

Original Research Article

Anxiety and insomnia prevalence during the COVID-19 pandemic among healthcare workers in the Ministry of Health and Prevention- United Arab Emirates

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Received: 22 June 2022

Accepted: 13 July 2022

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ABSTRACT

Background: COVID-19 pandemic and lockdown have the potential to influence the mental health of the frontline healthcare workers (HCWs), working in the time of crisis. Hence, it is essential to monitor the anxiety, sleep, along with the other mental health concerns to realize the interceding risk factors as well as to inform tailored interventions. This study therefore aims to detect the psychological impact of COVID-19 experienced by the healthcare professionals during the COVID-19 pandemic working in the Ministry of Health and Prevention (MOHAP) facilities.

Methods: A descriptive cross-sectional study was carried out between 25 October 2020 to 30 September 2021 by recruiting 404 healthcare providers currently working in different hospitals of the MOHAP.

Results: Of 404 healthcare workers, 76.7% were females and 23.3% were males. About 35.6% were aged 36-45 years. The majority of the participants were non-locals (84.4), 23.5% were doctors/physicians, and 58.7% were nurses, 7.7% were pharmacist, remaining were other healthcare providers. Overall, 10.6% and 3.2% of all healthcare workers reported severe symptoms of anxiety, and insomnia respectively. Only age, gender, qualification, worried about being infected with COVID-19 and likelihood of being infected from COVID-19 showed statistically significant results ($p < 0.05$).

Conclusions: The pandemic with respect to the COVID-19 tends to have a noteworthy impact on the mental health of healthcare workers. This evidence indicates that substantial proportion of healthcare workers may experience sleep disturbances and anxiety during the outbreak suggesting a necessity to indicating traditions of mitigating the risks of mental health and regulate interventions under pandemic situations.

Keywords: Anxiety, Insomnia, Impact, COVID-19, Healthcare providers, United Arab Emirates

INTRODUCTION

The COVID-19 pandemic has aggravated or caused pre-existing mental health issues among health care workers (HCWs) mainly the frontline.¹ Actions are required for the purpose of mitigating the COVID-19 impact on mental health by means of shielding in addition to promoting the

psychological wellbeing of the healthcare workers after and during the COVID-19 related outbreak. Healthcare professionals (HCPs) are considered to be at the forefront of the COVID-19 battle.² As the rest of us take measures to preserve social distancing or even go into a lockdown, several HCPs across the globe are doing the opposite. They may head out daily to care and treat for COVID-19

patients. Working overtime has become a normalcy for nurses, hospital staff, doctors, and other HCPs. Usually, they work for 12 hours for the purpose of tackling the high volume of patients. Together with the stress of working overtime, they are also subjected to repetitive exposure to the virus over days together putting them at a high risk to the very illness they wish to treat. Hence, it is not astonishing that the COVID-19 pandemic has taken its toll on the medical community. For the purpose of understanding the extent of such impact, this study aims to look at the infected cases in the community of HCPs.

The characteristics of the disease during the recent COVID-19 outbreak triggered a generalized climate of suspicion and uncertainty, specifically among HCPs, because of a range of reasons for example, the rapid COVID-19 spread, the symptoms severity originating in a segment of people infected, limited disease related knowledge, and deaths among HCWs. A survey of 1200+ HCWs in China showed that 70% of HCPs in Hubei, China (where the COVID-19 outbreak began), suffered from extreme levels of stress, 50% had depressive disorders, 44% had anxiety and 34% had insomnia.³ Other studies also found considerably high prevalence of insomnia and anxiety symptoms among healthcare providers related to COVID-19 pandemic.^{4,5} Nevertheless, those psychological consequences have yet to be recognized by means of epidemiological data. COVID-19 tends to have a significant negative impact on HCWs psychological health, thus, fostering concerns for example, sleep disturbance and anxiety.⁶ This suggests the requirements of offering psychological support for HCPs for example, implementation of the occupational health surveillance programs that mainly educates and trains the HCPs in terms of their capability of addressing the infectious disease and associated psychological distress.

This study was conducted to discover the mental health status of medical and non-medical staff of Ministry of the Health and Prevention (MOHAP) and the efficacy, or lack thereof, of disparagingly involving mental needs to getting psychological care. This study aims to detect the psychological impact of COVID-19 on health care providers working in MOHAP facilities. The study further identifies the risk factors of psychological impact on the health care providers working in the MOHAP facilities.

METHODS

Study design

A cross-sectional study was performed by the healthcare providers working in the MOHAP facilities of the United Arab Emirates from 25 October 2020 to 30 September 2021.

Study subjects

Around 404 healthcare providers, including medical residents, physicians, nurses, technicians and other

professionals were invited to willingly participate in a survey developed online.

Inclusion criteria

Healthcare providers, including medical residents, physicians, nurses, technicians and other professionals working in the MOHAP hospitals, and HCWs from all age groups, different nationalities and gender were included in the study.

Exclusion criteria

Healthcare professionals not working in the MOHAP hospitals were excluded from the study.

Sample size and sampling technique

A simple random sampling technique was used. According to Epi-Info version 7, the sample size was calculated after considering 10% dropout (with a confidence interval of 95.0 and 5.0% margin of error). Around, 404 individuals responded to the survey.

Data collection methods

An online survey was developed on mSurveys. The duration of the questionnaire was approximately 10 minutes. The questionnaire consists of four parts: basic demographic data, mental health assessment, risks of direct and indirect exposure to COVID-19, insomnia and anxiety.

Demographic data

Basic demographic data include name age, gender, occupation, qualification, place of work, nationality, specific occupation and remote working.

Exposure and perceived risk to COVID-19

Exposure to COVID-19 will be determined with the following questions asked to HCP staff: Have you been ever tested positive for COVID-19? Has someone close to you been infected with COVID-19? Has a person close to you died in the course of a COVID-19 disease? Has any of the people (or patients) with whom you had direct contact in the past two weeks had been infected with COVID-19? The perceived risk was also determined with questions such as I will infect myself with COVID-19, please indicate how likely you think it is that you will be infected with COVID-19, people close to me are infected with COVID-19, I will infect other people with COVID-19, In case of infection with COVID-19, the consequences for my health will be severe, I will die of COVID-19 and people close to me will die of COVID-19.

Mental health assessment

Two scales were used to assess the mental health status of medical and non-medical staff. The 7-item generalized

anxiety disorder (GAD-7), and 7-item insomnia severity index (ISI) was used to evaluate anxiety, and insomnia, respectively.

The GAD-7 scale is a self-rated scale to assess the anxiety severity and partakes good reliability and validity. The total scores are characterized as follows: “minimal/no anxiety (0-4), mild anxiety (5-9), moderate anxiety (10-14), or severe anxiety (15-21)”.⁷ The GAD-7 total score for the 7 items ranges from 0 to 21, with emerging scores showing more severe functional impairments as a consequence of anxiety.

The ISI is a measure of severity concerning insomnia that has been found to be valid and reliable. The total insomnia scores are characterized as follows: “normal (0-7), subthreshold (8-14), moderate insomnia (15-21), or severe insomnia (22-28)”.⁸

Data management and analysis plan

Analysis was carried out to address the following main outcome measures: anxiety, insomnia, impact analysis of COVID-19, and self-perceived health status. All the evidence collected were reviewed before data entry by manual revision of the data. Master sheet was prepared from the collected data. All the variables were then coded to ease the data transfer. Frequency measures, along with the measures of cross tabulation (tests of significance)/Chi square test was used. Level of significance selected for this study was found to be 0.05 (a confidence level of 95%). The statistical package of social sciences (SPSS and EPI info 7) was used for the analysis of the results.

Ethical consideration

The approval for the research was acquired from the MOHAP research ethics committee. The data confidentiality was also ensured. Consent from HCPs was also obtained prior to conducting the study.

RESULTS

A total of 404 participants completed the survey. Participants were mostly female (76.7%), non-locals (84.4%), aged 36-45 years (35.6%), nurses (58.7%) followed by doctor/healthcare professional (23.5%) and bachelors (48%) (Table 1).

Exposure and perceived risk during COVID-19 pandemic

An assessment with respect to the exposure and perceived risk to COVID-19 was performed to measure several different COVID-19 related parameters. Around 159 (39.4%) of the healthcare workers agreed that they were infected with COVID-19. Around 91 (22.5%) agreed that someone in their immediate family was infected with COVID-19 (Table 2).

Table 1: Characteristics of the sample of survey respondents (n=404).

Variables	N (%), n=404
Age (years)	
25-35	102 (25.7)
36-45	144 (35.6)
46-55	122 (30.2)
56-65	33 (8.2)
>65	1 (0.2)
Gender	
Female	310 (76.7)
Male	94 (23.3)
Total	404 (100)
Nationality	
Local	63 (15.6)
Non-local	341 (84.4)
Occupation	
Anaesthesiologist	4 (1)
Dentist	8 (2.0)
Doctor/healthcare professional	95 (23.5)
HR professional in health care	2 (0.5)
Innovation and entrepreneur specialist	1 (0.2)
Nurse	237 (58.7)
Pharmacist	31 (7.7)
Physiotherapist	1 (0.2)
Psychiatrist	2 (0.5)
Psychologist	3 (0.7)
Public health specialist	3 (0.7)
Radiographer	3 (0.7)
Radiology	1 (0.2)
Technician	10 (2.5)
Therapist	1 (0.2)
Qualification	
Bachelor	194 (48)
Diploma	62 (15.3)
Doctorate	50 (12.4)
Masters	68 (16.8)
MBBS	27 (6.7)

Around 129 (31.9%) of the HCWs agreed that thinking about COVID-19 made them somewhat worried that they may infect themselves with COVID-19. Nearly 144 (35.6%) somewhat believed that most likely they will be infected from COVID-19. Around 134 (33.2%) disagreed that people close to them will die of COVID-19. Around 40 (9.9%) of the workers agreed that they feared infecting other people with COVID-19. Majority of the healthcare personnel's 136 (33.7%) somewhat agreed that in case of infection due to COVID-19, the consequences for their health will be severe. Over the past fourteen days, and due to the COVID-19 pandemic, 176 (43.6%) disagreed to have had distressing dreams that replay portion of the COVID-19 pandemic experience. Around majority 116 (28.7%) disagreed to have evaded reminders of the COVID-19 pandemic experiences (e.g. feeling, thoughts,

or people, places, and situations). Ninety-four (23.3%) somewhat agreed to have been “super-alert”, jumpy, watchful, or alert. Around 223 (55.2%) disagreed to suffer from unforeseeable severe anxiety attacks (panic) with physical symptoms (e.g. palpitations, chest pain, and dizziness). Around 171 (42.3%) disagreed about worries of not being capable of getting the medical care (Figure 1).

Table 2: Assessment of COVID-19 exposure.

Variables	N (%) n=404
Have you been ever tested positive for COVID-19?	
N/A	1 (0.2)
Don't know	1 (0.2)
No	243 (60.1)
Yes	159 (39.4)
Has someone close to you been infected with COVID-19?	
N/A	1 (0.2)
Don't know	6 (1.5)
No	306 (75.7)
Yes	91 (22.5)
Please indicate if you are currently working remotely from home?	
No	388 (96.0)
Yes	16 (4.0)

Figure 2 demonstrates that over the past 14 day, 120 (29.7%) somewhat reported to have preserved a consistent daily routine. Around 121 (30%) somewhat have integrated sports as well as exercise into their everyday life. About 115 (28.5%) have somewhat limited any interaction with other individuals. About 109 (27%) have

reported to somewhat enjoy the time together with people close to them. Around 138 (34.2%) have somewhat focused on their resources, inner strengths, capabilities and talents. About 150 (37.1%) have recognized and believed the COVID-19 pandemic as reality (Figure 2).

Generalized anxiety disorder (GAD-7)

The prevalence of anxiety among healthcare providers in the sample of 404 HCPs studied was minimal (49.8%), mild (27%), moderate (12.6%) and severe (10.6%) respectively. The prevalence of severe anxiety was higher in females 38 (12.3%) than males 5 (5.3%). For severe anxiety, the peak age was 36-45 years respectively. Severe anxiety was higher among non-locals 34 (10.0%) compared to locals 9 (14.3%). The presence of anxiety was significantly associated with age, gender, qualification, worried about getting infected with COVID-19 and likelihood of getting infected from COVID-19 (Table 3).

Insomnia severity index (ISI)

Cataloguing of the ISI scale outcomes exhibited that the insomnia problem did not affect nearly half of the medical personnel (56.2%) surveyed, while 25.5% were at a subthreshold level, 51.1% had clinical insomnia (moderate severity), and 3.2% had clinical insomnia (severe level). For women, the insomnia risk was considerably more often described than for men respectively.

Analysis displayed indicated a relationship between variables. The ISI was significantly associated with age, nationality, worried about getting infected with COVID-19 and likelihood of getting infected from COVID-19.

Table 3: The prevalence of generalized anxiety disorder among healthcare providers in the sample of 404 healthcare professionals.

Variables	Total	Generalized anxiety disorder (GAD-7)				P value
		Minimal (0-4) n=201 (49.8%)	Mild (5-9) n=109 (27%)	Moderate (10-14) n=51 (12.6%)	Severe (15-21) n=43 (10.6%)	
Age (years)						
25-35	104 (25.7)	40 (39.2)	35 (34.3)	18 (17.6)	9 (8.8)	0.046
36-45	144 (35.6)	67 (46.5)	41 (28.5)	15 (10.4)	21 (14.6)	
46-55	122 (30.2)	75 (61.5)	21 (17.2)	13 (10.7)	13 (10.7)	
56-65	33 (8.2)	18 (54.5)	10 (30.3)	5 (15.2)	0	
>65	1 (0.2)	0	1	0	0	
Gender						
Female	310 (76.7)	145 (46.8)	92 (29.7)	35 (11.3)	38 (12.3)	0.011
Male	94 (23.3)	56 (59.6)	17 (18.1)	16 (17.0)	5 (5.3)	
Nationality						
Local	63 (15.6)	18 (28.6)	25 (39.7)	11 (17.5)	9 (14.3)	0.004
Non-local	341 (84.4)	183 (53.7)	84 (24.6)	40 (11.7)	34 (10.0)	
Qualification						
Bachelor	194 (48)	94 (48.5)	45 (23.2)	27 (13.9)	28 (14.4)	0.766
Diploma	62 (15.3)	35 (56.5)	18 (29.0)	6 (9.7)	3 (4.8)	
Doctorate	50 (12.4)	22 (44.0)	16 (32.0)	7 (14.0)	5 (10.0)	
Masters	68 (16.8)	33 (48.5)	22 (32.4)	8 (11.8)	5 (7.4)	

Continued.

Variables	Total	Generalized anxiety disorder (GAD-7)				P value
		Minimal (0-4) n=201 (49.8%)	Mild (5-9) n=109 (27%)	Moderate (10-14) n=51 (12.6%)	Severe (15-21) n=43 (10.6%)	
MBBS	27 (6.7)	15 (55.6)	7 (25.9)	3 (11.1)	2 (7.4)	
Not answered	3 (0.7)	2 (66.7)	1 (33.3)	0	0	
Have you been ever tested positive for COVID-19?						
Don't know	1 (0.2)	1 (100)	0	0	0	0.598
No	243 (60.1)	121 (49.8)	69 (28.4)	25 (10.3)	28 (11.5)	
Yes	159 (39.4)	78 (49.1)	40 (25.2)	26 (16.4)	15 (9.4)	
Has someone close to you been infected with COVID-19?						0.305
Don't know	6 (1.5)	6 (66.7)	1 (11.1)	2 (22.2)	0	
No	306 (75.7)	59 (53.2)	29 (26.1)	16 (14.4)	7 (6.3)	
Yes	91 (22.5)	135 (47.7)	79 (27.9)	33 (11.7)	36 (12.7)	0.510
Has a person close to you died in the course of a COVID-19 disease?						
Yes	91 (22.5)	41 (45.1)	24 (26.4)	15 (16.5)	11 (12.1)	
No	306 (75.7)	157 (51.3)	84 (27.5)	34 (11.1)	31 (10.1)	0.001
Don't know	6 (1.5)	2 (33.3)	1 (16.7)	2 (33.3)	1 (16.7)	
How do you currently perceive the risk of the COVID-19 pandemic? I am worried that...I will infect myself with COVID-19						
A little (1)	84 (20.8)	56 (66.7)	23 (27.4)	4 (4.8)	1 (1.2)	0.001
Much (3)	64 (15.8)	23 (35.9)	20 (31.3)	13 (20.3)	8 (12.5)	
Not at all (0)	64 (15.8)	41 (64.1)	16 (25)	3 (4.7)	4 (6.3)	
Somewhat (2)	129 (31.9)	66 (51.2)	37 (28.7)	18 (14.0)	8 (6.2)	
Very much (4)	62 (15.3)	14 (22.6)	13 (21.0)	13 (21.0)	22 (35.5)	
Please indicate how likely you think it is that you will be infected with COVID-19						0.001
A little (1)	86 (21.3)	58 (67.4)	23 (26.7)	3 (3.5)	2 (2.3)	
Much (3)	69 (17.1)	27 (39.1)	21 (30.4)	12 (17.4)	9 (13)	
Not at all (0)	47 (11.6)	32 (68.1)	9 (19.1)	4 (8.5)	2 (4.3)	
Somewhat (2)	144 (35.6)	68 (47.2)	47 (32.6)	16 (11.1)	13 (9.0)	
Very much (4)	57 (14.1)	15 (26.3)	9 (15.8)	16 (28.1)	17 (29.8)	

Table 4: Insomnia severity index (ISI).

Variables	Total	Insomnia severity index (ISI)				P value
		Normal (0-7) n=227 (56.2) %	Subthreshold (8-14) n=103 (25.5) %	Clinical insomnia (moderate severity) (15-21) n=61 (51.1) %	Clinical insomnia (severe) (22-28) n=13 (3.2) %	
Age (years)						
25-35	104 (25.7)	45 (44.1)	33 (32.4)	18 (17.6)	6 (5.9)	0.004
36-45	144 (35.6)	72 (50.0)	39 (27.1)	27 (18.8)	6 (4.2)	
46-55	122 (30.2)	81 (66.4)	28 (23.0)	12 (9.8)	1 (0.8)	
56-65	33 (8.2)	27 (81.8)	3 (9.1)	3 (9.1)	0	
>65	1 (0.2)	2 (100)	0	0	0	
N/A	2 (100)	0	0	0	0	
Gender						
Female	310 (76.7)	174 (56.1)	83 (26.8)	44 (14.2)	9 (2.9)	0.575
Male	94 (23.3)	53 (56.4)	20 (21.3)	17 (18.1)	4 (4.3)	
Nationality						
Local	63 (15.6)	23 (36.5)	21 (33.3)	15 (23.8)	4 (6.3)	0.005
Non-local	341 (84.4)	204 (59.8)	82 (24.0)	46 (13.5)	9 (2.6)	
Qualification						
Bachelor	194 (48)	101 (52.1)	53 (27.3)	34 (17.5)	6 (3.1)	0.319
Diploma	62 (15.3)	41 (66.1)	14 (22.6)	7 (11.3)	0	
Doctorate	50 (12.4)	26 (52.0)	16 (32.0)	7 (14.0)	1 (2)	
Masters	68 (16.8)	43 (63.2)	14 (20.6)	8 (11.8)	3 (4.4)	

Continued.

Variables	Total	Insomnia severity index (ISI)				P value
		Normal (0-7) n=227 (56.2) %	Subthreshold (8-14) n=103 (25.5) %	Clinical insomnia (moderate severity) (15-21) n=61 (51.1) %	Clinical insomnia (severe) (22-28) n=13 (3.2) %	
MBBS	27 (6.7)	13 (48.1)	6 (22.2)	5 (18.5)	3 (11.1)	
Not answered	3 (0.7)	3 (100)	0	0	0	
Have you been ever tested positive for COVID-19?						
Don't know	1 (0.2)	1 (100)	0	0	0	0.885
No	243 (60.1)	141 (58.0)	58 (23.9)	35 (14.4)	9 (3.7)	
Yes	159 (39.4)	85 (53.5)	44 (27.7)	26 (16.4)	4 (2.5)	
Has someone close to you been infected with COVID-19?						
Don't know	6 (1.5)	4 (44.4)	3 (33.3)	1 (11.1)	1 (11.1)	0.509
No	306 (75.7)	69 (62.2)	27 (24.3)	12 (10.8)	3 (2.7)	
Yes	91 (22.5)	154 (54.4)	72 (25.4)	48 (17.0)	9 (3.2)	
Has a person close to you died in the course of a COVID-19 disease?						
Yes	91 (22.5)	42 (46.2)	25 (27.5)	23 (25.3)	1 (1.1)	0.007
No	306 (75.7)	183 (59.8)	76 (24.8)	36 (11.8)	11 (3.6)	
Don't know	6 (1.5)	2 (33.3)	1 (16.7)	2 (33.3)	1 (16.7)	
How do you currently perceive the risk of the COVID-19 pandemic? I am worried that...I will infect myself with COVID-19						
A little (1)	84 (20.8)	66 (78.6)	14 (16.7)	4 (4.8)	0	0.001
Much (3)	64 (15.8)	23 (35.9)	23 (35.9)	15 (23.4)	3 (4.7)	
Not at all (0)	64 (15.8)	48 (75.0)	6 (9.4)	8 (12.5)	2 (3.1)	
Somewhat (2)	129 (31.9)	72 (55.8)	42 (32.6)	14 (10.9)	1 (0.8)	
Very much (4)	62 (15.3)	18 (29.0)	17 (27.4)	20 (32.3)	7 (11.3)	
Please indicate how likely you think it is that you will be infected with COVID-19						
A little (1)	86 (21.3)	62 (72.1)	16 (18.6)	8 (9.3)	0 (0)	0.001
Much (3)	69 (17.1)	23 (33.3)	27 (39.1)	17 (24.6)	2 (2.9)	
Not at all (0)	47 (11.6)	39 (83.0)	5 (10.6)	3 (6.4)	0 (0)	
Somewhat (2)	144 (35.6)	84 (58.3)	39 (27.1)	18 (12.5)	3 (2.1)	
Very much (4)	57 (14.1)	19 (33.3)	15 (26.3)	15 (26.3)	8 (14.0)	

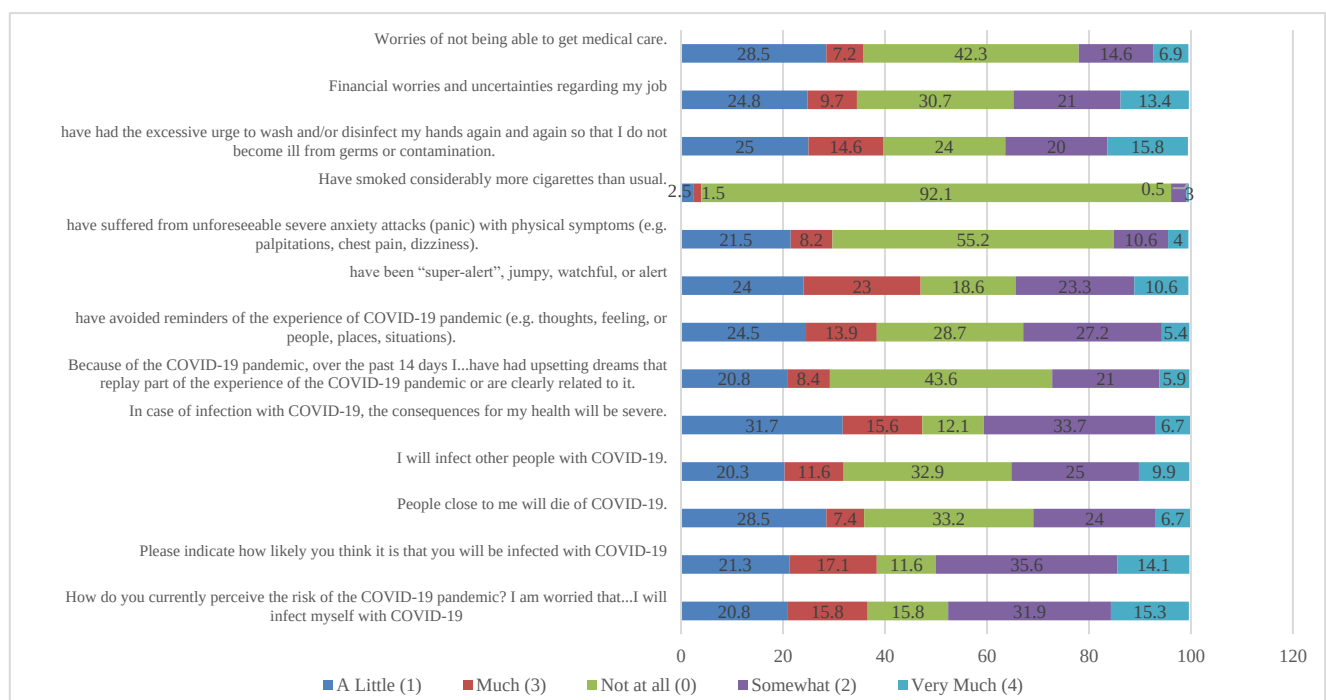


Figure 1: Assessment of COVID-19 perceived risk.

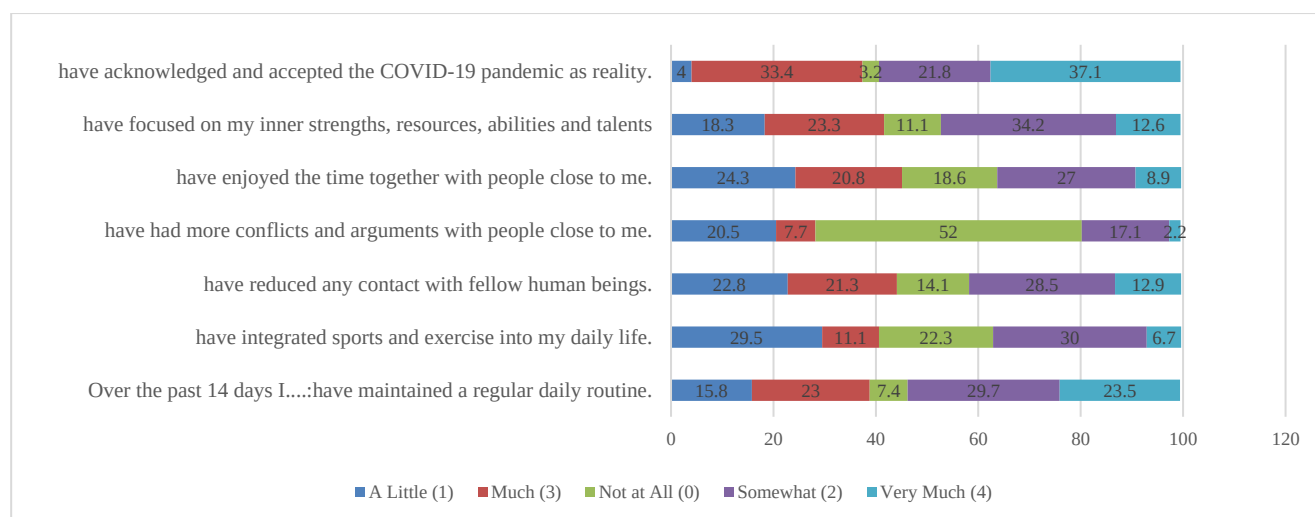


Figure 2: Assessment of conflict, daily routine and physical activity during COVID-19 pandemic.

DISCUSSION

This cross-sectional survey investigated the prevalence of mental health symptoms (anxiety and insomnia) among 404 HCWs in the hospitals involved in the patient care during the COVID-19 pandemic. The prevalence of severe anxiety, and severe insomnia symptoms among the HCWs in the study was found to be 10.6% and 3.2% respectively. A similar study was conducted in Abu-Dhabi, between 11th April 2020 and 23rd July 2020 to examine the anxiety and depression among HCWs during COVID-19. The findings suggested that more than half of the participants reported anxiety related symptoms (51.5%). Mild anxiety was reported in 28.8% of participating HCP, and 12.68% of the participants registered moderate anxiety scores, and 9.95 % reported severe anxiety.⁹ Another cross-sectional study was conducted among 400 HCWs at four different clinics in Dubai Health Authority from July 2020 to September 2020. Around 76.5% (n=306) reported symptoms of anxiety, 254 (63.5%) stress-based, depression, 315 (78.8%) and 187 (46.8%) suffered from clinical insomnia.¹⁰

The severe anxiety and insomnia symptom prevalence in our study is found to be lower than those mentioned in the other research articles. Lai et al reported prevalence of anxiety 44.6% (GAD-7 $\geq$ 5), and 34.0% (ISI $\geq$ 8) for insomnia among 1257 HCW's at 34 hospitals in China.¹¹ Similar to our study, the study results suggested that frontline HCPs were significantly more likely to suffer from anxiety. On the contrary, Zhang et al reported prevalence of 44.7% (GAD-7 $\geq$ 5), and 36.1% (ISI $\geq$ 8) respectively.¹² Rossi et al reported prevalence of 8.3% (GAD-7 $\geq$ 15), and 21.9% (ISI $\geq$ 22), respectively.¹³ Very assorted values have been detailed by several other studies.¹⁴⁻¹⁶

The findings from the current study mentioned above shows that HCPs experience anxiety during any outbreak just like the general population. Salazar et al reported the

prevalence of insomnia, and fear among HCWs during the COVID-19 pandemic as 37.9% and 43.7% respectively. Thus, in addition to GAD, the HCWs might experience several other psychological difficulties during COVID-19 pandemic. The anxiety often pre-disposes these individuals to different mental disorders. Considering the outcomes of the study, one may conclude that the infectious diseases epidemics for example, the COVID-19 can intensify the anxiety incidence among HCPs.¹⁷ The previous studies have reported COVID-19 to be an independent risk factor among HCPs. Moreover, the factors for example, workplace, gender, age and insufficient psychosocial support have been linked with depression and anxiety among healthcare providers.¹⁸

During the Ebola epidemic in the past, HCPs having direct contact with the patients often experience more mental health disorders. Hence, it is essential to include other experts from the mental health field in regards to the emergency response programs for the emerging infectious diseases.¹⁹ At present, the results suggest that healthcare providers may get exposed to anxiety disorders, particularly GAD, during the COVID-19 outbreak, therefore, it is important that special attention should be paid to their mental health. Neglecting the proper management of psychological problems of the healthcare providers may impose a dire consequence such as poor mental health among nurses that affects the quality of care for patients along with affecting their performance.^{20,21} In addition to getting infected from the COVID-19 disease risk, HCPs also are at a risk of developing anxiety related disorders. As the vulnerability to and the risk factors of psychological disorders mainly differs in people, it is recommended to explore the risk factors of anxiety disorder among HCPs in future.

Strength and limitations

A major strength of our study is that our survey was based on formerly validated and well-established objective tools

such as GAD-7 and ISI for the assessment of anxiety and insomnia outcomes, respectively. Nevertheless, this study had some limitations that cannot be ignored. First, the insomnia, and anxiety were examined using an online questionnaire, and not with an interview. Second, a modest sample size was used with the possibility of selective bias in the respondents who completed the survey. Third, a cross-sectional study was executed thus, it is recommended to further conduct longitudinal researches to study the prevalence of these mental condition in the COVID-19 pandemic process. Further research studies are warranted in future to address this subject.

CONCLUSION

This research indicated that anxiety and insomnia are significantly detected during COVID-19 outbreak among healthcare providers. In conclusion, this study highlights the anxiety and insomnia prevalence among COVID-19 pandemic on the frontline workers in the MOHAP hospitals. The presence of anxiety among healthcare providers in the sample studied was 49.8% at minimal level, followed by mild (27%), moderate (12.6%) and severe (10.6%) respectively. Our study also demonstrated that nearly half of the medical personnel (56.2%) surveyed were not affected from insomnia, while 25.5% were at a subthreshold level, 51.1% had clinical insomnia (moderate severity), and 3.2% had clinical insomnia (severe level). The data also indicates that insomnia problems must be addressed via psychological interventions for example, mindfulness-based therapy and cognitive behaviour therapy specifically in individuals with mental disorders to alleviate the related symptoms and prevent relapse.

This outbreak of COVID-19 has led to the features of generalized anxiety and insomnia severity index that is suggestively associated with factors for example, age, gender, qualification, worried about getting infected from COVID-19 and likelihood of getting infected from COVID-19. The results of the study underscore the necessity of identifying the healthcare providers at risk during an early stage to allow tiered, comprehensive, and situation-tailored mitigation measures, to upsurge the psychological resilience of healthcare providers and lessening their susceptibility in the current COVID-19 related situation. Because of the social distancing, there are limited opportunities for attendance at events and social interaction, and its usually essential to address the social support via a policy. Social support systems are critical in protecting health-care workers and reducing the psychological distress and its prevalence in future.

ACKNOWLEDGEMENTS

The authors would like to thank Ministry of Health and Prevention for their support.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Alrand H, Harbi A, Razzak HA, Eltabbakh MT, Shaali LA, Salama RE. Anxiety and insomnia prevalence during the COVID-19 pandemic among healthcare workers in the Ministry of Health and Prevention - United Arab Emirates. *Int J Community Med Public Health* 2022;9:3274-82.