Original Article

Study the role of spiritual health and resilience in pandemic COVID- 19 on psychological vulnerability

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Abstract

Introduction: The advent of COVID-19 has led to fear and anxiety among people around the world. This study aimed to study the spiritual health and resilience role in staff's psychological vulnerability in two corona peaks in Iran.

Materials and Methods: This descriptive study is a causal-comparative. According to Morgan's table, the statistical population includes all staff of the Islamic Azad University of Birjand, and the sample size is 123 people. Samples were selected randomly. Connor and Davidson Resilience, Symptom Checklist-90 (SCL-90), Pulotzin and Ellison Spiritual Health Questionnaires were fulfilled in the first peak (March to the end of April 2020) and the third peak (October 2020). Mean data, standard deviation, and t-test were used in data analysis with SPSS software   version 21.

Results: The results showed a significant difference in the degree of psychological vulnerability of individuals in the two corona peaks ($P < 0.001$). In addition, there is a considerable difference between individuals' psychological vulnerability levels and spiritual health in the two corona peaks ($P < 0.001$).

Conclusion: Enhancing resilience and spiritual health can decrease psychological vulnerability. Also, the results of this study can be used to determine the amount of psychological damage caused by the corona disease and to plan the necessary psychological interventions for the target group.

Keywords: COVID 19, Psychological vulnerability, Resilience, Spiritual health

Introduction

One of the emerging challenges in infectious disease management is coronavirus (COVID-19) disease (1). The virus was rapidly transmitted in late January 2020 and is receiving increasing attention worldwide (2).

The World Health Organization (WHO), on January 30, 2020, declared the outbreak of COVID-19 a global emergency disease (3). The incubation time is 2 to 14 days, and the most common symptoms include fever, fatigue, dry cough, muscle aches, dizziness, headache, sore throat, runny nose, chest pain, diarrhea, nausea, vomiting, and shortness of breath. (4-9).

Limited knowledge about COVID-19 and surprise news may lead to fear and anxiety among the people. The general public may also be subject to quarantine measures; experience

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boredom, frustration, and irritability. Rapid transmission of COVID-19 increases the likelihood of psychological distress and complications such as panic disorder, anxiety, insomnia, and depression in different populations, not only due to ongoing quarantine and widespread negative news coverage but also to the increasing number of cases. Confirmed and suspected as well as the mortality rate in the world which itself represents a stressful event (2).

In Iran, the most important policy of the government to deal with the crisis has been the implementation of social distancing plans and the closure of gathering and interaction centers such as schools and universities (10,11). However, statistics show that the incidence and mortality rate in the country is still rising, and the country is experiencing the most difficult days of the third wave of the crown. Thus, the crisis's continuation, restrictions, imposed or voluntary self-isolation, and on top of that, the unpredictability of the situation and uncertainty of time to control the disease and the seriousness of the risk challenge people and lead to many psychological problems. Therefore, it is likely to have long-term effects (10). The population is working in the community, including administrative staff, in addition to physical vulnerability to psychological consequences of this crisis.

Many psychologists believe that stressful events play an essential role in developing psychosomatic disorders. Severe emotional stress can increase a person's vulnerability to illness and slow recovery from the disease (12). Spiritual health is one of the key predictors of health outcomes in humans that provide essential information about the needs for health care, the ability of individuals to adapt to stress, and the interventions needed to adapt and cope with the crisis caused by severe illness. In addition, spiritual health is one of the dimensions that can lead to the integration of other dimensions of health. The number of people and professionals who believe that spirituality effectively treats many psychological, physical, and mental health problems is increasing daily (13,14). Besharat et al. showed a significant negative relationship between spiritual health and the severity of cardiovascular disease (15).

Spiritual health consists of two components; religious health and existential health. Spiritual health is a sign of connection with a higher power, God; existential health is also a psychosocial element and a sign of one's feelings; what he/she does and why and where he/she belongs. The results of some studies indicate that without spiritual health, other biological, psychological and social dimensions can not function properly or reach their maximum capacity (13). On the other hand, other studies show that between stressful events and psychological disorders, moderating factors cause these events to have different effects on individuals. One of these factors is resilience (16). Resilience means preparing and planning for more successful tolerance, recovery, or adaptation to potentially unpleasant events. In addition, individual resilience refers to an individual's ability to function well during and after a crisis or traumatic event at all behavior levels and successfully overcome changing environmental requirements (17). Fredrickson et al. found that individual differences in resilience predict improvement in stressful situations and that people with high resilience achieve faster psychological and emotional recovery from stress (18). On the other hand, Agaibi and Wilson found that there is a significant negative relationship between resilience and psychological problems. Also, studies found a significant positive relationship between resilience and psychological health (19). Now at the peak of the coronavirus outbreak, the prevalence of psychological damage caused by the spread of disease in the community is also significant. Therefore, in this study, we seek to answer the following questions, considering the importance of the issue and the current situation (widespread prevalence of the disease), and the high risk of infection in administrative jobs.

Is there a significant difference between the level of spiritual health and the psychological vulnerability in the first and third waves of corona?

Is there a significant difference between the level of resilience and psychological vulnerability in the first and third waves of corona?

Materials and Methods

The present study is a comparative causal study. The statistical population includes all staffs of

Birjand Azad University (200 people). The sample size was estimated based on Morgan's table of 123 people. After obtaining informed consent and receiving the code approved by the Ethics Committee (IR.BUMS.REC.1399. 242). The samples were selected randomly. The questionnaires were distributed via online process in the first peak (March to the end of April 2020), and the third peak (October 2020). Inclusion criteria included 20 to 60 years old and being employees of Birjand Azad University (contractual, or formal). Exclusion criteria included having a tragic event in the last six months, such as mourning a loved one, an accident, or a dangerous illness.

Research instruments

A) Spiritual Health Questionnaire: Polutzin and Ellison's spiritual health questionnaire consists of 20 questions, ten of which measure spiritual health and the other ten questions measure existential health. The range of spiritual and existential health scores is 10-60. There is no grading for spiritual and existential health subgroups, and judgments are made based on the score obtained—higher scores sign higher spiritual and existential health (20). In the study of Seyedfatemi et al., the content validity of the spiritual health questionnaire and its reliability was determined through Cronbach's alpha reliability coefficient of 0.82, which indicates the excellent reliability of this tool (21).

B) Symptom Checklist-90 (SCL-90): This tool has been translated and standardized by Rezapour into Persian. It contains 90 questions that measure mental disorders on a Likert scale of 1 to 5. This form has suitable psychometric properties, so its internal validity is acceptable and varies from 0.77 to 0.90 (22). In the present study, Cronbach's alpha for the mentioned scales was 0.82, 0.89, 0.81, 0.79, and 0.80, respectively.

C) Connor-Davidson Resilience Questionnaire: This tool was developed by Connor and Davidson (2003) and had 25 questions that measure the resilience structure on 5 to 1 Likert scales. The minimum score on this scale is 25, and the maximum score is 125. Mohammadi et al. standardized it. The multi-factor analytical method was used to determine the validity. The reliability of this test was obtained using Cronbach's alpha coefficient of 0.87 (23). In the present study, Cronbach's alpha was 0.97.

For data analysis at the level of descriptive statistics, mean, standard deviation, and inferential statistics, t-tests were used, and data analysis was performed using SPSS software version 21.

Results

The results show that the age range was between 25 and 55 years (34.3 ± 7.82 years). Of these, 46 (37.4%) were male, and 77 (62.6%) were female. 35 cases (28.5%) were single and 88 cases (71.5%) were married. In term of education, 6 cases had diploma (4.9%), and 5 cases had associate degree (4.1%). While 71 cases had bachelor (57.7%), 26 cases had master (21.1%) and 15 cases had doctorate degree (12%). Table 1 presents the descriptive findings and Table 2 presents the differences in psychological vulnerability in the first and third waves.

Table 1. Mean and standard deviation of research variables

Variables	Mean	Standard deviation
Resilience	95.44	16.16
Spiritual health	97.27	16.05
Psychological vulnerability	90.79	25.31

Table 2. Paired t-test to examine the differences in the degree of psychological vulnerability in the first and third waves

Variable	Phase	Mean	Standard deviation	T	P
Psychological Vulnerability	First peak corona	90.80	25.31	-10.828	0.000
	Third peak corona	99.97	28.46		

Table 2 shows that the mean score of psychological vulnerability in the first wave of corona was 90.80, reaching 99.97 in the third waves, and this increase is statistically significant *(P< 0.001)*. Table 3 shows the difference between people with different levels of spiritual health in the degree of psychological vulnerability.

Table 3. Independent t-test on the difference between people with different levels of spiritual health in the degree of psychological vulnerability

Variable	Mean difference	Differences in standard deviation	t	df	P
Psychological vulnerability (1)	22.41	4.19	5.342	91.861	0.000
Psychological vulnerability (3)	25.37	4.66	5.437	107.572	0.000

The results of Table 3 show that the significance of the t-test in individuals' psychological vulnerability level is significant in the first and third waves *(P< 0.001)*. Table 4 presents the difference between people with different levels of resilience (two levels high and low) in the degree of psychological vulnerability in the first and third waves.

Table 4. Independent t-test on the difference between people with different levels of resilience in psychological vulnerability in the first and third waves

Variable	Mean difference	Differences in standard deviation	t	df	P
Psychological vulnerability (1)	44.00	6.29	6.995	121	0.000
Psychological vulnerability (3)	48.20	7.14	6.746	121	0.000

The results of Table four show that the significance of the t-test in individuals' psychological vulnerability level is significant in the first and third waves (*P< 0.001*).

Discussion

This study assessed the role of spiritual health and resilience in the corona pandemic crisis on the psychological vulnerability of staffs of Birjand Islamic Azad University. The results showed that the psychological damage increased in the third peak compared to the first peak.

In this line, Farahati concluded that the uncertainty and unpredictability of the outbreak of infectious pandemics have a high potential for psychological fear of disease transmission. A pandemic can cause anxious thoughts and obsessive behaviors and increase negative emotions such as (anxiety, depression, and anger) and sensitivity to social risks. Also, quarantine, financial losses, and severe economic and financial distress are caused, leading to mental disorders and more severe anger and anxiety (10). These results are in line with the studies of Shi et al. and Wen et al. Their research showed that the outbreak of COVID-19 has caused tremendous psychological problems such as anxiety, fear, depression, and insomnia in different subpopulations (1,2).

Another result of the current study is the effect of spiritual health on psychological vulnerability. This finding is aligned with the results of Moradijoo et al. This cross-sectional study conducted on 122 patients with breast cancer in 2015. The patients fulfilled Paloutzian and Ellison's Spiritual Health Scale and a 28-item questionnaire on mental health. The results show that most patients had average spiritual health (37.8%), and most suffered mild mental health problems (50%). Also, there was a significant relationship between spiritual and mental health (24). It is also consistent with the results of Yousefi et al. study. The participants were 436 first-year students. The questionnaires include demographic information, Paloutzian Spiritual Health Questionnaire and General Health Questionnaire-28. The results showed that higher spiritual health is associated with lower psychological trauma (25). From this finding, it can be inferred that spiritual health contributes to promoting mental health by providing a framework for interpreting and describing life experiences and thereby providing a sense of existential cohesion (26).

Furthermore, spirituality provides social support in the human and divine aspects, creating positivity, optimism, purposefulness, hope, and motivation. It also increases individual empowerment, a sense of dominance, a pattern of acceptance, tolerance of suffering, and adaptation to stresses and problems (27).

Another aim of the present study is to investigate the effect of resilience on the level of psychological vulnerability. The results showed that the higher level of resilience may lead to the lower psychological vulnerability, both in the first and third peaks. This finding is consistent with the study by Albukordi et al. and Abolghasemi et al. (28,29). The results of Abolghasemi et al. study on adults (over 20 years old) with asthma in Ardabil showed that defense and resilience styles are among the influencing variables in the psychological vulnerability of patients with asthma (28). A cross-sectional study conducted by Albukordi et al. on 140 male prisoners in Shiraz, showed a high prevalence of mental illnesses and low resilience in prisoners (29). These findings are also consistent with the study of Lazarus's research, which found that the reduction in resilience to life events in the individual is associated with a feeling of stress, anxiety, or depression (30). Also, resilience theories consider a successful process of adapting to threatening conditions. People with low levels of resilience; are less resistant to stressful events and are, therefore, more prone to psychological damage (29). Resilience acts as a person's successful resistance to threatening and challenging situations. The resilient people, despite facing chronic stress and tension, can reduce the adverse effects and maintain their mental health. In contrast, people with low levels of resilience adapt slightly new situations and slowly recover from stressful situations (26). Barryhill et al. concluded that one of the mental health care strategies in the corona pandemic crisis is holding video conferences and online interventions that significantly reduce anxiety (31).

Using a self-report method such as a questionnaire may be associated with bias and may not provide accurate information. Therefore it is better to use combined methods to collect data in future research. In addition, the results of this research are obtained from staffs of Azad University of Birjand, and its generalization to the employees of other organizations requires research in the same situations. By the results of this study, it is suggested to determine the amount of psychological damage caused by corona disease in the employees of Birjand Azad University and to plan the necessary psychological interventions in this group.

Conclusion

The findings indicated the effects of corona on mental health of staffs in Birjand Islamic Azad University. The higher level of resilience may lead to the lower psychological vulnerability, both in the first and third peaks. Also, enhancing resilience and spiritual health can decrease psychological vulnerability.

Acknowledgments

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