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The Relationship between Anxiety, Depression and Insomnia in Medical Personnel in Times of COVID-19 Crisis (A Cross-Sectional Study)

Alimoradi H[1], Nazari M[1*], Nodoushan RJ[3] and Ajdani A[4]

[1]Master of Occupational Health Engineering, Occupational Health Research Center, school of public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

[2]Master of Occupational Health Engineering, Occupational Health Research Center, school of public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

[3]Department of Health, Safety and Environment Management,Occupational Health Research Center, school of public Health, Shahid Sadoughi University of Medical Sciences, Yazd, Iran

[4]Doctor Doctor of Medicine, Isfahan University of Medical Sciences

*Corresponding author:

Mahsa Nazari,
Occupational Health Research Center, school of public Health, Postal Code: 8915173160, Islamic Republic of Iran, Yazd, Bahonar Square, the central building of YazdIran, Shahid Sadoughi University of Medical Sciences, Iran, Tel: (035) 38209100-14, Fax: (035)38209119,
E-mail: m.nazari@stu.ssu.ac.ir

Authors' contributions:

H.A participated in the study design, analysis, and wrote the manuscript. H.A & RJ also conducted data collection. M.NZ also participated in the preparation of the draft of the paper, revised the draft of the manuscript, and supervised the project. M.NZ also conducted data analysis. All authors participated in the development of the manuscript and data interpretation. A.Aparticipated in the study design, interpretation of findings, and also wrote the manuscript. All authors read and approved the final manuscript.

1. Abstract

The purpose of this study was to examine the associations between anxiety, depression and insomnia in time of covid-19 in Iran, and to investigate whether anxiety and depression are related to future insomnia. This study employed a combination of a cross-sectional and a prospective design. From a randomly selected sample from the general population (N = 972), participants filled out a survey on insomnia, anxiety and depression in web-based platform. While anxiety seems to play a key role in the development of insomnia, depression may be considered as a possible precipitating mechanism but even more likely as a consequence of insomnia and stress of covid-19 crisis.

2. Introduction

One of the emerging global challenges in infectious disease management is addressing COVID-19 [2]. With the creation of the coronavirus (COVID-19) pandemic, human society, in addition to the physical complications of this disease, has also faced widespread psychological complications of this disease [1]. Due to the rapidly increasing number of people infected with this coronavirus (COVID-19), public anxiety and worry have increased in many areas. Fear and worry (which are prominent features of infectious diseases) are understandable because people are concerned about their health. Unfortunately, such concerns impair understanding of illness-related issues, leading to other psychosocial challenges such as stigma, discrimination and other psychosocial aspects that have not yet been addressed[3]. Outbreak of COVID 19's infection occurred in China last December and attracted worldwide attention. The prevalence of severe epidemics, Such As Acute Respiratory Syndrome (SARS), Ebola and Middle East Respiratory

Syndrome (MERS), has always been associated with a high prevalence of mental health problems[4]. Compared to other epidemics in the 21st century, COVID-19 is the most serious pandemic characterized by human-to-human transmission, asymptomatic carrier transmission and high transmission efficiencies[5]. Vulnerability to mental disorders such as depression, anxiety and stress can seriously affect a person's abilities and ultimately their future and destiny [6]. Today, despite technological advances, disorders such as depression, anxiety and stress are the most common diseases of the century. In addition to medical staff, more front-line staff such as community workers, police officers and volunteers has been recruited to fight COVID-19 [7]. Limited, the present study was performed to evaluate the characteristics of anxiety, depression and insomnia of frontline staff during the COVID-19pandemic. A cross-sectional study was performed in a hospital in Iran. Data was collected in February 2020 through an extensive web-based platform in Isfahan. During the 19COVID-epidemic, a total of 972 front-line employees in Isfahan, Iran participated in this study. Due to the risk of exposure to COVID-19, 498 (51.2) individuals were assigned to the high-risk group, including front-line medical staff working for approved cases and other front-line staff [8].

This study was approved by the ethics committee of ShahidSadoughi Medical University of Yazd. The questionnaires were anonymous and all participants participated in the study voluntarily. A scale of 7 general anxiety disorders, 7 patient health questionnaires, insomnia severity index and several demographic questions including gender, age, level of education, marital status, risk of COVID-19 exposure and health status were used. Chi-square analysis was used to determine the differences in class variables between groups and two t-tests (for continuous data) were used to determine the differences in continuous variables between the two groups. Multivariate logistic regression analysis was performed to identify factors related to anxiety, depression and insomnia in COVID-19 frontline staff and the adjusted odds ratio (OR) and 95% Confidence Interval (CI) for OR were calculated. The main finding of the present study was that, in general, out of 972 front-line personnel, 438 (45.1%) subgroups of anxiety symptoms were approved in (M = 6.71, SD = 5.80) and 313 (32.2%) individuals had depressive symptoms (M = 5.16, SD = 5.23) and 380 (39.1%) patients had insomnia symptoms (M = 3.87 SD = 4.70). The prevalence of moderate and excessive anxiety, depression and insomnia in frontline employees is 16.9%, 10.3% and 11.2%, respectively.

In our view, this is the first attempt to assess anxiety, depression and artificial insomnia in a large sample of typical front-line staff in the COVID-19pandemic in Iran. The present study showed that one of the two front-line personnel had at least one type of mental health symptom during the COVID-19 epidemic. Anxiety, depression and insomnia are the most common features of mental health symptoms. There are limitations in our study. Initially, these questionnaires were published through a wide web platform and the respondents were all from Iran, Isfahan province. Therefore, there is a selective bias in our study, which means that our study does not fully show the mental health status of frontline staff in other parts of Iran, especially in areas with relatively low prevalence. In the second stage, the data are self-reported and may be the respondents.

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