



ORIGINAL PAPER

The relationship between the COVID-19 pandemic and the sexual life quality of nurses

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ABSTRACT

Introduction and aim. Sexuality is one of the basic human needs. The coronavirus has adversely affected every aspect of people's lives. The nurses who were in the closest contact with the patients were affected more negatively due to the many unknowns during the COVID-19 pandemic. Aim of this study is to determine the relationship between the COVID-19 pandemic and the sexual quality of life of nurses.

Material and methods. The sample of this descriptive-cross-sectional study consisted of 390 nurses who met the inclusion criteria. The data were collected over the social networks between November 2020-January 2021. The data were collected through social networks using the "Personal Information Form" and "Quality of Sexual Life Scale-Women" using the self-report method.

Results. The mean age of the nurses was 32.44 ± 6.83 , and 59.2% of them had a university level education. The mean score of the women's sexual quality of life scale was calculated as 87.37 ± 20.83 . It has been determined that there is a statistically significant difference between the scores obtained from the sexual life quality scale according to the status of the nurses having ($p < 0.05$).

Conclusion. In the COVID-19 pandemic, it was determined that the sexual life quality of nurses was above the medium level and their sexual life was adversely affected.

Keywords. COVID-19, nurse, pandemic, sexuality

Introduction

The coronavirus disease (COVID-19), which emerged in Wuhan, China in late 2019, has affected almost all countries, especially starting from European countries such as Italy and Spain.¹ COVID-19, a member of the coronavirus family and discovered recently, is transmitted from the droplets of sick individuals or from contaminated surfaces by touching the mouth and throat mucosa. Due to its easy and rapid transmission, it has affected many people all around the world. More than 30 million people in the world and more than 314.000 people in Turkey have been infected with the coronavirus disease.^{2,3}

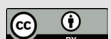
Nurses have been playing a leading role in meeting the care needs of the society since the beginning of the COVID-19 pandemic, as in many wars, disasters and epidemics in history. Like all diseases, it is highly significant to determine the care priorities of patients diagnosed with COVID-19, to provide a holistic and individualized nursing care, to meet the psychosocial needs of the patients and to make them feel safe.⁴

Sexuality, which is stated to be one of the basic human needs and considered as a significant part that affects the lives of all individuals from birth to death, is an important factor that affects individuals biopsychosocially. Human behaviours and sexuality are influenced

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by physical, psychological and social conditions. Therefore, sexuality cannot be considered separately from the physical, socioeconomic and cultural factors in which an individual lives. Sexuality, a concept peculiar to the individual, is an integral part of human life. A healthy sexual life is one of the most important parameters for health and quality of life.⁵⁻⁷

Sexuality is affected by the factors such as trust of spouses/partners to each other, communication between partners, determination of the right place and time and providing a safe environment for sexual life, receiving and giving sexual pleasure, lack of education and knowledge on sexuality, false beliefs about sexual life, physical diseases, drugs, surgeries, alcohol, drug abuse, sexual abuse and rape, sexual orientation and gender identity problems, loss of interest to the partner, individuals growing up in extremely conservative and protective environments.^{8,9} During the pandemic, many factors such as busy working pace of nurses in the field, inability to meet with their beloved ones for the fear of transmitting virus, stress, and the lack of an exact treatment for the virus may have had different effects on the sexual life of the individuals.

There have been many changes in almost every aspect of human life with the pandemic.¹⁰ Sexuality is one of the basic needs of life and is affected by many biopsychosociocultural factors.¹¹ It will be an expected result that nurses' sexual quality of life will change during the pandemic period when considered that the nurses, who belong to a professional occupation group, have humanitarian needs as well. There have been no study in Turkey examining the nurses' sexual quality of life during COVID-19 pandemic.

Aim

This study, it was aimed to determine the relationship between the COVID-19 pandemic and the nurses' sexual quality of life.

Material and methods

Study design and participants

This research is a cross-sectional study. The population of the study was composed of female nurses working in health institutions. The minimum number of individuals that should be included in the sample of the study was calculated using the formula of sample whose population was unknown ($n=t^2.p/q/d^2$) and it was found to be 385 at a 95% confidence interval ($d=0.05$, $t=1.96$, $p=0.5$, $q=0.5$). This study consisted of 390 nurses who were female between the ages of 18-65 and married, who were working as a nurse, who were not pregnant and who volunteered to participate in the study.

Data collection tools

In the data collection, the "Personal Information Form" prepared by the researchers and questioning socio-de-

mographic characteristics, and the "Sexual Quality of Life Scale-Female", validity and reliability of which were performed by Tuğut and Gölbaşı, were used. In the Personal Information Form, there were 27 questions related to the socio-demographic characteristics (such as age, educational status, educational status of the spouse, region of residence, working shift, number of children, family type), medical and sexual life of the nurses.

The Sexual Quality of Life Scale-Female consists of 18 items and is in a 6-point Likert type (1 = I totally agree, 2 = I strongly agree, 3 = I partially agree, 4 = I partially disagree, 5 = I strongly disagree, 6 = I do not agree at all). The Cronbach α reliability coefficient of the scale is 0.83. In the original of the scale, it is stated that each item can be scored between 1-6 or 0-5. If the questions of the scale are calculated according to the 1-6 scoring system, the minimum score to be obtained from the scale is 18 and the maximum score is 108. The items numbered 1, 5, 9, 13, and 18 in the scale need to be scored by reversing their scores. In order to the total scale score's being turned into 100, (raw score obtained from the scale-18) x 100 / 90 formula need to be used. The high scores obtained from the scale indicate that the quality of sexual life is good.¹² The data were collected with self-report method by sharing the question form which was prepared using www.surveeey.com between 24 November 2020 and 17 January 2021 via social networks (WhatsApp, Twitter, Facebook, Instagram, e-mail, etc.). The contact numbers of the researchers were shared for probable questions before the research. After the purpose and significance of the study had been explained, the participants were asked to approve their participation in the study. After confirming to participate in the study, the questions appeared on the screen. In addition, in order to prevent data loss, the participants were not allowed to see the following question before they answered a question and to complete the research. It took an average of 10 minutes to answer the questionnaire. The flowchart of the research is shown in Figure 1.

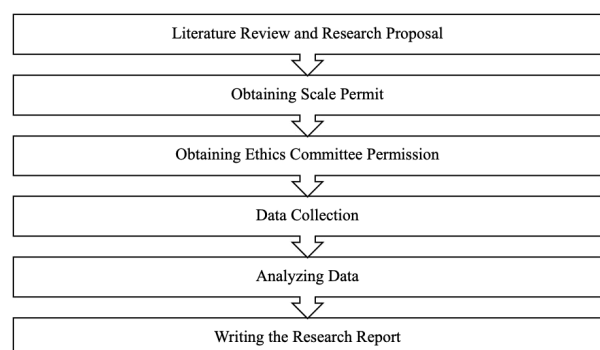


Fig. 1. Research flow chart

Ethical considerations

Written permission was obtained from the Bartın University Social and Human Sciences Ethics Committee

before starting the research (Date: 05.11.2020, No: 2020-SBB-0236). Research questions were uploaded to www.survey.com after obtaining permission from the ethics committee. The consent forms of participants were received to see whether they would participate in the questionnaire or not, and those who agreed to participate in the study were allowed to continue to fill out the forms.

Statistical analysis

Research data were analysed with IBM SPSS V23 program (IBM, New York, USA). Descriptive statistics such as frequency, percentage, arithmetic mean, and standard deviation were used in the evaluation of the data. With the Kolmogorov-Smirnov test, it was found that the data were not normally distributed. In the analysis of the data, Mann-Whitney U test was used to compare parameters that did not show a normal distribution. In the comparison of quantitative data, in case of more than two groups, the Kruskal-Wallis test was used for the comparison of parameters between groups, and the Mann-Whitney U test was used for the determination of the group that caused the difference. The reliability level of the scale was calculated with the Cronbach's alpha value, and $p < 0.05$ level was considered significant in the comparisons.

Results

The mean age of the nurses is 32.44 ± 6.83 (min.: 21, max.: 49) and education level of 59.2% is university. 25.9% of the nurses participating in the study live in the Aegean Region, 21.8% in the Central Anatolia Region and 95.4% have a nuclear family structure. 68.2% of nurses work both day and night (Table 1). 26.2% work in the intensive care unit, 9.5% in the emergency service, and the others in units such as inpatient services and polyclinics. 69.7% of the nurses' spouses are university graduates and have a regular job (74.4%). 67.2% of the nurses have children and 35.1% of them live separately from their children during the pandemic (Table 1).

31.8% of the nurses had a chronic illness and 27.9% of them took medicine continuously. 20.3% of the nurses were infected with COVID-19 and 16.2% of them took medicine during that period. Almost a quarter (23.3%) of the nurses received days-off/health report due to the pandemic (Table 2). The duration of days-off varied between 3 days and 5 months.

4.6% of the nurses stated that they were pregnant in the pre-pandemic period, 8.2% of them got pregnant during the pandemic, and 24.9% did not think of becoming pregnant during the pandemic. When the effect of COVID-19 disease on sexual life in the pandemic was examined, it was found that the sexual life of 17.9% of the nurses changed a lot and 35.1% changed slightly. The

Table 1. Distribution of the sociodemographic variables (n=390)*

| Sociodemographic Variables | | n (%) | ±SD |
|-------------------------------|-----------------------------|------------|-------|
| Age | 21–30 | 196 (50.3) | 0.5 |
| | 31–49 | 194 (49.7) | |
| Educational Status | High School | 52 (13.3) | 0.868 |
| | Two-year Degree | 48 (12.3) | |
| | University | 231 (59.2) | |
| | Postgraduate | 59 (15.1) | |
| Educational Status of Spouses | Primary School | 5 (1.3) | 0.562 |
| | High School | 83 (21.3) | |
| | University | 272 (69.7) | |
| | Postgraduate | 30 (7.7) | |
| Region of Residence | Aegean Region | 101 (25.9) | 2.078 |
| | Central Anatolian Region | 85 (21.8) | |
| | Black Sea Region | 68 (17.4) | |
| | Marmara Region | 51 (13.1) | |
| | Mediterranean Region | 43 (11) | |
| | South-East Anatolian Region | 25 (6.4) | |
| | East Anatolian Region | 17 (4.4) | |
| Working Shift | Day | 121 (31) | 0.925 |
| | Night | 3 (0.8) | |
| | Both day and night | 266 (68.2) | |
| Family Type | Nuclear Family | 372 (95.4) | 0.21 |
| | Extended family | 18 (4.6) | |
| Status of having children | Yes | 262 (67.2) | 0.47 |
| | 1 child | 116 (29.7) | |
| | 2 children | 114 (29.2) | |
| | 3 children | 32 (8.2) | |
| No | 128 (32.8) | | |

*Abbreviations: SD – standard deviation

frequency of sexual intercourse of nurses decreased by 42.8% in the pandemic. In addition, 32.6% of the nurses and 25.9% of their husbands experienced a lack of sexual desire during this period. 22.8% of the nurses stated that they separated their beds or rooms with their spouses due to the pandemic (Table 2).

The total mean score of the nurses' sexual quality of life scale was calculated as 87.37 ± 20.83 (min.:23, max.:105) in the study. The Cronbach alpha value of the scale for this study was found to be 0.964, and the scale is reliable for this sample. In Table 3, it is seen that the sexual quality of life scale score of nurses having a chronic illness, continuously taking medicine, infected with COVID-19 disease and taking medicine, receiving

Table 2. Distribution of information about medical and sexual life of nurses (n=390)*

| Medical Information of Nurses | n (%) | ±SD |
|---|------------|-------|
| Having a chronic illness | | |
| Yes | 124 (31.8) | 0.466 |
| No | 266 (68.2) | |
| Taking medicine continuously | | |
| Yes | 109 (27.9) | 0.449 |
| No | 281 (72.1) | |
| Getting through menopause | | |
| Yes | 30 (7.7) | 0.267 |
| No | 360 (92.3) | |
| Getting infected with COVID-19 | | |
| Yes | 79 (20.3) | 0.402 |
| No | 311 (79.7) | |
| Taking medicine during the disease | | |
| Yes | 63 (16.2) | 0.368 |
| No | 327 (83.8) | |
| Receiving days-off or health report during the disease | | |
| Yes | 91 (23.3) | 0.423 |
| No | 299 (76.7) | |
| Information about the sexual life of nurses during the pandemic | | |
| Status of getting pregnant during the pandemic | | |
| Not pregnant | 208 (53.3) | 1.731 |
| Getting pregnant in the pre-pandemic period | 18 (4.6) | |
| Getting pregnant during the pandemic | 32 (8.2) | |
| Thinking of getting pregnant | 35 (9.0) | |
| Not thinking of getting pregnant | 97 (24.9) | |
| Status of the pandemic's having changed the sexual life of nurses | | |
| It has changed a lot | 70 (17.9) | 0.752 |
| It has slightly changed | 137 (35.1) | |
| It has not changed | 183 (46.9) | |
| Frequency of sexual intercourse | | |
| It has decreased compared to the pre-pandemic period | 167 (42.8) | 0.946 |
| It has increased compared to the pre-pandemic period | 41 (10.5) | |
| It has not been affected | 182 (46.7) | |
| Experiencing low sexual desire | | |
| Yes | 127 (32.6) | 0.469 |
| No | 263 (67.4) | |
| Sexual desire status of the spouse | | |
| His sexual desire has increased | 44 (11.3) | 0.69 |
| His sexual desire has decreased | 101 (25.9) | |
| His sexual desire has not changed | 245 (62.8) | |
| Bed/room separation status | | |
| Yes | 89 (22.8) | 0.42 |
| No | 301 (77.2) | |
| Total | 390 (100) | |

*Abbreviations: SD – standard deviation

days-off/health report is lower and statistically significant ($p < 0.05$).

According to the results of the Kruskal-Wallis H-test conducted to determine whether the nurses showed a significant difference in terms of sexual quality of life scale scores, the difference was found to be significant in terms of pandemic's having changed nurses' sexual life, frequency of sexual intercourse and frequency of sexual desire of the spouse ($p < 0.05$). Mann-Whitney U test was performed to find which group caused the difference. According to the test, the sexual quality of life scale score was determined to be lower in the group with decreased sexual intercourse frequency and in the group with decreased sexual desire of the spouse ($p < 0.05$) (Table 4).

Table 3. Sexual quality of life scale scores of the nurses according to their medical information*

| Medical Information | n | \bar{x} | U | p |
|-------------------------------------|-----|-----------|-----------|--------|
| Having a chronic illness | | | | |
| Yes | 124 | 165.39 | 12758.000 | <0.001 |
| No | 266 | 209.54 | | |
| Continuously taking medicine | | | | |
| Yes | 109 | 169.50 | 12480.000 | 0.005 |
| No | 281 | 205.59 | | |
| Getting through menopause | | | | |
| Yes | 30 | 196.87 | 5359.000 | 0.945 |
| No | 360 | 195.39 | | |
| Being infected with COVID-19 | | | | |
| Yes | 79 | 166.54 | 9997.000 | 0.01 |
| No | 311 | 202.86 | | |
| Taking medicine during the disease | | | | |
| Yes | 63 | 150.52 | 7467.000 | 0.001 |
| No | 327 | 204.17 | | |
| Receiving days-off or health report | | | | |
| Yes | 91 | 163.39 | 10682.500 | 0.002 |
| No | 299 | 205.27 | | |

*Abbreviations: \bar{x} – mean rank, U – Mann-Whitney U test

Discussion

In this study, the level of nurses' sexual quality of life were found above the average level. The high score obtained from the sexual quality of life scale examined in the study indicates that the sexual quality of life of nurses is good. However, the presence of a chronic illness, continuous medication use, having COVID-19 disease, receiving COVID-19 treatment, receiving days-off/health report for COVID-19 negatively affected the sexual quality of life. In different studies examining the sex-

ual quality of life, it was observed that the sexual quality of life of women was affected depending on factors such as age period, current illness, and operation.¹³⁻¹⁵

Table 4. Sexual quality of life scale scores of the nurses according to their sexual life*

| Information about Their Sexual Life | n | \bar{x} | KW | p |
|---|-----|-----------|--------|-------|
| The status of getting pregnant in the pandemic | | | | |
| Not pregnant | 208 | 204.40 | 8.202 | 0.084 |
| Getting pregnant in the pre-pandemic period | 18 | 168.11 | | |
| Getting pregnant during the pandemic | 32 | 185.23 | | |
| Thinking of getting pregnant | 35 | 151.44 | | |
| Not thinking of getting pregnant | 97 | 200.77 | | |
| Status of the pandemic's having changed the sexual life of nurses | | | | |
| It has changed a lot | 70 | 108.49 | 68.023 | 0.000 |
| It has slightly changed | 137 | 184.47 | | |
| It has not changed | 183 | 237.04 | | |
| Frequency of sexual intercourse | | | | |
| It has decreased compared to the pre-pandemic period | 167 | 137.43 | 77.682 | 0.001 |
| It has increased compared to the pre-pandemic period | 41 | 240.99 | | |
| It has not been affected | 182 | 238.53 | | |
| Sexual desire status of the spouse | | | | |
| His sexual desire has increased | 44 | 214.76 | 77.052 | 0.000 |
| His sexual desire has decreased | 101 | 111.07 | | |
| His sexual desire has not changed | 245 | 226.84 | | |

*Abbreviations: \bar{x} – mean rank, KW – Kruskal-Wallis H test

More than half of the nurses participating in the study stated that their sexual life changed during the pandemic period. Approximately half of the participants stated that the frequency of sexual intercourse decreased, more than one third of them stated that the desire for sexual intercourse decreased and a small number of participants stated that they separated their bed or room with their spouse. Similarly, in a study conducted to determine the sexual attitudes of healthcare staff in the COVID-19 pandemic, it was found that there was a significant decrease in the sexual desire, frequency of sexual intercourse and duration of sexual intercourse compared to the pre-pandemic period.¹⁶ In another

study, it was reported that the COVID-19 pandemic led to a decrease in sexual desire and the frequency of sexual intercourse in Polish women.¹⁷ In parallel with our research results, it was stated in international studies that the frequency of sexual intercourse, sexual desire and sexual functions between spouses / partners during the COVID-19 pandemic decreased compared to the pre-pandemic period and the sexual quality of life decreased.¹⁸⁻²¹ However, Yüksel and Özgür (2020) found that women's sexual desire and frequency of sexual intercourse increased in the pandemic compared to the pre-pandemic period, but the sexual quality of life decreased.²² Since there is not yet sufficient evidence on the fact whether the COVID-19 infection can be transmitted by sexual or genital tract secretions and the spouse/partners are in close contact with each other due to the nature of sexual intercourse, there have been changes in the sexual lives of individuals during the pandemic.¹⁶ Some people may have decreased their sexual functions in this period due to the possibility of transmission whereas some may have increased sexual functions due to the increase in practices such as quarantine, long stay at home, and working distantly. However, it can be said that sexual functions and sexual quality of life of healthcare staff are more affected due to the fact that they are more likely to get infected with COVID-19 and contact with infected people.

The majority of the participants (82.8%) stated that they did not get pregnant during the pandemic and did not intend to become pregnant. Studies have also revealed that reasons such as future anxiety led by the pandemic, economic difficulties, and exposure of the fetus to the virus reduce the desire of women to become pregnant.^{22,23} In the studies of Haung and Zhao, the stress and anxiety levels of healthcare staff during the pandemic were found to be quite high.²⁴ In another study conducted in Saudi Arabia, it was found that medical students experienced high levels of anxiety against the MERS virus.²⁵ Hamilton and Meston stated that high level of chronic stress caused a decrease in sexual desire. In this study, it is not surprising that sexual functions and desire for getting pregnant of the women working as nurses during the pandemic period have reduced due to the busy and stressful working conditions and social isolation measures.²⁶

Limitations of the study

The study had several limitations. The women included in the study may have seen the questions about sexuality as a violation of their privacy and may not have answered fully and correctly. In addition, the online collection of the data of the study and the fact that the results of the study are based on the self-report of the participants can be considered as limitations.

Conclusion

The COVID-19 pandemic has negatively affected people's quality of life globally. Nurses have been more affected by the negative effects of the pandemic as they play an active role in the care and treatment of patients during the COVID-19 pandemic process. Since the nurses are afraid of transmitting the disease to their families and loved ones, restrictions have come with them in many areas of their lives. Although sexuality is not a fundamental factor for the continuation of life, it is one of the most important factors that increase the quality of life. In this study, it was found that the nurses' sexual quality of life during the COVID-19 pandemic was above the average level and their sexual life was negatively affected due to many reasons related to the pandemic. Since sexual life is a phenomenon affected by biopsychosocial and cultural factors, many factors such as the busy working pace of nurses in the field in the COVID-19 pandemic, inability to meet with beloved ones for fear of transmitting viruses, stress, the lack of an exact treatment for the virus, have different effects on the sexual life of individuals in this period. In order to clarify the unknowns about COVID-19, studies with large samples and comparing different parameters related to sexual life are required.

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Declarations

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Author contributions

Conceptualization, E.C.E. and Ş.K.E.; Methodology, E.C.E. and Ş.K.E.; Software, E.C.E.; Validation, E.C.E. and Ş.K.E.; Formal Analysis, Ş.K.E.; Investigation, E.C.E. and Ş.K.E.; Resources, E.C.E. and Ş.K.E.; Data Curation, E.C.E. and Ş.K.E.; Writing – Original Draft Preparation, E.C.E.; Writing – Review & Editing, E.C.E. and Ş.K.E.; Visualization, E.C.E. and Ş.K.E.; Supervision, E.C.E. and Ş.K.E.; Project Administration, E.C.E. and Ş.K.E.; Funding Acquisition, E.C.E. and Ş.K.E.

Conflicts of interest

All authors declare that they have no conflicts of interest.

Data availability

The data have not been made public, but are kept with the authors, if necessary.

Ethical approval

Ethical consent was obtained from Bartın University Social and Human Sciences Ethics Committee for the study, dated 05/11/2020 and numbered 0236.

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