

# Impact of COVID-19 Pandemic upon Iraqi Women's Commitment to Family Planning at Primary Health Care Centers in Baghdad City

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(Submitted: 07 January 2024 – Revised version received: 14 February 2024 – Accepted: 02 March 2024 – Published Online: 26 April 2024)

## Abstract

**Objective:** To evaluate the impact of COVID-19 upon Iraqi women's commitment to family planning before and during COVID-19 pandemic.

**Methods:** A descriptive design, correlational approach was conducted from November/2021 to July/2022. The setting of the study including two primary health care centers in Baghdad City. A non-probability 'purposive sample' consists of (200) women at reproductive age (16–49) years old. Descriptive and correlational statistics were used for data analysis.

**Results:** The results of the study shows that regarding commitment to use of family planning methods among women before and during COVID-19 pandemic; the "Use family planning methods" among (94.5%) before-COVID-19 and (83%) during COVID-19. There is high significant relationship between commitment to use of family planning before-COVID-19 and during COVID-19 at  $P$ -value = .001 respectively.

**Conclusion:** The pandemic has affected women's commitment to family planning methods, as well as its impact on the type of method that used. Despite the pandemic family planning is very important to women's reproductive health so, it is necessary to improve family planning information, services, and access.

**Keywords:** Family planning, women's commitment, COVID-19, primary health care centers

## Introduction

The COVID-19 pandemic has caused deficit to health systems globally, it affected the woman's access to family planning information and services, as well as sexual and reproductive health. The critical need for family planning for women remains the same, despite the burdens of the pandemic and lockdown.<sup>1,2</sup> The priority of health systems around the world has become towards the prevention and treatment of people with COVID-19 pandemic, but this does not mean that women neglected to access family planning information and services.<sup>3</sup> Family planning is an important intervention to reduce maternal and neonatal mortality, it also contributes to improving the health of mothers and their children. Women's commitment to family planning is helps them to determine the desired number of children and achieve spacing between them.<sup>4,5</sup> Despite the pandemic disruption the access to family planning, the necessary need for family planning methods for couples remained the same, so it was necessary to conduct evidence-based studies from different countries to enhance understanding the pandemic and prepare to deal with future epidemics to ensure access to family planning in similar circumstances.<sup>6,7</sup>

Before the COVID-19 pandemic, it was expected globally that 77% of women in reproductive age (19–49) would get their family planning needs, but the pandemic caused decrease in the number of family planning users to 71%, which means a decrease in Family planning users will reach 60 million world-wide in 2020.<sup>3</sup> The decrease in the use of family planning methods will also include change the type of method used.<sup>8</sup>

Health systems in middle-income countries are different from developed countries because it considered fragile and the pandemic has caused more burdens makes it difficult to providing essential and routine health services. It was difficult for these countries to provide primary health

care services, including women's health, in addition to their struggle to control the pandemic and provide care for those with COVID-19.<sup>2,9</sup>

Iraq's population has increased four-fold over the last 50 years, according to UN Population Division data, during the last 25 years doubling (from 10 million in 1970, to 20 million in 1995, to 40 million in 2020). 24.4% of the total population are women in reproductive age (15–49 years). In Iraq, about 36% only use of modern contraceptive methods. It means that many couples they need family planning services do not have access to them, which deprives them of their reproductive rights.<sup>4</sup>

## Methodology

### Research Design

A descriptive design, correlation approach was used to identify the Impact of COVID-19 Pandemic upon Iraqi women's commitment to Family Planning at Primary Health Care Centers in Baghdad City.

### Setting and Samples

A non-probability 'purposive sample' consists of (200) women at reproductive age (16–49) years old that attending primary health care centers in Baghdad City were participated. The study was started at November/2022 to July/2022.

### Measurement and Data Collection

A Paper-based questionnaire was utilized for data collection in this study. The data was collected by researcher from women, the total number of questions is (51). The instrument consists of seven main parts include (socio demographic characteristics, previous medical history, reproductive history, the type of family planning methods that use before COVID-19, the type of family planning methods that use during COVID-19,

questions about commitment in use of family planning methods before the COVID-19, questions about commitment in use of family planning methods during the COVID-19). The time for collecting samples from 8:30 am to 2:30 pm daily during official working days and each interview takes about 20–30 minutes for each woman. The researchers developed the first section that involves a number of items related to demographic information of the participants. These demographic data included age, residency, educational level, occupation. Second section involves medical history and the third section involves reproductive history. The fourth, fifth, sixth, and seventh section was adopted from USAID-funded R4S Project. The fourth and fifth sections consists of (20) items about the type of family planning methods used before and after COVID-19 and the sixth and seventh sections consist of (27) items about the women's commitment to family. The participants were asked to answer the questions with (yes) or (no). After the approval from the original authors has been obtained to use, modify, and translate the instruments, the researchers followed the guidelines of world health organization (WHO)<sup>10</sup> for adopting and translating research tools. A bilingual academician who has extensive expertise in scientific research checked the translated instrument for adequacy, conceptual correspondence, and any missing concepts or expressions. After that, an expert in English language back translated the Arabic version of the instruments to English, and no major discrepancies were revealed between both versions. In order to check the suitability and psychometric properties of the Arabic version of the instruments, the researchers conducted a pilot study, the pilot study included 10 women who were excluded from the original sample. Reliability statistical analysis was performed and showed that Cronbach alpha was 0.86 for the instrument, which indicated that the research instrument have a good internal consistency and acceptable.

### Data Analysis

The researchers used SPSS 22.0 (IBM Corp., Armonk, N.Y., USA) to analyze data. Frequencies, and percentages were computed to describe data related to women demographic characteristics, medical history, reproductive history, Family Planning Methods used by Women before and during Pandemic of COVID-19, Commitment to Family Planning Methods before and During Pandemic of COVID-19, correlational analysis to relationship between before and during Pandemic of COVID-19 Commitment to Family Planning Methods among Women.

### Ethical Considerations

The study protocol was approved by the Scientific Research Ethical Committee, College of Nursing, University of Baghdad, Baghdad, Iraq (Ref. 552 number: 25 August 2021). Furthermore, the researchers informed the women about their rights of voluntarily participation, withdraw at any time, confidentiality, and privacy. Women who agreed to participate were asked to sign the consent form.

### Results

The descriptive analysis in Table 1 shows that average age was  $30 \pm 7$  years in which the highest percentage among participant refers to 22.5% of age group 23–29 years. Regarding educational level, the highest percentages refer to 24.5% who

graduated from institute and 21.5% college graduated. Concerning residency, 72.5% of participants are resident in urban. The occupational status reveals that 66.5% are housewives while remaining are governmental employee.

The descriptive analysis in Table 2 shows that only 12% of participants are with positive history of hypertension; 5.5% with positive history of diabetes mellitus; 3.5% with positive history of cardiovascular diseases; only 37.5% of them getting immunization; 8.5% having positive history of sensitivity to drug; and only 10% are with positive history of sensitivity to foods.

The descriptive analysis in Table 3 shows that 81.5% of women are with regular menstrual cycle. 66.5% of them are with 1–3 gravida, and 75% are with 1–3 para. Regarding abortion, 71% reported no abortion while remaining have positive history of abortion and the highest percentage refer to one abortion among 18.5%. More than half of women reported no cesarean section while remaining have as refer among 42% who have 1–3 cesarean section, normal vaginal delivery reported among 39% with 1–3 times.

The descriptive analysis in Table 4 presents the types of family planning methods used by women before and during COVID-19 pandemic; the commonest methods used by women before COVID-19 pandemic is Oral contraceptive pills (37%) and calendar method (39%) during COVID-19 pandemic. The remaining methods are very rarely reported among women before and during pandemic of COVID-19.

The analysis in Table 5 indicates that only (21.5%) of women are committed to use of family planning methods before-COVID-19 (Mean  $\pm$  SD =  $5.39 \pm 1.549$ ) and 20% of

Table 1. Distribution of the sample according to their demographic characteristics

Characteristics	No.	%	
Age M $\pm$ SD = $30 \pm 7$	16–22 years	38	19
	23–29 years	45	<b>22.5</b>
	30–36 years	70	35
	37–43 years	39	19.5
	44 $\leq$ years	8	4
	Total	200	100
Educational level	Illiterate	6	3
	Primary	6	3
	Intermediate	42	21
	Secondary	54	27
	Institute	49	<b>24.5</b>
	College	43	<b>21.5</b>
Total	200	100	
Residency	Urban	145	<b>72.5</b>
	Rural	2	1
	Sub-urban	53	26.5
	Total	200	100
Occupation	Employee	67	33.5
	Housewife	133	<b>66.5</b>
	Total	200	100

No.: Number, %: Percentage, M: Mean, SD: Standard deviation.

Table 2. Distribution of the sample according to their previous medical history

Variables	No.	%	Variables	No.	%		
Hypertension	Negative	176	88	Taking immunization	Negative	125	62.5
	Positive	24	12		Positive	75	37.5
	Total	200	100		Total	200	100
Diabetes mellitus	Negative	189	94.5	Allergy to medication	Negative	183	91.5
	Positive	11	5.5		Positive	17	8.5
	Total	200	100		Total	200	100
Cardiovascular diseases	Negative	193	96.5	Allergy to foods	Negative	180	90
	Positive	7	3.5		Positive	20	10
	Total	200	100		Total	200	100

No.: Number, %: Percentage.

Table 3. Distribution of the sample according to their reproductive health history

Variables	No.	%	
Menstrual cycle	Irregular	37	18.5
	Regular	163	81.5
	Total	200	100
Gravida	None	4	2
	1–3	166	66.5
	4–6	59	29.5
	7 ≤	4	2
	Total	200	100
Para	None	6	3
	1–3	150	75
	4–6	44	22
	Total	200	100
Abortion	None	142	71
	One	37	18.5
	Two	15	7.5
	Three	6	3
Total	None	103	51.5
	1–3	84	42
	4 ≤	13	6.5
	Total	200	100
Normal vaginal delivery	None	93	46.5
	1–3	78	39
	4–6	29	14.5
	Total	200	100

No.: Number, %: Percentage.

women are committed to use planning during COVID-19 (Mean ± SD = 5.39 ± 4.92 ± 1.803).

The analysis in Table 6 presents the commitment to use of family planning methods among women before and during COVID-19 pandemic; the “Use family planning

methods” among 94.5% before-COVID-19 and 83% during COVID-19; women reported “I could easily get contraception” among 90% before-COVID-19 and 69.5% during COVID-19; and “You and your husband avoided getting pregnant” is reported by 83% before-COVID-19 and 78.5% during COVID-19.

The correlation analysis in Table 7 indicates that there is high significant relationship between commitment to use of family planning before-COVID-19 and during COVID-19 at  $P$ -value = .001 respectively.

## Discussion

COVID-19 has negatively affected health systems in all the world, there is many problems that accompanied with pandemic, such as limiting access to family planning information and services, lockdown countries. Too many spouses staying at home, lack of financial resources, and inability to reach parents, friends, and health care providers.<sup>11,12</sup>

The average age of current study was 30 ± 7 years in which the highest percentage among participant refers to 22.5% of age group 23–29 years. In Iraq the total population are women in reproductive age (15–49 years) so, there is many women need family planning information and services. Most women in reproductive age had a great challenge in how to prevent unintended pregnancy as well as maintaining their reproductive health status.<sup>4,10,13</sup> In previous study conducted in Bangladesh, the results of the study showed a significant decrease in the use of family planning methods, especially oral contraceptives among married 15–49 years aged women was 36.03% suggesting a 23% (approximately) decrease compared to before pandemic. Results of current study also showed that 24.42% of the women were using oral contraceptive pills (OCP) which is lower than before pandemic data (61.7%), the pandemic affected the number of users of family planning methods, as well as the impact on the type of family planning method used, since the first case of infection with COVID-19 in 2020 was recorded, the number of users of short-term family planning methods decreased while increased the users of long-term methods such as IUDs and implants, this was linked to a number of factors, including the woman's age, educational level, husband's attitude, number of children, and this is consistent with the results of the current study.<sup>14,15</sup>

Table 4. Family planning methods used by women before and during pandemic of COVID-19 (N = 200)

Family planning methods	Before-COVID-19		During-COVID-19	
	Not used	Used	Not used	Used
	No. (%)	No. (%)	No. (%)	No. (%)
Calendar method	146 (73)	<b>54 (27)</b>	107 (53.5)	<b>93 (46.5)</b>
Condom	144 (72)	<b>56 (28)</b>	159 (79.5)	<b>41 (20.5)</b>
Vaginal ring	200 (100)	0 (0)	200 (100)	0 (0)
Contraceptive injection	183 (91.5)	17 (8.5)	185 (92.5)	15 (7.5)
Oral contraceptive pills	126 (63)	<b>74 (37)</b>	176 (88)	<b>24 (12)</b>
Intrauterine device	190 (95)	10 (5)	182 (91)	18 (9)
Arm implanted contraceptive	200 (100)	0 (0)	198 (99)	2 (1)
Fallopian tube ligation	193 (96.5)	7 (3.5)	191 (95.5)	9 (4.5)
Emergency dose after intercourse	192 (96)	8 (4)	196 (98)	4 (2)
Do not use any method	190 (95)	10 (5)	175 (87.5)	25 (12.5)

No.: Number, %: Percentage.

Table 5. Commitment to family planning methods before and during pandemic of COVID-19 (N = 200)

Commitment	Before COVID-19		During COVID-19	
	No.	%	No.	%
Uncommitted	157	78.5	160	80
Committed	43	21.5	40	20
Mean ± SD	<b>5.39 ± 1.549</b>		<b>4.92 ± 1.803</b>	

Uncommitted = more than 6.5, Committed = less than 6.5. No.: Number, %: Percentage, SD: Standard deviation.

Table 6. Commitment to family planning methods among women before and during pandemic of COVID-19 (N = 200)

Family planning methods	Before-COVID-19		During-COVID-19	
	No	Yes	No	Yes
	No. (%)	No. (%)	No. (%)	No. (%)
Use family planning methods	11 (5.5)	<b>189 (94.5)</b>	34 (17)	<b>166 (83)</b>
I visit my private doctor to follow up on family planning information and services	82 (41)	118 (59)	136 (68)	64 (32)
I go to the primary health care center to follow up on family planning	90 (45)	110 (55)	180 (90)	20 (10)
I had unintended pregnancy	189 (94.5)	11 (5.5)	147 (73.5)	53 (26.5)
I had abortion	184 (92)	16 (8)	176 (88)	24 (12)
I had a normal vaginal birth	145 (72.5)	55 (27.5)	176 (88)	24 (12)
I had a caesarean section	139 (69.5)	61 (30.5)	187 (93.5)	13 (6.5)
I could easily get contraception	20 (10)	<b>180 (90)</b>	61 (30.5)	<b>139 (69.5)</b>
You and your husband avoided getting pregnant	34 (17)	<b>166 (83)</b>	43 (21.5)	<b>157 (78.5)</b>
I got information and education about family planning methods by phone by calling my private doctor	153 (76.5)	47 (23.5)	128 (64)	72 (36)
I got information and education about family planning methods by going to the primary health care center	115 (57.5)	85 (42.5)	183 (91.5)	17 (8.5)
I got information and education about contraceptive methods through what women and friends transmit in the community	178 (89)	22 (11)	149 (74.5)	51 (25.5)
I got the means of family planning through home delivery service through phone, applications, and websites on the Internet	183 (91.5)	17 (8.5)	152 (76)	48 (24)

No.: Number, %: Percentage.

Table 7. Relationship between before and during pandemic of COVID-19 commitment to family planning methods among women

Correlation		Before commitment	During commitment
Before-commitment	Pearson correlation	1	.261
	Sig. (2-tailed)		.001
	N	200	200
During-commitment	Pearson correlation	.261	1
	Sig. (2-tailed)	.001	
	N	200	200

Regarding educational level, the highest percentages refer to 24.5% who graduated from institute and college graduated 21.5%. Concerning residency, 72.5% of participants are resident in urban. The occupational status reveals that 66.5% are housewives while remaining are governmental employee. Many studies have clarified the relationship between women's educational level and the increasing expectations of women's employment and reducing the gap between them and men, which has resulted in women delaying marriage.<sup>16,17</sup> In Iraq, the situation is different most women are housewives because of the lack of employment opportunities for women, even if they are educated. Women who live in the city, especially the employees women, were able to access family planning methods by home delivery services, while the women who live in the outskirts of the city, who were unable to access family planning methods, so some women had to change their family planning method and chose the natural method because of the difficulty of access family planning methods.<sup>18,19</sup>

Only 12% of participants are with positive history of hypertension; 5.5% with positive history of diabetes mellitus; 3.5% with positive history of cardiovascular diseases; only 37.5% of them getting immunization; 8.5% having positive history of sensitivity to drug; and only 10% are with positive history of sensitivity to foods. Women who have a previous medical history of chronic diseases such as heart disease, high blood pressure, diabetes negatively affects their general and reproductive health and make pregnancy high risk, not all women with chronic diseases get help in choosing the appropriate contraceptive method. Women with chronic diseases are at increased risk of having unintended pregnancies this is due to the lack of options available to them.<sup>20-23</sup>

Most of women 81.5% are with regular menstrual cycle. 66.5% of them are with 1-3 gravida, and 75% are with 1-3 para. Regarding abortion, 71% reported no abortion. More than half of women reported no cesarean section while remaining have as refer among 42% who have 1-3 cesarean section, normal vaginal delivery reported among 39% with 1-3 times. Most of the women participating in the current study had had the experience of pregnancy and childbirth previously, so they may have previous experience in using the appropriate family planning method for them.<sup>24</sup>

The types of family planning methods used by women before and during COVID-19 pandemic; the commonest methods used by women before COVID-19 pandemic is Oral Contraceptive pills (37%) and calendar method (39%) during COVID-19 pandemic, only (21.5%) of women are committed to use of family planning methods before-COVID-19 (Mean  $\pm$  SD = 5.39  $\pm$  1.549) and 20% of women are committed to use planning during COVID-19

(Mean  $\pm$  SD = 5.39  $\pm$  4.92  $\pm$  1.803). The "Use family planning methods" among 94.5% before-COVID-19 and 83% during COVID-19; women reported "I could easily get contraception" among 90% before-COVID-19 and 69.5% during COVID-19; and "You and your husband avoided getting pregnant" is reported by 83% before-COVID-19 and 78.5% during COVID-19. The remaining methods are very rarely reported among women before and during pandemic of COVID-19. Most of women had to change their method and back to natural method, such as changing use of oral contraceptive pills to the calendar method, while women who adopt long-term family planning methods such as IUDs, tubal ligation and injections the pandemic has not affected their commitment because it does not need to repeat visits to doctors' clinics or primary health care centers. Some women whose husbands' work made intercourse not regular, such as the military man, preferred to use an emergency dose after intercourse because of their inability to access family planning easily.<sup>15,25</sup>

About the commitment to use of family planning methods among women before and during COVID-19 pandemic; the "Use family planning methods" among 94.5% before-COVID-19 and 83% during COVID-19; women reported "I could easily get contraception" among 90% before-COVID-19 and 69.5% during COVID-19; and "You and your husband avoided getting pregnant" is reported by 83% before-COVID-19 and 78.5% during COVID-19. The correlation analysis in current study indicates that there is a high significant relationship between commitment to use of family planning before-COVID-19 and during COVID-19 at  $P$ -value = .001 respectively. Some women were using family planning methods before the pandemic because of the ease of access family planning methods, as well as their ability to visit doctors' clinics or primary health care centers. telemedicine service in Iraq is not exist, which led to leave family planning methods and occurrence of unintended pregnancies for some women as well as, the occurrence of miscarriages for women, which put their lives at risk with the absence of visits and follow-up.<sup>26</sup>

In previous study was conducted in California, USA the results showed that epidemic had a positive side in addition to the negative one. In a developed country such as the United States, women were not deprived of their rights to reproductive health and access to family planning methods and services. Women benefited from innovations in various delivery services and remote follow-up, extended use of contraception, telemedicine for abortion care, and a no-test medication abortion protocol have decreased the need for in-person visits and improved access to family planning

services. In a developing country like Iraq, innovations were not available for women to benefit from in obtaining their rights to reproductive health. Some women had to leave the contraceptive method they were using before the pandemic due to the lockdown and there is no remote follow-up or tele-medicine, which led to abortions and unintended pregnancies. Women still needing family planning information and services, and some of them obtained it from women in the community and friends so, this information may be incorrect and not suitable for every woman. Decrease using of contraceptive methods during the COVID-19 pandemic led to unintended pregnancies, abortion, and increase the risk of maternal and neonatal mortality.<sup>27,28</sup> In a study that conducted in Iraq about the COVID-19 pandemic the study was showed that the sexual and reproductive health of women affected by the pandemic, manifested through challenges encountered during pregnancy, childbirth, postpartum phases, and family planning.<sup>29</sup>

## Conclusion

The pandemic has affected women's commitment to family planning methods, as well as its impact on the type of method that used. Despite the pandemic family planning is very important to women's reproductive health so, it is necessary to improve family planning information, services, and access.

## Author Contribution

The researcher did the conceptualization, methodology, formal analysis, writing, reviewing, editing, Investigation, and validation for this study.

## Conflict of Interest

There is no conflict of interest it may affect the results of the study. ■

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