into three groups (IUDs, pills, and others). The factor for comparison was the mean domain scores calculated for both groups (the IUD and pills). Ensuring that every participant answered at least the minimum question needed to be answered in each domain. The focus of the research was to compare the IUD and pill groups. We codded the IUD as group 1 and the pills as group 2. The domain score was computed to have the final score in the form of 4- 20 using an independent sample to compare the means of the four domains' scores in each group to find the p-value.

Results

Total 175 women participated in the study, with a mean age of 33.7 ± 6.73. Among them, 61 women were using IUDs as a contraception method that includes copper and hormonal IUD. Whereas 91 women were using the pills as contraception in both types: the Estrogen and progestin pill and the progestin-only pills. In addition, 23 of the women were using other methods (Figure 1).

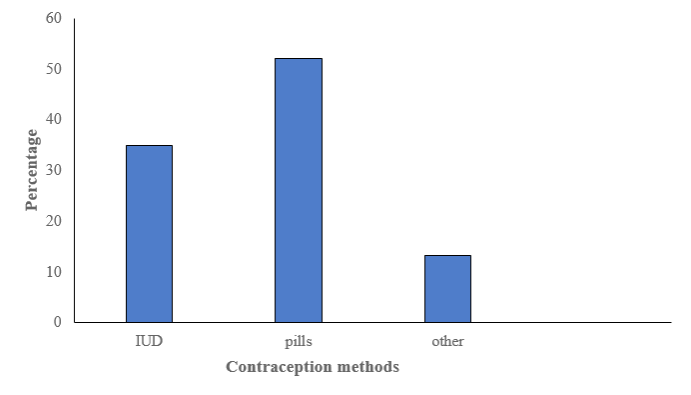

Figure 1: The percentage of women using different contraception.

The mean duration of using contraception in months was 32.9 ± 32.9 (Table 1).

Items	Number	Mean
Age (years)	175	33.77 ± 6.73
Duration (months)	175	32.89 ± 32.95

Table 1: The number of participants and their mean age, and the duration of using the contraception.

The response to the questions was 100%, and the average score of each domain was calculated on a scale of 4-20. Among IUD users (group 1), the highest mean score was domain 1, representing physical health at 14.96 ± 2.24. While domain 2 was the lowest score, and it represents the psychological aspect, with a mean of 13.51 ± 2.95. In the social relationships domain 3, the mean score was 13.96 ± 3.67; the fourth domain representing the environment was 13.86 ± 3.36. In comparison, the women who used pills as contraception have a lower mean score within all four domains. An average score of 14.37 ± 2.67 in physical health, 12.68 ± 2.93 in the psychological domain, 13.34 ± 4.30 in social relationships, and 13.46 ± 3.01 in the environment (Table 2). Overall, the highest average score in both groups was domain 1, which represents physical health; moreover, domain 2 is the lowest score, and it represents the psychological aspect of the questionnaire.

Type of contraception		Physical health	Psychological	Social relationship	Environment
IUD 61 women	Mean of score in 4-20	14.96 ± 2.25	13.52 ± 2.95	13.97 ± 3.68	13.86 ± 3.36
Pills 91 women	Mean of score in 4-20	14.37 ± 2.68	12.68 ± 2.94	13.34 ± 4.30	13.46 ± 3.01

Table 2: The mean score of the 4 domains in women in both groups IUD and Pill in a scale of 4-20.

Statistically, there was no significant difference between the two groups the p-value in the four domains was (0.158, 0.773, 0.257, and 0.2274), respectively (Table 3). However, women who used IUDs as contraception have the highest mean score among all the domains in comparison to women who use contraception pills.

Items	Type of contraception	Response					P-value
		Very poor	poor	Neither poor nor good	Good	Very good	
Q1: How would you rate your quality of life?	IUD	0.0%	0.0%	23.0%	41.0%	36.1%	0.019
	OCP	0.0%	7.7%	36.3%	25.3%	30.8%	
		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied	

Q2: How satisfied are you with your health?	IUD	0.0%	4.9%	32.8%	37.7%	24.6%	0.065
	OCP	3.3%	17.6%	33.0%	30.8%	15.4%	
The following questions ask about your exposure to certain things							
		Not at all	A little	A moderate amount	Very much	An extreme amount	
Q3: To what extent do you feel that physical pain prevents you from doing what you need to do?	IUD	0.0%	9.8%	29.5%	42.6%	18.0%	0.360
	OCP	3.3%	11.0%	29.7%	30.8%	25.3%	
Q4: How much do you need any medical treatment to function in your daily life?	IUD	1.6%	3.3%	14.8%	31.1%	49.2%	0.291
	OCP	1.1%	7.7%	23.1%	18.7%	49.5%	
Q5: How much do you enjoy life?	IUD	3.3%	8.2%	49.2%	26.2%	13.1%	0.020
	OCP	8.8%	11.0%	29.7%	45.1%	5.5%	
Q6: To what extent do you feel your life to be meaningful?	IUD	6.6%	6.6%	18.0%	39.3%	29.5%	0.447
	OCP	7.7%	8.8%	22.0%	45.1%	16.5%	
Q7: How well are you able to concentrate?	IUD	3.3%	14.8%	41.0%	32.8%	8.2%	0.310
	OCP	7.7%	22.0%	44.0%	22.0%	4.4%	
Q8: How safe do you feel in your daily life?	IUD	4.9%	13.1%	21.3%	42.6%	18.0%	0.900
	OCP	7.7%	16.5%	20.9%	40.7%	14.3%	
Q9: How healthy is your physical environment?	IUD	8.2%	11.5%	36.1%	27.9%	16.4%	0.633
	OCP	8.8%	14.3%	30.8%	36.3%	9.9%	
The following questions ask about your ability to complete certain things							
		Not at all	A little	Moderately	Mostly	Completely	
Q10: Do you have enough energy for everyday life?	IUD	3.3%	11.5%	41.0%	34.4%	9.8%	0.152
	OCP	1.1%	20.9%	42.9%	19.8%	15.4%	

Q11: Are you able to accept your bodily appearance?	IUD	3.3%	18.0%	34.4%	27.9%	16.4%	0.474
	OCP	3.3%	26.4%	27.5%	19.8%	23.1%	
Q12: Have you enough money to meet your needs?	IUD	4.9%	18.0%	24.6%	32.8%	19.7%	0.630
	OCP	2.2%	20.9%	33.0%	25.3%	18.7%	
Q13: How available to you is the information that you need in your day-to-day life?	IUD	3.3%	9.8%	32.8%	36.1%	18.0%	0.908
	OCP	4.4%	12.1%	37.4%	31.9%	14.3%	
Q14: To what extent do you have the opportunity for leisure activities?	IUD	9.8%	21.3%	39.3%	23.0%	6.6%	0.630
	OCP	9.9%	33.0%	31.9%	19.8%	5.5%	
		Very poor	poor	Neither poor nor good	Good	Very good	
Q15: How well are you able to get around?	IUD	0.0%	0.0%	14.8%	26.2%	59.0%	0.447
	OCP	1.1%	3.3%	14.3%	31.9%	49.5%	
The following questions ask you to express your satisfaction with different aspects of your life							
		Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied	
Q16: How satisfied are you with your sleep?	IUD	3.3%	8.2%	42.6%	27.9%	18.0%	0.522
	OCP	2.2%	14.3%	38.5%	34.1%	11.0%	
Q17: How satisfied are you with your ability to perform your daily living activities?	IUD	0.0%	4.9%	47.5%	37.7%	9.8%	0.200
	OCP	1.1%	15.4%	49.5%	26.4%	7.7%	
Q18: How satisfied are you with your capacity for work?	IUD	1.6%	11.5%	39.3%	36.1%	11.5%	0.714
	OCP	4.4%	11.0%	46.2%	27.5%	11.0%	
Q19: How satisfied are you with yourself?	IUD	3.3%	9.8%	34.4%	34.4%	18.0%	0.818
	OCP	3.3%	13.2%	40.7%	29.7%	13.2%	

Q20: How satisfied are you with your personal relationships?	IUD	0.0%	14.8%	32.8%	34.4%	18.0%	0.265
	OCP	6.6%	14.3%	24.2%	38.5%	16.5%	
Q22: How satisfied are you with the support you get from your friends?	IUD	3.3%	13.1%	34.4%	36.1%	13.1%	0.494
	OCP	11.0%	14.3%	29.7%	30.8%	14.3%	
Q23: How satisfied are you with the conditions of your living place?	IUD	4.9%	6.6%	34.4%	29.5%	24.6%	0.773
	OCP	2.2%	9.9%	29.7%	34.1%	24.2%	
Q24: How satisfied are you with your access to health services?	IUD	0.0%	13.1%	31.1%	36.1%	19.7%	0.825
	OCP	2.2%	14.3%	31.9%	34.1%	17.6%	
Q25: How satisfied are you with your transport?	IUD	1.6%	16.4%	26.2%	27.9%	27.9%	0.763
	OCP	4.4%	12.1%	31.9%	25.3%	26.4%	
The following questions indicate how often you felt or were exposed to certain things							
		Never	Seldom	Quite often	Very often	Always	
Q26: How often do you have negative feelings such as blue mood, despair, anxiety, depression?	IUD	4.9%	26.2%	42.6%	23.0%	3.3%	0.133
	OCP	9.9%	38.5%	38.5%	9.9%	3.3%	

Table 3: Response to questions and p-value in IUD and OCP group.

According to the response of the first question asking about the QoL, a significant difference between the IUD group and OCP group (p= 0.019), the response of most women who used IUD was good (41.0%), and on the other hand, the majority of women (36.3%) who used OCP answered was neither poor nor good (Table 3). The second question was asked about the satisfaction of life; the p-value was 0.065, there was no statistical difference between the two groups, but the answers of the women in both groups suggested that most women who used IUDs were satisfied about their health, with 32.8% choosing Neither satisfied nor dissatisfied 37.7% Satisfied, 24.6% very Satisfied, and only 4.9% Dissatisfied, and no answer for Very dissatisfied. However, women who used OCP 3.3% were Very dissatisfied, 17.6% were dissatisfied, 33.0% were neither satisfied nor dissatisfied, 30.8% were satisfied, and only 15.4% were Very satisfied.

In the first part of the questionnaire, seven questions (2 questions were related to physical health, 4 questions related to physiological health, and a single question related to the environment) were asked from the women who were using OCP and IUD. In terms of physical health, there was a non-significant response of women (IUD and OCP groups) (p>0.01), while women of both groups need physical health in terms of treatment to reduce the pain as the majority (IUD=42.6% very much; 18.6% an extreme amount. OCP=30.80% very much; 25.3% an extreme amount) of women feel physical pain which prevents them from doing work. While when women of both groups were asked how much medical treatment they needed, the majority of IUD group women 31.1% response very much, and 49.2% response was an extreme amount; meanwhile, 18.7% of the OCP group responded very much, and 49.5% responded an extreme amount of treatment they need.

In terms of physiological health questions, there was non-significant difference among both groups (p>0.01). When women of both groups were asked how much they enjoy life, there was a varied response as 49.2% of IUD group women were found to enjoy their life in moderate amount while 26.2% responded very much while 13.1% an extreme amount. However, 45.1% of OCP group women responded very much and 29.7% moderate amount, while only 5.5% responded in extreme amount. When women of both groups were asked to what extent life is meaningful, most of the IUD group responded in very much and an extreme amount (39.3% and 29.5%, respectively). Similarly, the OCP group also responded very much and an extreme amount (45.1% and 16.5%, respectively). In addition, 41% and 32.8% of women IUD group responded to the question (how well are you able to concentrate?) as moderate amount and very much while 44% and 22% of the OCP group responded in terms of moderate amount and very much with p=0.30 which indicated non-significant difference among the groups. Similarly, in terms of the healthy physical environment, there was non-significant difference between both groups (p>0.01), and the majority of IUD and OCP groups women responded in moderate amount (36% and 30.8%) and very much (27.9% and 36.3%), respectively.

However, in terms of the environment, when they were asked how much safe the majority of IUD and OCP groups responded very much (42.6% and 40.7%) and an extreme amount (18% and 14.3%) of safety with the non-significant differences among the groups (p=0.90).

In the second part of the questionnaire, there were three questions related to physical health and 3 questions for the environment. In terms of physical health, both groups (IUD and OCP) responded moderately (41% and 42.9%) and mostly (34.4% and 19.8%) have the energy for everyday life, respectively, with a non-significant difference (p=0.015). In addition, when IUD group women were asked the question 34.4% moderately, 37.9% mostly, and 16.4% completely accepted bodily appearance, while OCP group women responded 27.5% moderately, 19.8% mostly and 23.1% completely accepted the bodily appearance with non-significant difference (p=0.47). Similarly, after the treatment, both groups were asked how they feel to get around 26.2% and 59% IUD group women felt good and very good, respectively, while 31.9% and 49.5% OCP group women feel good and very good, respectively (p=0.44). When women of both groups were asked questions related to environment (money, information, and opportunity) majority of the IUD group women responded in moderately (24.6%, 32.8%, and 39.3%, respectively) and mostly (32.8%, 36.1%, and 23%, respectively) while OCP group women responded in agreeing moderately (33%, 37.4%, and 31.9%, respectively) and mostly (25.3%, 31.9%, and 19.8% respectively) with the non-significant difference (p>0.01).

In the third part, there were 9 questions related to physical health, social relations, and environment. In terms of physical health, the majority of the women of both groups were neither satisfied nor dissatisfied with the questions related to sleep, daily activities, and the capacity of their work. While 27.1%, 37.7%, and 27.5% of IUD women were satisfied with their sleep, daily activities, and capacity of their work, respectively. Similarly, 34.1%, 26.4%, and 27.5% of OCP group women were found to be satisfied with their sleep, daily activities, and capacity of their work, respectively. In terms of social relations, when questions were asked about satisfaction (yourself, personal relations, and support from friends) majority of the IUD group women were satisfied (34.4%, 34.4%, and 36.1%, respectively) and very satisfied (18%, 18%, and 13.1%, respectively) while OCP group women were also found to be satisfied (29.7%, 38.5%, and 30.8%, respectively) and very satisfied (13.2%, 16.5%, and 14.3% respectively) with p>0.01. In addition, when women of the IUD group were asked about their satisfaction level about the living conditions, access to health services, and transport services, the majority of the women were satisfied (29.8%, 36.1%, and 27.9%, respectively) and very satisfied (24.6%, 19.7%, and 27.9%, respectively) with these services. While, OCP group women were also satisfied (34.1%, 34.1%, and 25.3%, respectively) and very satisfied (24.2%, 17.6%, and 26.4%, respectively) with these services with the non-significant differences (p>0.01).

In the fourth part, there was a single question related to health care needs, when IUD group women were asked about negative feelings, most of the women responded in quite often (42.6%) and very often (23%), while the OCP group women also responded in quite often (38.5%) and very often (9.9%).

Discussion

Particularly in underdeveloped nations, the topic of contraception has drawn a lot of interest in recent years. Due to their ability to prevent many morbidities and fatalities associated with repeated births, as well as other socioeconomic benefits, contraceptive methods have become increasingly popular around the world [43]. In the Saudi community, where polygamy is accepted, it occurs frequently. The fact that there are more and more children in this community makes men proud [16]. Contraception's prevalence, knowledge, and use have all been extensively studied in Saudi Arabia, but limited research was done on the QoL of women. Thus, the present study was designed to observe the QoL of contraceptive women.

In the present study, 61 participants were using IUD as a contraception method that includes copper and hormonal IUD. Whereas 91 women were using the pills as contraception in both types. This is consistent with the findings of Gharaibeh [38], and the study found that IUDs are the contraceptive of choice for women. In contrast, 56% of the women were currently taking or had previously used a form of contraception. The most popular approach was OCPs, which were used or had been used by 94.8% of the 1497 women who practiced contraception [44]. Similarly, the most popular approach among respondents of the Aljouf region of Saudi Arabia (n=203; 71.2%) was taking pills, followed by IUDs (n=67; 23.5%), and surgery (n=3; 1.1%) [45]. Additionally, according to a Jeddah-based survey, the IUD was the second most popular method of birth control among females, utilized by 21% of respondents [46], roughly matching the outcome of the other study

(specifically, 22%) [47].

Furthermore, a study conducted in Al-Taif's found that 34.3% of females utilized an IUD, which is comparable with our findings [48]. In addition, another study found a higher percentage of contraceptive use, showing that 54% of Omani women were presently using a family planning method, and 76.8% had previously used a contraceptive method [49]. This increase in contraception may be due to women's increased work and education, changes in fertility attitudes and habits, and increased birth spacing using various contraceptive techniques, the socioeconomic makeup of the Saudi community has drastically changed in recent years [50], and the current Saudi government is working very hard on education for both gender according to vision 2030. Another reason may be most likely as a result of the impact of economic progress and improved information accessibility. However, other research revealed a significant use of traditional contraceptive technique use as well [51]. Meanwhile, there are many benefits of contraception as children born three years or more after a prior birth were found to be healthier at birth and more likely to live through all phases of infancy and childhood up until age five, according to one study that analyzed Demographic and Health Survey (DHS) program data from 18 nations [52]. However, there are different factors which can significantly correlate with contraceptive use, including demographic factors like age, marital status, husband's age at first marriage, and continuing with first marriage; geographic factors like where a person was raised; social factors like family structure and employment; and economic factors like income. A few other important factors include the duration of the first marriage, age at first marriage, number of children, and property ownership [53].

In the current study, WHOQOL-BREF was used for the evaluation of the QoL of both groups (IUD and OCP), this type of questionnaire is reliable [54] overall, women of both groups were satisfied with all the questions asked and had non-significant difference among the groups and had overall good QoL in both groups which are in line with prospective cohort research in a Chinese province of rural women who used OCPs and IUDs discovered that these treatments could considerably raise general QoL [34], but according to scores in the present study there was a substantial variation in QoL depending on the method employed; women who used IUDs had a higher QoL scores related to contraceptive use than those who utilized OCPs. Pérez-Campos reported that the SEC-QoL is ideal for active clinical research projects and standard clinical practice to assess the HRQOL of contraceptive-using women [33]. While, according to a prospective observational multicenter study carried out in Spain, the Levonorgestrel Intrauterine System (LNG-IUS) has a favorable effect on health-related QoL. This conclusion is consistent with our findings. The findings were obtained by administering the SEC-QoL questionnaire at baseline (before using the LNG-IUS) and again 12 months afterward. All SEC-QoL areas, including the social, menstrual symptoms, breast symptoms, psychological, and sexual domains, showed increased ratings in the study. In addition to its effectiveness as a family planning technique, LNG-IUS offered women non-contraceptive advantages (such as decreased bleeding and menstrual pain) [31]. However, our findings coincide with those of Alyahya [24], who discovered that Jordanian women who use IUDs have better physical and psychological health, social relationships, and environmental QoL than those who use OCPs. Prior studies have provided evidence that the usage of pills, injectables, and IUDs did not significantly negatively affect QoL across all WHO QoL domains. Additionally, it has been noted in Japan that OCPs, when used solely for contraceptive purposes, can affect QoL [55]. However, according to some research, especially those involving first-time users, OCPs had no detrimental effects on QoL [56]. Contraceptive method users had considerably lower FSFI scores than non-users [26]. Moreover, the contraceptive methods had a significant effect on the sexual function of women but did not affect their QoL. In another study, the duration of bleeding and the requirement for painkillers decreased after three months of using a hormonal contraceptive, and the impact of menstruation on everyday life was increased. However, no adverse impacts on assessments of HRQoL were found [30]. Alfaifi demonstrated that symptoms of mood disorders were presented in roughly one-third of women who used hormonal contraception [28]. Furthermore, Alqahtani reported that hormonal contraceptive users had a greater prevalence of depression in comparison to non-hormonal contraceptive users [29]. Although IUDs may have minor side effects such amenorrhea, irregular bleeding, and hormonal changes that may affect a woman's QoL [57,58].

There are certain limitations on the current study that must be recognized. First, the sample was gathered using a cross-sectional study approach. Second, QoL was self-reported, which raises the possibility of deceptive reporting. Like any self-reporting questionnaire, there is always a danger that patients' responses will be overestimated by erroneous answers. The WHOQOL-BREF, on the other hand, is a cross-cultural, thoroughly validated, general questionnaire and has been used in a number of research.

Conclusions

The freedom to choose whether and when to have children is seen as a fundamental right to reproductive health and is intimately connected to the well-being and standard of living of women. The findings showed that using IUDs has no negative effects on women's QoL across all WHOQOL-BREF domains, with significantly higher QoL scores than those who use OCPs. Overall, we found that both groups of women were satisfied with questions related to QoL and all four domains.

Recommendation

We advise conducting more Randomized Controlled Trails (RCTs) in this area due to the significance of the subject. In addition, it is important to address risk factors and negative outcomes like depression.

Ethical considerations: The research center at PSMMC-ethics Riyadh's review committee gave its approval before the study could begin after approved by an ethics review committee. No medicines or interventional procedures are used in this study. All participants provided their consent after being fully informed. The

study maintains the confidentiality and anonymity of the data.

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