Prevalence of Fear and Anxiety Due to Covid-19 in Medical Staff and Non-medical Population: A Systematic Review Study

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Abstract

Introduction: The lack of any definitive treatment or preventive method, and the prediction of some epidemiologists that most of the population will infected with Covid-19, has caused a lot of stress and anxiety in people. So study aimed to review the prevalence of fear and anxiety due to Covid-19 in medical staff and non-medical population.

Method: in this study the databases including PubMed, Web of Science (ISI), Scopus, PsycINFO, EMBASE, Google Scholar, and national databases such as Irandoc, Civilica, MagIran SID, using the keywords of fear, anxiety, prevalence, and covid-19 from the start of Covid-19 pandemic at December 2019 until July 2022 were searched in order to find the related articles.

Results: Anxiety prevalence in women was higher than in men, in people who follow the news related to Covid-19 was more than those who didn’t follow, among younger people was higher than older, in people in the region with the high epidemic of covid-19 was more than a low epidemic region, and in people who had an unchanging residence was higher than those who change. Also, anxiety prevalence among medical staff was higher than the non-medical.

Conclusion: The prevalence of anxiety in most people especially in medical staff was high. Special measures should be taken to reduce anxiety among the medical staff and non-medical population.

Keywords: Fear, Anxiety, Covid-19, Prevalence.

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INTRODUCTION

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV2), was found for the first time from Wuhan, China, in December 2019 [1]. For this reason named Coronavirus Disease 2019 (COVID-19) by World Health Organization (WHO) [2, 3]. This viral disease is an acute respiratory illness with unknown etiology, and highly contagious [4]. In late December 2019, the WHO announced the infection caused by this virus as a global emergency [5]. Epidemiological investigation of the initial cases of COVID-19 showed that many cases were exposed to the seafood market in Wuhan, China. The WHO report also states that the novel coronavirus-2019 was detected in environmental samples collected from the seafood market in Wuhan, China [6, 7]. Ji et al. reported that COVID-19 is a chimeric virus between a bat, coronavirus, and a coronavirus of unknown origin. By comparing with other animals, they found that snakes are very likely to be the reservoir of novel coronavirus-2019 [8]. Chan et al. confirmed that the 2019 novel coronavirus is a novel coronavirus that is closely related to the bat SARS coronavirus [9]. The spread of the novel coronavirus-2019 can potentially become a serious and dangerous threat to health and global health as well as regional economies [10, 11]. The growing prevalence of this disease has challenged the public health of the world and has led to a morbid fear of contracting it in different people [12]. The lack of any definitive treatment or preventive...
method for covid-19, and the prediction of some epidemiologists that most of the population will be infected with Covid-19, has caused a lot of stress and anxiety in people [13]. Fear and anxiety due to disease are damaging and can lead to psychological disorders [14]. Anxiety about the covid-19 virus is common and it seems to be mostly due to being unknown and the lack of definitive medicine to treat this virus [15]. Regarding the situation of the covid-19 pandemic, which has affected all important economic, political, and social aspects of the world, the discussion of the psychological effects, including the level of anxiety of this viral disease, on the mental health of people at different levels of society is very important [16]. So this systematic review study aimed to evaluate the prevalence of fear and anxiety due to covid-19.

**METHOD & MATERIALS**

**Search methodology and article selection**

in this systematic review study we followed the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines for conducting this systematic review and meta-analysis [17]. The searches were performed on the following electronic databases: Pubmed, EMBASE, Web of Science (ISI), Scopus, PsycINFO, Google scholar, and Persian databases, including Scientific Information Database (SID), Irandoc, and MagIran were searched. The following terms were used as text words and keywords in databases (for example PubMed): Anxiety, fear, and covid-19 from the start of Covid-19 pandemic at December 2019 through July 2022 were used. Two authors independently performed screenings of these databases. Also, these authors considered the reference lists of articles at the full-text stage and reviewed articles on the topic of fear, anxiety and covid-19.

**Eligibility criteria**

We considered for inclusion criteria, observational studies (Cohort studies, cross-sectional) published as original or conference abstracts and used a validated method or instrument to assess fear, anxiety, covid-19, and also for selections of studies. Exclusion criteria included Studies that did not report enough data to determine the fear, anxiety, covid-19, and all types of review articles, letters, editorials, and interventional studies were excluded. The two mentioned investigators independently determined the study’s eligibility. At beginning of the search, no linguistic restrictions were applied.

**Data collection**

Regarding the selection criteria, the results of the search were screened for relevant titles and abstracts. The relevant abstracts were chosen for full-text review. After that, data extraction was done individually by the two authors. Also, references to relevant articles were screened for relevance. Duplicates were removed. Then, for extracting the following information from included studies, a standardized data collection form was used: first author, study design, sample size, purpose people, conclusion, and year of publication.

**Study quality**

For each included article, a second author investigated all extracted data during the quality assessment process. The Newcastle-Ottawa Scale (NOS) was used for assessing the methodological quality of studies. First, the keywords were searched in the desired databases based on the determined time range. The articles that were in harmony with the keywords of the research include fear, anxiety, and covid-19 was selected.

**RESULTS**

In this study, all published studies analyzing the fear, anxiety, and covid-19 in Iran and other countries were systematically reviewed and meta-analyzed based on the PRISMA guidelines Fig.1. In the initial search of databases, 895 studies were obtained, of which 674 studies were removed after duplication and 221 full-text studies were screened, of which 18 studies were included in the present study.
Fig. 1: Four-phase PRISMA flow diagram showing the number of studies identified, screened, eligible, and included in the systematic review.

Result showed that the most commonly used data collection tools or scales were Corona Disease Anxiety Scale (CDAS), Self-rating Anxiety Scale (SAS), Depression, Anxiety, and Stress Scales (DASS), mental health measurements from (MHMF), Perceived Social Support Questionnaire (PSSQ), Perceived Organizational Support (POS) questionnaire, Self-reporting questionnaire (SRQ), Coronavirus Anxiety Scale (CAS), Generalized Anxiety Disorder (GAD), and Beck Anxiety Inventory (BAI).

Table 1: The frequency of conducted studies on fear and anxiety of covid-19

<table>
<thead>
<tr>
<th>NO</th>
<th>First author</th>
<th>Purpose population</th>
<th>Tool &amp; Scale</th>
<th>Sample Size</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Labrague et al [18]</td>
<td>Medical Staff</td>
<td>PSSQ, POS</td>
<td>325</td>
<td>37.8% of nurses had anxiety</td>
</tr>
<tr>
<td>2</td>
<td>Roy et al. [19]</td>
<td>Indian Adults</td>
<td>SRQ</td>
<td>662</td>
<td>The prevalence of anxiety was 80%.</td>
</tr>
<tr>
<td>3</td>
<td>Huang et al. [20]</td>
<td>Medical Staff</td>
<td>SAS</td>
<td>246</td>
<td>Medical staff have high anxiety and stress</td>
</tr>
<tr>
<td>4</td>
<td>Zhao et al. [21]</td>
<td>Chinese Population</td>
<td>BAI</td>
<td>800</td>
<td>People in the region with the high epidemic of covid-19 had more anxiety.</td>
</tr>
<tr>
<td>5</td>
<td>Tan et al. [22]</td>
<td>Medical Staff</td>
<td>DASS-21</td>
<td>470</td>
<td>Non-medical staff has more anxiety than medical staff</td>
</tr>
<tr>
<td>6</td>
<td>Husky et al. [23]</td>
<td>Freshman in France</td>
<td>SRQ</td>
<td>291</td>
<td>People who had an unchanging residence reported higher levels of anxiety.</td>
</tr>
<tr>
<td>7</td>
<td>Liu et al. [24]</td>
<td>Medical Staff</td>
<td>SAS</td>
<td>512</td>
<td>Anxiety of the Covid-19 infected cities' medical staff was higher than the medical staff of other cities</td>
</tr>
</tbody>
</table>
Results showed that the prevalence of anxiety in most people especially in medical staff was high. Anxiety prevalence of more than 40% was reported in most of the studies. Anxiety prevalence in women was higher than in men, in people who follow the news related to Covid-19 was more than those who didn’t follow, among younger people was higher than older, in people in the region with the high epidemic of covid-19 was more than a low epidemic region, and in people who had an unchanging residence was higher than those who change. Also, anxiety prevalence among medical staff was higher than the non-medical, in the Covid-19 infected cities’ medical staff was higher than the medical staff of other cities, in frontline medical staff was higher than among medical staff who were not in the frontline, and in medical staffs who were in direct contact with patients with Covid-19 was higher than those who were not.

**DISCUSSION**

Anxiety is a response to perceived or real threatening events or situations [31]. Anxiety is a common symptom in patients with respiratory disorders and can significantly reduce the quality of life of patients. In most cases, the measurement of anxiety includes physical issues that can overlap with symptoms of respiratory disease and the side effects of drugs [35]. Among the causes of anxiety in covid-19, it can be pointed out that in critical situations, social and individual structures of life are disturbed. These disturbances mean a decrease in a person's power of control and a decrease in the predictability of the flow of life, which causes panic among people [36]. For example, during quarantine, when the routine of a person's life is disturbed, he can predict his future less and as a result, a feeling of insecurity is created. This lack of security will cause anxiety. Anxiety is the most basic characteristic of crisis situations and the unpredictability of the future plays the biggest role in creating it [37].

One of the most important reasons for anxiety in the medical staff during the covid-19 epidemic is that family members cannot be in contact with them. Health care workers also experience anxiety due to the possibility of spreading the virus to themselves and their family members [38]. Being under mental and physical pressure from the family, as well as the risk of being infected with Covid-19 disease, isolation, and fatigue due to increasing work volume can be other causes of anxiety in the treatment staff [25]. Problems related to mental health such as anxiety may interrupt the decision-making power of healthcare staff [39]. Therefore, information about mental health concerns is very important for the prevention and control of the Covid-19 pandemic [40]. In order to improve mental health and reduce anxiety among the medical staff, it is necessary to emphasize on self-care as much as possible and reduce overwork by matching working hours and work shift arrangements [41]. In addition, knowledge about infection, control and self-protection should be improved among health care providers [42]. Therefore, healthcare workers have a higher chance of contracting the disease Covid-19. Also, in the face of a heavy workload, they experience moral dilemmas and control social changes and emotional stress experienced by patients [43]. They are also at a lower level of immunity due to long working hours and high anxiety, which increases their chances of contracting Covid-19 [41].

**CONCLUSION**

The prevalence of anxiety in most people especially in medical staff was high. Anxiety prevalence of more than 40% was reported in most of the studies. Considering the importance of mental health in the medical staff and non-medical population and the prevalence of covid-19, the
importance of reducing anxiety in them, and the important role it plays in strengthening immunity, special measures should be taken to reduce anxiety among the medical staff and non-medical population.

CONFLICTS OF INTEREST
The authors declare no conflict of interest.

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