

Effects of COVID-19 Lockdown on People's Sexual Lives in Turkiye

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What's known on the subject? and What does the study add?

Previous studies showed that negative effects such as anxiety, fear and depression due to COVID-19 lockdown might negatively affect sexual life. According to the data of this study conducted among Turkish participants, sexual deterioration was observed in 15% of the individuals. Additionally, this study demonstrated that while anxiety plays a role in women, the Marriage adjustment score was significant in married men.

Abstract

Objective: To evaluate the impact of coronavirus disease-2019 (COVID-19) lockdown on the sexual lives of couples who live in Turkiye.

Materials and Methods: One hundred ninety-three sexually active participants. While sexual functions were evaluated with the international erectile function index-15 in men and the female sexual function index in women, Hamilton anxiety scale (HAM) was used to measure anxiety level. Married people filled out the Marriage adjustment test (MAT) questionnaire. The effects of the quarantine period on the relationship were evaluated with a questionnaire created specifically for this study.

Results: Sexual improvement and worsening were observed in 8.8%, and 15%, respectively. It did not change for 76.2%. Sexually deteriorated subjects had a higher HAM score ($p=0.003$). The MAT score was lower in sexually deteriorated subjects ($p=0.004$). The rate of sexual worsening was higher in women than in men (28.6% vs. 12%, $p=0.02$). Women's HAM scores were higher ($p=0.002$). The MAT score was also found to be higher in women ($p=0.0037$). 58% of sexually deteriorated participants did not feel safe at home during the COVID-19 period, whereas all of those sexually improved participants felt safe at home.

Conclusion: During the COVID-19 lockdown period, sexual deterioration was detected in 15% of sexually active people. This worsening was associated with the HAM score. Additionally, it was revealed that feeling safe at home is related to sexual life. While the relationship between sexually worsening and the MAT score was significant in men, it was revealed that the level of anxiety in women affected sexual life more significantly.

Keywords: COVID-19, lockdown, sexual health

Introduction

While the coronavirus disease-2019 (COVID-19) pandemic is affecting the whole world, its social and psychological effects still continues. The first lockdown in Turkiye started on April 29, 2020 and lasted until May 17, 2020. Afterward, these lockdown

periods are repeated when case numbers reach threatening levels. Especially in the first half of the 2020, the lack of vaccines and uncertainties in the prognosis and treatment of the disease created negative effects such as widespread fear, anxiety, and depression in society at the time of the first lockdown (1,2). Additionally, social isolation, economic problems, fear of job

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loss, and many other factors have seriously affected people of all ages. Such a relationship between sexual life and severe stress has been reported in the previous studies and has been observed in this pandemic as well (3,4). A study from Italy examined the sexual life of couples during the first lockdown period and interestingly showed that sexual life was improved in most people (3). In this study, we evaluated how the sexual life of couples was affected during the first lockdown period in Türkiye.

Materials and Methods

This single-center, cross-sectional study was conducted between 10 and June 25, 2020. Ethics committee approval was obtained (2022.064.IRB1.033) and patient consent forms were filled out online. Participants over the age of 18 of both sexes who were sexually active and had been in a relationship for at least six months were included in the study. Individuals who were sexually inactive, living alone, COVID-19 positive, were excluded from the study.

For the study, an online questionnaire was designed in Google Form. The survey link was shared with all friend groups of the authors of this study with the help of social media accounts (Facebook™, Instagram™ Inc., Menlo Park, CA, USA) and communication applications (Whatsapp™, Inc., Menlo Park, CA, USA). Among the respondents, 193 participants who met the inclusion criteria were included in the study.

Demographic data (age, body mass index, gender, sexual orientation, occupation, marital status, education) of all participants were included in the survey. The female sexual function index (FSFI-19) (5) for women and the international erectile function index (IIEF-15) (6) for men were used to evaluate sexual functions. Married participants additionally completed the Marital adjustment test (MAT) questionnaire (7). All participants completed the Hamilton anxiety scale (HAM) (8) to measure their anxiety levels. Finally, a separate questionnaire created by the authors was used to examine the impact of the COVID-19 pandemic and the quarantine process on couples (Table 1). "Improvement of sexual life" was defined based on, the response to question 4: "Do you feel improvement in your sexual life during this period?" Participants who answered "a lot" or "too much" was accepted as "improvement of sexual life." While those who answered as "much" or "too much" the question "Do you feel that your sexual life has deteriorated during this period?" were defined as those whose sexual life deteriorated.

Statistical Analysis

Responses were downloaded and analyzed from Google Form. Categorical data were evaluated with Fisher's exact test, while

the Mann-Whitney U test was used to compare continuous variables that did not show normal distribution. Normally distributed continuous variables were evaluated with the t-test.

Results

Sexual improvement was observed in 17 (8.8%) of 193 participants and worsening in 29 (15%), no change in 147 (76.2%) of the 193 participants (Table 2). No significant differences were observed between these three groups in terms of age, gender, marriage rates, the duration of relationship and working area. The MAT score of the sexually worsened participants was found to be lower than people who had sexually improved and not-changed (40.2 ± 19.5 vs. 55.9 ± 10.2 vs. 49.5 ± 13.8 , $p=0.004$). The sexually worsened group had a higher HAM score (14.8 ± 13.5 vs. 5.2 ± 4.6 vs. 7.1 ± 8.1 , $p=0.003$) compared to those who improved and did not change. This difference was more significant when comparing their sex life as very improved to those who described their sex life as "much worse" (18.2 vs. 2.8 , $p<0.001$).

The rate of sexually worsening was higher in women than in men (28.6% vs. 12% , $p=0.02$) (Table 3). Although the rate of sexual improvement was higher in women than in men, no statistical difference was found (17.1% vs. 7% , $p=0.09$). There was no improvement or worsening in the sexual life of 81% of men and 54.3% of women ($p=0.002$). Women's HAM score was higher than men's. (12.2 ± 10.3 vs. 7.2 ± 8.87 , $p=0.002$). The

1. Do you feel safe at home?
2. Do you feel safe outside the home?
3. Do you think that your sex life as a couple has deteriorated during this period?
4. Do you think that your sex life as a couple has improved during this period?
5. Do you feel safe with your partner at home?
6. Do you feel dissatisfied with your partner at home?
7. Do you feel happy with your partner at home?
8. Do you feel uncomfortable with your partner at home?
9. How comfortable do you feel with your partner at home?
10. How satisfied do you feel with your partner at home?
11. Do you think that your couple problems have decreased during this period?
12. Do you feel unhappy with your partner at home?
13. Do you think that your couple problems have increased during this period?
14. Do you feel more nervous towards your partner during this period?
15. Do you feel more calm towards your partner during this period?
Responses: "No"- "Not Much"- "So and So" -"Much" - "Very Much", COVID-19: Coronavirus disease-2019

MAT score was also found to be higher in women (56.7 ± 6.7 vs. 47.3 ± 15.5 , $p=0.0037$). MAT scores among sexually worsened, improved, and unchanged participants were 40.2 ± 19.4 , 55.9 ± 10.2 , and 49.5 ± 13.8 ($p=0.04$). The MAT score of sexually worsened men was lower than those who improved and did not change (31.5 ± 18.1), (57.4 ± 11.3 , 48.8 ± 13.9 , $p<0.0001$). There was no difference between those who continued to work and others (flexible working, retired, unemployed) in terms of changes in their sexual lives (Table 4).

Although the rate of married people was higher in the sexually worsened group compared to the sexually improved group (82.8% vs. 70.6%), no significant difference was observed ($p=0.33$). The rate of those who felt safe outside the home was similar between the two groups (27.6% and 35%, respectively). However, while the rate of people who felt safe outside the home in the sexually worsened group was 58%, all people from the sexually improved group felt safe at home (100%).

Discussion

This study was planned as the Turkish version of the original study conducted in Italy (3). The survey questions were translated into Turkish and conducted as a separate study in Türkiye with the approval of the authors of the original article. Both populations were mostly similar in terms of demographics (age, marital status, duration of relationship, education level, working life), although there were some differences. In our study, men were in the majority. Additionally, while most our participants stated that their sexual life was not affected during this period, 8.8% said it improved and 15% stated that it worsened. In the study conducted in Italy, these rates were 22%, 49%, and 29%, respectively. Compared to our study, the percentage of patients in the original study whose sexual lives had worsened was similar, while the percentage of patients whose sexual lives had improved was much higher.

	Worsening n=29 (15%)	Improvement n=17 (8.8%)	No change n=147 (76.2%)	p-value
Age	42.6±11.6	37.4±7.4	43±11.3	0.14
BMI	26.1±4.6	23.7±3.4	26±3.2	0.054
Gender				
Female n (%)	10 (34.5)	6 (35.3)	19 (12.9)	0.004
Male n (%)	19 (65.5)	11 (64.7)	128 (87.1)	
Sexual orientation				
Heterosexual n (%)	26	16	144	
Homosexual n (%)	1	1	1	
Bisexual n (%)	2	0	2	
Sex n (%)	16 (55.2)	9 (52.9)	107 (72.8)	0.06
Married n (%)	24 (82.8)	12 (70.6)	119 (81)	0.55
Cohabitants n (%)	24 (82.8)	11(64.7)	122 (83)	0.42
Years of stable relationships				
<5 years n (%)	9 (31)	9 (53)	29 (19.7)	0.002
>5 years n (%)	20 (69)	8 (47)	118 (80.3)	
Occupation				
Student n (%)	0	0	0	
Retired n (%)	3 (10.3)	0	12 (8.1)	
Unemployed n (%)	0	2 (11.7)	1 (0.7)	
Working at the usual workplace n (%)	16 (55.2)	8 (47.1)	71 (48.3)	
Smart working n (%)	10 (34.5)	7 (41.2)	63 (42.9)	
Questionnaire				
IIEF (mean, SD)	44.3±23	67.6±7.7	61.1±16.4	<0.001
FSFI (mean, SD)	36.7±28.09	76.1±4.1	69.4±24.1	0.001
MAT (mean, SD)	40.2±19.4	55.9±10.2	49.5±13.8	0.004
HAM (mean, SD)	14.8±13.5	5.2±4.6	7.1±8.1	0.003
BMI: Body mass index, IIEF: International index of erectile function, FSFI: Female sexual function index, MAT: Marital adjustment test, HAM: Hamilton anxiety scale, SD: Standard deviation				

In the same study, it was also reported that the couples who showed improvement in their sexual lives were happier and more satisfied when they were at home, and the increase in the time they spent together and the number of things they had in common was an important factor in this. However, being unemployed, working from home, and having children were identified as risk factors for people whose sexual life worsened. For those who had children, homeschooling via the internet was found to be effective as the time allocated to children at home increased while the time that couples could spare for each other decreased. In our study, we found that variables such as gender, marital status, relationship time, and work-life balance were similar when comparing participants whose sexual life worsened

and those who improved. We also observed that the HAM score of the sexually worsening group was higher than that of the sexually improved and unchanged groups. Previous studies have showed that factors such as stress, fear, and anxiety decrease sexual desire, frequency of intercourse, orgasm, and libido (9-12). In Constantini et al's (3) study, the authors indicated that the sexual life of people who have problems such as fear, anxiety, and depression caused by COVID-19 and lockdown was worsened. Interestingly, in our study, when compared to the sexually worsened and improved groups, the rate of those who felt safe outside home was similar, while the rate of those who did not feel safe at home was significantly higher in the sexually worsened group. In this study, which was conducted in the

	Female n=35	Male n=158	p-value
Age	36.5±10.3	43.7±10.8	<0.001
BMI	22.4±3.1	26.6±3.1	<0.001
Sexual orientation			
Heterosexual n (%)	35 (100)	151 (95.6)	
Homosexual n (%)	0	3	
Bisexual n (%)	0	4	
Son n (%)	8 (22.9)	124 (78.5)	<0.001
Education			
Primary school n (%)	0	1 (0.6)	
Secondary school n (%)	0	1 (0.6)	
High school n (%)	2 (5.7)	5 (3.2)	
Graduate school n (%)	33 (94.3)	151 (95.6)	
Occupation			
Student n (%)	0	0	
Retired n (%)	2 (5.7)	13 (8.2)	
Unemployed n (%)	5 (14.3)	5 (3.2)	
Working at the usual workplace n (%)	17 (48.6)	74 (46.8)	
Smart working n (%)	11 (31.4)	66 (41.8)	
Cohabitants n (%)	25 (71.4)	132 (83.5)	0.095
Married n (%)	21 (60)	134 (84.8)	0.002
Stable relationship			
<5 years n (%)	13 (37.1)	34 (21.6)	0.108
>5 years n (%)	22 (62.9)	124 (78.4)	
Questionnaire			
IIEF (mean, SD)	-	59.6±17.8	0.0037
FSFI (mean, range)	61.2±27.4	-	
MAT (mean, SD)	56.7±6.7	47.3±15.5	
HAM (mean, SD)	12.2±10.3	7.2±8.87	
Sexual improvement n (%)	6 (17.1)	11 (7)	0.09
Sexual worsening n (%)	10 (28.6)	19 (12)	0.02
No change n (%)	19 (54.3)	128 (81)	0.002

BMI: Body mass index, IIEF: International index of erectile function, FSFI: Female sexual function index, MAT: Marital adjustment test, HAM: Hamilton anxiety scale

initial time of the COVID-19 pandemic, when the vaccine was not administered and there were several ambiguities about the disease, the risk of transmission from the partner at home and the fear and anxiety may have negatively affected sexual life. Mollaioli et al. (13) found that 50% of sexually active people quit their sexual activities during restrictions. The authors attributed this to two reasons: The first is the stress disorder caused by the quarantine, and the second is the difficulty in reaching their partners. Moreover, the researchers observed that people who could maintain their sexual activity had lower anxiety and depression scores compared to those without sexual activity. It has been shown in this study and other studies that anxiety and mood scores of women were affected more than men during the COVID-19 period, and its effects on sexual life were greater (13-17). In our study, the HAM score of women was higher than that of men. In line with this, more sexual worsening was observed in women than in men.

It has been shown that people with higher MAT scores feel more secure and connected in their relationships and have less relationship anxiety (18). Also, previous studies have shown the relationship between MAT and sexual life (3,19). In Constantini et al.'s (3) study, the MAT score of those whose sexual life worsened during lockdown was also lower, as in our study. Although the mean MAT scores of women in our study were higher than that

of men, the relationship between MAT scores and changes in women's sexual lives could not be demonstrated. In men, on the other hand, the MAT score was significantly lower in sexually worsened subjects than in the others. A study from Türkiye has exhibited a significant relationship between women's MAT scores and their sexual lives (20). However, in our study, the high anxiety caused by the pandemic in women probably worsened their sexual life regardless of the MAT score. According to these data, it can be said that while the relationship between the MAT score and sexual life in men is obvious, the anxiety factor plays a more critical role in the sexual life in women. Previous studies have demonstrated the effects of unemployment and dismissal on depression and anxiety symptoms (21-24). In our study, however, the effect of job status on HAM score and sexual life was not observed. This may be presumably because the people who participated in our study were mostly healthcare professionals, and in this respect, they could maintain their current job positions during this period and did not have the fear of being dismissed. In our study, the participants whose sexual life was not changed represent the majority, and this can be explained by the same reason.

The fact that many employees and employers have switched to work from home during the COVID-19 period has increased the time spent with a partner at home. However, people experience

Table 4. Comparison of participants according to working conditions

	Working at the usual workplace n=91	Smart working/unemployed/ retired/student n=102	p-value
Age	41.6±10.5	43.2±10.2	<0.05
>40 years (mean, SD)	44 (48.4)	47 (46.1)	
<40 years (mean, SD)	47 (51.6)	55 (53.9)	
Gender			
Female	17 (18.6)	18 (17.7)	<0.05
Male	74 (81.4)	84 (82.3)	
Son	65 (71.4)	67 (65.7)	<0.05
Married	76 (83.5)	79 (77.4)	<0.05
Cohabitans	77 (84.6)	80 (78.4)	<0.05
Stable relationship			
<5 years n (%)	19 (20.9)	28 (27.5)	<0.05
>5 years n (%)	72 (79.1)	74 (72.5)	
Questionnaire			
IIEF (mean, SD)	60.9±16.6	58.5±12	<0.05
FSFI (mean, SD)	63.4±24.9	58.2±29.6	<0.05
MAT (mean, SD)	42.9±13.5	42.8±12.5	<0.05
HAM (mean, SD)	7.5±8.6	8.5±9.1	<0.05
Sexual worsening	16 (17.6)	13 (12.7)	<0.05
Sexual improving/no change	75 (82.4)	89 (87.3)	

IIEF: International index of erectile function, FSFI: Female sexual function index, MAT: Marital adjustment test, HAM: Hamilton anxiety scale

social restrictions. During this period, cultural and artistic activities at places such as cinemas, theaters, museums and performance centers stopped. Also, accessibility to places that allow people to come together, such as cafes and restaurants, was limited. Even going outside the house was restricted. In such a socially weakened period, the excess of negative psychological factors is expected to negatively affect sexual life. This study reflects the results of a survey conducted during the first months of the COVID-19 period. At currently, the period of COVID-19 has shaken the whole world both psycho-socially and economically. It should be investigated whether these staggering changes will have long-term negative effects on sexual lives.

Study Limitations

Our study has several limitations, such as: The small number of patients, the obvious difference between female and male participant rates, the fact that all those who filled out the questionnaire were limited to health professionals and friends, and the fact that HAM and MAT scores of the pre-pandemic period are not known. The lack of information regarding the underlying conditions of the patients in the study was another limitation. We were also unable to fill out a questionnaire that allowed us to examine the patients' pre-pandemic sexual life. However, we requested only sexually active people to fill out the questionnaire.

Conclusion

We found that the rate of sexually deteriorated participants during the first lockdown period of the pandemic was 15%. We also observed that those people had higher anxiety scores during this period and that not feeling safe at home was an effective factor in this. While the relationship between men whose sexual life deteriorated and the MAT score was obvious, the level of anxiety in women had a more significant effect on their sexual life.

Ethics

Ethics Committee Approval: Ethics committee approval was obtained (Koç University Ethics Committee, date: 28.03.2022, approval number: 2022.064.IRB1.033).

Informed Consent: Informed consent was obtained from all the patients.

Peer-review: Externally peer-reviewed.

Authorship Contributions

Concept: M.K., T.T., E.I., E.C., Design: E.I., E.C., Data Collection or Processing: M.K., E.K., F.Te., T.T., Analysis or Interpretation: M.K., T.T., Literature Search: M.K., Writing: M.K., F.Te., E.C., F.T., T.T.

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