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Original Article

Comparison of the Depression Disorder and Related Psychosocial Disorders Before and After Contracting COVID-19 in Women Attending Imam Khomeini Hospital Complex

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Abstract

Objective: The present study was conducted with the aim of comparing psychosocial disorders before and after contracting COVID-19 in women in the city of Tehran.

Materials and methods: A retrospective descriptive-analytical study was conducted on 250 women who had recovered from COVID-19. The data were collected from the information registration system for COVID-19 patients in Tehran-Iran from the year 2019 until 2020. Data were collected using demographic questionnaires, The Hospital Anxiety and Depression Scale (HADS), The Billings and Moss Coping Strategies, Multidimensional Scale of Perceived Social Support (MSPSS), Mini-Mental State Examination (MMSE), Russell Loneliness Scale, Beck Scale for Suicide Ideation (BSSI), Female Sexual Function Index (FSFI), and Pittsburgh Sleep Quality Index (PSQI). Data analysis was performed using the analysis of covariance (ANCOVA). The SPSS-20 software was utilized for data analysis.

Results: The results obtained in this study indicated that women who had more severe COVID-19 reported higher levels of depression and cognitive disorders and lower sexual tendencies after recovery compared to women with mild COVID-19. There was a significant difference in disease severity (from mild to severe) in psychological variables such as sleep and sexual disorders, depression, social support, and cognition before and after recovery from COVID-19 (p=0.0001).

Conclusion: Due to severe fear and anxiety and other psychological disorders in people infected with Corona even after recovery from the disease, Psychologists should take measures for the relaxation and mental health of patients, such as consultations (online and by phone) for patients at home during quarantine, which will cause the patient to recover as quickly as possible and prevent mental disorders of the patients.

Keywords: Mental Disorder; COVID-19; Women; Retrospective Studies

Introduction

Despite significant advancements in the medical field, the prevalence of certain new infectious diseases has had extensive impacts on human life (1). In fact, although humans have sought to enable adaptation and reduce the spread of infectious diseases through educational and therapeutic

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innovations (2), these changes have not been able to fully shield individuals from the physical and psychological consequences of such diseases (3). The emergence of a new virus called COVID-19 has demonstrated that this novel disease can threaten the physical and mental health of individuals while altering the course of their lives. The spread of this disease has heightened concerns about the potential for mortality due to viral infections and, on the other hand, has led to psychological stress (4). A study has shown that the psychological effects of COVID-19 can manifest in symptoms of anxiety, depression, and fear in individuals (5). Moreover, this disease has significant psychological effects on individuals' coping skills and emotional responses. Additionally, women exhibit more severe anxiety compared to men (6).

The psychological effects and pressures resulting from social crises, especially the experience of the coronavirus disease, persist and may impact various psychological dimensions, including lifestyle, coping strategies, quality of life, mental health, etc. These psychological dimensions remain largely unknown, with limited scientific and research information available about them (7). The results obtained from this study may reveal the role of women's mental health in the contraction, severity, and duration of all communicable and non-communicable diseases during pandemics or outbreaks.

The purpose of this study was the relationship between psychological disorders and covid-19 infection and even after recovery from the disease. In the review of various texts in the countries of the world, many studies have been conducted in connection with mental health and Covid-19 and the results show the relationship between these variables. Unfortunately, in our country, Iran, very limited studies have been conducted on this topic. In our study, more variables or mental disorders in connection with covid-19 were conducted and the results indicated attention to the mental health of patients in order to recover as quickly as possible and prevent mental disorders in the future. Therefore, measures and actions must be taken through the relevant officials.

Materials and methods

The present research is a retrospective (before-after) study. The sample size for this study consisted of 250 women who had recovered after contracting COVID-19(Due to the fact that no study related to our plan had been conducted in the country, therefore, we included all the patients registered in the patient registration system in Imam Khomeini Hospital into the study). The data were collected from the COVID-19 Patients Information System of the Imam Khomeini Hospital Complex Tehran- Iran (the information registration system for COVID-19 patients from the year 2019 until 2020 the implementation of the project). The study was conducted over a one-year period. The inclusion criterion for the study was six months' post-recovery from the illness. The names of the patients and their contact information were obtained from the system, and the researcher informed the patients about the research methodology and objectives through telephone calls. The questionnaires were sent through the Pors online questionnaire system to individuals whose mobile numbers were in the patient registration system at Imam Khomeini Hospital, and individuals completed the questionnaires whenever they wanted and sent them to the project manager. If interested, patients could choose to participate in the study. Moreover, participants had the option to withdraw from the study during its execution. This project received ethical approval from the Ethics Committee of Tehran University of Medical Sciences (ethics code: IR.TUMS.IKHC.REC.1400.473).

Demographic characteristics include the following: age, education, marriage, occupation, number of children, birth order, history of psychiatric disorders and referrals, severity of illness, history of chronic diseases, history of physical illnesses, blood type, history of abortion, treatment for COVID-19, vaccination, its type and number of times, number of cases of infection, smoking, stress, type of personality, fear of re-infection, and duration of recovery.

Data were collected using the Depression Scale, Billings and Moss Coping Responses Questionnaire, Multidimensional Scale of Perceived Social Support (MSPSS), Mini-Mental State Examination (MMSE), Russell Loneliness Scale, Beck Scale for Suicide Ideation (BSSI), Female Sexual Function Index (FSFI), and Pittsburgh Sleep Quality Index (PSQI).

The Coping Responses Questionnaire was developed by Billings and Moos in 1981. In this questionnaire, they define coping responses as a combination of cognitions and behaviors that individuals use for the evaluation and reduction of stress and management of stressors. The questionnaire comprises 19 statements, investigating two coping strategies through it: problem-focused coping with 11 statements and emotion-focused

coping with 8 statements. In the Billings and Moos Coping Questionnaire, a four-point scale is used, including always, most of the time, sometimes, and never, with scores ranging from 0 to 3. The Billings and Moos Coping Questionnaire is utilized to calculate three distinct scores for each participant: the total score for coping strategies, the score for problem-focused coping responses, and the score for emotion-focused coping responses. The reliability coefficient, calculated using the split-half method, has been reported as 0.78 (8).

The Beck Scale for Suicide Ideation (BSSI) is a 19-item self-report tool designed to detect and measure the intensity of attitudes, behaviors, and plans related to suicide. Scoring is based on the Likert scale, and the individual's total score ranges from 0 to 38. The BSSI demonstrates high reliability, with Cronbach's alpha ranging from 0.87 to 0.97 and test-retest reliability of 0.54. Therefore, the scale exhibits internal consistency, test-retest reliability, and concurrent validity (9). The Mini-Mental State Examination (M.M.S.E) is a paper-and-pencil test designed and developed by Folstein and colleagues in 1975. Lower scores are indicative of more severe cognitive issues. In terms of internal consistency reliability, the Cronbach's alpha coefficient is reported to be 0.81 for the entire questionnaire. It has also been documented that the sensitivity and specificity of the Persian version of this test are 90% and 93.5%, respectively (10). The Petersburg Sleep Quality Index (PSQI) assesses individuals' attitudes regarding sleep quality, with scoring based on a Likert scale ranging from 0 to 3. Its components include the individual's overall description of sleep quality, sleep latency, duration of sleep, habitual sleep efficiency, sleep disturbances, use of sleep medication, and daytime dysfunction. The questionnaire's reliability has been reported at 83% using the Cronbach's alpha coefficient. The content validity for the PSQI has also been confirmed (11). The Female Sexual Function Index (FSFI) is a questionnaire that assesses women's sexual function in six independent domains: desire, arousal, lubrication, orgasm, satisfaction, and sexual pain, with a total of 19 questions. The Cronbach's alpha coefficient is reported to be 0.70 or higher for the entire form and for each domain individually. In this scoring system, higher scores indicate better sexual function. The maximum score is 6for each domain and 36 for the total scale (12). The Russell Loneliness Scale was developed by Russell and colleagues in 1978, and Naderi and Haghshenas created its indigenous version in 2009. The questionnaire consists of 20 questions designed on a 5-point Likert scale (ranging from never to always). The Cronbach's alpha coefficient for the scale is reported to be 0.87. This questionnaire demonstrates good convergent and discriminant validity (13). The Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire was developed by Zimet and colleagues in 1988 to measure perceived social support from family, friends, and significant others. This instrument consists of 12 items, scored on a Likert scale ranging from completely disagrees to completely agree. In 2009, Salimi and colleagues reported the reliability of the scale using the Cronbach's alpha coefficient, indicating values of 0.86, 0.86, and 0.82 for the perceived social support from family, friends, and significant others, respectively (14). The Hospital Anxiety and Depression Scale (HADS) is a 14-item self-report questionnaire. In this study, we used 7 scales of the HADS for measuring depression. This questionnaire assesses symptoms of depression in the patients and is scored on a Likert scale from 0 to 3. The alpha coefficient of this questionnaire is (0.78) (9). The data were entered into SPSS-20, and descriptive statistics, as well as two-way analysis of covariance (ANCOVA), were used for the data analysis.

Results

Data collected using demographic questionnaires are summarized in table 1.

Given that the present study was of the pre-and-post type, a two-way analysis of variance (ANCOVA) was employed (with the pre-COVID sleep disorder variable always present in the analysis). In the two-way ANCOVA, the severity of sleep disorders was compared based on the severity of COVID illness. The severity of sleep disorders was higher in the mild group compared to the severe and moderate groups. Additionally, besides the pre-COVID sleep disorder variable, individual factors such as age, marital status, occupation, blood type, and history of chronic illnesses were entered into the model separately. In the presence of age ($F=96.77$, $P < 0.0001$), marital status ($F=53.47$, $P < 0.0001$), occupation ($F=75.87$, $P < 0.0001$), blood type ($F=40.18$, P-Value < 0.0001), and a history of chronic illnesses ($F=49.99$, $P < 0.0001$), sleep disorders after COVID were more prevalent in patients with mild COVID-19.

Table 1: Demographic characteristics of participants

Variables	n (%)	Variables	n (%)
Rate of the birth		History of chronic illness	40(16)
First	73(29.2)		
Middle	123(49.2)		
Youngest	54(21.6)		
History of psychology disorders		History of physical illness	
Before covid-19	100(40)	Before covid-19	80(32)
Two weeks after recovery	160(64)	Two weeks after recovery	150(60)
3-6 Months after recovery	120(48)	3-6 Months after recovery	130(52)
Education		Blood group	
Under diploma	31(12.4)	A	90(36)
Diploma	51(20.4)	AB	20(8)
Upper Diploma	168(67.2)	B	100(40)
		O	40(16)
Marital			
Single	60(24)	Abortion	
Married	180(72)	One Time	30(12)
Divorced	10(4)	More than one time	30(12)
Woman's Job		Action for treatment	
Housewife	110(44)	Immediate	90(36)
Employed	140(56)	Delay	160(64)
Personality		Vaccination	
Introverted	180(72)	Two	
Extroverted	70(28)	Three	
Illness severity		Vaccine's Type	
Mild	180(72)	Sinopharm	230(12)
Middle	40(16)	Astrazeneca	10(4)
Sever	30(12)	Despotic	10(4)
History of seeing a psychiatrist		The number of cases of covid	
Before covid-19	10(4)	One	110(44)
Two weeks after recovery	50(20)	Two	70(28)
3-6 Months after recovery	40(16)	Three	70(28)
History of psychiatric disorders	90(36)	Fear of re-infection with covid-19 after recovery	170(68)
Smoking		Follow protocols	
Before covid-19	30(12)	Low	60(24)
Two weeks after recovery	0	Middle	30(12)
3-6 Months after recovery	0	High	160(64)
Stress		Number of Children	
Before covid-19	20(80)	One	11(4.4)
Two weeks after recovery	20(80)	Two	13(5.2)
3-6 Months after recovery	210(84)	More than Two	226(90.4)
Age (28y-63y)	47.98 ±11.08	Duration from infection to recovery (7d-30d)	16.24±6.07

In the ANCOVA test, variables with a $P < 0.2$ in the bivariate analysis were entered into the model. Even in the presence of all potential confounding variables, the severity of COVID-19 remained strongly associated with sleep disorders. In this test, the severity of depression after contracting COVID-19 was higher in patients in the severe and moderate groups compared to those in the mild group. Depression was more in patients with moderate and severe COVID-19 in the presence of age ($F=28.63$, $P < 0.0001$), marital status ($F=28.36$, $P < 0.0001$), occupation ($F=22.69$, $P < 0.0001$), blood type ($F=11.01$, $P < 0.0001$), and a history of chronic illnesses ($F=20.55$, $P < 0.0001$).

In the final model, the relationship between depression and COVID remained significant in the presence of all variables. In the ANCOVA test, variables with a $P < 0.2$ in the bivariate test were included in the model.

In the presence of all variables that could have

confounding effects, the severity of COVID-19 still had a strong association with depression. In this test, the variable of sexual dysfunction after contracting COVID-19 was more in patients in the severe and moderate groups than those in the mild group. Sexual dysfunction was more in patients with moderate and severe COVID-19 in the presence of age (F=77.50, P < 0.0001), marital status (F=44.19, P < 0.0001), occupation (F=26.21, P < 0.0001), blood type (F=11.14, P-Value < 0.0001), and a history of chronic illnesses (F=26.01, P < 0.0001). In the final model, the relationship between sexual dysfunction and COVID remained significant in the presence of all variables. In the ANCOVA test, variables with a P < 0.2 in the bivariate test were included in the model. In the presence of all variables that could have confounding effects, the severity of COVID-19 still had a strong association with sexual dysfunction. Cognitive impairment was more in patients with moderate and severe COVID-19 in the presence of age (F=8.756, P = 0.003), marital status (F=5.168, P = 0.024), and occupation (F=9.962, P =0.002). In the final model, considering all variables, the relationship between cognitive impairment and COVID remained significant. The ANCOVA test included variables with a P < 0.2 in the bivariate test. In the presence of all potential confounders, the severity of COVID-19 remained strongly associated with cognitive impairment. It is worth mentioning that social isolation and social support were significantly associated with the severity of COVID-19, but no significant relationship was observed using the ANCOVA test. In this comparison, there was no significant difference in suicide scores and coping responses between patients with mild COVID-19 and those with moderate/severe COVID-19 using the two-way ANOVA test (Table 2).

Discussion

The aim of this study was to investigate psychological disorders before and after contracting COVID-19. Various psychological variables were examined in women before and after COVID-19 infection in this study. The results showed that patients with moderate to severe COVID-19 had a higher level of depression compared to those with mild COVID-19. In other words, the severity of COVID-19 is significantly associated with increased post-recovery depression. In a meta-analysis of cohort studies, a significant increase in mental health symptoms, particularly depression, emerged at the onset of the pandemic. According to reports from mental health experts throughout 2020, the prevalence of major depressive disorder due to this disease increased to 27.6% globally (15). Renaud-Charest and colleagues (2021) reported that depressive symptoms were identified in the acute phase of COVID-19, but the prevalence of depression persisted after recovery from the acute phase of the disease. Out of 316 articles, 8 articles were considered. The severity of acute COVID-19 did not correlate with the frequency of depressive symptoms. However, this study was highly heterogeneous in terms of diagnostic criteria, assessment timing, and the location and age of the patients. Additionally, most studies did not include a controlled group (16). Regarding the relationship between COVID-19 severity and depression, it appears that further controlled investigations are needed based on the recommendations of the authors, and even depression after recovery from the acute phase of the disease remains unclear.

Table 2: Evaluation of the relationship between severity of COVID-19 infection and psychological variables based on bivariate and multiple analyses of variance

Variables	Bivariate			Multiple
	Severe Of Covid-19			F(P-Value)
	Mild (M±SD)	Moderate/Severe (M±SD)	F(P-Value)	
Sleep Disorder	37.5±13.68	30.14±9.33	53.395(<0.0001)	84.32(<0.0001)
Depression	17.98±6.22	20.94±5.98	21.49(<0.0001)	22.42(<0.0001)
Suicide	30.72±8.99	33.28±8.91	0.896(0.345)	NS
Isolation	45.17±14.41	54.71±19.28	4.21(0.041)	NS
Sexual Disorder	39.55±24.20	48.00±29.70	21.098(<0.0001)	81.565(<0.0001)
Social support	40.08±12.34	38.32±18.07	6.758(0.010)	NS
Coping	19.68±8.92	19.08±6.49		NS
-Solving			3.576(0.060)	
-Emotional			0.019(0.891)	
Cognitive	8.894±1.90	9.585±0.712	6.011(0.015)	16.689(<0.0001)

If the present analysis shows a significant association between depression and disease severity, it seems that more rigorous studies might lead to different results, possibly aligning with the findings of the current study. Another psychological variable studied in relation to COVID-19 severity is sleep disturbance in this group of patients. The results of the present study showed that women with mild COVID-19 reported more sleep disturbances after recovery from coronavirus compared to women with moderate and severe COVID-19. In other words, contracting a mild COVID infection is significantly associated with more sleep disturbances after recovery.

Datta (2021) reported that sleep is affected during COVID-19, on their families, health-care workers and their families, isolated population, and quarantine and as such in public (17).

In a systematic review and meta-analysis comprising 250 studies with 493,475 participants from 49 countries, the prevalence of sleep disorders during the COVID-19 pandemic was assessed. The global prevalence of sleep disorders was reported to be 40.49%, while it was 45.96% among individuals with COVID-19. Four out of every ten individuals experienced sleep disturbances during the COVID-19 pandemic (18). A study investigated the long-term effects of COVID-19 after complete recovery on mental health and sleep. The results showed that 91.2% experienced psychiatric symptoms, and 64.8% had poor sleep. Regarding the long-term impact of COVID-19 on mental health and sleep, specific results were not obtained, emphasizing the need for well-controlled research (19). Comparison of the results of the present study with previous studies suggests that the prevalence of sleep disorders significantly increased during the COVID-19 pandemic. Further research is necessary for a more detailed understanding of the continued sleep disorders after recovery from COVID-19 in the long term.

During the COVID-19 pandemic and home quarantine, many couples experienced increased marital conflicts and sexual problems (20). The results of the present study indicated that women with moderate and severe COVID-19 reported lower sexual desires after recovery from the coronavirus compared to those with mild cases. In other words, moderate and severe COVID-19 cases were significantly associated with a greater decrease in sexual desires after recovery. A review study involving 6,929 participants revealed that the COVID-19 pandemic negatively impacted the quality and satisfaction of couples' sexual lives (21).

In another study, the sexual function of couples during the COVID-19 pandemic significantly decreased, which can be influenced by various psychosocial and economic variables (22). Considering the investigations into sexual function and desires during the COVID-19 pandemic across different studies, there has been a notable decrease. In the present study, besides examining sexual function and desires, their correlation with the severity of the illness and even after recovery was investigated. Individuals who experienced a more severe form of COVID-19 reported lower sexual desires even after recovery. Our study aligns with other research findings and provides additional insights into sexual performance.

Among the important psychological variables, cognitive impairment is one of the most prevalent and debilitating symptoms post-COVID-19. The results of the present study demonstrated that women who experienced moderate to severe COVID-19 reported more cognitive impairments compared to women with mild cases, even after recovery. In other words, moderate to severe COVID-19 is associated with a significant increase in cognitive impairments after recovery.

In a systematic review of 10,979 studies, of which 81 studies were extracted for analysis, the aim was to diagnose cognitive disorders 12 weeks after COVID-19 infection. Initial outcomes included feelings of fatigue and cognitive difficulties, while secondary outcomes were related to inflammatory correlations and functional outcomes associated with post-COVID-19 syndrome. A meta-analysis of 43 studies regarding cognitive impairment indicated that the proportion of individuals with cognitive impairment was 22.0%. A significant portion of individuals, after recovering from acute COVID-19, experienced persistent fatigue or cognitive disorders (23).

In a review and meta-analysis conducted by Crivelli et al. on the cognitive effects of the coronavirus in adults without a history of cognitive disorders, the Montreal Cognitive Assessment (MoCA) questionnaire was used to compare recovered COVID-19 individuals with healthy individuals. The assessment period was from the acute phase to 7 months post-infection. Impairments in executive functions, attention, and memory were observed in patients after COVID-19. Recovered COVID-19 patients had lower general cognitive function compared to healthy individuals up to 7

months after infection (24). Considering the results of various studies and the follow-ups in this research, cognitive disorders in individuals with COVID-19 seem to persist even several months after recovery, suggesting that the coronavirus can be considered a significant factor in cognitive impairments.

Among other psychological variables that are crucial for a comprehensive understanding of mental health outcomes during the COVID-19 pandemic is social isolation and loneliness. The results of the present study indicate a meaningful association between social isolation and the severity of COVID-19. These findings align with the results of studies by Holt-lunstad and colleagues (2015) and Milman and colleagues (2022), suggesting that social isolation is correlated and associated with COVID-19 (25-26).

To explain this hypothesis, it seems that the COVID-19 pandemic has halted the speed of our social interactions and, in the true sense of the word, limited unrestricted social interactions. Social isolation has increased the prevalence of depression, anxiety, post-traumatic stress disorders, and insomnia in the population. In explaining these findings, it can be said that the concept of neglect and loneliness leads to anger, despair, and anxiety, which can in turn result in COVID-19-related anxiety, potentially creating serious consequences for public health (27).

Social support is considered a supportive and sustaining resource provided by others, especially family, friends, and even the environment. Social support, both directly and indirectly, is beneficial for health and can help individuals cope with diseases and life pressures (28). The results of the present study indicated that social support is significantly associated with the severity of COVID-19. In other words, individuals who contract COVID-19 receive more family and social support compared to before contracting with COVID-19.

The results of a study on pregnant women showed that as family support for individuals with COVID-19 increases, their anxiety levels decrease (r=0.211, P=0.003). A significant inverse relationship has been reported between social support and COVID-related anxiety (28). A study examined the relationship between optimism, resilience, perceived social support, and coronavirus anxiety in students using various indices based on a causal model. Optimism, resilience, and perceived social support were found to have a direct impact on the level of coronavirus anxiety in students; additionally, optimism and resilience indirectly influenced students' coronavirus anxiety through perceived social support ($p>0.05$). Therefore, optimism, resilience, and perceived social support play a crucial role in the level of coronavirus anxiety in students, and incorporating these three components through psychological treatments can be effective in reducing students' coronavirus anxiety (29). The role of social support during the COVID-19 pandemic is of great importance for those affected by this disease and seems to play a significant role in the care and recovery of patients.

In the present study conducted on the general population, no significant relationship was found between COVID-19 and psychological variables such as suicidal thoughts and coping mechanisms. However, in a study conducted on healthcare professionals, suicidal thoughts and psychological disorders were reported among unmarried nurses (30).

In a systematic review and meta-analysis on the prevalence of suicidal thoughts based on 972 studies with a thorough examination of 106 studies covering 120,076 participants, the results indicated that the main risk factors for suicidal thoughts included low social support, high physical and mental fatigue, weaker physical health in frontline healthcare workers, sleep disorders, quarantine and fatigue, loneliness, and mental health issues. The rate of suicidal thoughts during the COVID-19 pandemic appears to be higher than what was reported in pre-pandemic population studies and may lead to higher suicide rates in the future (31).

It seems that the results of the present study are not in line with the findings of previous studies, and further investigations with larger sample sizes may be needed. Given the psychological challenges in COVID-19 patients, psychiatric and psychological interventions should be integrated into public health programs and emergency interventions to effectively control this disease. With the global spread of the virus, governments should pay attention to the mental health needs of the entire community during the COVID-19 pandemic by developing and implementing appropriate mental health strategies.

Positive points of the project: Appropriate psychological information was obtained regarding Covid-19 patients. The results showed that the role of mental health is important before contracting diseases.

Negative points of the project: In future studies, researchers should use a larger sample size and use patients hospitalized in hospitals and sampling from multiple hospitals.

Limitations and Recommendations: In general,

psychological symptoms such as stress, anxiety, and depression are observed in individuals during natural disasters, and while a significant portion of these reactions is natural, it is necessary to manage them with initial mental health care, as if left unattended; they can become chronic and lead to severe psychological problems. Therefore, health policymakers need to provide preventive, supportive, educational, and timely intervention programs in the early stages of the onset of pandemics to minimize the psychological pressure resulting from these diseases, preventing more serious difficulties in later stages.

Based on conducted research, remote methods have proven to be effective for treating psychological disorders such as depression, anxiety, and post-traumatic stress disorder (PTSD). Therefore, it is recommended to further promote non-face-to-face approaches, such as online and telephone counseling, for both prevention and treatment, to minimize the psychological impacts of the quarantine period. One of the main limitations of this study was the sample size. Perhaps, with a larger sample size, one of the significant psychological variables, like suicidal thoughts, could have a significant correlation with the severity of the coronavirus disease.

Conclusion

Coronaviruses are a large family of viruses that, in addition to causing severe and widespread diseases in humans, have various psychological implications for individuals. The results obtained in this study showed that women, who experienced a more severe form of COVID-19, after recovering from the virus, reported higher psychological disorders such as increased depression, reduced sexual desire, and more cognitive disturbances compared to women with milder cases of COVID-19. Women with mild COVID-19 exhibited more sleep disorders after recovery. Social isolation and social support were significantly associated with contracting COVID-19. However, no correlation was found between suicidal thoughts and defense mechanisms with the severity of coronavirus.

Conflict of Interests

Authors declare no conflict of interests.

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