PSYCHOLOGICAL DISORDERS AFFECTING MEDICAL STAFF IN KSA: A SYSTEMATIC REVIEW

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Abstract:
Objective: A growing number of research on psychological disorders among medical staff in KSA have been undertaken; nevertheless, there is no clear consensus on psychological disorders among medical staff in KSA. The goal of this systematic review was to consolidate current data on psychological disorders among medical staff in KSA.
Methods: Authors began with recognizing the important examination proof that spots light on psychological disorders among medical staff in KSA. Authors led electronic writing look in the accompanying data sets: Ovid Medline (2016 to present), Ovid Medline Daily Update, Ovid Medline in process and other non-filed references, Ovid Embase (2016 to present), The Cochrane Library (latest issue) and Web of Science. Just examinations in English language will be incorporated. The precise selection was acted in close collaboration with a clinical examination curator.
Results: A total of 94 studies were identified in the search, all of them were assessed for eligibility, and 6 articles were included in this review. All included studies assessed psychological status of medical staff during the period of COVID-19 as it was a stressing era except for one study [18]. The methodological characteristics of studies are presented in table. Psychological disorders were more common among nurses than doctors. The most common psychological disorders were depression, stress and sleep disturbances.
Conclusion: Overall, Saudi Arabia's medical staff had depressive or anxious symptoms, with mild disorders accounting for half and moderate and severe problems for the remainder. However, the mental health of nurses, female employees, and those aged 30 to 39 should get greater focus. Especially during pandemics, regular checks on people's mental health should be instituted. The results showed that poor sleep quality was significantly connected with emotional discomfort, but fear of COVID-19 was associated with just a minor degree of anxiety.

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INTRODUCTION:

As a result of this urgent situation, health care workers (HCWs) have been increasingly engaged in the diagnosis and treatment of patients with COVID-19, putting themselves at risk for a wide range of adverse effects on their physical, psychological, and behavioral health. The growing number of confirmed and suspected cases, heavy workload, human-to-human transmission, association with high morbidity and potentially fatal outcome, lack of personal protective equipment (PPE), extensive media coverage, lack of specific treatments, and the perception of insufficient support are all factors that may contribute to these outcomes [1-3].

The novel coronavirus (COVID-19) quickly became a worldwide health, socioeconomic, and political problem when it was first identified in China [1, 2]. The 2019 New Coronavirus was designated a Public Health Emergency of International Concern by the World Health Organization (WHO) on January 30th, 2020. (PHEIC). World Health Organization (WHO) announced a worldwide pandemic on February 11, 2020 [2-4], and the new coronavirus was formally called COVID-19. Earlier that day (April 1), the International Committee for Virus Classification (ICTV) changed the name of 2019-nCoV to SARS-CoV-2 [4]. There were more than 8.5 million cases reported to the WHO as of June 25, 2020. In spite of this, the number of infected persons continues to rise. Over 457,000 people have died during this time span because no effective therapy exists [4, 5]. Communities and critical professionals around the country, particularly those working in hospitals with patients, have been under significant emotional strain since the disease's emergence [5].

Professionals in the fields of psychology, psychiatry, and behavioral science across the world have significant obstacles in dealing with stress, anxiety, and depression. Depression is one of the most prevalent mental disorders worldwide and also one of the most frequent physical conditions. According to the World Health Organization, depression [6] is one of the most frequent behavioral diseases, characterized by poor mood, lack of interest, feelings of guilt and worthlessness, sleep and food difficulties, low energy and reduced attention. Ten percent to twenty percent of the population suffers from major depressive illness or anxiety condition [6-9]. Stress is one of the most widespread problems in today's communities [6, 11], and it is an inevitable aspect of living as a human being. Anxiety is a mental health problem characterized by persistent worry and distress, manifesting itself physically via feelings of drowsiness, agitation, and rapid heartbeat. Anxiety

may have several causes, some of which are biological, while others are genetic, environmental, psychological, social, or all of the above [6, 12, 13]. Constant stress and concern may cause a person to lose faith in themselves, develop depression, and act humiliatingly toward others, all of which contribute to a negative work environment and lower productivity. The latter exacerbates anxiety, and the vicious cycle may weaken people's minds and bodies, culminating in unstable neuropsychiatric diseases [6, 14].

The National Institutes of Health (NIH) found that the relative frequency of health issues in high-stress employment was highest among nurses and doctors due to the stress caused by their responsibilities to provide health and treatment to patients. Nursing ranks 27 out of 130 occupations in terms of mental health issues [15]. When compared to workers in other professions, nurses are away from work due to burnout or disability at a rate of 7.4% per week [15].

The health and happiness of the hospital personnel responsible for admitting and caring for patients with COVID-19 have been negatively impacted by a wide range of personal and professional pressures. Therefore, identifying sources of stress and engaging in periodic training may help with treatment, management, and alleviation [10–14]. Depression, anxiety, a lack of enjoyment in one's work, strained personal relationships, and even thoughts of suicide may all be exacerbated by stress. The inability to focus, make sound decisions, and effectively connect with clients are all ways in which stress may lessen the efficacy of psychological therapies [15].

We performed a comprehensive literature review because of the absence of general information on the incidence of stress, anxiety, and depression among hospital workers who come into direct contact with COVID-19 patients and because of the influence of numerous variables on this prevalence. We conducted a statistical analysis of the reported results of the gathered studies in order to provide a set of broad statistics on the prevalence of stress, anxiety, and depression among front-line healthcare workers caring for COVID-19 patients, with the hope that this data may inform other related programs aimed at reducing the complexities of these disorders.

METHODS:

Review Question

This review seeks to evaluate and point out most common psychological disorders affecting medical staff in KSA. The specific review questions to be addressed are:

(1) What are the most common psychological disorders affecting medical staff in KSA?
(2) What is the effect of pandemics on the psychological status and mental health of medical staff in KSA?

Searches

To start, we acknowledged the significant examination evidence that elucidates the most prevalent mental health issues confronting KSA's medical workforce. We conducted an electronic literature search in the following databases: Ovid Medline (2016–present), Ovid Medline Daily Update, Ovid Medline in process and other non–filed references, Ovid Embase (2016–present), The Cochrane Library (latest issue), and Web of Science. All tests must be administered in English. A clinical examination curator was consulted extensively to make the final choice.

To ensure completeness, we also used ISI Web of Science to look up each reference we used, as well as the bibliographies of any qualifying publications we found.

When we spoke about "published" publications, we were referring to those that appeared in academic journals that had through a peer review process. The grey literature was not considered in this study.

Types of studies to be included

We included articles covering how to coordinate different review plans in orderly review of most common psychological disorders affecting medical staff in KSA. We did exclude articles only depicting the most common psychological disorders affecting medical staff in KSA.

We concentrated on the most common psychological disorders affecting medical staff in KSA. We included articles depicting sample sizes and articles that planned to sum up their outcomes to the populace which test was drawn from. Case series and case reports were excluded from our search. Only studies from KSA were considered.

Participants

The systematic review included medical staff in KSA.

Searching key words

For every data set, looking through was led by utilizing a mix of the accompanying keywords: (psychological OR disorder OR mental health OR impact OR depression OR anxiety OR stress OR pandemic OR COVID-19 OR medical staff OR Kingdom of Saudi Arabia OR systematic review).

We included examinations enrolling members in everyone as well as clinical settings. Studies were incorporated assuming they revealed most common psychological disorders affecting medical staff in KSA. No comparator or control test size is required in the review to be incorporated.

Studies selection process

All list items were brought into an EndNote record. Two analysts evaluated titles and abstracts for their likely pertinence.

One reviewer freely screened titles and abstracts from the search and any articles that report most common psychological disorders affecting medical staff in KSA. We gained the full text of articles that possibly meet the eligibility criteria.

Outcomes
Primary outcome

To highlight the most common psychological disorders among medical staff in KSA.

Secondary outcome

To determine the impact of pandemic on psychological state and mental health among medical staff in KSA.
Information extraction, (choice and coding)

Information was extracted from the included articles utilizing an electronic information extraction structure on Microsoft Access programming. Two reviewers freely extracted information, utilizing a standard information extraction structure which was created by the survey creators with the end goal of the review.

Data management

A descriptive statistics is employed and relevant data are extracted from eligible studies and presented in tables. We then presented a narrative synthesis of the summary of most common psychological disorders affecting medical staff in KSA.

RESULTS:

A total of 94 studies were identified in the search, all of them were assessed for eligibility, and 6 articles were included in this review (Figure 1).
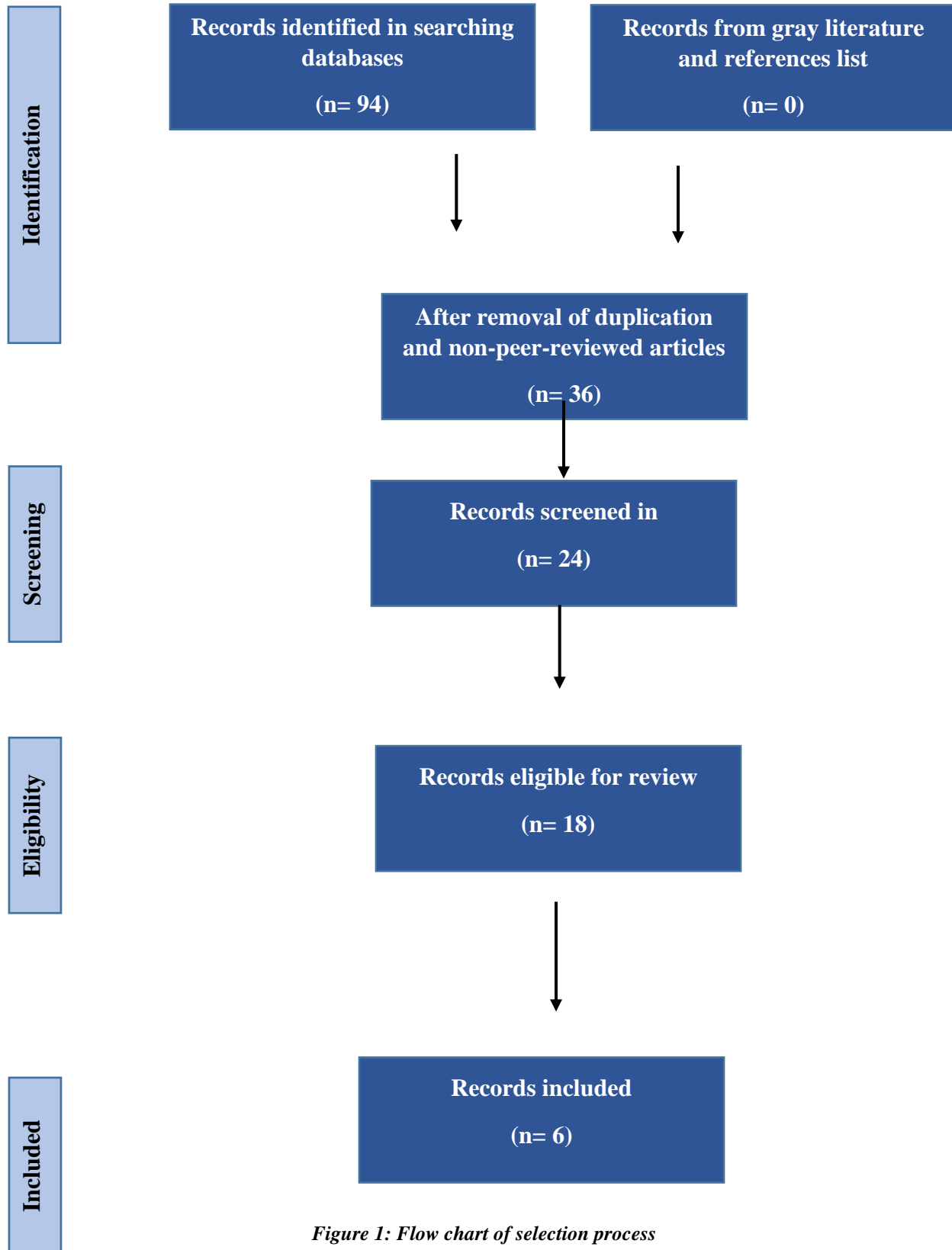
Figure 1: Flow chart of selection process

All included studies assessed psychological status of medical staff during the period of COVID-19 as it was a stressing era except for one study [18]. The methodological characteristics of studies are presented in table.

Table 1: Methodological characteristics of included studies

Study	Year	Region	Design	Sample size	Sampling	Setting	During COVID	Analysis	Data collection	Questionnaire
Alyami [16]	2022	Taif city	Cross sectional	202	Convenience	King Faisal Medical Complex	Yes	SPSS 27.0	Electronic	FCV-19S DASS-21 PSQI PVD
Alhurishi [17]	2021	KSA	Cross sectional	200	Convenience	Multi-center	Yes	SPSS 22.0	Electronic	PHQ-9 GAD-7 ISI-7 IES-R
Aljohani [18]	2022	KSA	Cross sectional	1028	Convenience	Multi-center	No	RStudio 4.1.1	Face-to-face, electronic	DASS-21
Altwaijri [19]	2022	KSA	Cross sectional	1985	Convenience	Multi-center	Yes	SAS 9.4	Electronic	K6*
AlAmmari [20]	2021	Central, eastern, western regions	Cross sectional	720	Purposive	Multi-center	Yes	SAS 9.4	Electronic	PHQ-9 GAD-7 ISI-7
Alateeq [21]	2020	KSA	Cross sectional	502	Convenience	Multi-center	Yes	SPSS 23.0	Electronic	PHQ-9 GAD-7

FCV-19S: Fear of COVID-19 Scale; DASS-21: Depression, Anxiety and Stress Scale; PSQI: Pittsburgh Sleep Quality Index; PVD: Perceived Vulnerability to Disease; PHQ-9: Patient Health Questionnaire; GAD-7: Generalized Anxiety Disorder; ISI-7: Insomnia Severity Index; IES-R: Impact of Event Scale-Revised; K6*: psychometrically reliable and valid scale, which was used in the Saudi National Mental Health Survey questionnaire the CIDI 3.0 and validated for use in KSA

Summary of significant results are presented in table 2. Figure 2 shows factors associated with psychological disorders.

Table 2: Main results and conclusion of included studies

| Study	Doctor	Nurse	Others	Depression	Anxiety	Stress	Fear of disease	Insomnia	Associated factors
Alyami [16]	66	136	-	41.08%	50.5%	47.64%	92.7%	40.5%	Female gender
Alhurishi [17]	23	147	30	73%	69%	83%	-	62%	Female gender, nurses
Aljohani [18]	334	216	478	43%	31%	37%	-	-	-
Altwaijri [19]	284	574	1090	55.1%	67.5%	74.6%	80%	-	Female gender, age, nurses
AlAmmari [20]	194	262	264	49.17%	49.59%	49.24%	-	42.92%	Non-Saudi nationality, female gender
Alateeq [21]	111	132	259	52.2%	44.1%	33.1%	-	57.9%	Male gender, age, nurse
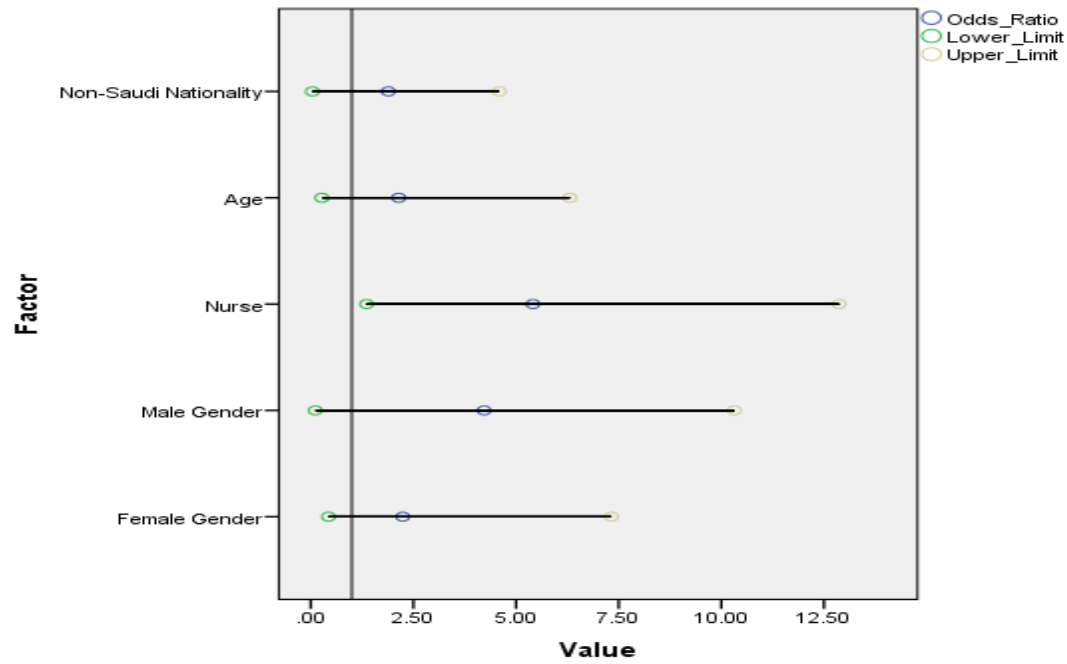
Figure 2: Forest plot of factors affecting participants psychological state

DISCUSSION:

SARS-CoV-2, also known as COVID-19, was first identified in Wuhan, China, towards the end of December 2019 and was labeled a worldwide public health concern by WHO at the end of January 2020 [21]. As of May 14, 2020, the number of Coronavirus-positive cases in the Kingdom of Saudi Arabia (KSA) was at 44,830, making it the most among the Gulf Cooperation Council nations [22]. Since HCWs are continually putting themselves at danger of infection and must spend weeks away from their families to prevent spreading the virus, it is crucial to assess their mental health in the context of the COVID-19 pandemic. Due to the high risk of exposure, worry about infecting and caring for loved ones, lack of PPE, and long work hours, HCWs are also among those most likely to experience emotional distress as a result of the current epidemic [23-24].

According to research conducted during the 2003 SARS epidemic, HCWs worried about spreading the disease to their loved ones and experienced shame as a result of their association with ill patients [25-28]. This caused them to suffer from severe post-traumatic stress disorder (PTSD) for a long time after the epidemic ended, even a year later [28]. It has been noted that despite a lack of infectious disease consultants and other medical professionals being educated to care for a surge in patients, the health care systems in both Italy and the United States were able to handle the effects of the epidemic within a week [29]. Since they have never seen a patient being intubated or die in front of them, many of them are at risk for developing PTSD or other mental health issues in the future [29].

Already, the prevalence of depression among healthcare professionals is almost three times that of the general population [30]. Nonetheless, the stress of caring for coronavirus patients and the difficult choices that many healthcare providers are being forced to make will undoubtedly harm their mental health [31]. In the midst of the MERS-CoV pandemic, researchers in KSA conducted a number of investigations [32-36]. According to one study, 75% of those who were exposed to MERS-CoV also had psychological issues, and 50% of those people also reported impaired job performance. As many as 61.2% of HCW in this research were worried that they may get MERS-CoV from their patients [32]. No surveys conducted at the time employed reliable methods to gauge HCWs' emotional health.

For adults, the workplace is a crucial location for well-being-enhancing activities. Healthcare expenditures for firms and their workers may be lowered if management gives more attention to mental health in the workplace. In these situations, it is crucial to assess and treat patients' mental health. Employees' job performance, involvement in work, communication with colleagues, and physical capacities are all significantly impacted by poor mental health and stress [37].

During the COVID19 epidemic, it was crucial in KSA to ensure the mental health of medical staff. In order to anticipate the likelihood of acquiring the disease, which is often unrecognized by the patient, it is important to evaluate not only the mental health of HCWs, but also linked variables or risk factors [38]. In medicine, a risk factor is anything in a person that raises his or her illness risk, such as a trait, a feature, or an exposure [39].

Various research employing a variety of KSA measures have examined the mental health effects of COVID 19 on HCWs and the general population. Researchers Alateeq et al. used the Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder (GAD-7) to examine patients' mental health at institutions run by the Ministry of Health Care, most of which are located in the Qassim district. Since the writers were primarily interested in the Arabic-speaking population, they only utilized the Arabic version of these surveys [21]. The mental well-being of ophthalmologists in the Kingdom of Saudi Arabia was the focus of a research by Al Mater et al. PHQ-9, GAD-7, Insomnia Severity Index (ISI), and Perceived Stress Scale (PSS) were administered in English [40-41].

To further understand the prevalence of anxiety among HCWs, Alzaid et al. conducted an English-language survey in the Eastern Province of KSA. The authors devised a survey consisting of 34 items distributed over four parts; the GAD-7 scale was added in the last segment to gauge levels of anxiety [42]. After conducting an Arabic and English survey of healthcare workers at the Northern Armed Forces Hospital, Zaki et al. reported on the stress and psychological effects on those who work in the field. The Impact of Events Scale, Revised (IES-R) was incorporated in the last element of this four-part instrument [43]. The incidence and determinants of anxiety among HCWs in 13 locations of KSA were analyzed by Alenazi et al. [44], who conducted an Arabic-language survey of HCWs. Doctors' mental health was examined by

Alsulais et al., who looked at the effects of COVID 19. The authors used an existing English-language questionnaire from a Canadian research on SARS [45]. HCWs at King Khalid University Hospital in Riyadh were surveyed by Temsah et al. The GAD-7 was included in the survey design by the authors to measure levels of anxiety [46-47].

CONCLUSION:
Overall, Saudi Arabia's medical staff had depressive or anxious symptoms, with mild disorders accounting for half and moderate and severe problems for the remainder. However, the mental health of nurses, female employees, and those aged 30 to 39 should get greater focus. Especially during pandemics, regular checks on people's mental health should be instituted. Providers of medical treatment must also be given the opportunity to get enough rest and have quiet spaces to recharge. During the COVID-19 pandemic, psychiatric and psychotherapy therapies may improve psychological resilience and well-being. Finally, longitudinal research studies are required to track individuals' mental health problems and gather data for use in developing effective treatments.

The results showed that poor sleep quality was significantly connected with emotional discomfort, but fear of COVID-19 was associated with just a minor degree of anxiety. These findings highlight the need of developing and implementing psychological interventions to aid healthcare workers in coping with the emotional toll of the current epidemic.

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