

Review Paper

The Role of Resilience and Emotion Regulation in Psychological Distress of Hospital Staff During the COVID-19 Pandemic: A Systematic Review Study



Farzin Bagheri Sheykhangafshe¹ , Vahid Hajjalani² , Jafar Hasani^{2*} 

1. Department of Psychology, Faculty of Humanities, Tarbiat Modares University, Tehran, Iran.

2. Department of Clinical Psychology, Faculty of Psychology and Educational Sciences, Kharazmi University, Tehran, Iran.



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ABSTRACT

Background: During the COVID-2019 pandemic, the hospital staff was among the first to deal with this problem. Because of the high workload, the medical staff may experience psychological distress. In this regard, the present study was conducted to investigate the role of resilience and emotion regulation in managing the psychological distress of hospital staff during the COVID-2019 pandemic.

Methods: In the present study, we searched English databases, such as Google Scholar, PubMed, Scopus, ScienceDirect, and Iranian databases, such as Iranian databases of Scientific Information Database (SID), Iranian Publications (Magiran), and Iranian Medical Sciences Articles from February 2020 to July 2021 with using the keywords of “coronavirus 2019”, “COVID-19”, “depression”, “anxiety”, “stress”, “resilience”, “emotion regulation”, “mental health”, “medical staff”, and “psychological distress”. We also used the PRISMA (The Preferred Reporting Items for Systematic Reviews and Meta-analysis) checklist to review and control the quality of the articles.

Results: Studies have shown that resilience and emotion regulation strategies positively affect nurses, physicians, hospital staff, and medical students during the COVID-19 pandemic. Good resilience and using adaptive emotion regulation strategies have reduced their anxiety, depression, insomnia, and fear, which results in increased psychological well-being during the COVID-19 pandemic.

Conclusion: Based on the reviewed articles, we found that COVID-19 can affect various aspects of the mental health of hospital staff. Given that COVID-19 is still mutating and it is impossible to predict a specific time for the end of this deadly virus, medical staff must receive the necessary training to improve resilience and emotion regulation strategies.

*** Corresponding Author:**

Jafar Hasani, PhD.

Address: Department of Clinical Psychology, Faculty of Psychology and Educational Sciences, Kharazmi University, Tehran, Iran.

Phone: +98 (88) 848938

E-mail: hasanimehr57@khu.ac.ir

1. Introduction

Coronaviruses are single-stranded ribonucleic acid viruses belonging to the coronavirus family. Although primarily known as enzootic infections, they have evolved over the past few decades to infect humans [1]. The severity of coronavirus diseases ranges from the common cold to more serious illnesses, such as acute respiratory syndrome and the Middle East respiratory syndrome. The coronavirus 2019 first broke out on December 17, 2019, in Wuhan, China, and the World Health Organization declared it a pandemic on March 11, 2020 [2]. During the outbreak of COVID-19, the medical staff of hospitals was under a lot of pressure because of the heavy workload and dangerous work environment [3]. Harsh conditions can cause mental health problems, such as anxiety and depression. These problems affect the attention span, comprehension, and decision-making ability of the staff, which may impede their ability to treat patients with COVID-19. These mental problems may also have long-term effects on their physical and psychological health [4].

After facing natural disasters and unexpected events, medical staff usually demonstrate different psychological reactions [5]. During the COVID-19 outbreak, hospital staff worked around the clock, had no definitive treatment for the disease, and faced challenges they had not experienced before. For this reason, they may suffer from various mental injuries [6]. High workload, night shifts, lack of equipment, lack of familiarity and training in the face of disasters that kill the people who may not have normally passed away, the fear of being infected with COVID-19 and passing it on to family and relatives, witnessing the death of patients and prolonged separation from family can lead to psychological distress and increase the risk of posttraumatic stress in hospital staff [7, 8]. Psychological distress is used to describe a condition in which a person becomes emotionally disturbed and loses his or her normal functioning levels. These conditions are usually characterized by symptoms of stress, anxiety, and depression [9]. Numerous factors, such as underlying disease, gender, age, and low education, can predict psychological distress in turbulent and stressful situations [10]. The prevalence of COVID-19, as well as strict measures and rules to control it, have caused changes in the lifestyle, social and occupational interactions of hospital staff, which increase the personnel's psychological distress [7]. Similarly, Elbay et al. [11], in a study on the medical staff of Turkish hospitals during the outbreak of COVID-19, concluded that 64% of the symptoms of the staff were depression, 51%

anxiety, and 42% stress. Also, the findings of this study indicate a high correlation of female gender, low work experience, and being single with higher psychological distress in the medical staff.

In contrast, some studies have also reported that various interpersonal factors, such as resilience and emotion regulation, promote the mental health of medical staff during the COVID-19 pandemic [12, 13]. Hospital staff uses different coping strategies in facing shocking, destructive, and stressful events [14]. Some people respond to stressful situations by giving in to psychological disorders, such as anxiety and depression, while others quickly adjust to the situation and resume their normal lives. This ability, which improves the mental state of individuals, is known in the positive psychological approach as resilience [15].

Resilience is the process of optimal adaptation in the face of difficulties, traumatic events, calamities, threats, or any tense situation. Resilient people return to an average level of performance after facing difficult life situations. Resilient people readily accept the realities of life and believe that life is meaningful [16]. Resilience refers to an individual's practical ability to adapt or cope with adverse conditions. This virtue may help maintain a person's mental health during a deadly pandemic [17]. The concept of resilience among the medical staff of hospitals facing natural disasters has drawn the attention of many researchers [18]. During the COVID-19 pandemic, resilience was also found to improve mental health [19] and reduce anxiety, stress, and burnout in hospital staff [20].

In this regard, Tam et al. [4] investigated the psychological distress of the medical staff during the COVID-19 outbreak with the mediating role of resilience. According to results, 38% of medical staff had psychological distress. But, people who received adequate social support and were highly resilient experienced less stress, depression, and anxiety. In another study, Luceño-Moreno et al. [8] examined posttraumatic stress, anxiety, depression, resilience, and burnout during the COVID-19 pandemic. In total, 56.6% reported posttraumatic stress symptoms, 58.6% anxiety, 46% depression, and 41.1% burnout.

In contrast, people with good levels of resilience reported fewer psychological problems. Being a woman and working in the COVID-19 ward increase in psychological distress in the medical staff of hospitals. Sinichi et al. [21] also showed that nurses suffer from many psychological problems. Symptoms of stress were observed in 48.7%, anxiety in 77.6%, and depression in 60.5% of nurses. The most important strategy used in them was

the emotion-focused type. There was a positive correlation between psychological disorders and emotion-based approaches, as well as a negative correlation between problem-based skills and the incidence of depression.

The ability to regulate emotion is critical to effective and successful performance in difficult and stressful situations, such as the COVID-19 pandemic [22]. Researchers have identified various cognitive and behavioral strategies for regulating emotions that can generally be divided into adaptive and incompatible strategies [23, 24].

Strategies such as acceptance, cognitive reassessment, and positively refocusing on planning or focusing on finding a solution to a problem are typically considered adaptive strategies, leading to reduced emotion and negative feelings [23]. In contrast, repression of emotions, self-blame, rumination, and catastrophizing are recognized as maladaptive emotion regulation strategies that exacerbate and prolong negative emotions [24]. In the COVID-19 pandemic, emotion regulation strategies also play an important role in treating depression, anxiety, and stress in medical staff [13]. Investigations conducted during the outbreak of COVID-19 have shown that people with self-blame, rumination, and rejection experience high levels of anxiety and depression [25, 26]. In contrast, therapeutic staff who used adaptive cognitive-emotional regulation, such as positive reassessment and refocused on positive planning, had better mental and physical health [27]. In a similar study, Wang et al. [28] examined anxiety, depression, and cognitive emotion regulation in nurses during the COVID-19 outbreak. This study showed that 27.6% and 32.8% of nurses have symptoms of anxiety and depression, respectively. Also, low self-blame, lack of rumination, and positive acceptance decreased anxiety and depression in nurses. In another study, Zhu et al. [29] examined nurses' mental health and emotion regulation strategies during the COVID-19 outbreak. The results showed that 55% had anxiety, and 56.4% had depression. Also, 31.6% reported simultaneous symptoms of anxiety and depression. Nurses who used negative emotion regulation strategies had lower mental health. Safa et al. [30] also reported that a significant number of nurses had severe posttraumatic stress. There was a significant difference between different age groups in terms of the depression absence scale and between individuals with different marital statuses in terms of pervasive memories subscales and inability to control emotions and total posttraumatic stress score.

Because the medical staff of the hospitals was at risk of developing COVID-19 from the very first days, they suffered from extensive psychological damage, such as

posttraumatic stress, anxiety, depression, burnout, and insomnia. If these problems are not taken into account, they may create irreparable consequences for these people [31, 32]. On the other hand, more than a year after the outbreak of COVID-19, we are still witnessing the mutation of this deadly virus on a global scale, and a definite date for the post-corona era is inconceivable [33, 34]. Thus, it is necessary to seek solutions to improve the mental health of hospital nurses and doctors. For this purpose, the present review study was conducted to investigate the role of resilience and emotion regulation in the psychological distress of medical staff during the COVID-19 pandemic.

2. Methods

The present study is a systematic review study that, through PRISMA (The Preferred Reporting Items for Systematic Reviews and Meta-Analysis) [35] model, examined the research findings related to the role of resilience and emotion regulation on the psychological distress of the medical staff of hospitals during the COVID-19 pandemic. In the present study, using the keywords of "coronavirus 2019", "COVID-19", "depression", "anxiety", "stress", "resilience", "emotion regulation", "mental health", "medical staff", and "psychological distress", we searched in English databases of Google Scholar, PubMed, Scopus, ScienceDirect, as well as Iranian databases of Scientific Information Database (SID) of Jahad Daneshgahi, Iranian Publications (Magiran) and Iranian Medical Sciences articles from February 2020 to July 2021. After collecting the articles, irrelevant and duplicate papers were removed by the researchers. In the next step, the full texts of the remaining articles were examined, and after removing the irrelevant items, the remaining articles were categorized and analyzed. Research articles were selected based on the inclusion criteria (relevance to the purpose of the research, having a structured research framework and publication in a valid journal) and exclusion criteria (unavailability of full text of the article, letter to the editor, and no abstract). The quality of articles was evaluated using the Gifford et al. criteria [36]. Based on the criteria provided for quantitative (6 criteria), qualitative (11 criteria), quasi-experimental (8 criteria), and experimental (7 criteria) studies, the articles were evaluated on a 2-point scale (0 and 1). Out of 593 articles related to the role of resilience and emotion regulation in the psychological distress of hospital staff during the COVID-19 pandemic, 30 completely related articles were included in the study. Then, they were studied thoroughly and accurately (Figure 1).

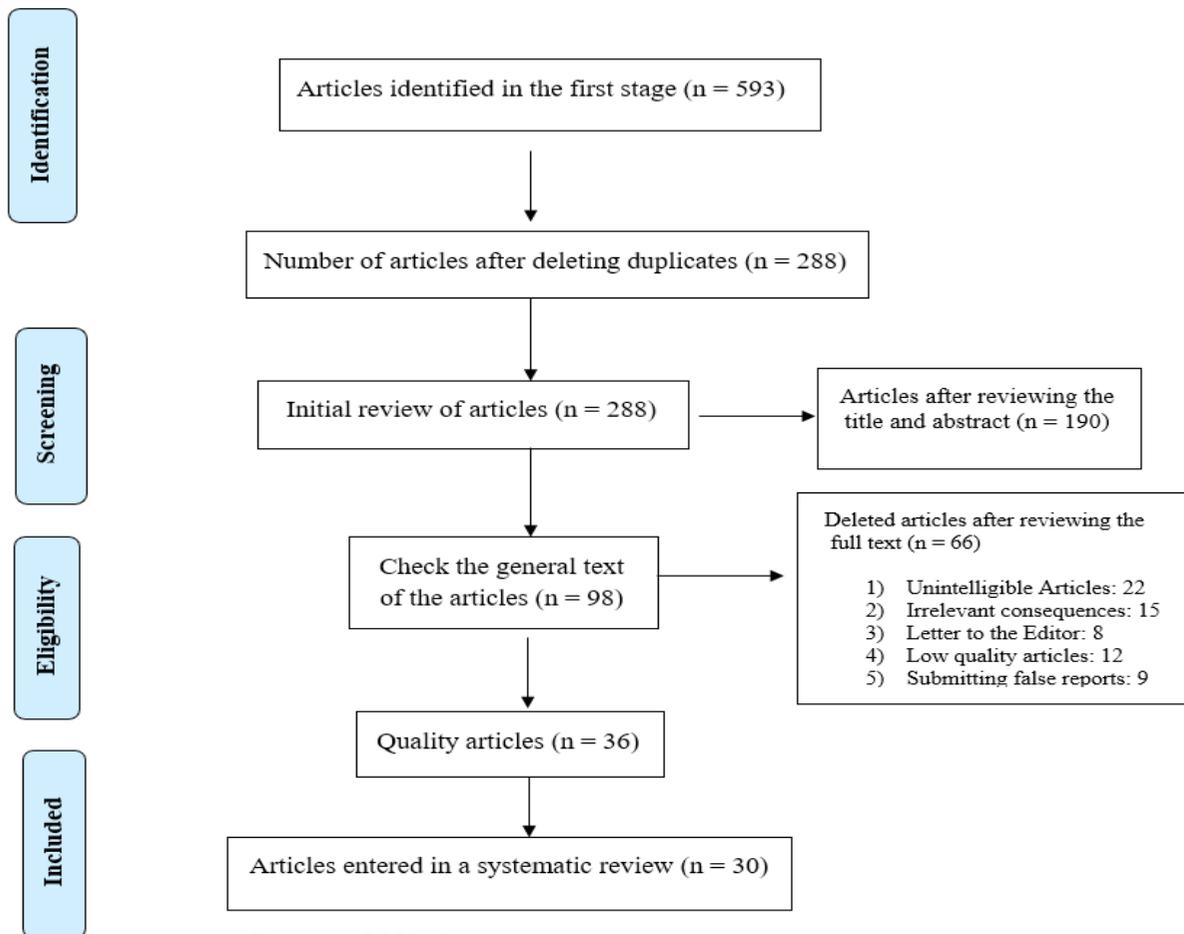


Figure 1. PRISMA flow chart outlining research results

Figure 1. Prisma flow chart outlining research results



3. Results

In this study, 30 qualified research articles in Persian and English were reviewed. Table 1 presents the findings from the reviewed articles on the role of resilience and emotion regulation in the psychological distress of hospital staff during the COVID-19 pandemic. Out of 593 articles related to the role of resilience and emotion regulation in the psychological distress of hospital staff during the COVID-19 pandemic, 30 articles with a total of 13902 samples were selected and reviewed based on the inclusion and exclusion criteria. The studies were collected from 16 countries: Iran, Italy, the Dominican Republic, China, Romania, Turkey, the United States, Nigeria, South Korea, Bahrain, Serbia, Indonesia, the United Kingdom, Portugal, Oman, and Spain. Of the 30 articles reviewed, 24 were quantitative articles, and one was a review article. Also, 36.6% and 63.4% of articles were published in 2020 and 2021, respectively.

Studies have shown that resilience and emotion regulation strategies during the outbreak of COVID-19 had

positive effects on nurses, physicians, hospital staff, and medical students. Most studies have shown that good resilience and the use of adaptive emotion regulation strategies can reduce anxiety, depression, insomnia, fear, and rumination, which results in increased well-being and psychological health of hospital staff during the COVID-19 pandemic.

4. Discussion

This study aimed to investigate the role of resilience and emotion regulation in the psychological distress of hospital staff during the COVID-19 pandemic. The present study results showed that medical staff with high resilience performed better in the face of COVID-19 stress and anxiety and had good mental health [6-10].

In explaining these findings, it can be acknowledged that coping strategies help hospital staff when they face stressful and anxious issues, such as the outbreak of COVID-19 and the high volume of hospitalized patients, positive behaviors are not observed. show good coping styles and

Table 1. Characteristics of the studies selected

Authors [Ref.]	Purposes	Sample	Country	Results
1 Lorente et al. [3]	Factors causing psychological distress of nurses during COVID-19 pandemic with the mediating role of resilience	421	Spain	This study showed a positive correlation between emotion-oriented coping strategies and psychological distress. Resilience and problem-solving coping strategies also reduced nurses' depression, stress, and anxiety during the COVID-19.
2 Tam et al. [4]	Evaluation of psychological distress of medical staff during the COVID-19 pandemic with the mediating role of resilience	1029	China	According to this study, 38% of medical staff had psychological distress. People who received adequate social support and were highly resilient experienced less stress, depression, and anxiety.
3 Labrague [5]	Evaluation of psychological resilience, coping behaviors and social support of medical staff during the COVID-19 pandemic	31	Oman	The study has shown that nurses and physicians who enjoy high resilience, social support, and positive coping behaviors during the COVID-19 pandemic are less likely to experience anxiety and stress caused by COVID-19.
4 Collantoni et al. [6]	Psychological distress, resilience, and fear of COVID-19 in the medical staff of hospitals	996	Italy	Nurses reported more anxiety, stress, and insomnia than physicians and other hospital staff. Also, being a woman, working in the COVID-19 Ward, and fear of getting COVID-19 were some of the factors that caused psychological distress. Resilience also reduced psychological distress and fear of getting COVID-19.
5 Serrão et al. [7]	Investigating the mediating role of resilience in relation to burnout and depression of medical staff during the COVID-19 pandemic	2008	Portugal	The study has shown that depression in medical staff increases their burnout. In contrast, people with psychological resilience cope better with the situation and have less depression.
6 Luceño-Moreno et al. [8]	Evaluation of posttraumatic stress, anxiety, depression, resilience, and burnout of medical staff during the COVID-19 pandemic.	1422	Spain	In total, 56.6% of medical staff reported post-traumatic stress symptoms, 58.6% reported anxiety, 46% reported depression, and 41.1% reported burnout. In contrast, people with good levels of resilience have fewer psychological problems. Being a woman and working in the COVID-19 ward led to an increase in psychological distress in the medical staff of hospitals.
7 Huang et al. [10]	Factors related to resilience among hospital medical staff during the COVID-19 pandemic.	600	China	Based on the studies, gender, age, level of education, protective equipment, stress, and anxiety played a role in the level of resilience of individuals. For this purpose, it is necessary to take measures to increase resilience.
8 Roberts et al. [12]	Levels of depression, anxiety, and resilience in respiratory nurses during COVID-19 outbreaks	255	England	About 17.2% of nurses had high levels of depression and anxiety. Also, 18.9% suffered from low resilience. Young and inexperienced nurses had more depression and anxiety, which reduced their resilience.
9 Man et al. [13]	Understanding illness and coping with emotional distress during the COVID-19 pandemic	115	Romania	This study showed that medical staff experience more stress and anxiety than in the past, which eventually led to their understanding of the disease. Emotion regulation also helps people cope with anxiety.
10 Chang et al. [14]	Investigating the role of religion and psychological resilience in the mental health of medical staff during the COVID-19	458	China	About 12.3% of hospital staff suffered from psychological distress, most of whom did not receive adequate social support. Religious people with good resilience were also more resistant to COVID-19 stress and anxiety.
11 Setiawati et al. [15]	Evaluation of resilience and anxiety of medical staff during the COVID-19 pandemic	227	Indonesia	33% of the medical staff had state anxiety, and 26.9% had trait anxiety. The mean resilience score was 69, which had a direct negative correlation with the level of anxiety.
12 Ristić et al. [16]	Levels of stress and resilience in the medical staff during the COVID-19 pandemic	483	Serbia	Medical students and medical staff participated in this study. About 57.3%, 26.7%, and 15.9% had mild, moderate, and severe stress, which was higher in medical students compared to medical staff. Low fertility, femininity, and poor financial status were also associated with stress levels.

Authors [Ref.]	Purposes	Sample	Country	Results
13 Aljehani et al. [17]	Evaluation of stress and psychological resilience in surgical residents during the COVID-19 pandemic	234	Bahrain	The mean age was 28 years, 53.8% were single, 65.8% were male, and 50.4% were placed in intensive care units due to lack of human resources. Of these, 117 had high stress and anxiety. The level of education, being a man, activity in the intensive care unit, and lack of equipment were significantly associated with the level of stress and anxiety.
14 Hong et al. [18]	Resilience, work stress, and depression of nurses during the COVID-19 pandemic	824	South Korea	Studies have shown that resilience was negatively correlated with nurses' stress and depression. Also, age, marital status, and work experience showed a significant relationship with the level of staff stress.
15 Coco et al. [19]	Psychological dimensions and resilience of medical staff during the COVID-19 pandemic	152	Italy	The findings showed that demographic factors could affect the level of stress and resilience of individuals. Age, gender, marital status, level of knowledge of individuals, work history, and activity in the COVID-19 ward were involved in the level of anxiety. Resilience as a mediating variable also reduces stress and anxiety.
16 Yörük & Güler [20]	Relationship between psychological resilience, burnout, stress, and depression in nurses and midwives during the COVID-19 pandemic	337	Turkey	The results showed a 31.8% prevalence of depression in nurses and midwives. The rate of midwives' depression was almost twice that of nurses. Stress levels lead to increased burnout and depression in nurses and midwives. In contrast, resilience could significantly improve the mental health of medical staff.
17 Sinichi et al. [21]	Psychological symptoms and coping strategies of nurses caring for patients with COVID-19 pneumonia	67	Iran	The findings showed that nurses suffer from many psychological problems. Symptoms of stress were observed in 48.7%, anxiety in 77.6%, and depression in 60.5% of nurses. The most important strategy used in them was the emotion-focused type. There was a positive correlation between psychological disorders and emotion-based approaches, as well as a negative correlation between problem-based skills and the incidence of depression.
18 Söğütü et al. [26]	The relationship between anxiety, anger, sleep, and difficulty in regulating emotion during the COVID-19 pandemic	406	Turkey	The level of anxiety was 50.5%, anger was 34.8%, insomnia was 35.4%, and difficulty in regulating emotion was 36.1%. The results also showed that people who have difficulty regulating emotion have more anxiety and anger, which leads to disturbed sleep patterns.
19 Garcia-Batista et al. [27]	The mediating role of emotion regulation on medical staff stress during the COVID-19 pandemic	155	Dominican Republic	This study showed that people with cognitive bias experienced more COVID-19 anxiety. Catastrophe and rumination also led to increased coronavirus stress and anxiety.
20 Wang et al. [28]	Evaluation of anxiety, depression and cognitive emotion regulation in nurses during the COVID-19 pandemic	586	China	Findings of this study showed that 27.6% and 32.8% of nurses have symptoms of anxiety and depression. Also, low self-blame, lack of rumination, and positive acceptance led to decreased anxiety and depression in nurses.
21 Zhu et al. [29]	Assessing mental health and emotion regulation strategies during the COVID-19 pandemic	342	China	About 55% had anxiety, and 56.4% had depression. Also, 31.6% reported simultaneous symptoms of anxiety and depression. Nurses who used negative emotion regulation strategies had lower mental health.
22 Safa et al. [30]	Evaluation of posttraumatic stress disorder in nursing staff involved in the care of patients with COVID-19	311	Iran	According to studies, a significant number of nurses had severe posttraumatic stress. There was a significant difference between different age groups in the depression absence subscale and between individuals with different marital statuses, in the pervasive memories subscales and inability to control emotions and total post-traumatic stress score.

Authors [Ref.]	Purposes	Sample	Country	Results
23 Vitale et al. [31]	A survey of mindfulness and emotion regulation in nurses during the COVID-19 outbreak	200	Italy	According to the results, men scored higher in mindfulness and emotion regulation. There was also a significant difference in terms of gender, age, work experience, and activity in the coronavirus ward.
24 Croghan et al. [32]	Evaluation of resilience, stress, and coping strategy of medical staff during the COVID-19 outbreak	302	The USA	Nurses, physicians, service staff, and administrative and educational staff of the hospital participated in this study. The study has shown high levels of stress in young nurses. Resilience and problem-oriented coping strategies also reduce stress.
25 Sirati et al. [33]	Perceived stress of medical and non-medical staff in the face of the pandemic of COVID-19	528	Iran	About 90.2% of people had moderate job stress, and 4.2% had severe stress. The level of stress in students was higher than in permanent and contract employees. Also, women had more stress than men, people with medication, people without medication, and people with medical occupations more than non-medical occupations.
26 Sarboozai et al. [34]	Nurses' depression, stress, and anxiety in the COVID-19 pandemic	125	Iran	The study showed that nurses had moderate psychological distress. Nurses' depression and anxiety were also significantly associated with age, employment status, and satisfaction with personal protective equipment.
27 Rahmani et al. [37]	Comparison of anxiety in medical and non-medical staff of Jahrom City in the face of COVID-19	402	Iran	The mean score of psychological symptoms of the clinical staff was higher than the administrative staff. Also, the average score of physical symptoms of the clinical staff was higher than the administrative staff. There was a significant difference between the clinical and administrative staff in terms of mean anxiety.
28 Olashore et al. [38]	Evaluation of resilience, social support, and anxiety of medical staff during the COVID-19 outbreak	373	Nigeria	The mean age was 38 years, of which 65% were women, and 57.6% were nurses. About 13% of people reported high anxiety. Also, the level of resilience and social support was directly related to people's anxiety levels.
29 Schierberl et al. [39]	The role of resilience and social support on nurses' psychological symptoms during the COVID-19 outbreak	312	The USA	The study has shown that nurses working in the COVID-19 ward were more fearful and anxious. Resilience and social support also reduced nurses' anxiety and fear of COVID-19.
30 Di Giuseppe et al. [40]	Stress, burnout, and resilience of medical staff during the COVID-19 pandemic	223	Italy	The medical staff working in the COVID-19 unit experienced more stress and depression, and more burnout. Stress and burnout were also associated with younger age and work history, being a woman, lack of protective equipment, and activity in the coronavirus ward.



have more flexibility [4]. This ability helps nurses and physicians to accept existing conditions and perform at their best [8]. In contrast, low resilience leads to anxiety, stress, and burnout in hospital staff, result in reduced efficiency of services provided by hospital staff. Because resilience includes positive patterns of adaptation to hardships and difficulties over time, nurses and physicians with good resilience are expected to show better flexibility over time [12]. In other words, people with good resilience endure hardships, cope better with threatening situations, cope more effectively with stress and problems, and have a greater capacity to respond to life stressors and cope with everyday problems [17]. This ability causes hospital staff to adapt better to the anxious conditions (such as hospital overcrowding, equipment shortages, and

medication) created by the COVID-19 pandemic [3]. In other words, the dimensions of resilience, such as personal competence, trust in instincts, positive acceptance of change, self-confidence, control, and spiritual impact when in stressful and difficult situations, help people to show the necessary flexibility, adapt to the current situation and use effective coping strategies better [14-20].

On the other hand, the findings showed that medical staff who used adaptive emotion regulation strategies, such as positive reassessment and refocusing on planning, positively coped with COVID-19 anxiety and stress. In contrast, the use of maladaptive emotion regulation strategies, such as catastrophe, rumination, and blaming others, negatively aggravates psychological disorders during the coronavirus 2019 pandemic.

Explaining these findings, it can be acknowledged that people who manage and control their emotions during the COVID-19 outbreak have better mental health. When a person is faced with an emotional situation, feeling good and optimistic is not enough to control the emotion, but he needs to have the best cognitive function in these situations. In regulating emotion, an optimal interaction of cognition and emotion is required to deal with adverse conditions because people interpret every stimulus and situation they encounter, and cognitive interpretations determine people's reactions [29]. For this reason, people who use negative and weak cognitive styles, such as rumination, catastrophizing, and self-blame during the COVID-19 pandemic are more vulnerable to emotional problems than others [27]. In other words, people who could not properly manage their emotions in the face of stress caused by COVID-19 show more stress, depression, and anxiety. When people with high anxiety symptoms have more difficulty regulating their emotional functions, they are less able to recognize and accept their emotions and are more likely to show negative emotions in ambiguous emotional situations [26-31].

5. Conclusion

The present study results showed that resilience and emotion regulation play an important role in reducing depression, anxiety, and stress of hospital staff during the COVID-19 pandemic. People with high resilience are well aware of the situation and do their best to accept it and show their best performance. Emotion regulation also allows nurses and physicians to manage and control their emotions. This strategy prevents them from engaging in negative emotions and helps them show their best performance. In this regard, it is suggested to use appropriate psychological services in hospitals to promote the mental health of nurses and physicians.

One of the limitations of the present review study is the unavailability of the full text of some articles, which led to the non-inclusion of these articles in the review process. Also, due to the filtering of some scientific databases, researchers could not access them. In addition, some studies were descriptive and should be cautious in generalizing their results. In this regard, it is suggested that descriptive studies be conducted on the role of resilience and emotion regulation in promoting the mental health of nurses and medical staff of hospitals during the COVID-19 outbreak in the country. These studies improve the physical and psychological function of medical staff in Iran.

Ethical Considerations

Compliance with ethical guidelines

Ethical principles in writing the article have been observed according to the instructions of the National Ethics Committee and the COPE regulations.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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