



A Study of the Impact of the Teachings of the Quran on the Stress, Anxiety, Depression, and Resilience of Nurses Caring for COVID-19 Patients in Iran

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Abstract

Nurses have been exposed to great tension in the COVID-19 pandemic. The present study aims to investigate the impact of the teachings of the Quran on the stress, anxiety, depression, and resilience of nurses caring for COVID-19 patients. This is a quasi-experimental study on 70 nurses at Larestan and Gerash hospitals. The intervention was implemented in ten 30-min online and offline sessions through mobile phone-based applications. The standard resilience scale and DASS-21 were completed by the two study groups immediately before and one month after the intervention. The posttest total stress mean scores of the experimental and the control group were 5.77 ± 4.67 and 17.71 ± 3.22 , respectively, showing a statistically significant difference between the two groups after the intervention (p -value < 0.05). Similarly, there was a statistically significant difference (p -value < 0.05) between the experimental and the control group' posttest total resilience mean scores (71.17 ± 15.16 and 36.05 ± 0.5 , respectively). Accordingly, educational programs based on the teachings of the Quran are recommended as an effective way to improve resilience and decrease anxiety in nurses.

Keywords Teaching · Quran · Stress · Anxiety · Depression · Nurse

Introduction

Starting from Wuhan, China, in 2019, COVID-19 quickly became a pandemic and was the main cause of deaths of more than 7 million people by 9/8/2024 (Worldometers, 2024). At this time, the significance of the role of nurses was underscored by nurses' display of efficiency and self-sacrifice for their people in the face of the pandemic (Catton & Iro, 2021). In Iran, nurses faced such issues as work overload,

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extended shifts, poor organizational structures, and job insecurity (Bayrami et al., 2017; Beheshtaeen et al., 2024) and had to work overtime while they lacked information about the disease and had to rely on partially effective treatments from the onset of the pandemic and through the various peaks of the infection, even after the beginning of vaccination programs (Sajjad Ranjbar et al., 2023). The results of a study showed that the prevalence of mental health problems, including post-traumatic stress disorder, high prevalence of anxiety, and depression, among nurses who provided care to patients with COVID-19 was 23.5% (Sharififard et al., 2021). Another study showed that more than 70% of healthcare providers who provided care to patients with COVID-19 suffered from mental health problems, such as anxiety, depression, and sleeplessness (Huang & Zhao, 2020).

All of the above-mentioned problems increased anxiety, stress, depression, and despair in nurses and led to diminished resilience, rumination, concern about returning home and infecting one's family, and other psychological disorders in nurses, especially those who were in the front line of the battle against COVID-19 (Amiri et al., 2021; Ariapooran & Amirmanesh, 2020; Ariapooran et al., 2021; Barrett & Heale, 2021; Chen et al., 2020; Davarinia Motlagh Quchan et al., 2020; Eyni et al., 2020; Haji & Mohammadimehr, 2021; Huerta-González et al., 2021).

As a result of the increase in nurses' fatigue and job burnout (due to the persistence of the pandemic), the quit rate among nurses rose, the quality of nursing services, especially at the peaks of COVID-19, declined, and more nurses required sick leave. In addition, nurses felt less motivated to continue their work and share their experiences, suffered from diminished quality of life, family problems and poor interaction with their loved ones, and lost interest in training (Ariapooran et al., 2021; Haji & Mohammadimehr, 2021; Labrague et al., 2021). Mhjoob et al. assessed the effect of listening to the Quran on the mental health of the personnel at Zahedan University of Medical Sciences, southeast of Iran. The results showed significant differences between the test and control groups in terms of their mental health mean scores after the intervention ($P=0.037$). These results suggest that listening to the Quran can contribute to improving care providers' mental health (Mahjoob et al., 2016). The result of a systematic review by Moulaei et al., (2023) showed that the sound of Quran readings could significantly reduce anxiety and enhance mental health.

Healthcare systems must develop long-term, organized interventions to address the existing issues in the nursing profession (Chan et al., 2021) and empower nurses to improve their psychological skills, including resilience (the ability to adapt to difficulties and recover after experiencing negative emotions), so that they can better cope with their anxiety, stress, and depression (Arefnejad et al., 2021; Bauer et al., 2020; Jo & Kurt, 2021).

According to Alameddine et al., (2021) study, it was essential that healthcare administrators take measures to enhance nurses' resilience during the COVID-19 pandemic. Odom-Forren (2020) stated that, by motivating nurses to display professional behaviors, resilience can prepare nurses to cope with difficult work conditions, job burnout, and fatigue. On a similar note, Arbusia et al., (2021) reported that training nurses to be resilient helps they feel less stressed and anxious. According to Ariapooran and Amirmanesh (2020) study, there was an

urgent need for psychological interventions designed to lessen stress, anxiety, and depression in nurses during the pandemic.

At the time of a pandemic, people suffer from lack of meaning in their lives and do not get satisfaction from the materialistic pleasures of life. This change makes them increasingly aware of their need for religious matters to gain resilience and cope with their negative internal emotions (Fradelos et al., 2018; Mirzaei & Bagherie-Asle-Monfared, 2020). Ahangarkani et al., (2019) reported that religious teachings are very effective in adaptation at hard times. Chang et al., (2021) reported that the healthcare personnel with strong religious beliefs were in a better mental state during the COVID-19 pandemic. Foroozanfar (2020) study mentioned that the Quran describes resilience as a moral virtue. Talebian et al., (2021) referred to spiritual health as the missing link in nurses' resilience during the pandemic. Accordingly, there was an urgent need for new, creative interventions based on religious ideologies to enhance resilience and decrease anxiety in nurses during the COVID-19 pandemic (Labrague, 2021).

One of the effective interventions to improve nurses' resilience and reduce their anxiety and stress is using the teachings of the Quran about anxiety and resilience (Hatefi et al., 2019; Jabbari et al., 2020). As the holy book of Muslims, the Quran pays special attention to resilience: The term "patience" (which is equivalent to resilience) has been frequently used in the Quran. The Muslims' holy book is filled with verses about how to cope with crises and stressors in life (Foroozanfar, 2020), an understanding of which can help people in adapting at difficult times. The verses of the Quran about patience and resilience are a cure for the pains of humanity. Iran is an Islamic country and the Quran, the holy book of Islam, has become an established part of the Iranian culture (Rowshanaei et al., 2018).

Troubles and difficulties in nurses' profession disturb nurses and make them vulnerable to anxiety and stress and the physical and mental illnesses associated with them. From the viewpoint of the Quran, patience and resilience (as described by God) are the only cure to these pains, as stressed in various verses. Rashidzadeh found that Islamic teachings contribute to the resilience of mothers with autistic children. He maintained that the teachings of the Quran improve well-being (Rashidzadeh et al., 2018). Similarly, Emami study reported that positive thinking based on the teachings of the Quran improves resilience in adolescents (Emami & Fattahi, 2019). Malekiha and Olyanasab (2021) found that the teachings of the Quran are effective in enhancing resilience in married women with spinal injuries.

Despite repeated assessments of the extent of psycho-emotional disorders in Iranian nurses, religious mental care programs are not recognized in nurses' training. There is a lack of organized efforts to prevent psychological disorders in nurses in Iran, and the impact of the teachings of the Quran on the stress, anxiety, depression, and resilience of nurses in the face of COVID-19, which posed a major threat to their lives, was not investigated. Accordingly, the present study was conducted to explore the impact of the teachings of the Quran on stress, anxiety, depression, and resilience in nurses caring for COVID-19 patients at the third peak of the infection in Iran.

Research Questions

1. Could the teachings of the Quran about resilience (in a situation in which a person's life may be at risk) increase resilience in nurses during the COVID-19 pandemic?
2. Could the teachings of the Quran reduce stress, anxiety, and depression in nurses during the COVID-19 pandemic?
3. Could interventions based on the teachings of the Quran be incorporated into training programs for nurses to enable them to cope with COVID-19 pandemic and suffer less fatigue and burnout?
4. Is there an effective method to present the teachings of the Quran to nurses?

Method

Type of study and sample size

This is a quasi-experimental study with an experimental and a control group. The study population consisted of all the nurses who were in practice in the units assigned to caring for COVID-19 patients at Imam Reza Hospital in Larestan (120 nurses) and Amirmomenin Hospital in Gerash (80 nurses) (both located in the south of Fars province, Iran). Data were collected from September to October 2020. Using the Cochran formula and Morgan table with a precision of $d=0.05$, significance level of $P=0.05$, and attrition rate of $\alpha=0.05$, sample size was set at 80 nurses. Eventually, 70 nurses participated in the study (35 in the experimental group and 35 in the control group). After acquiring the necessary permits and an ethics code for the study, the researchers called the nurses from a telephone in Gerash University of Medical Sciences. The researchers applied convenience sampling and the nurses who were willing to participate in the study were recruited. The nurses from Amirmomenin Hospital were assigned to the experimental group, and the nurses from Imam Reza Hospital were assigned to the control group. (The assignment was not random.) Next, the nurses were informed of the objectives of the study by phone and asked to complete the informed consent form sent to them on a social media platform (Rubika) if they were willing to participate. The participants in the experimental group were added to a group made on Rubika for simultaneous participation in online sessions.

The inclusion and exclusion criteria

The inclusion criteria were having at least three consecutive months' experience of practice in a hospital unit for COVID-19 patients, being a Muslim, being willing to participate in the study, and having an account on a social network, e.g., WhatsApp, or Rubika (an Iranian messenger). In addition, it was essential that the participants not have received any training in a workshop, seminar, or convention about using the teachings of the Quran in one's everyday life, not have (Matheson et al., 2002) a

history of a psychological disorder by self-report, and not be on psychotropic medications. The participants who were not willing to cooperate after sampling, failed to attend more than two sessions of the educational program, were transferred to another city during the study period, or took a long leave (vacation) were excluded.

Instruments

The data collection instruments were a researcher-made demographics survey (which addressed the participants' age, gender, marital status, number of children, education, extent of religiousness, work experience, employment status, income, number of shifts, and history of infection with COVID-19), Connor–Davidson Resilience Scale, and the standardized DASS-21 to measure depression, anxiety, and stress in the nurses. Before the first intervention session and one month after the last session, the questionnaires were completed by the experimental and control groups in Google Docs on the Internet. The data collector (research assistant) and statistical analyst were unaware of how the instruments were coded for the intervention and control groups.

1. *Connor–Davidson Resilience Scale* To measure the nurses' resilience, the researchers used the Connor–Davidson Resilience Scale developed in 2003 (Connor & Davidson, 2003). The scale consists of 25 items which are scored on a 5-point Likert scale (Not true at all=0 to Always true=4). The score range is between 0 and 100, which is divided into four levels: 0–25, 26–50, 51–75, and 76–100. Higher scores indicate greater resilience. The cutoff point of the scale is 50. The resilience scale consists of five factors: personal competence, trust in one's instincts (tolerance of negative emotions), and positive acceptance of change and secure relationships, control, and spiritual influence. The construct validity and reliability of this scale have been measured in Iran. Samani et al., found the Cronbach's alpha of the scale to be 0.87 (Samani et al., 2007).

2. *DASS-21* The nurses' depression, anxiety, and stress levels were measured using the standardized DASS-21 (Depression, Anxiety, and Stress Scale-21), first developed by Lovibond. This scale consists of 21 items scored on a 4-point Likert scale. Seven items are about stress (trepidation, difficulty breathing, trembling, dry mouth, palpitations, lack of initiative, and unease), seven are about anxiety (agitation, losing energy to nervousness, overreacting, irritability, intolerance, panic, and situational anxiety), and seven address the subscale of depression (worthlessness, meaninglessness, lack of peace, lack of a positive feeling, despair, lack of enthusiasm, and indifference) (Lovibond & Lovibond, 1995). The reliability of this scale was measured by Najafi in Iran (Anxiety=0.86, Stress=0.85, Depression=0.83) (Najafi Kalyani et al., 2013). The subscale to which each item belongs is indicated by the letters D (depression), A (anxiety), and S (stress). Because DASS-21 is a short form version of DASS (the Long Form has 42 items), the final score of each subscale (depression, anxiety, and stress) needs to be multiplied by two ($\times 2$). Once multiplied by 2, each score can be transferred to the DASS profile sheet, allowing for comparisons to be made between the three subscales and giving percentile rankings and severity labels.

The intervention

The content of the intervention was developed in collaboration with Imam Hadi Daraltahfiz, the Quran experts at Ahsanolhadith (individuals who knew the entire Quran by heart and interpreters of Quran verses and hadith), and nursing professors specialized in course planning. It is the largest specialized center for daily memorization and stabilization of Quran and Hadith in Fars province.

The educational content (Table 1) was presented to the participants by the experts at Ahsanolhadith using the resilience theory (van Breda, 2018) in the form of lectures, images, and video clips in ten 30- to 45-min sessions. The sessions were held weekly at 8 p.m. The intervention lasted for a total of 10 weeks. In the first session, the participants were given the timetable of the sessions and were sent a reminder message on the morning of the day of every session. The participants confirmed their attendance by saying a short prayer at the beginning and end of each session. The researchers contributed to the sessions by inviting lecturers, sending educational materials to the participants, and receiving their assignments from them.

Each session began with a short recitation (2 to 3 min) of some verses from the Quran. These verses were selected as research topic by Quranic experts and were related to the topics of each session. Next, the lecturer greeted the participants, introduced a key verse (related to the topic of that session) from the Quran, and used video clips or podcasts to elaborate on the topic (up to five minutes). After a live audio or video speech made by the lecturer (up to 15 min), the participants' questions (if any) were answered, the participants discussed the topic (10 min), a final clip related to the topic was played (as a summary of that session) (up to 3 min), the participants were assigned a task (a practical task designed to encourage the participants to use the teachings of the Quran in clinical practice), and eventually, a verse from the Quran was displayed to end the session.

In our study, treatment fidelity was determined through several key methods:

1. *Training of interventionists* All personnel delivering the intervention underwent a standardized training program to ensure they understood the protocol thoroughly. All instructors are certified and actively engaged in teaching at the Dar Al-Tahfiz Quran institute. This institute, in addition to Quran memorization, also offers courses in Quranic translation and interpretation. Additionally, the researcher of this project is also a Quran memorizer and has played a significant role in designing the educational guide. They possessed the requisite skills and competence to present the educational content effectively.
2. *Use of a manual* We developed a detailed intervention manual that outlined each component of the intervention, which was provided to all interventionists. The educational content of this course is based on the Quran and its authentic interpretations. All interventionists of this course are Quran memorizers with a deep understanding of Quranic concepts. Therefore, the concepts and verses of the Quran can have a significant impact on human life. It can ensure that participant receive effective treatment.
3. *Monitoring adherence* We implemented regular supervision sessions and utilized video recordings of sessions to monitor adherence to the protocol. Feedback was

Table 1 Content of the educational sessions

Session	General topic	Verses from the Quran used to elaborate on the topic	Assignment
1	Introductions, having the participants complete the questionnaires	Al-Isra (verse 9), Al-Zumar (verses 73–75), Yusuf (verse 64), Al-Zumar (verse 36)	Completing the questionnaires
2	Introduction to the concept of having belief in God and resilience from the viewpoint of the Quran	Al-Ahzab (verse 35), Al-Rad (verse 28), Al-Talaq (verse 3), Al-Zumar (verse 36), Ghafir (verse 44), Yusuf (verse 64)	Narrating events combined with resilience in the workplace
3	The comparison technique to increase one's resilience	Al-Layl, Al-Insan (verse 13), Yusuf (verse 11)	Using the comparison technique to soothe a patient
4	Special respect for patient individuals in human history	Al-Imran (verse 8), Al-Qamar, Al-Sajdah (verse 40), Al-Qasas (verse 54), Al-Insan (verse 76), Yusuf (verse 64), Al-Jinn (16), Al-Isra (verse 61), Al-Baqara (verse 249)	Three examples from personal life to demonstrate the positive results of patience
5	The effectiveness of praying in increasing resilience and reducing stress and anxiety	Al-Talaq (verse 7), Al-Saff (verse 4), Al-Araf (verse 55), Al-Isra (verse 110), Al-Anbiya (verse 83), Al-Qasas (verse 24), Yusuf (verse 255), Al-Baqara (verses 64, 256, 257), Al-Sajdah (verse 7), Al-Rad (verse 28), Ar-Rum (verse 30), Ta Ha (verse 124), Al-Zumar (verse 23), Al-Anbiya (verse 83), Al-Araf (verse 55), Al-Isra (verse 110), Yusuf (verse 64)	Which praying ritual is used more than the others is Salah? Saying a prayer using the learned rituals
6	Colors and resilience	Al-Nahl, Al-Ma'idah (verse 32), Al-Naml (verse 59), Ya Sin (verse 58), Al-Imran (verse 34), Fatir (verse 106), Al-Ma'idah (verse 119), Al-Baqara (verse 69), Al-Kahf (verse 31), Al-Imran (verse 107), Muhammad (verse 15), Al-Hujurat (verse 13)	Determining your favorite color as described by the Quran and the impact of that on achieving peace and resilience
7	The medicine of loving God	Al-Taghabin, Ad-Dukhan (verse 32), Yusuf (verse 86), Fuşşilat (verse 34), Ibrahim (verse 4), Al-Baqara (verse 165), Al-Insan, Yusuf (verse 33), Al-Qamar (verse 55)	Chapters in the Quran about nursing combined with love and kindness

Table 1 (continued)

Session	General topic	Verses from the Quran used to elaborate on the topic	Assignment
8	The role of friendship in reducing and eliminating stress and anxiety	Adh-Dhariyat (verse 56), Al-Insan (verse 8), Yusuf (verse 33), Ta Ha (verses 25, 26, 29, 31, 32), Al-Fatihah, Al-Imran (verses 31–32), Al-Nisa (verse 69), Al-Muddaththir (verses 38–47), Al-An'am (125), Al-Baqara (verse 195), Al-Ma'idah (verse 32), Al-Tawbah (verse 40)	Giving well-known examples of friendship and collaboration in performing nursing duties
9	The role of authorities in helping care providers keep calm	Al-Ma'idah (verses 17–18), Al-Nur (verse 45), Ya Sin (67), Al-Tawbah (verses 128, 103), Al-Isra (7), Al-Ahqaf (35), Al-Baqara (142), Al-Imran (106), Abasa (39), Al-Zumar (verse 75), Al-Insan (12), Al-Mursalat (27), Yusuf (64)	Narrating experiences of the presence of authorities in hospital units and its impact on the personnel's morale
10	Conclusion: Wrap-up of the main points and having the participants complete the questionnaires again		

provided to ensure consistency across sessions. You used a standardized protocol or manual for the intervention

Analysis

The collected data were analyzed in SPSS v. 23. The Kolmogorov–Smirnov test was used to assess the normality of the data. The Mann–Whitney test was used to compare the two study groups in terms of the dependent variables and the Wilcoxon test was used to compare the two groups' pretest and posttest scores. To compare the frequencies between the two study groups, the researchers used the Chi-square (Fisher) test. A nonparametric equivalent was used due to the non-normality of the data. Level of significance was set at 0.05.

Results

Seventy nurses (divided into a control and an experimental group) participated in this quasi-experimental study which lasted for 10 weeks. 80% of the participants in the control and experimental groups were female. In addition, the majority of the participants had a bachelor's degree, were married, did not have any children, and were moderately religious (Table 2). The results showed that there were no statistically significant differences between the two groups in terms of the frequency (percentage) of the qualitative demographic variables and means of quantitative variables, i.e., with regard to demographic variables, the two groups were homogeneous.

The pretest total stress mean scores (the Mann–Whitney test) of the nurses in the experimental and control groups were 25.42 ± 13.82 and 21.34 ± 12.57 , respectively, which were not significantly different (p -value = 0.119). Thus, the two groups were homogeneous in terms of their pretest scores and the difference between their posttest mean scores was due to the intervention (education in the teachings of the Quran and other religious matters). After the intervention, the total stress mean scores of the nurses in the experimental and control groups were 5.77 ± 4.67 and 17.71 ± 3.22 , respectively, which showed a statistically significant difference (p -value < 0.001). The results also showed statistically significant differences between the two groups' posttest mean scores in all the subscales of depression, anxiety, and stress (p -value < 0.001): There was a significant decrease in the experimental group's mean scores as compared to those of the control groups, which indicated that the educational intervention was effective in reducing stress in the nurses (Table 3 and Fig. 1).

The pretest total resilience mean scores (the Mann–Whitney test) of the nurses in the experimental and control groups were 27.45 ± 5.09 and 28.20 ± 5.10 , respectively, which were not significantly different (P = 0.40). Thus, the two groups were homogeneous in terms of their pretest mean scores for resilience and its subscales. However, after the intervention, the total resilience mean scores of the experimental and control groups were found to be 71.17 ± 15.16 and 36.05 ± 7.37 , respectively, which showed a statistically significant difference (p -value < 0.001). The resilience

Table 2 Baseline characteristics of intervention and control groups in terms of their demographic variables

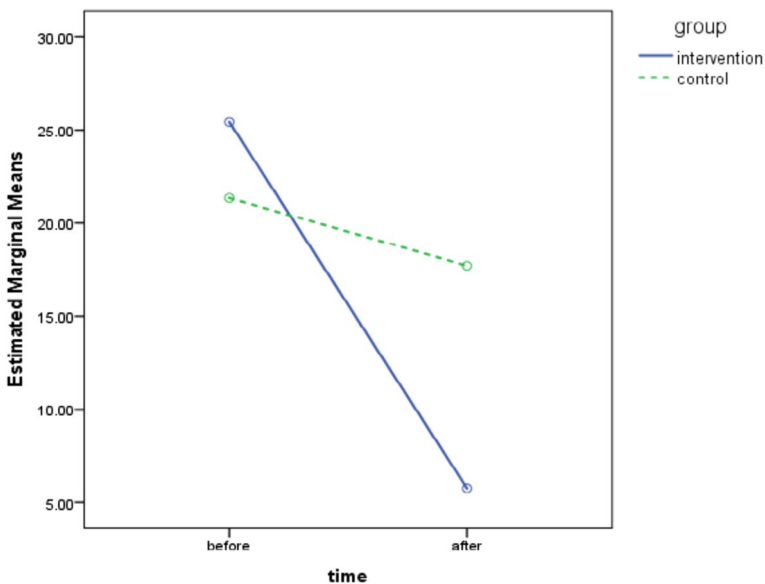
Variable	Group		Chi-square test results	
	Frequency (percentage)			
	Experimental (n = 35)	Control (n = 35)		
Gender	Female	28 (80)	28 (80)	P = 0.9999 X ² = 0.00
Marital status	Male	7 (20)	7 (20)	P = 0.1 Fisher exact = 4.28
	Single	24 (68.6)	16 (45.7)	
	Married	8 (22.8)	16 (45.7)	
Education	Divorced	3 (8.6)	3 (8.6)	P = 0.33 Fisher exact = 2.12
	Associate degree	4 (11.4)	1 (2.8)	
	Bachelor's degree	27 (77.2)	31 (88.6)	
	Master's degree	4 (11.4)	3 (8.6)	
Employment status	Trainee	20 (57.1)	14 (40)	P = 0.515 X ² = 2.28
	Temporary	6 (17.1)	7 (20)	
	Contractual	5 (14.4)	7 (20)	
Number of children	Permanent	4 (11.4)	7 (20)	P = 5.38 Fisher exact = 5.38
	0	29 (83)	22 (62.8)	
	1–2	5 (14.2)	13 (37.2)	
	3 or more	1 (2.8)	0 (0)	
Degree of religiousness	Low	0 (0)	3 (8.6)	P = 0.30 Fisher exact = 2.93
	Moderate	16 (45.7)	13 (37.2)	
	high	19 (54.3)	19 (54.3)	
COVID-19 infection	Yes	13 (37.2)	19 (54.3)	P = 0.51 X ² = 2.072
	No	22 (62.8)	16 (45.7)	
COVID-19 Vaccine	Yes	25 (71.4)	29 (82.9)	P = 0.255 X ² = 1.29
	No	10 (28.6)	6 (17.1)	

Table 2 (continued)

Variable	Group		Chi-square test results	
	Frequency (percentage)			
	Experimental (n = 35)	Control (n = 35)		
Income per month	Less than 5 million Tomans	16 (45.7)	9 (25.8)	P = 0.30 Fisher exact = 2.93
	5–10 million Tomans	16 (45.7)	22 (62.8)	
Reading the Quran	More than 10 million Tomans	3 (8.6)	4 (11.4)	P = 0.242 X ² = 4.19
	Daily	7 (20)	13 (37.2)	
	Weekly	5 (14.2)	7 (20)	
	Monthly	13 (37.2)	10 (28.6)	
	Never	10 (28.6)	5 (14.2)	
Quantitative variables		Mean ± SD		Mann–Whitney test results
Age		29.65 ± 8.74	30.51 ± 5.20	P = 0.292
Work experience (year)		5.14 ± 6.10	5.62 ± 4.39	P = 0.087
Number of shifts(week)		6.14 ± 1.81	6.54 ± 0.65	P = 0.225

Table 3 A comparison between the pretest and posttest mean scores of the experimental and control groups for stress and its subscales

Variable		Group		Mann-Whitney test results
		Mean \pm SD		
		Experimental (n=35)	Control (n=35)	
Before intervention	Depression	7.54 \pm 5.75	6.08 \pm 5.33	P=0.383
	Anxiety	7.68 \pm 4.54	6.42 \pm 4.20	P=0.067
	Stress	10.20 \pm 4.98	8.80 \pm 4.17	P=0.175
	Total stress score	25.42 \pm 13.82	21.34 \pm 12.57	*P=0.119
After intervention	Depression	1.42 \pm 1.55	5.48 \pm 4.76	P < 0.001
	Anxiety	2.05 \pm 2.02	4.91 \pm 4.42	P < 0.001
	Stress	2.28 \pm 2.09	7.31 \pm 4.78	P < 0.001
	Total stress score	5.77 \pm 4.67	17.71 \pm 3.22	P < 0.001

* $P \leq 0.05$ **Fig. 1** Changes in the pretest and posttest stress, anxiety, and depression mean scores of the nurses in the experimental and control groups

mean score of the nurses in the experimental group was significantly higher than that of the nurses in the control group. Also, with regard to all the subscales of resilience, there were statistically significant differences between the two groups' mean scores (p -value < 0.001): There was a significant increase in the experimental group's mean scores as compared to the control groups, which indicates that the educational intervention was effective in enhancing resilience in the nurses (Table 4 and Fig. 2). Personal competence, trust in one's instincts (tolerance of negative emotions), positive

Table 4 A comparison between the pretest and posttest mean scores of the experimental and control groups for resilience and its subscales

Variable		Group		Mann–Whitney test results
		Mean ± SD		
		Experimental	Control	
Before intervention	Personal competence	8.08 ± 2.11	8.80 ± 1.77	P = 0.089
	Trust in one’s instincts	8.40 ± 2.07	8.45 ± 2.85	P = 0.958
	Positive acceptance of change	5.45 ± 2.36	5.25 ± 1.94	P = 0.616
	Control	3.17 ± 1.20	3.62 ± 0.84	P = 0.069
	Spiritual influence	2.34 ± 1.16	2 ± 0.97	P = 0.172
	Total resilience	27.45 ± 5.09	28.20 ± 5.10	*P = 0.40
After intervention	Personal competence	23.85 ± 4.95	13.34 ± 3.01	P < 0.001
	Trust in one’s instincts	18.77 ± 5.01	8.94 ± 1.87	P < 0.001
	Positive acceptance of change	13.74 ± 3.75	5.31 ± 2.13	P < 0.001
	Control	8.60 ± 2.22	6.34 ± 2.11	P < 0.001
	Spiritual influence	6.20 ± 1.69	2.11 ± 1.45	P < 0.001
	Total resilience	71.17 ± 15.16	36.05 ± 7.37	P < 0.001

*P ≤ 0.05

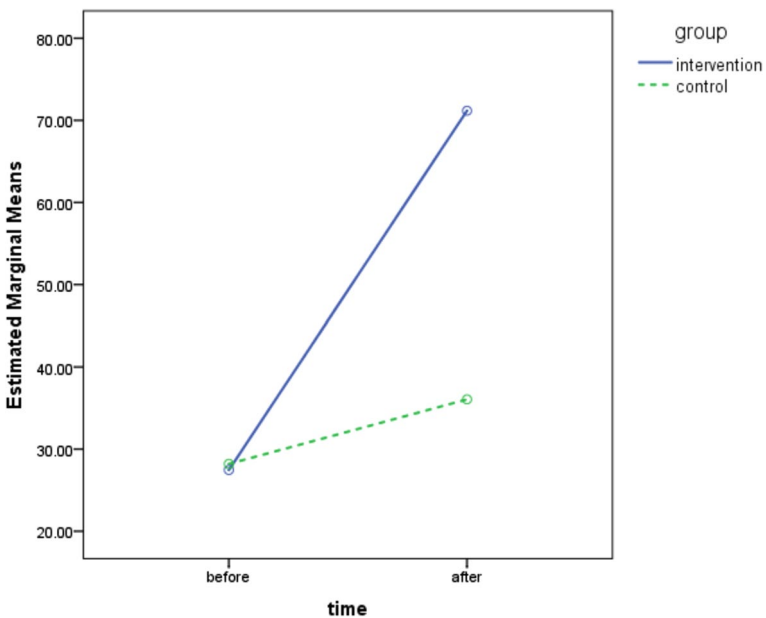


Fig. 2 Changes in the pretest and posttest resilience mean scores of the nurses in the experimental and control groups

acceptance of change and secure relationships, control, and spiritual influence constituted the subscales of resilience.

Discussion

The findings of the study show that the teachings of the Quran were effective in increasing resilience and reducing stress, anxiety, and depression in nurses caring for COVID-19 patients. The present study was conducted at the third peak of the coronavirus infection in Iran. Since the onset of the pandemic (a pandemic), nurses who were in practice in hospital units assigned to care of COVID-19 patients showed great dedication and self-sacrifice despite their lack of information about the infection. In Al-Ma'idah, verse 32, God says, "... whoever saved a human life shall be regarded as having saved all mankind." The intervention used in the present study showed that the teachings of the Quran proved effective in increasing resilience and all its subscales in the nurses: After the intervention, the resilience of the experimental group was approximately twice the resilience of the control group. Resilience is defined as a personality trait which facilitates coping with crises, making an effort to accomplish one's goals, having hope, and gaining control over difficult situations (Connor & Davidson, 2003). In the control group, there was a slight increase in the nurses' resilience, which can be attributed to the termination of the third peak and decrease in the workload of the personnel.

In the present study, the intervention included a session designed to increase resilience by informing the participants about the role of having belief in God and trusting Him in accomplishing goals and living through hard times. In a pandemic, when individuals cannot cope with difficulties on their own, trusting God and having confidence in Him ("God suffices for anyone who puts his trust in Him") can enhance resilience and reduce anxiety in nurses. Having trust in God motivates one to endeavor to accomplish one's goals, control difficult situations, have hope in accomplishing one's goals, remain optimistic, and overcome problems. Jenaabadi and Mir (2019) stated that having trust in God results in greater resilience and more hope in life, which is consistent with the results of the present study. Similarly, Khodabakhshi Koolaee et al., (2016) found that trust in God is a safe refuge and facilitator of positive acceptance associated with higher resilience in the parents of children with special needs. According to Krok et al., (2021) study, religiousness correlates with hope and hope correlates with resilience. Bazrafshan et al., (2019) reported that resilience was a major contributory factor in improving nurses' performance in the hospitals in Lar and Gerash.

In the third and fourth sessions of the intervention, the participants were introduced to the comparison technique for enhancing resilience and the significance of patience in history. The nurses were informed that comparing one's current situation in life to the difficult times which others have experienced (like the stories in the Quran about Jacob's and Yusuf's patience and the outcome of their patience) can increase one's resilience. In this technique, one can compare his/her problems to similar problems of other people or the characters in the Quran to appreciate the fruit of patience and resilience in the face of problems (Al-Insan, verse 13, Yusuf

verse, 11). In their study of the impact of reading the Quran on the resilience of COVID-19 patients, Rahman et al., (2020) study concluded that reading the Quran creates peace in the patients and empowers them in coping with crises. Razavidoost et al., (2016) study referred to patience and persistence, as described by the Quran, as contributory factors in having spiritual health and conquering difficulties.

In the fifth session of the intervention, the participants were educated about the role of praying in increasing resilience and reducing stress, anxiety, and depression. According to Islam and other major religions, a human being is made up of a soul and a body and the needs of the soul are met by praying (“surely in the remembrance of God hearts can find comfort”). The topics of the fifth session included urgency, need for God, the role of mediators in removing disasters, moving toward God in one’s mind, spirit, and deeds, appealing to God in private, and repetition of prayers. As with the present study, a study by Johnson (2018) showed that praying is effective in reducing depression. Similarly, Kruijthoff et al., (2021) referred to praying as a cure for Parkinson’s disease and concluded that medicine does not have all the answers about the human body.

Another session of the intervention concerned colors and resilience (“On the day when some faces are bright and some faces are dark, it will be said to those with darkened faces, ‘Did you reject faith after accepting it?’” (Al Imran, verse 106)). In this session, the participants were informed about the teachings of the Quran regarding use of colors in increasing resilience. In the Quran, it is said that yellow increases joy (Al Baqarah, verse 69), green increases spirituality and joy (Al Kahf, verse 31), and white, the color of nurses’ uniform in Iran, shows welfare (Al Imran, verse 107). Other discussion topics were the Quran’s stance on avoiding racism (Al-Hujurat, verse 13), use of colors that generate peace in patients in hospitals, and wearing light-colored clothes. Stressing the effects of colors on feelings and behaviors, Wiercioch-Kuzianik and Babel (2019) study maintained that the significance of colors should be reappraised in medical sciences as colors correlate with the degree of pain in patients.

Love for intimacy with God and those who love God were the subjects of another intervention session related to stress and resilience. Deep love for God and belief in His presence (Prophet Muhammad said, “Choose your fellow-traveler before you set off”) elevates one’s tolerance in the face of difficulties. Those who love God truly can tolerate hardships more easily (they have greater resilience) and experience less anxiety and stress. The participants were told stories from the Quran about the result of loving God and those who were close to Him in increasing one’s tolerance. In Iran, the majority of the population is Muslim and Shiite and the Quran is considered the holy book, which provides guidelines for daily deeds (what is called familiarity with the Quran). The path to loving God is through gaining knowledge and awareness of Him. According to Nikić (2021) study, loving God and believing in Him can strengthen one’s willpower and adaptation to hardships. In her study, Tamam concluded that love or intense affection could alleviate pains.

The findings of the present study also showed that the teachings of the Quran about patience and resilience could reduce anxiety, stress, and depression in nurses. The posttest total stress mean score of the nurses in the experimental group decreased by one fourth compared to before the intervention. In a pandemic, nurses

need to have their work properly appreciated and valued by authorities. Therefore, in the last session of the intervention, the nurses' superiors were asked to attend and acknowledge their gratitude to the nurses for their dedication. Showing appreciation of people's work increases their morale in hard times (Grabowski et al., 2021). In contrast to the findings of the present study, the results of a study by Fradelos et al., (2018) about the relationship between resilience and mental health showed that religiousness correlated with resilience, but there was no correlation between religiousness on the one hand and anxiety, stress, and depression on the other. In addition, in another study, Fradelos et al., (2020) reported that religion and religious beliefs were at two ends of a spectrum: He mentioned that though performing religious rituals could protect one from depression and anxiety, religious beliefs and experiences could lead to increased depression and anxiety, which is not consistent with the findings of the present study.

Limitations

During the pandemic, the nurses who participated in the study were exposed to work overload and considerable tension. Thus, in order to ensure maximum participation in the intervention, the researchers informed them of the dates and hours of the sessions beforehand. Furthermore, to raise the nurses' interest and determine the extent of practicality of the intervention, the researchers rewarded the nurses who completed the practical assignments. In the course of the intervention, some of the nurses contracted COVID-19 and attrition rate from 0.05 arrived to 0.1, but 70 nurses completed their participation according to the criteria set by the researchers. This study is a quasi-experimental study and the results should be used with caution. Finally, we conducted this study for the first time to investigate the impact of Quranic teachings on a population of nurses who are facing psychological stress, especially during the COVID-19 period. This study can be applied to a larger sample size with a longer intervention period in normal conditions and other crises.

Conclusion

It is recommended that the intervention used in the present study be employed in a single session or in several sessions as part of the training programs for nurses to enhance resilience and reduce stress and anxiety in this population.

Ethical considerations

The present study has been approved by the ethics committee at Gerash University of Medical Sciences (ethics code: IR.GERUMS.REC.1400.012) and was conducted under the supervision of the university. Participation in and withdrawal from the study was on a voluntary basis (refusing to participate in the study did not affect the job status of the nurses). Before the intervention, each of the selected nurses was

sent of the informed consent form (informing them about confidentiality, number of sessions, the discussion topics, and the subject of the questionnaires) and asked to complete it before they could participate in the study. At the end of the study, the content of the education presented to the intervention group was made available to the control group as video files.

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Declarations

Conflict of interest None to declare.

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