

COVID-19: the unmet need for family planning and its effects on sexuality: a cross-sectional study

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SUMMARY

OBJECTIVE: This study was conducted to examine the effect of women's unmet family planning needs on their sexual functions during the COVID-19 pandemic period.

METHODS: A cross-sectional study was conducted with 319 women of childbearing age across Turkey between April and May 2021. Data were obtained through online questionnaires using the "Survey Form" and the Female Sexual Function Index.

RESULTS: It was observed that 46.77% of the participants had difficulty in accessing the family planning method, the most used family planning method during the pandemic period was the withdrawal method with 52.35%, and there was a significant difference between them and the pre-pandemic method ($p < 0.05$). In the regression analysis, it was shown that a one-unit increase in the difficulty of accessing the family planning method and the place reached parameter would lead to an increase of 0.33 points in the sexual function probability of women.

CONCLUSIONS: It was observed that women of childbearing age living in Turkey had limited access to family planning services during the pandemic, those who used modern methods before the pandemic had to prefer the traditional method, and the sexual functions of women who had fear of becoming pregnant were adversely affected.

KEYWORDS: COVID-19. Unmet family planning. Sexual function. Woman health.

INTRODUCTION

The measures taken to stop and treat the COVID-19 epidemic and the increase in the burden on health systems caused some units to be closed or limited services to be provided. The pandemic process also affects sexual and reproductive health services and poses serious potential risks all over the world^{1,2}. It has caused long-term disruptions in the provision of contraceptive products and services, especially in developing countries. Restriction of sexual and reproductive health clinics due to various reasons, restrictions on women's access to contraception and abortion, prevention of women's right to make autonomous decisions about their bodies and their lives, and, as a result, termination of unwanted pregnancies in unsafe environments are other possible problems^{3,4}.

Reproductive rights are a "human right" subject according to international and national definitions, and although individuals/families have the right to use them or not, some countries unfortunately consider birth control and induced abortion services within the group of deferrable services and especially among these services. Abortion is classified as "non-mandatory" and "non-medically urgent" care, and

these countries are also implementing policies to effectively ban abortion within the scope of the COVID-19 outbreak^{5,6}. These delays in reproductive health services have the potential to negatively affect the health of individuals and society in the longer term than the epidemic³.

During the epidemic, people are expected to maintain social distance from people to reduce the risk of transmission. However, one of the behaviors that can be affected by social distance is sexual activity. In this period, when people distance themselves from each other due to social distance, there is a decrease in the frequency of sexual activity along with sexual reluctance^{1,7,8}. During the COVID-19 pandemic, which threatens the whole world, some changes have been made in the access of reproductive health services. While the still unclear face of the epidemic and the anxiety caused by the prolongation of the process continue, the need for descriptive research on access to family planning and sexual health, which is the most important part of preventive health services, is increasing. This study was conducted to examine the effect of women's unmet family planning needs on their sexual functions during the COVID-19 pandemic period.

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METHODS

The STROBE Statement was used in the design, planning, implementation, and reporting of the cross-sectional, descriptive study. The study was carried out across Turkey between April and May 2021. The sample size was calculated as 344 people with the sample formula of unknown universe. The study was completed with 319 women at the scheduled time for data collection. For the research, post-hoc power analysis was performed using the G-Power version 3.1 statistical program. It was determined that for the chi-square test in a single group, a medium effect size of 0.30 and a significance level of 0.05, -0.996% power was reached.

Inclusion criteria

- Women aged between 18 and 49 years who were of childbearing age and accepted the study.
- Were literate and had internet access.
- Had an active sexual life.
- Volunteered to participate in the study.

Exclusion criteria

- Diagnosed sexual dysfunction.
- Diagnosed psychiatric disease.
- Antidepressant use.
- Experienced trauma in the last year.

Data were obtained through online surveys with women who met the sample selection criteria across Turkey.

Data collection tools

Data were obtained using the “Survey Form”⁹⁻¹¹ consisting of multidimensional questions and the “Female Sexual Functions Index” (FSFI).

Survey Form was created with a total of 21 questions, 4 of which were about the sociodemographic characteristics of women, 3 about their obstetric history, 4 about their sexual behavior in the COVID-19 period, and 10 questions about the family planning characteristics in the COVID-19 period.

FSFI is a 19-item Likert-type scale that evaluates the sexual dysfunction of women in the last 4 weeks. Its validity and reliability were determined by Rosen et al. (2000). The Turkish validity and reliability analysis of the scale was performed by Aygin and Aslan in 2005¹². The Cronbach's alpha coefficient of the scale, which was adapted into Turkish, was found to be 0.95, and the test-retest reliability was between 0.75 and 0.95. This scale has six sub-dimensions: desire, arousal, lubrication, orgasm, sexual satisfaction, and pain, and a higher score from the scale means better sexual function. In this study, the internal

consistency of the question items and a Cronbach's alpha coefficient for each item were calculated. Cronbach's alpha value is 0.83. Cronbach's alpha values for FSFI sub-dimensions were as follows: alpha desire: 0.723, arousal: 0.911, lubrication: 0.818, orgasm: 0.922, satisfaction: 0.787, and pain: 0.952. As a result of the factor analysis on the items, the adequacy of the sample and the sphericity of the data were found to be significant (KMO: 0.829, $\chi^2(78)=1360.94$; Bartlett test of sphericity (p)=0.000). The fact that the results are similar shows that the data were collected online and that the women reflected the situation while giving the answers.

Evaluation

The data were evaluated with the statistical package program (Statistical Package for the Social Sciences for Windows SPSS version 21.0) in computer environment. Results from descriptive statistics were presented as mean, number, and percentage. In the comparative analyses, independent t-test was used for normal distributions, and Mann-Whitney U, two-way analysis of variance, and multiple regression analysis were performed for non-normal distributions. Statistical significance level was accepted as $p < 0.05$.

Ethical aspect of research

Ethics committee approval was obtained for the study from the non-interventional clinical research Ethics Committee (dated March 14, 2021, and numbered E.4646). The principles of the Declaration of Helsinki were complied with in the study. An informed consent form was added to the first page of the online questionnaires and the women were informed about the purpose and confidentiality of the research. Women who signed the “I agree” option at the end of the first page accepted that their consent was obtained and could proceed to the next page, while those who chose the “I do not agree” option were not allowed to answer the survey.

RESULTS

A total of 319 women with mean age 31.12 ± 8.05 years, number of pregnancies 1.25 ± 1.818 , time of marriage years 3.72 ± 1.20 , and number of births 1.14 ± 1.2 were included in the study. In addition, 49.21% of the participants had a university or higher education level, 81.8% did not work in any job, 58.0% had medium socioeconomic status, 89.0% lived in a nuclear family, and 38.9% never gave birth (Table 1).

Table 1 presents a comparison of information on family planning and sexual intercourse status of women before and after COVID-19. When we look at the frequency of sexual intercourse after COVID-19, it is seen that there is a decrease in

the frequency of sexual intercourse ($p=0.0034$) (Table 1). Table 2 shows the analysis of the relationship between the continuous variables of women's sexual function status. According to the analysis, there is a weak and negative relationship between total FSFI score and age, number of pregnancies, and years of marriage ($r: -0.119, -0.043, -0.074$) ($p\leq 0.01$) (Table 2).

Table 1. Comparison of participant's responses about family planning and sexual relationship status before and after the COVID-19 pandemic.

	Before COVID-19 (%)	After COVID-19 (%)	p-value
FP method usage			
Yes	160 (50.2)	117 (36.67)	0.002
No	159 (49.9)	202 (63.32)	
Difficulty with FP access			
Yes	45 (14.11)	149 (46.77)	0.004
No	274 (85.89)	173 (54.23)	
Where FP is procured			
FHC	201 (63.0)	100 (31.34)	0.078
Hospital	36 (11.2)	29 (9.09)	
Private polyclinic	46 (14.4)	48 (15.04)	
Market/pharmacy	36 (11.3)	106 (33.22)	
Change in FP requirement			
Yes	10 (3.14)	114 (35.7)	0.0032
No	309 (96.86)	205 (64.3)	
Change in FP method use			
Yes	17 (5.3)	189 (59.24)	0.0017
No	302 (94.7)	130 (40.75)	
The method he uses as an FP			
IUD	10 (3.13)	9 (2.82)	0.022
Condom	75 (23.51)	67 (21.00)	
OCs	47 (14.73)	17 (5.32)	
Calendar	55 (17.24)	65 (20.37)	
Retraction	132 (41.37)	167 (52.35)	
Frequency of sexual intercourse			
None	0 (0.0)	13 (4.07)	0.034
1 per week	78 (24.45)	110 (34.48)	
2 per week	157 (49.21)	133 (41.69)	
3 or more per week	84 (26.33)	63 (19.74)	
Satisfaction with sexual intercourse			
Yes	207 (64.89)	187 (58.62)	0.082
No	112 (35.10)	132 (41.37)	

FP: family planning; FHC: family health center; IUD: intrauterine device; OC: oral contraceptive. Bold indicates significant p-value.

In Table 3, multiple regression analysis was performed to determine some variables that may affect the FSFI, namely, sexual function, of women with unmet family planning during the COVID-19 period. In the regression analysis, FSFI was used as the dependent variable, and the family planning method used during the pandemic period, the place where the method was accessed, the difficulty in accessing, and the method change were included in the model. According to the results of the regression analysis, when the significance level corresponding to the F-value is considered, it is seen that the established model is statistically significant. Four independent variables explain 3.3% of the variance in the dependent variable and the regression model is statistically significant ($p<0.005$). FP usage change in the COVID-19 period and required FP method status parameters had no significant effect on the model ($p>0.05$). In contrast, the difficulty in accessing FP methods and the parameters of the place available had a significant effect ($p<0.005$) in the COVID-19 period, which means that the difficulty in accessing the FP method and a one-unit increase in the reach parameter of the women's sexual orientation. It shows that it will lead to a 0.33 point increase in the probability of the function (Table 3).

DISCUSSION

The isolation process brought by COVID-19 may disrupt daily routines such as commuting to work, which takes half or sometimes the whole of the day, but it seems that this isolation process may allow people to spend more time with their partner and thus experience sexual activity more regularly¹³⁻¹⁵. But the quarantine measures were taken during the epidemic. It is possible to say that it negatively affects sexual relations. In general, it is stated in the studies that both sexual activities and sexual satisfaction of men and women decrease during the COVID-19 epidemic^{16,17}.

During the pandemic period, when people distanced themselves from each other due to social distance, there is a decrease in the frequency of sexual activity along with sexual reluctance. In a study conducted with 868 people in England, it was reported that 60.1% of the participants were not sexually active during self-isolation/social distancing. It was stated that the number of sexual activity was significantly higher in men than in women ($p=0.002$). Variables that are significantly associated with sexual activity are being male and young, being married or living with a family, consuming alcohol, and increasing days of isolation⁷. In a study conducted in China, it was stated that 25% of the participants experienced a decrease in sexual desire, 44% had a decrease in the number of sexual partners, and men had

Table 2. Relationship between women’s continuous variables and female sexual functions index.

	Mean±SD	FSFI		Request		Arousal		Lubrication		Orgasm		Satisfaction		Pain	
		r	p	r	p	r	p	r	p	r	p	r	p	r	p
Age (years)	31.12±8.05	-0.175	0.002	-0.175	0.002	-0.098	0.024	-0.047	0.041	-0.018	0.075	-0.082	0.014	-0.146	0.009
Marriage time (year)	3.72±1.20	-0.074	0.020	-0.156	0.005	0.464	0.014	-0.052	0.036	-0.010	0.085	-0.042	0.046	-0.030	0.059
Number of pregnancy	1.25±1.81	-0.043	0.045	-0.072	0.023	-0.019	0.079	-0.052	0.036	0.026	0.065	-0.073	0.019	-0.011	0.050
Number of births	1.14±1.20	-0.007	0.090	-0.116	0.039	-0.019	0.073	0.080	0.016	0.074	0.019	-0.017	0.076	-0.033	0.055
Number of children	1.13±1.18	-0.011	0.084	-0.119	0.034	-0.020	0.072	0.082	0.014	0.066	0.024	-0.024	0.069	-0.030	0.059

FSFI: female sexual functions index; r: pearson. Bold indicates significant p-value.

Table 3. Multiple regression analysis of female sexual health status by characteristics related to family planning method use in the COVID-19 period.

Dependent variable	Independent variable	β	Standard error	β	t	p	VIF	F	Model (p)	R ²	Durbin Watson
FSFI	Constant	31.969	14.343	-	2.229	0.027*	-	3.541	0.008*	0.033	1.989
	Change in FP method use in the COVID-19 period	1.366	4.882	.016	0.280	0.051*	1.062				
	Change in need for FP method use in the COVID-19 period	-4.034	2.224	-0.105	-1.814	0.071*	1.023				
	Difficulty in accessing the FP method in the COVID-19 period	14.150	6.131	0.136	2.308	0.022*	1.069				
	The place reaching the FP method in the COVID-19 period	1.965	0.824	0.135	2.348	0.020*	1.026				

FSFI: female sexual functions index; VIF: variance inflation factor. Bold indicates significant p-value.

a lower decrease in the number of sexual partners than women (53% vs. 30%). In addition, 32% of men and 39% of women stated that they also experienced a decrease in sexual satisfaction, and most of the participants with a history of risky sexual experiences also stated that risky sexual behavior acts decreased after the COVID-19 epidemic¹⁸. In this study, it was seen that there was a significant relationship between the fear of becoming pregnant during the COVID-19 period and the FSFI scores of the participants (p=0.005), and the FSFI score averages of the participants who were not afraid of becoming pregnant were higher. In a study examining the sexual functions of women during the pandemic, it was reported that while 32.7% of the participants wanted to become pregnant before the pandemic, this rate decreased by 5.1% during the pandemic (p=0.001). In the same study, it was determined that the use of contraception during the pandemic decreased significantly among the participants compared to the previous one¹⁹. Different findings

on the subject have been found in the literature. This suggests that sexuality is multifactorial and affected by many factors.

In order not to increase the burden of unwanted pregnancies on the health system, it is necessary to continue the provision of family planning consultancy services as much as possible during the pandemic process^{17,20}. The United Nations Population Fund (UNFPA) states that during the current pandemic period, more than 47 million women may not have access to modern family planning methods, and therefore, significant unwanted pregnancies may occur⁴. In this study, it was seen that there was a significant relationship between having difficulty in reaching the family planning method in COVID-19 and FSFI scores, and the FSFI scores of the participants who had no difficulties in reaching it were higher. In the research, it was determined that the risk of infection transmission in health institutions decreased, the applications to family planning services decreased, there was a significant

decrease in the use of modern family planning during the pandemic process, and there was more disruption in family planning counseling in the public sector compared to the private sector²¹⁻²³. The regression analysis performed in this study showed that difficulty in accessing the family planning method would lead to a 0.33 point increase in the probability of female sexual function. In a study conducted in India, there was a 36% decrease in the use of injectable birth control methods during the pandemic process, and a 21% decrease in the insertion of an intrauterine device (IUD). Similarly, combined oral contraceptive use decreased by 15% and condom use by 23%. These figures have been an indicator of family planning services that could not be met during the pandemic process in the country¹¹. In cases where women apply to health institutions (e.g., pregnancy termination and delivery), effective family planning counseling should be given before discharge. Reproductive health services, which will affect the health of individuals and society in the long term, should be carried out in a controlled manner. In the pandemic process, practices such as providing individuals with access to family planning methods, continuing to provide services such as counseling and curettage in isolated centers, and providing consultancy with distance education are recommended to prevent the long-term public health problems^{6,22,23}. With the results of the research, it was thought that access to family planning was reported as a problem, as in many countries in

the world. Providing birth control methods and counseling to all men and women who request it is an important step in overcoming the pandemic process with the least damage.

CONCLUSIONS

The COVID-19 pandemic lockdown has disrupted access to contraceptives in Turkey, thus changing the dynamics of the unmet need for family planning. Individuals who initially used a modern method of contraceptive now lack access to their contraceptive method of choice for several reasons, including the fear of visiting health care facility, shutdown of drug/chemist stores, restriction of movements, and lack of access to health care providers. As a result, it was observed in the study that women of childbearing age living in Turkey restricted their access to family planning services during the pandemic and the sexual functions of women who were afraid of becoming pregnant were negatively affected.

AUTHORS' CONTRIBUTIONS

AYK: Conceptualization, Data curation, Formal analysis, Investigation, Methodology, Project administration, Resources, Supervision, Validation, Visualization, Writing – original draft. **FŞB:** Data curation, Investigation, Resources, Software, Validation, Visualization, Writing – review & editing.

REFERENCES

1. World Health Organization. Coronavirus disease (COVID-19) pandemic. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
2. Ahmed Z, Sonfield A. The COVID-19 outbreak: potential fallout for sexual and reproductive health and rights [Internet]. Guttmacher Institute; 2020. [cited on Jun. 4, 2020]. Available from: <https://www.guttmacher.org/article/2020/03/covid-19-outbreak-potential-fallout-sexual-and-reproductive-health-and-rights>
3. HASUDER Gender and Women's Health Working Group. Novel coronavirus disease (COVID-19) outbreak and unwanted pregnancies. Istanbul Tabip Odasi; May 6, 2020. [Internet]. [cited on Jun. 4, 2020]. Available from: <https://www.istabip.org.tr/5807-yeni-koronavirus-hastaligi-COVID-19-salginiveistenmayan-gebeliks.html>
4. United Nations Population Fund. The impact of the COVID-19 epidemic on efforts to end gender-based violence, female genital mutilation, child marriage and family planning. [Internet] 2020 [cited on Jun 4, 2020]. Available from: https://www.unfpa.org/sites/default/files/resource-pdf/COVID_19_impact_brief_for_UNFPA_24_April_2020_1.pdf
5. Todd-Gher J, Shah PK. Abortion in the context of COVID-19: a human rights imperative. *Sex Reprod Health Matters*. 2020;28(1):1758394. <https://doi.org/10.1080/26410397.2020.1758394>
6. Serhatlıoğlu SG, Göncü N. COVID-19 and its reflections for family planning services. *Bandırma Onyedü Eylül University Journal of Health Sciences and Research*. 2020;2(3):184-91. <https://doi.org/10.46413/boneyusbad.779111>
7. Jacob L, Smith L, Butler L, Barnett Y, Grabovac I, McDermott D, et al. Challenges in the practice of sexual medicine in the Time of COVID-19 in the United Kingdom. *J Sex Med*. 2020;17(7):1229-36. <https://doi.org/10.1016/j.jsxm.2020.05.001>
8. National Health Service. Advice for people at high risk from coronavirus (COVID-19). [Internet]. 2020 [cited on Jun. 4, 2020]. Available from: <https://www.nhs.uk/conditions/coronavirus-covid-19/people-at-higher-risk/advice-for-people-at-high-risk/>
9. Mousavizadeh L, Ghasemi S. Genotype and phenotype of COVID-19: their roles in pathogenesis. *J Microbiol Immunol Infect*. 2021;54(2):159-63. <https://doi.org/10.1016/j.jmii.2020.03.022>
10. Riley T, Sully E, Ahmed Z, Biddlecom A. Estimates of the potential impact of the COVID-19 pandemic on sexual and reproductive health in low- and middle-income countries. *Int Perspect Sex Reprod Health*. 2020;46:73-6. <https://doi.org/10.1363/46e9020>
11. Vora KS, Saiyed S, Natesan S. Impact of COVID-19 on family planning services in India. *Sex Reprod Health Matters*. 2020;28(1):1785378. <https://doi.org/10.1080/26410397.2020.1785378>

12. Aygün D, Eti Aslan F. Turkish adaptation of female sexual function scale. *Turkey Clinics J Med Sci.* 2005;25(3):393-9. Available from: <https://www.turkiyeklinikleri.com/article/tr-kadin-cinsel-islev-olceginin-turkceye-uyarlamasi-36254.html>
13. Unal B, Gülseren L. The hidden side of COVID-19 pandemic: domestic violence. *J Clin Psy.* 2020;23(1):89-94. Available from: <https://klinikpsikiyatri.org/eng/jvi.aspx?un=KPD-37973&volume=23&supp=1>
14. Unal B, Gülseren L. The invisible face of the COVID-19 pandemic: domestic violence against women. *J Clin Psy.* 2020;23(1):89-94. Available from: <https://klinikpsikiyatri.org/eng/jvi.aspx?un=KPD-37973&volume=23&supp=1>
15. Demir R, Taspınar A. Reflections of coronavirus pandemic on women's life and health. *Current Approaches in Psychiatry.* 2021;13(4):779-89. <https://doi.org/10.18863/pgy.882529>
16. Şahin E, Satılmış IG. Sexuality and sexual health in the COVID-19 pandemic. *Androl Bul.* 2020;22:249-53. <https://doi.org/10.24898/tandro.2020.24392>
17. Bahamondes L, Makuch MY. Family planning: an essential health activity in the pandemic of SARS-CoV-2. *Eur J Contracept Reprod Health Care.* 2020;25(4):319-20. <https://doi.org/10.1080/13625187.2020.1768368>
18. Grabovac I, Smith L, Yang L, Soysal P, Veronese N, Isik AT, et al. The relationship between chronic diseases and number of sexual partners: an exploratory analysis. *BMJ Sex Reprod Health.* 2020;46(2):100-7. <https://doi.org/10.1136/bmjsex-2019-200352>
19. Yuksel B, Ozgor F. Effect of the COVID-19 pandemic on female sexual behavior. *Int J Gynaecol Obstet.* 2020;150(1):98-102. <https://doi.org/10.1002/ijgo.13193>
20. Serhatlıoğlu S, Göncü N. COVID-19 and its reflections on family planning services. *Bandırma Onyedi Eylül University Journal of Health Sciences and Research.* 2020;2(3):184-91. <https://doi.org/10.46413/boneyusbad.779111>
21. Favre G, Pomar L, Qi X, Nielsen-Saines K, Musso D, Baud D. Guidelines for pregnant women with suspected SARS-CoV-2 infection. *Lancet Infect Dis.* 2020;20(6):652-3. [https://doi.org/10.1016/S1473-3099\(20\)30157-2](https://doi.org/10.1016/S1473-3099(20)30157-2)
22. Ataş AN, Bay F, Kabakçı E. Midwife-focused approach to sexual and reproductive health problems in the COVID-19 pandemic. *Journal of Education and Research in Nursing.* 2021;18(Suppl):S26-S29. <https://doi.org/10.5152/jern.2021.17003>
23. Michael TO, Agbana RD, Ojo TF, Kukoyi OB, Ekpenyong AS, Ukwandu D. COVID-19 pandemic and unmet need for family planning in Nigeria. *Pan Afr Med J.* 2021;40:186. <https://doi.org/10.11604/pamj.2021.40.186.27656>

