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COVID-19 anxiety and access to reproductive health services

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ABSTRACT

Aims: Access to healthcare services has been negatively impacted during the COVID-19 pandemic. This study aims to determine women's access to reproductive health services (RHS), reasons, and their relationship with COVID-19 anxiety.

Methods: In this cross-sectional descriptive study, data were collected from 345 women (≥18 years) using an online form via Google Forms, including an individual data form and the COVID-19 Anxiety Scale. Sample size was calculated with the Sample Size Calculator by Raosoft, with a 95% confidence, 5% deviation, as 385 using an interval and an unknown population. However study results present data from 345 voluntary women.

Results: Mean age was 29.95±9.35, Turkiye (88.1%), married (51.0%), with bachelor's (47.5%), student (34.2%), insured (80.6%), income equal to expenses (51.3%), and experienced COVID-19 (53.9%). The majority (45.8%) were neutral about sexuality, 42% found it important. Some stated sexual desire remained same (72.8%) during lockdown decreased (20.9%). Nearly half (49.6%) had no sexual intercourse during this period. Condoms were the preferred method before and after COVID-19. Lockdown, no access to public hospital appointments, expensive private hospital costs, and condom prices were listed as barriers. As a result, 13 reported unintended pregnancy, 5 abortions, and 12 spontaneous miscarriages. The most needed methods were condoms, birth control pills, IUDs, and monthly injections. COVID-19 anxiety and difficulty in RHS access were similar. Unplanned pregnancy and no interest in sexuality experience significantly more problems in family planning services. However, COVID-19 anxiety levels were similar ($p>0.05$).

Conclusion: Findings indicate RPH should be a priority in pandemics and other crises. Facilitating access to methods is crucial for preventing unintended pregnancies and abortions, as well as sexually transmitted infections.

Keywords: Contraceptive access, COVID-19, family planning barriers, pandemics

INTRODUCTION

COVID-19, a beta-coronavirus group including SARS-CoV and MERS-CoV, first started in December, spread quickly worldwide. The World Health Organization (WHO) declared the situation a "pandemic".[1] In Turkiye, the first were reported to originate from Europe and Iran. To follow up latest data, share information with the community, and increase public awareness, the Ministry of Health established a COVID-19 Scientific Committee in January 2020.[2] The easy transmission through droplets and close contact was the main reason for the high number of cases, which was also the main reason for quarantine and curfew decisions. The main purpose was to slow down and even stop the widespread of the disease. However, these measures have caused additional health-related problems and also economic, social, and health-related problems. Among these, access to public services and healthcare services was also affected.[3,4] During the pandemic, access to healthcare services decreased, and the provision of services, manpower, materials, and logistics resources for professionals within the healthcare system was also severely impacted. In many countries, healthcare staff were diverted to COVID-19 patients, and healthcare services were restructured, or some units were closed. The supply chain for materials and medications has also been disrupted. In reproductive health, women's demands for contraception or postponement of needs have increased. Access to reproductive and sexual health services has decreased, and the provision of these services has also been negatively impacted.[5] In addition, the pandemic and its effects on sexual health in men and women are discussed.[6] Despite WHO's warnings during quarantine and closure periods, many countries did not consider sexual and RHS as part of basic health services and stopped services in this area.[7] These disruptions have increased the risk of unintended pregnancies, sexually transmitted infections, and unsafe sex. Healthcare systems, with their patient loads increasing due to the pandemic, have left some services out when prioritizing services. Elective pregnancy termination was among the neglected services in this period.[7,8] Negative influence on sexual desire and behavior, tension in couple relationships, and decreased sexual satisfaction levels have been noted. These were also related to mental health issues, such as depression, loneliness, and anxiety.[9] Birth control methods play a crucial role in preventing unwanted pregnancies and maternal deaths.

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Therefore, ensuring uninterrupted access to all women under all circumstances is crucial.[10] Some studies in our country report problems in healthcare services access for all healthcare settings during the COVID-19 period and family planning issues specifically.[11-12] However, the relationship between these issues and COVID-19 anxiety is not specified. It is known that anxiety experienced by individuals is related to their health behaviors and management. In light of these data, our study aimed to determine access to family planning services and their relationship with COVID-19 anxiety.

METHODS

Ethics

All procedures were conducted according to the ethical standards of the Helsinki Declaration guideline. This study was approved by the İstanbul University-Cerrahpaşa, Social and Human Sciences Ethics Committee (Date: 22.12.2022, Decision Number: 355). Participants were first asked to contribute voluntarily via a Google Form.

Study Design and Participants

In this cross-sectional descriptive study, data were collected between 08.11.2022 and 10.01.2023, from women ≥18 years of age using a Google Form, which is divided into an individual data form and COVID-19 Anxiety Scale item. Before the study questions, participants read online a summary of the purpose of the data collection and approved as part of the informed consent. The sample size was calculated using the Sample Size Calculator by Raosoft, with a 95% confidence, 5% deviation, as 385 using an interval and with the population unknown.13 Participants were reached via the internet, using social media, personal contacts, and snowball sampling.

Study inclusion criteria were:

- Female Turkiye citizens
- ≥18 years
- No communication problem
- Able to read, write, and understand in Turkiye
- Willing to participate
- Having access to the internet via mobile phone or computer was included in the study.

The study data reflect data from a total of 345 voluntary women aged ≥18.

Measures

Individual Data Form: The individual data form, which was prepared by the researcher in light of the literature, covers descriptive characteristics of the study group.[14-17] In this context, data were collected under four headings: (1) Sociodemographic data: age, ethnic, education level, occupation, health insurance, marital status, income status, economic status, economic impact of COVID-19, (2) Pregnancy and Birth Information: Number of pregnancies, number of births, health problems experienced in the last pregnancy and type of delivery, (3) Family Planning Preferences: Methods used, factors affecting the choice of method and information sources, and (4) Utilization of Health Services: Access to health services and difficulties experienced during the pandemic period.

COVID-19 Anxiety Scale: To measure anxiety levels related to COVID-19, we used the COVID-19 Anxiety Scale (CAS)[1], a brief mental health screening tool developed by Lee[1] to identify cases of dysfunctional anxiety related to the COVID-19 crisis. The scale was translated into Turkiye by Biçer et al.[18], and validity and reliability studies were conducted. The scale includes a total of five items. The participant's anxiety level was assessed by scoring the following items on the frequency of experiencing the following statements: (1) I felt dizzy, lightheaded, or faint, when I read or listened to news about the coronavirus (2) I had trouble falling or staying asleep because I was thinking about the coronavirus; (3) I felt paralyzed or frozen when I thought about or was exposed to information about the coronavirus; (4) I lost interest in eating when I thought about or was exposed to information about the coronavirus; and (5) I felt nauseous or had stomach problems when I thought about or was exposed to information about the coronavirus. Frequencies were scored as follows: never 0; rarely 1 point for less than a day or two; 2 points for a few days; 3 points for more than 7 days; and 4 points for almost every day in the last two weeks. The scale scores ranged between 0-20. Scale scores ≥9 and more were defined as high anxiety, values under this score as normal. Cronbach's alpha value in this study was found to be high at 0.84 for the COVID-19 anxiety scale.

Statistical Analysis

Data analyses were performed using IBM SPSS Statistics for Windows, version 25.0 (IBM Corp., Armonk, NY). Categorical variables were shown as frequencies and percentages, while continuous variables (age, number of pregnancy, birth, abortion, etc.) were presented as the arithmetic mean with standard deviation, range, according to the distribution. However, in categorical groups (difficult in family planning services access, COVID-19 anxiety status, planned pregnancy, importance of sex), comparisons were conducted using the Chi-square or Fisher's exact test was conducted. Despite the Turkiye validity and reliability study by Biçer et al.[18] additional Cronbach's alpha analyses were conducted for this study group. The main reason for this decision was the possibility of non-Turkiye participants with "Turkiye citizenship" in this study who participated via Google Form. This possible situation and related results were explained in detail under the study limitations headline. A p-value than 0.05 was considered significant.

RESULTS

The sociodemographic features are given in Table 1. A significant number were women who defined themselves as Turkiye (88.1%), had a bachelor's degree (47.5%), were civil servants (31.3%), had health insurance (80.6%), and were married (51.0%). Half of the group (51.3%) reported that their income was equal to their expenses, but more than half (58.6%) reported that their health worsened during the COVID-19 period.

Table 1. Distribution of sociodemographic characteristics of participants (n=345)

Features	X+SD (min-max)	n	%
Ages	29.95±9.35 (18-65)		
Ethnic			
Turkiye		**304**	**88.1**
Afghani		**36**	**10.4**
Iraqi		**2**	**6**
Tajik		**1**	**3**
Syrian		**1**	**3**
Turkmenian		**1**	**3**
Education			
Primary school		18	5.2
Secondary school		19	5.5
High school		60	17.4
Associate degree		28	8.1
Bachelor		164	47.5
Master degree		56	16.2
Occupation			
Housewife		60	17.4
Worker		42	12.2
Civil servant		108	31.3
Freelance		17	4.9
Student		118	34.2
Health insurance status			
Yes		278	80.6
No		67	19.4
Marital status			
Single		152	44.1
Married		176	51
Widow/divorced		17	4.9
Income status			
Less than expenses		118	34.2
Equal to expenses		177	51.3
More greater than expenses		50	14.5
Economic impact of COVID-19			
Worsened		202	58.6
Same		134	38.8
Improved		9	2.6

SD: Standard deviation, Min: Minimum, Max: Maximum

Participants' information on obstetrics and family planning is presented in Table 2. According to the participants' obstetric history and family planning use, 59.6% of the women's last pregnancy was planned, ages of the youngest child varied between 1 (14.2%) and 6 (0.3%) years. Condoms were most preferred before (35.7%) and during COVID-19 (24.4%). The majority (63.8%) reported no difficulty accessing family planning methods during the pandemic, while those who experienced access difficulties reported the lockdown (49.6%) as the primary reason.

Nearly half (45.8%) reported a neutral approach to sexuality, 72.8% reported no change in sexual desire, with frequency of once a week (28.4%). According to COVID-19 diagnosis and anxiety level (Table 3) more than half of the participants (53.9%) experienced COVID-19, and COVID-19 anxiety levels were in normal (%83.5).

Comparisons according to COVID-19 anxiety, pregnancy planning, sexuality, and difficulty in accessing family planning services are given in Table 4. The proportion of those whose last pregnancy was not planned (x^2:7.85; p: 0.005)

Table 2. Participants' knowledge of obstetrics and family planning (n=345)

Features	X+SD (min-max)	n	%
Pregnancies	1.13±1.54 (0-7)		
Births	1.13±1.54 (0-7)		
Abortions	09±0.39 (0-3)		
Spontaneous abortion	2.37±0.55 (1-3)		
Planed pregnancy			
Yes		127	59.6
No		86	10.4
Pre-COVID method* (n:196)			
Don't use		37	18.9
Oral contraceptive		31	15.8
IUD**		23	11.7
Injection		27	13.8
Condom		70	37.7
Withdrawal method		5	2.6
Menopause		2	1.0
Other		1	0.5
Current method (n=217)			
Don't Use		49	22.6
Oral contraceptive		13	6.0
IUD		21	9.7
Injection		8	3.7
Condom		53	24.4
Withdrawal method		39	18
Menopause		11	5.1
Other		23	10.6
Difficulty in access			
Yes		126	36.52
No		219	63.48
Reasons			
No pills at the health center		1	0.3
Lockdown		171	49.6
No appointments at state hospital		49	38.9
Expensive Private hospitals		25	19.8
Expensive pills at the pharmacy		7	5.6
Expensive condoms		21	16.7
Other		23	18.3
Importance of sexuality			
Very important		145	42.0
Neutral		158	45.8
Not important		42	12.2
Sexual desire in lockdown			
Demand decreased		72	20.9
Same as before Covid		251	72.7
Demand increased		22	6.4
Sexuality during COVID restrictions			
Every day		8	2.3
Every other day		35	10.1
Every other day		98	28.4
Monthly		33	9.6
None		171	49.6

SD: Standard deviation, Min: Minimum, Max: Maximum, *FPM: Family Planning Methods **IUD:Intrauterine device

Table 3. COVID-19 status and COVID-9 anxiety scale (n=345)

Variables	X+SD (min-max)	n	%
Diagnosed COVID-19			
Yes		186	53.9
No		159	46.1
COVID-19 anxiety status			
Normal		288	83.5
High anxiety		57	16.5
COVID-19 anxiety scale score	4.34±4.35 (0-20)		

SD: Standard deviation, Min: Minimum, Max: Maximum

Table 4. COVID-19 anxiety pregnancy and sexuality according to FPS access (n=345)

Variables		Difficulty in accessing FPS				
		Yes		No		X^2
		n	%	n	%	p
COVID-19 anxiety status	Normal	247	85.8	41	14.2	0.15
	High	50	87.7	7	11.9	0.70
Planned pregnancy	Yes	90	70.9	37	29.1	7.85
	No	75	87.2	11	12.8	0.005
Importance of sexuality	Very important	116	80.0	29	20	8.73
	Neutral	141	89.2	17	10.8	0.013
	Not important at all	40	95.2	2	4.8	

FPS: Family planning services

and those who stated neutrality to sexuality (x2:8.73; p: 0.013) were more seen in the group reporting problems in reaching family planning services ($p<0.05$). However, the COVID-19 anxiety level showed a similar distribution between the groups in terms of difficulty in accessing family planning services ($p>0.05$).

DISCUSSION

The COVID-19 pandemic has strained the healthcare systems globally. This has led to significant disruptions, particularly in reproductive health and family planning services. Our study focuses on the influence of COVID-19 on access to family planning methods in Turkiye. Our findings reveal the negative impact of pandemic on these health services. Considering that 14.1% of the last-born children in this study were 1 years old indicates a baby group born in the pandemic period. This also highlights the importance of prenatal monitoring and continuity of perinatal care during crisis situations like a pandemic. WHO and other national institutions like the Turkiye health ministry similarly emphasize the importance of pregnancy monitoring in reducing maternal and neonatal morbidity-mortality, especially in crises like the pandemic term. These crises emphasize the need for easy access to health care services as a basic need.1[9,20] It is well reported that during the pandemic term, due to direct effects like infection risk or indirect effects like lockdown, no access to health care, increasing economic, social, mental problems etc., all have negative outcomes on mother and child health, including changes in pregnancy planning, concerns about access to healthcare, effect of COVID-19 on mother and baby, plus economic uncertainty, job loss, increasing anxiety and other mental health problems.[14,15] These concerns showed similarity with other results. Nearly half (53.9%) of our study group experienced COVID-19 at least once, and 16.5% were defined high COVID-19 anxiety level. Different countries' results report similarly the strong effects of COVID-19 on stress levels of people, resulting in anxiety, depression, sexual health problems, and other psychological problems.[21-23] Anxiety was 16.5% in this study, which, below the rates of up to 30% reported in other studies.[23] Different factors like present health status, comorbid present diseases can also influence a person's anxiety level during the pandemic. Even in the younger group present chronic diseases or severe diseases can increase the vulnerability of the person. Patients with chronic obstructive pulmonary disease (COPD) are one of the vulnerable patient groups. Bozkurt & Bozkurt[24] reported an increasing depression rate from 21.8% to 31.7%, and the anxiety rate from 9.9% to 12.9%. Similarly, in another study from Turkiye[25] COVID-19 fear score was higher in the chronic diseases group, which also reported (27.5%) follow-up problems during the pandemic. Studies on cancer patients also report similar problems,[26] like problems in accessing healthcare, anxiety, depression, and psychological difficulties. All family planning methods are basic needs for women in pregnancy protection, and also to protect them from sexually transmitted diseases. Preferred methods in Turkiye are known as withdrawal, condoms, intrauterine devices, tubal ligation, and oral contraceptives.[27] Our results show condoms at first rank before COVID-19, and also during the pandemic, as a much easier method to reach compared to other methods, and no need for monitoring. However, the increase in withdrawal methods before COVID-19 and during the pandemic is also very significant. Emphasizing the tendency of people's choice for methods that are easy to reach and also easy to use, without any need for monitoring.[28,29] This also showed similarity study results from China[30] and Iran.[31] Difficulties in accessing health care services and interruptions in methods might push family planning method users to easier methods, with no need for a clinic visit and no need for follow up and under their own control.[27,30,31] Restrictions like lockdowns, restrictions on going out have also impacted to reach face-to-face consulting opportunities. Disadvantaged groups like poor, low-educated women who already have difficulty in reaching health information and services were more affected in the pandemic period.[12,32] The United Nations Population Fund (UNFPA) reported that approximately 12 million women in low- and middle-income countries were unable to access contraceptive services due to the pandemic.[33] Our study results also show similarity to the problems in facing problems to reach, reporting difficulties accessing family planning services due to curfew, being unable to schedule an appointment, and economic reasons, similar to factors highlighted in the literature. No access to the methods increases the risk of unplanned pregnancy. More than half of women experienced an unplanned pregnancy during the pandemic. This is a natural result of problems in accessing health services and results in unplanned pregnancies, aligning with the study results from Egypt,[34] Iran[31] noted and UNFPA[33] reports. Another closely related topic to reproductive health is sexual health, which is still one of the taboo topics in Turkiye due to cultural and social factors. Women have difficulties in expressing their sexual desires, problems, and sexual health care needs.[35-37] Nearly half of our women showed a neutral attitude toward sexuality; however similarly mentioned the importance of sexuality in their lives. COVID-19 and sexuality studies indicate that factors like social isolation, stress, and psychological transformations during the pandemic have negative effects on sexuality, lower desire, satisfaction, and interest.[9,38-40] Nearly half (49.6%) of our group stated no sexual intercourse during the pandemic. Social isolation and increased anxiety levels are well-reported factors that lead to a decrease in sexual desire.[41] However, some studies also stated that the role of sexual activity as a way stress coping and psychological relief during the pandemic.[41,42] This increases the risk for unplanned pregnancy during the pandemic and

mostly results in economic and social problems for women who are not ready for a child and decide on abortion.[43]

Vulnerable groups like lower educated, poor, disabled, ethnic and cultural minorities, uninsured are at a higher risk of accessing health care, especially in a crisis like a pandemic. Universal health coverage aims to ensure equal access to healthcare for all individuals. The COVID-19 pandemic has made this goal challenging. The shift in healthcare systems' priority to COVID-19 cases during the pandemic has negatively impacted access to essential healthcare services for pregnant women, adolescents, and marginalized groups like people with disabilities, ethnic and cultural minorities, and individuals with diverse sexual orientations and gender identities.[44,45]

Limitations

The study results are limited by the answers of the population reached via Google Form. Additional studies are needed to assess data from a larger population. Preferably should be taken in a face-to-face interview. This might avoid wrong information sharing related to ethnic or nationality questions. We aim to reach a wide range of women from different ethnical groups. Despite all participants reporting Turkiye citizenship and 304 defining themselves as Turkiye to the ethnic question, a small number reported their origin country as Afghanistan (n=2), Iraq (n=2), Tajikistan (n=1), Syria (n=1), and Turkmenistan (n=1). Considering the increasing number of immigrants in Turkiye, to avoid misunderstandings, it might be better to define Turkiye citizenship, ethical background, and country of origin as separate questions. Especially in non-face-to-face data collection like Google Forms, with no chance to request the person, this might cause weakness. This country report makes us suspicious about other possible participants who have Turkiye citizenship but a foreign country of origin. This was also the main reason to add additional reliability analysis for this study group, to make sure that the scale COVID-19 Anxiety Scale questions are well understood or not. Cronbach's alpha value was defined as 0.84 quite high.

Recommendations for Future Research

Qualitative studies that provide the opportunity to access in-depth data, along with large sample studies, are needed.

CONCLUSION

The COVID-19 pandemic has significantly impacted access to RHS, perceptions of sexuality, and individuals' sexual behaviors. Our study findings demonstrate that the difficulties women face in accessing family planning services which also result in unwanted pregnancies, deliveries in some situations even abortion decisions. Continuity of RHS even in crisis term is important and need to be managed quickly to repond womens needs. Meeting basic needs in social crises such as pandemics, natural disasters, etc., as well as making RHS and education, counseling, and protective measures accessible, will play an important role in protecting against unwanted pregnancies and sexually transmitted diseases. RHS should be carried out in a multidisciplinary approach, and in this context, nurses and midwives, especially women health professionals who have the opportunity to reach all segments of society in preventive health services and therapeutic units within the health care system, will play a key role. In this regard, our recommendations are listed as follows;

- Organizing accessible information and training programs on digital platforms to raise women's awareness about family planning methods and reproductive health.
- Considering the difficulties women face due to curfews, lockdowns, economic barriers, and lack of access to services, remote counseling services should be increased in family health centers and access to necessary materials should be facilitated.
- Access to methods such as condoms and birth control pills that can be delivered via cargo systems should be planned.
- Support should be provided in line with the needs due to economic issues during the pandemic period.
- State-supported health programs should be expanded and private health services should be made more accessible.
- Mental health services should be strengthened for individuals with high anxiety levels.
- Policies that facilitate access to reproductive health and family planning services should be developed in Turkiye.
- Arrangements should be made to ensure that these services are maintained as a priority, especially during times of crisis.
- More studies on the subject are needed

ETHICAL DECLARATIONS

Ethics Committee Approval

This study was approved by the İstanbul University-Cerrahpaşa, Social and Human Sciences Ethics Committee (Date: 22.12.2022, Decision Number: 355).

Informed Consent

Written informed consent was obtained from all individual participants prior to their inclusion in the study. Participants were fully informed about the study's aims, procedures, potential risks and benefits, and their rights—including the right to withdraw at any time without consequence. All participants voluntarily signed a written informed consent form.

Peer Review Process

This manuscript was subject to external peer review.

Conflict of Interest

The authors declare no conflicts of interest related to this study.

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Author Contributions

Concept: E.D.; Design: E.D., A.D.K.; Supervision: E.D.; Resources: E.D., A.D.K.; Data collection and/or processing: E.D.,A.D.K.; Analysis and/or interpretation: E.D., A.D.K.; Literature search: E.D., A.D.K.; Writing manuscript: E.D., A.D.K.; Critical review: E.D.

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