Sleep disturbances following recovery from COVID-19: a comparative cross-sectional study in Egypt

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Abstract

Background: Sequelae from COVID-19 are increasingly being reported, but sleep disturbances after recovery from the disease have had little attention.

Aims: This study aimed to identify and compare sleep disturbances and associated correlates among adults who have recovered from COVID-19 with those who have never been infected with the disease.

Methods: The sample included 85 adults who have recovered from COVID-19 and 85 adults who have never been infected (matched on age, sex, education and socioeconomic level). Individuals were recruited from Zagazig University Hospitals, Egypt from 1 September to 29 November 2020. Participants were interviewed using a sociodemographic and clinical checklist, the Pittsburgh Sleep Quality Index and the Hospital Anxiety Depression Scale.

Results: Most (77%) of the recovered cases had experienced sleep disturbances, compared with 46% of controls. Individuals who had recovered from COVID-19 were more likely to have poor subjective sleep quality (odds ratio (OR) 1.5, 95% confidence interval (CI): 1.1–2.1), prolonged sleep latency (OR 1.8, 95% CI: 1.3–2.6), shorter sleep duration (OR 1.6, 95% CI: 1.1–2.2), reduced sleep efficiency (OR 3.8, 95% CI: 2.0–7.1), frequent daytime dysfunction (OR 1.9, 95% CI: 1.2–3.1) and poor global Pittsburgh Sleep Quality Index score (OR 3.0, 95% CI: 1.5–6.0). Depressive ($P = 0.002$) and anxiety ($P = 0.003$) symptoms were associated with a poor global Pittsburgh Sleep Quality Index score among recovered female participants ($P = 0,034$) who had low-to-medium education level ($P = 0.004$).

Conclusions: Further studies (e.g. population-based longitudinal studies) are needed on sleep disturbances as a potential sequelae of COVID-19, because it can impair mental and physical well-being.

Keywords: COVID-19, sleep disorders, depression, anxiety, Egypt

Introduction

COVID-19 was first detected in Wuhan, China, in late 2019 and it spread rapidly across the globe. It is a respiratory illness caused by a newly discovered severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) (1,2). In March 2020, the World Health Organization (WHO) declared it a global pandemic (3). The causative virus was thought to be primarily transmitted through respiratory droplets and close contact. However, there no conclusive evidence yet about the nature and course of this new, rapidly transmissible and potentially fatal virus (4).

With the increasing COVID-19-related morbidity and mortality, many people are experiencing COVID-19-related fears, depression and burnout symptoms and increased levels of physical and psychological distress (5,6). The pandemic itself, the social restrictions and lockdown regulations imposed to halt the spread of the virus, and the resulting financial problems caused to people are affecting mental health and well-being negatively (7). Based on previous outbreaks such as the severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), recent studies have claimed that COVID-19 patients may suffer from neuropsychiatric sequelae (8), such as depression, anxiety and sleep disturbances (9). Even after stabilization of a good number of people have reported post-recovery sequalae. According to a recent Italian study, several patients who survived the COVID-19 experienced at least one psychiatric disorder, such as anxiety, depressive disorders or post-traumatic stress disorder, which was diagnosed during follow-up one month after hospital treatment or home isolation (10).

Sleep is essential for a person's physical and mental health (11,12). Interrupting the normal sleep cycle can result in prolonged wakening or insomnia, shortened sleep cycle, nightmares and daytime somnolence and fatigue (11). Potential factors associated with sleep disturbances include severe stressful conditions, emotional disturbances (e.g. depression and anxiety), trauma (either physical or psychological) and/or overuse of technology, especially social media (13,14).

Despite the high prevalence of sleep disturbances and other psychiatric symptoms among COVID-19 patients (prevalence 34%) (9) to date, limited data exist on the psychopathological effects of COVID-19 on people in the early post-illness remission period. Thus, this study aimed to investigate the prevalence and potential risk factors for sleep disturbances in people who had recovered from COVID-19 and their control counterparts.

Methods

Study design and participants

This was a comparative cross-sectional study conducted from 1 September to 29 November 2020. A total of 85 adults were selected consecutively who had recovered from COVID-19 and were discharged according to the WHO discharge criteria (15) adopted by the Zagazig University committee for COVID-19 isolation hospitals.They had been diagnosed with COVID-19 based on the presence of viral nucleic acid in the nasopharyngeal swab and had either been hospitalized or had isolated at home. An equal number of volunteers, who had never been found positive for SARS-CoV-2, were included as a control group. They were first-degree relatives of participants who had recovered from COVID-19 and they were matched on age, sex, education and socioeconomic level. First-degree relatives were chosen to differentiate between the shared genetic, environmental and potential COVID-19-related effects on their mental health status. None of the investigators who interviewed the participants for this study had been involved in the treatment of the participants All recovered COVID-19 participants were interviewed in outpatient clinics at least one month after completing their home isolation or being discharged from hospital.

The sample size was calculated using *Epi Info* 6.0, assuming a prevalence of psychological symptoms of 41% and 21%, respectively (16), in those who had COVID-19 and the general population at 80% power of the study and 95% confidence level. This gave a sample size of 170 participants (85 COVID-19 cases and 85 controls) (17). The following people were excluded: those younger than 18 years or older than 60 years, those with major physical (e.g. heart failure, renal failure and hepatic failure) or mental illness (e.g. acute psychosis, dementia and mental retardation), illiterate people and those who declined to participate.

Data collection

The participants were requested to complete a semi-structured checklist designed to collect relevant sociodemographic and clinical data. The checklist included questions about age, sex, marital status, residence, level of education, occupation, and history of psychiatric illness and/or medical illness. Low-to-medium educational level was defined as attaining a basic or secondary education, while high educational level included those with university or postgraduate education.

Questionnaires

We used the Structured Clinical Interview for DSM-5 Axis I Disorders (SCID-5) (18) – a semi-structured tool – to help exclude the presence of current major acute or chronic primary mental illnesses (e.g. psychosis, mental retardation or dementia) in our participants, as these could affect the results if present. Several studies have established the validity and reliability of this tool (19,20). Thus, all participants enrolled in our study for further psychometric assessment had no history of major psychiatric illnesses.

The Hospital Anxiety and Depression Scale is a self-report tool used to screen for symptoms of anxiety and depression. It consists of seven questions each on depressive and anxiety symptoms, with a four-point Likert scale scoring rage 0 to 3. The total score of each subscale ranged from 0 to 21 (21). Participants were considered to have comorbid anxiety or depressive symptoms if their scores on this scale were ≥ 11 points. We used a validated Arabic version of this scale (22).

The Pittsburgh Sleep Quality Index (PSQI) questionnaire is a self-report questionnaire to assess sleep quality in the past month. It consists of 19 items assessing seven domains of sleep quality – subjective sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbance, use of sleeping medication and daytime dysfunction. Each domain is scored equally on a 0–3 scale. Scores for all seven domains are summed to produce a global Pittsburgh Sleep Quality Index score, ranging from 0 to 21. Poor global sleep quality was defined as a global Pittsburgh Sleep Quality Index score of ≥ 5, and the higher the score, the worse the sleep quality (23). We used a validated Arabic version of this scale (24).

Ethical considerations

The protocol of this study was approved by the institutional review board of Zagazig University (no. 6304-2-9-2020), and all study procedures were conducted within the ethical guidelines of the Declaration of Helsinki and its later amendments. Written informed consent was obtained from all the participants after explaining the study objectives and confirming confidentiality.

Statistical analysis

We used *SPSS*, version 16 to analyse the data. The chi-square test was used to compare proportions of categorical variables, while continuous variables were analysed using the independent sample *t*-test to compare the means of two groups. The Mann-Whitney-U test was used for data that were not normally distributed. Conditional logistic regression analysis was used to obtain odds ratios (OR) and 95% confidence intervals (CI) of sleep disturbances among COVID-19 and control participants after adjusting for associated anxiety and depressive symptoms. Associations were considered statistically significant at $P < 0.05$.

Results

Characteristics

A total of 98 recovered COVID-19 patients were approached, of whom 13 (13%) either declined to participate or did not complete the questionnaire: those who failed to complete the questionnaire and their control family members were excluded from the analysis. Of all participants who had CIVID-19, 45 (53%) had been discharged from hospital as they had moderate-to-severe symptoms and 40 (47%) had self-isolated as they reported mild symptoms of COVID-19 infection.

The mean age of participants who had recovered from COVID-19 was 35.95 (standard deviation 9.4) years, and most of them were women (81%), married (88%), of low-to-medium educational level (62%) and were skilled workers (91%). The prevalence of anxiety and depressive symptoms in recovered participants was 25% (21/85) and 29% (25/85), respectively, which was higher than that of the controls (15% (13/85) and 8% (7/85), respectively). No statistically significant differences in sociodemographic variables were found between the two groups, or in their history of mental or medical illness. However, recovered participants had significantly higher mean anxiety and depressive scores than their control counterparts; $P = 0.001$ and $P = 0.003$, respectively (Table 1).

Sleep disturbances in recovered participants

The prevalence of sleep disturbances among recovered COVID-19 cases and control participants was 76% (65/85) and 46% (39/85), respectively. Compared to the control group, the recovered participants had significantly higher levels of sleep disturbances in all domains assessed by the Pittsburgh Sleep Quality Index questionnaire except the use of medications, namely: sleep quality ($P < 0.001$), latency ($P < 0.001$), duration ($P = 0.003$), efficiency ($P < 0.001$), disturbances ($P = 0.002$), daytime dysfunction ($P < 0.001$) and global PSQI score ($P < 0.001$) (Table 2). Even after adjusting for associated anxiety and depressive symptoms, the recovered participants had higher odds of impairment in sleep quality (OR 1.48, 95% CI: 1.05–2.10; $P = 0.026$), latency (OR 1.82, 95% CI: 1.29–2.57; $P = 0.001$), duration (OR 1.57, 95% CI: 1.11–2.22; $P = 0.011$), efficiency (OR 3.77, 95% CI: 2.00–7.12; $P < 0.001$), daytime functioning (OR 1.94, 95% CI: 1.21–3.11; $P = 0.006$) and poor global PSQI score (OR 3.0, 95% CI: 1.50–6.01; $P = 0.002$) (Table 3).

Table 1 Characteristics of recovered COVID-19 cases and controls, Egypt, 2020

Variable	Cases (n = 85)	Controls (n = 85)	Statistical test	P-value
Age, mean (SD)	35.95 (9.40)	33.68 (9.37)	$t = 1.58$	0.117
Sex, no. (%)			$\chi^2 = 1.63$	0.202
Female	69 (81.2)	62 (72.9)		
Male	16 (18.8)	23 (27.1)		
Marital status, no. (%)			$\chi^2 = 3.37$	0.066
Married	75 (88)	66 (78)		
Not married	10 (12)	19 (22)		
Residence, no. (%)			$\chi^2 = 1.976$	0.160
Rural	55 (65)	46 (54)		
Urban	30 (35)	39 (46)		
Level of education, no. (%)			$\chi^2 = 0.61$	0.435
Low-to-medium	53 (62)	48 (57)		
High	32 (38)	37 (43)		
Occupation, no. (%)			$\chi^2 = 2.65$	0.266
Skilled	77 (91)	70 (82)		
Government employee	7 (8)	12 (14)		
Unemployed	1 (1)	3 (2)		
History of psychiatric illnesses, no. (%)			$\chi^2 = 0.083$	0.773
Yes	7 (8)	6 (7)		
No	78 (92)	79 (93)		
History of medical illnesses, no. (%)			$\chi^2 = 2.590$	0.108
Yes	19 (22)	11 (13)		
No	66 (78)	74 (87)		
HADS score, mean (SD)				
Depression	8.24 (4.21)	6.62 (3.85)	MWU = −2.95	0.003
Anxiety	8.15 (4.17)	6.13 (3.37)	MWU = −3.33	0.001

COVID-19: coronavirus disease 2019; HADS: Hospital Anxiety and Depression Scale; MWU test: Mann–Whitney U test.
Significant at P < 0.05.

Table 2 **Sleep problems among recovered COVID-19 cases and controls, Egypt, 2020**

Variable	Cases (n = 85) Mean (SD)	Controls (n = 85) Mean (SD	Mann–Whitney U test	P-value[a]
Sleep quality	1.71 (0.98)	1.20 (0.97)	−3.49	< 0.001
Sleep latency	1.82 (0.93)	1.16 (1.00)	−4.25	< 0.001
Sleep duration	1.14 (1.05)	0.68 (0.88)	−2.97	0.003
Sleep efficiency	0.72 (0.88)	0.18 (0.41)	−4.69	< 0.001
Sleep disturbances	1.59 (0.66)	1.34 (0.68)	−2.30	0.002
Use of medications	0.35 (0.88)	0.16 (0.60)	−1.65	0.099
Daytime dysfunction	1.13 (0.80)	0.71 (0.65)	−3.51	< 0.001
Global PSQI	No. (%)	No. (%)		
Good (< 5)	20 (23.5)	46 (54.1)		
Poor (≥ 5)	65 (76.5)	39 (45.9)	χ^2 = 16.74	< 0.001

COVID-19: coronavirus disease 2019; SD: standard deviation; PSQI: Pittsburgh Sleep Quality Index
[a]Significant at P < 0.05.

Among recovered participants with poor scores on the global Pittsburgh Sleep Quality Index, 29% (25/85) and 36% (31/85), had associated anxiety and depressive symptoms, respectively, which was higher than that of recovered participants with good global Pittsburgh Sleep Quality Index scores (10% (9/85; 11%) and 5% (4/85; 5%), respectively). There were significant associations between poor global Pittsburgh Sleep Quality Index scores and being female (P = 0.034), low-to-medium level of education (P = 0.004) and associated depressive (P = 0.002) and anxiety symptoms (P = 0.003) (Table 4).

Discussion

The main finding of this study is that about 77% of people who had recovered from COVID-19 experienced sleep disturbances (compared to only 46% of control participants). Moreover, the recovered participants were more likely to have poor subjective sleep quality, prolonged sleep latency, shorter sleep duration, reduced sleep efficiency, more frequent daytime dysfunction, and poor global Pittsburgh Sleep Quality Index scores compared to the controls. These findings are supported by the results of previous studies on disease outbreaks, where psychiatric morbidities, including sleep disturbances, ranged from 10% to 35% in the post-remission period (8,25). For example, a Nigerian study found that out of 117 partic-

ipants, including survivors of Ebola virus disease and their families, 39 (33%) reported sleep insufficiency attributed to epidemic-related fears (26). A meta-analysis of eight studies concluded that the prevalence of sleep disturbances in post-recovery COVID-19 patients in China, Turkey and Italy was 35%, 13% and 50%, respectively (9). The sleep disturbances associated with the COVID-19 outbreak could be attributed to psychological stressors such as social restrictions, the psychological impact of a new virus with potentially severe morbidity and mortality, apprehensions about infection or infecting others, and illness stigma.

However, the higher propensity for psychological disturbances, including sleep disturbances, among people who have recovered from COVID-19 than people who have not had COVID-19 but who share the same environmental stressors raises concerns about the potential neuroimmunological effects of the COVID-19 virus itself. It has been claimed that the immune reaction induces local and systemic cytokine infiltrations and, similar to SARS and MERS patients, COVID-19 patients showed T-helper-1 cell overstimulation with overproduction of interferon-γ, interleukin (IL)-1β, IL-6, CXCL10 and CCL2 (27,28). However, unlike in SARS and MERS, activation of T-helper-2 cells with overproduction of cytokines (such as IL-4 and IL-10) has been detected in COVID-19 patients (29). Evidence suggests that

Table 3 **Association of COVID-19 with sleep problems: conditional logistic regression analysis**

Variable	β	SE	Wald	P-value	aOR[a] (95% CI)
Sleep quality	0.40	0.18	4.99	0.026	1.48 (1.05–2.10)
Sleep latency	0.60	0.18	11.82	0.001	1.82 (1.29–2.57)
Sleep duration	0.45	0.18	6.48	0.011	1.57 (1.11–2.22)
Sleep efficiency	1.33	0.32	16.78	< 0.001	3.77 (2.00–7.12)
Sleep disturbances	0.30	0.25	1.44	0.23	1.36 (0.82–2.23)
Daytime dysfunction	0.66	0.24	7.58	0.006	1.94 (1.21–3.11)
Poor global PSQI	1.10	0.36	9.56	0.002	3.00 (1.50–6.01)

COVID-19: coronavirus disease 2019; β: regression coefficient; SE: standard error; aOR: adjusted odds ratio; CI confidence interval; PSQI: Pittsburgh Sleep Quality Index.
[a]aORs adjusted for associated depression and anxiety symptoms.

Table 4 Factors associated with poor sleep quality in recovered COVID-19 participants, Egypt 2020

Variable	Global PSQI score		Statistical test	P-value[a]
	Good (< 5) (n = 20)	Poor (≥ 5) (n = 65)		
Age, mean (SD)	33.05 (9.67)	36.85 (9.21)	t = −1.59	0.115
Sex, no. (%)			χ² = 4.48	0.034
Female	13 (65)	56 (86)		
Male	7 (35)	9 (14)		
Marital status, no. (%)			χ² = 1.71	0.191
Married	16 (80)	59 (91)		
Not married	4 (20)	6 (9)		
Residence, no. (%)				
Rural	14 (70)	41 (63)	χ² = 0.32	0.388
Urban	6 (30)	24 (37)		
Level of education, no. (%)				
Low-to-medium	7 (35)	46 (71)	χ² = 8.34	0.004
High	13 (65)	19 (29)		
Occupation, no. (%)				
Skilled	19 (95)	58 (89)	χ² = 0.70	0.706
Employee	1 (5)	6 (9)		
Unemployed	0 (0)	1 (1)		
History of psychiatric illnesses, no. (%)				
Yes	3 (15)	4 (6)	χ² = 1.58	0.208
No	17 (85)	61 (94)		
History of medical illnesses, no. (%)				
Yes	2 (10)	17 (26)	χ² = 2.30	0.129
No	18 (90)	48 (74)		
Severity of COVID-19 symptoms, no. (%)				
Mild	11 (55)	29 (45)	χ² = 0.66	0.416
Moderate-to-severe	9 (45)	36 (55)		
Medications given during COVID-19 infection, no. (%)				
Antibiotics	17 (85)	57 (88)	χ² = 0.01	0.925
Anticoagulants	12 (60)	37 (57)	χ² = 0.15	0.700
Antimalarial	9 (45)	28 (43)	χ² = 0.06	0.804
Antiparasitic (ivermectin)	12 (60)	41 (63)	χ² = 0.02	0.894
Steroids	8 (40)	37 (57)	χ² = 1.68	0.195
Home isolation in days, mean (SD)	11.71 (8.90)	9.11 (9.90)	MWU = −0.92	0.359
Hospital isolation in days, mean (SD)	4.94 (6.70)	6.97 (9.62)	MWU = −0.59	0.558
HADS score, mean (SD)				
Depression	6.05 (4.12)	8.83 (4.33)	MWU = −3.08	0.002
Anxiety	5.95 (2.69)	8.70 (4.45	MWU = −2.99	0.003

COVID-19: coronavirus disease 2019; SD: standard deviation; HADS: Hospital Anxiety and Depression Scale; MWU test: Mann–Whitney U test.
[a]Significant at P < 0.05.

the activation of the immune system with release of pro-inflammatory cytokines was associated with the development of psychiatric symptoms (30). Many studies have found that coronaviruses could infect neuronal cells by binding to the angiotensin-convertase enzyme receptor 2 (ACE2) expressed by neuronal cells (31–33). The invasion of the coronavirus into the central nervous system, including the brainstem which is responsible for cardiorespiratory control, would result in respiratory insufficiency (32). With the prolonged respiratory dysregulation as a result of neurological injury, recovered patients may experience a worsening of their quality of sleep induced by breathing difficulties (34). Accordingly, the virus could also have a role in the emergence of sleep disorders in recovered COVID-19 patients through immune–neurological mechanisms.

Our study shows that female and having higher levels of depression and anxiety symptoms predicted poor scores on the global Pittsburgh Sleep Quality Index

among recovered participants. A similar study found that females had an increased risk of developing insomnia *(35)*. However, another study found that male COVID-19 patients were more likely to report sleep-related problems *(36)*. These apparent differences regarding sex as a risk factor for sleep disturbances in COVID-19 patients could be attributed to variances in the studied subgroups, e.g. the general population, health care workers or COVID-19 patients.

Regarding the relationship between anxiety and depression and sleep disturbances, previous clinical studies had demonstrated the close association between emotional instability and sleep disturbances *(37)*. In our study most of the participants were employed. It has been claimed that during the epidemic, elevated stress and anxiety levels associated with reduced social capital were linked with poor sleep quality and that people who had recovered from COVID-19 were more susceptible to experiencing adverse health outcomes *(38,39)*. This susceptibility could occur by affecting the emotional and intellectual capabilities, and even disturbing the other physiological functions such as cardiovascular, hormonal, immunological and metabolic functions *(40)*. Furthermore, long-term recurrent episodes of insufficient sleep would lead to emotional symptoms and vice versa *(41)*.

Our study has some limitations. First, it was cross-sectional and thus we cannot establish a causal relationship between sleep disorders and related risk factors, including COVID-19. Second, the selection of participants from only one province, despite being one of the largest provinces in Egypt, and relatively small-sized sample limit the generalizability of our findings. Third, sleep disturbances, the main outcome, were assessed through a self-rating scale which would increase the possibility of recall bias. Therefore, more objective measures (e.g. polysomnography) would provide more accurate and reliable results.

Conclusions

Further attention needs to be given to sleep disturbances as one of the potential sequelae of COVID-19 because it can negatively affect mental and physical well-being. Tailored interventions targeting those with and most at risk of sleep disturbances following COVID-19 (e.g. women) could overcome/prevent such disorders. Population-based longitudinal studies are needed to investigate the various psychological and neurobiological mechanisms underlying sleep disturbances and to identify the other possible long-term sequelae of COVID-19 in Egypt.

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Troubles du sommeil après la guérison de la COVID-19 : étude transversale comparative en Égypte

Résumé

Contexte : Les séquelles post-COVID-19 sont de plus en plus souvent signalées, mais les troubles du sommeil après la guérison de la maladie ont suscité peu d'attention.

Objectifs : La présente étude visait à identifier et à comparer les troubles du sommeil et les corrélats associés chez les adultes qui avaient guéri de la COVID-19 et chez ceux qui n'avaient pas contracté la maladie.

Méthodes : Les échantillons comprenaient 85 adultes guéris de la COVID-19 et 85 autres qui n'ont jamais été infectés de COVID-19 (appariés en fonction de l'âge, du sexe, du niveau d'éducation et du niveau socio-économique). Des personnes ont été recrutées dans les hôpitaux universitaires de Zagazig (Égypte) du 1er septembre au 29 novembre 2020. Les participants ont été interrogés à l'aide d'une liste de contrôle socio-démographique et clinique, de l'index de qualité du sommeil de Pittsburgh et de l'échelle d'anxiété et de dépression de l'hôpital.

Résultats : La plupart (77 %) des cas de COVID-19 guéris avaient présenté des troubles du sommeil, contre 46 % des témoins. Les personnes qui s'étaient rétablies de la COVID-19 étaient plus susceptibles d'avoir une mauvaise qualité subjective du sommeil (odds ratio (OR) 1,5, intervalle de confiance (IC) à 95 % : 1,1-2,1), une latence prolongée du sommeil (OR 1,8, IC à 95 % : 1,3-2,6), une durée de sommeil plus courte (OR : 1,6, IC à 95 % : 1,1-2,2), une efficacité courte du sommeil (OR 3,8, IC à 95 % : 2,0-7,1), des dysfonctionnements fréquents pendant la journée (OR 1,9, IC à 95 % : 1,2-3,1) et un score global médiocre de l'index de qualité du sommeil de Pittsburgh (OR 3,0, IC à 95 % : 1,5-6,0). Chez les participantes guéries (*p* = 0,034) qui avaient un niveau d'éducation compris entre faible et modéré (*p* = 0,004), les symptômes dépressifs (*p* = 0,002) et liés à l'anxiété (*p* = 0,003) étaient associés à un score global médiocre de l'index de qualité du sommeil de Pittsburgh.

Conclusion : D'autres études (par exemple, des études longitudinales en population) sont nécessaires sur les troubles du sommeil en tant que séquelles potentielles de la COVID-19 qui peuvent nuire au bien-être mental et physique.

اضطرابات النوم عقب التعافي من مرض كوفيد-19: دراسة مقطعية مقارنة في مصر

محمد عبد الغني، مها الصادق، أحمد عبد المعطي، سمر عطوة، أميرة سعيد، ميرفت حسن

الخلاصة

الخلفية: يتزايد الإبلاغ عن مضاعفات مرض فيروس كورونا 2019 (كوفيد-19)، ولكن لم تحظَ اضطرابات النوم التالية للإصابة بمرض كوفيد-19 بالاهتمام الكافي.

الأهداف: هدفت هذه الدراسة إلى تحديد اضطرابات النوم والمعاملات المرتبطة بها ومقارنتها بين البالغين الذين تعافوا من مرض كوفيد-19 والبالغين الذين لم يصابوا به.

طرق البحث: شملت العينة 85 مشاركًا متعافيًا من مرض كوفيد-19، و85 بالغًا لم يصابوا به (متماثلين من حيث العمر والجنس والمستوى التعليمي والاجتماعي الاقتصادي). وتمت الاستعانة بأفراد من مستشفيات جامعة الزقازيق، مصر، في الفترة من 1 سبتمبر/ أيلول إلى 29 نوفمبر/ تشرين الثاني 2020. وأجريت مقابلات مع المشاركين باستخدام قائمة مرجعية سكانية وسريرية، ومؤشر بيتسبرج لجودة النوم، ومقياس القلق والاكتئاب في المستشفيات.

النتائج: عانت معظم الحالات المتعافية من مرض كوفيد-19 (77٪) من اضطرابات النوم، مقارنة بنسبة 46٪ من الشواهد. كما أن الأفراد الذين تعافوا من مرض كوفيد-19 كانوا أكثر عرضة لضعف الجودة الذاتية للنوم (نسبة الأرجحية 1.5، فاصل الثقة 95٪: 1.1–2.1)، وطول مدة النوم (نسبة الأرجحية 1.8، فاصل الثقة 95٪: 1.3–2.6)، ومدة النوم القصيرة (نسبة الأرجحية: 1.6، فاصل الثقة 95٪: 1.1–2.2)، وانخفاض كفاءة النوم (نسبة الأرجحية: 3.8، فاصل الثقة 95٪: 2.0–7.1)، والخلل الوظيفي المتكرر أثناء النهار (نسبة الأرجحية: 1.9، فاصل ثقة 95٪: 1.2–3.1)، وتدني الدرجة الخاصة بمؤشر بتسبرج العالمي لجودة النوم (نسبة الأرجحية: 3.0، فاصل ثقة 95٪: 1.5–6.0). ومن بين المشاركين المتعافين من مرض كوفيد-19، كان جنس الإناث (الاحتمالية = 0.034)، والتعليم المنخفض إلى المتوسط (الاحتمالية = 0.004)، وأعراض الاكتئاب (الاحتمالية = 0.002) والقلق (الاحتمالية = 0.003) مرتبطة بتدني الدرجة الخاصة بمؤشر بتسبرج العالمي لجودة النوم.

الاستنتاجات: يلزم إجراء مزيد من الدراسات (مثل الدراسات الطولية القائمة على السكان) بشأن اضطرابات النوم، باعتبارها أحد المضاعفات المحتملة لمرض كوفيد-19 التي يمكن أن تضعف السلامة النفسية والبدنية.

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