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The protective factor of depression and anxiety in the general population in the post-coronavirus era: coping, spiritual well-being & resilience

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ABSTRACT

Background: Considering the crisis of the coronavirus in the world and the confusion and mental distress that arose for people in different societies, it seems necessary to find protective factors against depression and anxiety caused by this epidemic. This study aims to find the relationship between resilience, spiritual well-being, and coping with depression and anxiety. *Methods:* Using the available sampling method, a descriptive survey design was employed to select 900 adults from the general population of Tehran. They received questions to answer the questions of the hospital anxiety scale, 9-question patient health questionnaire, brief resilience scale, Holahan and Moss coping scale, and Grech and Hamby spiritual well-being scale. The data were analyzed using Pearson correlation and multiple linear regression methods. *Results:* The results indicated the prediction of anxiety and depression through resilience (sig = 0.000) and spiritual well-being (sig = 0.002), as well as a strong negative correlation between depression and spiritual well-being (-0.492). *Conclusion:* Study findings suggest empowering individuals regarding spiritual well-being, raising religious awareness, and fostering a connection with a higher power can enhance resilience. This empowerment can help individuals withstand critical situations such as the coronavirus pandemic and mental injuries and disorders. Furthermore, increased resilience is associated with reduced anxiety and depression, promoting overall well-being and self-fulfillment.

Keywords: Anxiety, Coping, Depression, Resilience, Spirituality well-being

1. INTRODUCTION

Since December 2019, several cases of the 2019 virus disease have been reported in Hubei Province's Wuhan, and the disease has spread rapidly in

China and the whole world and has had the most demolished effects globally (Roy et al., 2020). This illness affects physical health and is essential to people's mental well-being. While the primary focus may be on the physical symptoms and consequences of the disease, it is necessary to recognize its significant impact on mental health (Sim and Chua, 2004). The coronavirus's spread caused substantial changes in people's lives. People's mental health will be impacted by adjustments such as social isolation, quarantine, restricted travel, and the amplification of rumors on social networks (Banerjee, 2020). Fear, anxiety, and depression are the most common mental challenges during the disease outbreak (Horta et al., 2023; Wong et al., 2023). During the outbreak of SARS, several Psychiatric conditions such as depression, panic, and anxiety have been reported (Xiang et al., 2020).

The unpredictability of the situation and the inability to control it over time are among the most stressful circumstances. Condition and degree of severity of illness, challenges, and stress can initiate mental disorders such as anxiety and depression, and anxiety and depression are related to sleep disorders (Sher, 2020). Showed that the spread of the coronavirus in China caused an increase in widespread anxiety disorders and a decrease in sleep quality (Huang and Zhao, 2020). Sleep is essential in the regulation of psychological and physical performances (Zielinski et al., 2016). Inadequate sleep and sleep disturbance could relate to mental and physical disorders to damage health consequences among populations. Numerous studies have reported the effects of COVID-19 on rest in certain demographic groups (Alnofaiey et al., 2020; De-Pablo et al., 2020; Miller and Cappuccio, 2021). Patients with COVID-19 may experience adverse effects from sleep problems on their recovery, prognosis, and treatment. Mental anguish and signs of mental illness are linked to the broad transmission of infectious viruses such as the coronavirus (Rajkumar, 2020).

The capacity for resilience, defined as the capacity to face traumatic experiences based on the interplay between individuals and their coping mechanisms, is another aspect that influences people's mental health during the challenging Coronavirus era (Cai et al., 2020). A study considers the idea of resilience as a person’s ability to battle hypothetical emotional distress caused by a problematic and damaging atmosphere (Bjelland et al., 2002). Hence, it arises from an inherent motivation to heal, stemming from the human inclination to resist adverse circumstances and refuse to accept suffering or the current state of reality. Therefore, it represents an individual's capacity to achieve a state of tranquility by effectively dealing with traumatic experiences (Hamadeh-Kerbage et al., 2021).

Having efficient coping strategies to deal with Tense circumstances is essential because it may prevent experiences that lead to stress-related mental disorders (Sameer et al., 2020). However, when a person has trouble with stress and specific conditions, having the ability to adapt can help them. Various studies have shown that people use different coping methods in stressful situations and crises (Health, 2011). The Mariani et al., (2020) study indicated a connection between anxiety and emotion-focused and avoidant coping mechanisms. However, regression analysis only supported the emotional strategy's function in predicting anxious symptoms. Analysis failed to show a connection between anxiety and felt social support (Mariani et al., 2020). The results also showed that avoiding thinking about the current stressful condition, ignoring coping strategies, and not knowing the correct coping methods have a significant relationship with anxiety and depression (Mariani et al., 2020).

Similarly, humor as a coping strategy was significantly less associated with stress (Budimir et al., 2021). It proves challenging to consider which coping mechanisms are most effective because none were linked to probable PTSD or a lack of it. However, as the study's findings indicate, it might be helpful to share information about efficient coping strategies and ways of coping (Bailey, 2008). Utilizing religious and spiritual practices as coping mechanisms during this trying period in Corona is one of the most effective approaches since many people turn to their religion, spirituality, or sense of faith to help them cope with stress and the unfavorable effects of life's problems (Sanne et al., 2003). The COVID-19 pandemic can be considered an ongoing traumatic event related to other disasters that can seriously affect a person's psychological state in private and public settings (Hamby et al., 2013; Smith et al., 2008; Vanistendael and Lecomte, 2002).

Due to the connection between faith, spirituality, and mental health, religious acts may be considered a resilient plan during the pandemic (Leys et al., 2021). Recent research results, which analyzed daily data on Google searches in 95 countries, show that during the COVID-19 crisis, Google searches for prayer increased by 50% and reached an all-time high. This could indicate that in times of hardship, many seek to draw closer to God as has ever been recorded (Ran et al., 2020). In March 2020, one of the most checked prayers was the “Corona Prayer,” which asked God to protect against the coronavirus, stay strong, and thank nurses for their efforts (Hiyoshi et al., 2015). Therefore, this study examines the protective factors of anxiety and depression in the general population during the post-coronavirus stress era with the role of mediating coping, spiritual well-being, and resilience.

2. METHOD

Study procedure

This study is a cross-sectional survey conducted in the Tehran area from January 2023 to September 2023. The method of this study was descriptive and prediction type and regression statistical way. Statistical Society, the general population was Tehran residents who answered the questionnaire's questions online. The method of collecting information was accessible; In this way, the general public was asked to answer the questionnaires online. The study is a cross-sectional study conducted on the general public after the plan was approved and the code of ethics was received. Data collection includes demographic and quantitative information that was done online with the help of a questionnaire.

The full description of each questionnaire is given at the end. The sampling method is available. The sample size was calculated using the Free Statistics Calculators software, taking into account the effect size of 0.3, the power of 0.8, latent variables of 4 obvious variables of 34, and alpha of 0.5, suggesting a sample of 888 people. Finally, 900 people were selected participants in the research, taking into account the potential of dropping out of the subjects. To analyze the tests of the structural equation model, regression and correlation were done with the help of SPSS-26 software. The criteria for entering this research included informed consent, minimum ability to read and write, and proper literacy. The criteria for exiting the study were lack of satisfaction and not answering all the questionnaires.

Measurement

Patient Health Questionnaire (PHQ-9)

The Patient Health Questionnaire (PHQ) was the first self-report questionnaire created for use in medical focus on finding specific disorders using criteria from the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-V) (Löwe et al., 2004). It assigns scores to each of the nine criteria outlined in DSM-V, ranging from zero to three, representing the frequency of occurrence from "never" to "almost every day" (Löwe et al., 2004). PHQ-9 questionnaire measures the diagnosis of depression disorder based on criteria and is a valid and reliable tool in clinical work and research actions (Milstein et al., 2020). In a recent study by Arellano-Vilela and Tume-Zapata, (2021) the PHQ-9 was found to have high internal consistency (α = .91). The Persian version of the PHQ-9 indicated an acceptable internal consistency (α = .84) in a sample of Iranian psychiatric outpatients (Dadfar et al., 2018).

Hospital Anxiety Scale

A self-report scale has been designed and demonstrated to be an accurate tool for identifying symptoms of depression and anxiety among patients attending a medical outpatient clinic in a hospital setting (Norton et al., 2013). This scale consists of 7 questions that are designed with four options for each question. The scoring is such that the option "often" gets a score of 3, and the option "never" gets a score of 0. The range of scores is from 0 to 21, and the larger the score, the greater the extent of the disorder (Stern, 2014). Only anxiety-related questions were used in this research (Snaith, 2003). It has been validated in many languages, countries, and cultures, including general practice and the general population (Bjelland et al., 2002; Herrmann, 1997; Snaith, 2003). Several studies have reported acceptable reliability and validity of HADS (Stern, 2014). The Persian version of the HADS showed good reliability (Montazeri et al., 2003).

Spiritual well-being scale

This questionnaire was created by Banyard, Grech, and Hamby in 2013; it has 5 items with 4 options (Genia, 2001). It assesses the degree to which individuals believe in a satisfying connection with God (Genia, 2001). Each question has a value from 4 to 1, and the total score is the sum of the scores of all the items. The results show that validity in non-clinical samples strongly correlated with other outcome measures, such as post-traumatic growth (r = 0.58), subjective well-being (r = 0.59), as well as religious meaning-making (r = 0.71) (Imam et al., 2009). The Persian version of the SWBS showed an acceptable internal consistency (α = .78) in a sample of Iranian patients with cancer (Nia et al., 2022).

Coping scale

The coping scale evaluates cognitive, emotional, and behavioral methods to address problems (Kato, 2015). This study used a combination of items from different sources to assess mental and emotional factors. Specifically, items 2, 3, and 4 were selected from the widely used scale developed by Holahan and Moss in 1987 (Kuo et al., 2006). These items have been extensively validated and are recognized in the field. Additionally, items 1, 5, 6, and 8 were developed specifically for this study to capture other cognitive and emotional aspects not covered by the Holahan and Moss scale (Kuo et al., 2006). The test-retest reliability for the sample of

Hospital patients includes (0.88 and 0.91) (Sinclair and Wallston, 2004). Cronbach's alpha of this scale for a group of Iranian patients was 82, and its item-total correlation coefficient was reported to be (.56 to .91) (Rohani et al., 2010).

Brief Resilience Scale

The Brief Resilience Scale (BRS) specifically targets recovery by assessing an individual's ability to return from stress and adversity (Smith et al., 2008). It measures the person's capacity to quickly and effectively retrieve their psychological well-being after facing difficulties (Smith et al., 2008). The study employed a self-report scale of six questions, each offering six options. Participants were required to select one answer ranging from 1 (strongly disagree) to 5 (completely agree) for each of the six questions. The total score on the scale ranged from 6 to 30, with broader scores indicating a greater degree of resilience, according to Balter's scoring system (Rodríguez-Rey et al., 2016). The English version of the scale showed good internal consistency (Cronbach's alpha: 0.80-0.91) and was loaded onto a single factor, indicating that the items are measuring the same construct effectively. The Persian version of the BRS showed excellent internal consistency (α = .85) in a sample of students (Gheisari et al., 2023).

Ethical considerations

This study was approved by the Medical Ethics Committee of the Shahid Beheshti University of Medical Sciences (IR.SBMU.MSP.REC.1401.249). Before the commencement of the study, the participants were informed of the study objectives and assured of data confidentiality. All participants signed the informed written consent.

3. RESULTS

Nine hundred people aged 20 to 60 with a mean age of 31.74 and a standard deviation of 9.44 participated in this study. Table 1 shows the demographic characteristics of the research samples. The Compared gender groups had a similar percentage of reported participants (Figure 1).

Table 1 Comparison of demographic characteristics of research samples

Variables	Subgroups	Frequency	Percent%
Sex	Women	516	57.3%
	Men	384	42.7%
Marital status	Single	342	38%
	Married	516	57.3%
	Divorced	42	4.6%
Education	Less than a diploma	12	1.3%
	Diploma	162	18%
	Associate Degree	192	21.3%
	Bachelor's degree	414	46%
Education	Master's degree	102	11.3%
	Ph.D.'s	18	2%

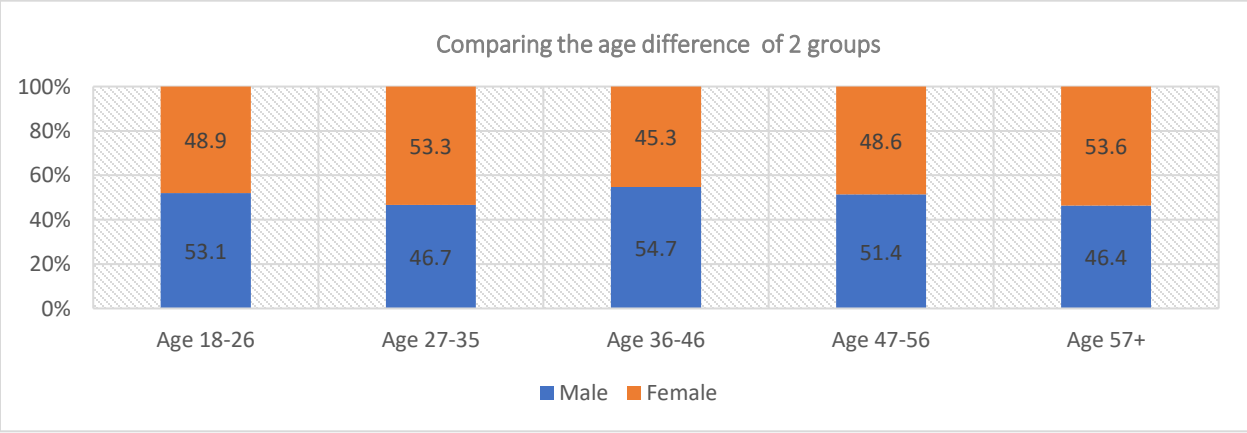

Figure 1 A clustered bar chart comparing the age percentage of the gender groups

The results of Table 2 report the mean and standard deviation of the research questionnaires, and Figure 2 shows the mean self-report score for both males and females. Table 3 shows the correlation coefficient of the variables together. As we can see, a strong negative correlation (-.492) exists between depression and spiritual well-being. Also, the Pearson correlation coefficient shows that there is a negative correlation between depression and resilience (-.164), and there is a positive correlation between spiritual well-being and coping (.272), and a negative correlation between anxiety and resilience (-.124).

Table 2 Mean and standard deviation of research questionnaires

Variables	Mean	Std. Deviation	N
Anxiety	8.34	3.83	900
Depression	8.70	4.73	900
Resilience	14.13	3.96	900
Spirituality	16.46	3.20	900
Coping	35.04	5.57	900

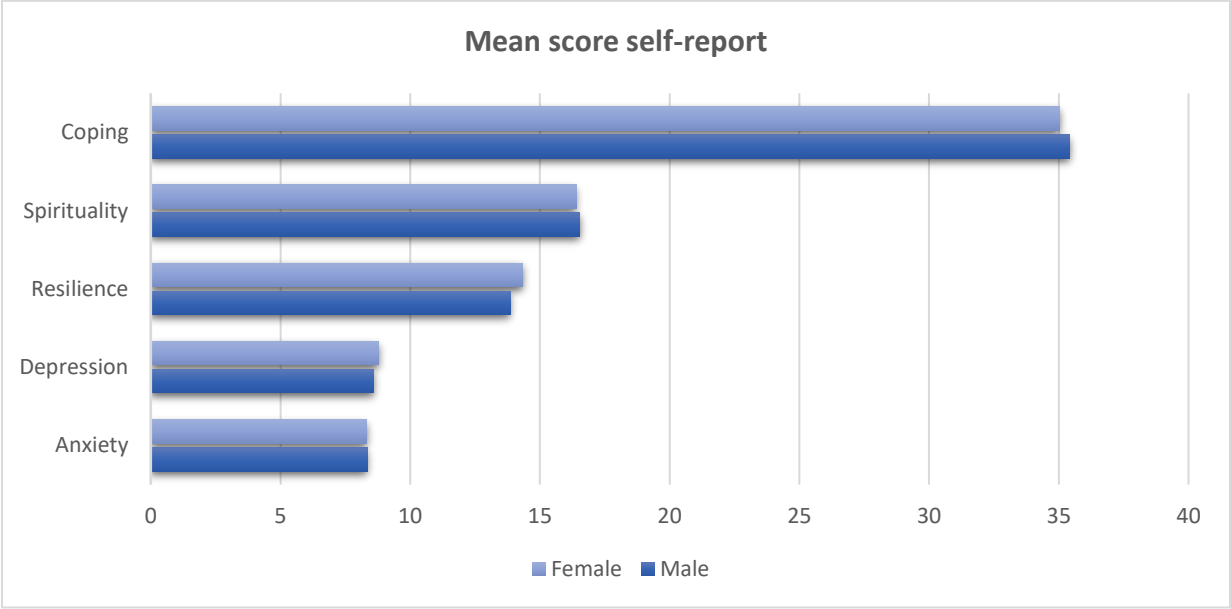

Figure 2 Mean participant self-report scores by gender group

Table 3 Regression correlation coefficient between research variables

Variables	Depression	Spirituality	Resilience	Coping	Anxiety
Depression	1.000	-.492	-.164	-.52	-
Spirituality	-.492	1.000	-.054	.272	-.097
Resilience	-.164	-0.54	1.000	-.203	-.124
Coping	-.052	.272	-.203	1.000	-.021
Anxiety	-	-.097	-.124	-.021	1.000

Results of Durbin-Watson's post hoc test in Table 4 show that the assumption of serial autocorrelation is met because the development of this test is between 1.5 and 2.5 (1.58).

Table 4 The results of the follow-up test of the Durbin-Watson and Model Summary

Model	R	R Square	Std Error of the Estimate	Durbin- Watson
1	.492a	.242	4.12	-
2	.527b	.278	4.02	1.584

a. Predictors: (constant), spirituality

b. Predictors: (constant), Spirituality, Resilience

c. Dependent Variable: Depression

As the results of Table 5 show, the significance level of 0.000 shows that the regression result and significant prediction between the variables of this study are established. As the results of Table 6 show, the significance level of 0.000 shows that the regression result and significant prediction between the variables of this research are established. As Tables 7 and 8 performances, the relationship between the variables is essential if the two variables of spiritual well-being and resilience are entered in both cases when they are the criteria (dependent) variable of anxiety and depression. In other words, the two variables of resilience and spiritual well-being can predict anxiety and depression. Still, no relationship between coping and anxiety and depression was found in this study.

Table 5 ANOVA, The significance level of the test, Dependent variable: Depression

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4869.68	1	4869.68	286.548	.000b
	Residual	15260.87	898	16.99	-	-
	Total	20130.56	898			
2	Regression	5600.043	2	2800.02	172.85	.000c
	Residual	14530.51	897	16.19	-	-
	Total	20130.56	899			

a. Dependent Variable: Depression

b. Predictors: (constant), Spirituality

c. Predictors: (constant), Spirituality, Resilience

Table 6 ANOVA, The significance level of the test, Dependent variable: Anxiety

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	201.950	1	201.950	13.91	.000b
	Residual	13032.010	898	14.512	-	-
	Total	13233.960	898			
2	Regression	344.591	2	172.296	11.990	.000c
	Residual	12889.369	897	14.369	-	-
	Total	13233.960	899			

a. Dependent Variable: Anxiety

b. Predictors: (constant), Spirituality

c. Predictors: (constant), Spirituality, Resilience

Table 7 Specific regression correlation coefficients when the dependent variable is depression

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	20.65	.719	-	28.72	.000
	Spirituality	-.726	.043	-.492	-16.93	.000
2	(Constant)	24.122	.871	-	27.68	.000
	Spirituality	-.741	.042	-.502	-17.677	.000
	Resilience	-.22	.034	-.191	-6.715	.000

a. Dependent Variable: Anxiety

Table 8 Specific regression correlation coefficients when the dependent variable is anxiety

Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	10.028	.470	-	21.336	.000
	Spirituality	-.119	0.32	-.124	-	.000
2	(Constant)	12.153	.821	-	14.807	.000

	Spirituality	-.125	.032	-.129	-3.914	.000
	Resilience	-.124	.039	-.104	-3.151	.000

a. Dependent Variable: Anxiety

4. DISCUSSION

The purpose of the present study was to apply multiple regression statistics to predict how resilience, coping skills, and spiritual well-being will affect people's feelings of anxiety and depression across the post-Corona Crisis period. Our research shows that people's resilience can predict their anxiety and depression. These results agree with previous studies (Leys et al., 2021; Moret-Tatay and Murphy, 2022; Vanistendael and Lecomte, 2002). The results of studies in China show an excessive incidence of psychological disorders such as depression and anxiety among the general public at the height of the outbreak of COVID-19 in China, which had a negative correlation with the level of resilience in people.

This study observed that psychological resilience is essential for psychological intervention in public health emergencies; adolescents with low resilience to stress were at increased risk of persistent use of antidepressants and anti-anxiety medications (Hiyoshi et al., 2015). Therefore, resilience can help people against psychological distress and is a protective shield against stress or a traumatic event; assessing individual psychological resilience can also predict people's mental health status (Ran et al., 2020). This helpful finding can teach psychotherapists appropriate strategies and innovative ways to improve people's resilience in critical situations and life fluctuations. People with better patience and internal resistance through coping strategies are less anxious and depressed and can use proper social and functional performance in critical situations.

Also, results demonstrated that Spiritual well-being can predict anxiety and depression in the general population, according to the results of several previous studies (Akbari et al., 2020; Braam and Koenig, 2019; Chehrazi et al., 2021; Milstein et al., 2020; Sharma et al., 2019). During the coronavirus crisis, the self-reported strengthening of religious faith has been revealed more among some entirely religious people at the beginning. So, most religious Americans who attend religious services regularly and frequently see religion as very important to them are much more likely than others to say their faith has become more substantial due to the coronavirus outbreak (Gecewicz, 2020). Also, spirituality as a psychosocial resource supplies better mental and physical health conditions after recovery from depression. Based on previous research findings, it can be concluded that spirituality protects against depression by providing positive coping, flexibility, high frustration tolerance, and meaning or purpose in life (Akbari et al., 2020).

Also, this study found no relationship between coping and anxiety and depression, contrary to previous studies (Chen et al., 2019; Mariani et al., 2020; Yang, 2021). The difference between these results and results from past studies regarding anxiety symptoms may be because coping involves a variety of approaches, each of which can produce outcomes that are distinct from those of the others. As was found in a previous study, anxiety is associated with avoidant and emotion-oriented coping methods. These findings suggest that depression and anxiety are distinct symptoms of an out-of-control emotional state, which might sometimes result in emotional problems and indifference (Ogueji et al., 2021). Even in the case of anxiety, the emotional disturbance must first be identified and regulated, and experiencing powerful emotions cannot be effectively used to manage stress (Mariani et al., 2020). The result of this study has also shown that coping cannot predict a person's level of anxiety and depression.

5. CONCLUSION

According to the findings of this study, it can be determined that by empowering people in terms of spiritual well-being and by raising religious awareness and communication with a supernatural force more potent than themselves, people can be saved in critical situations such as the coronavirus and front of mental injuries and mental disorders are resistant and also, in this way, the level of resilience of people can be increased. With the ability of resilience, people experience less disturbing anxiety and depression, and in life, the well-being and well-being of the subject The need for self-fulfillment. The research limitations include the use of an available sample and the cross-sectional nature of the research method, as well as the non-experimental nature and the inability to investigate the cause and coronavirus research results.

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Author Contributions

Mehdi Bazi Alahri (Data collection and writing), Amir Sam Kianimoghadam (Analysis), Maryam Khesali (Data collection), Maryam Bakhtiari (Data collection and writing), Samira Farahani Alavi (Data collection)

Ethical approval

The Medical Ethics Committee of Shahid Beheshti University of Medical Sciences, Tehran, Iran (Ethical approval code: IR.SBMU.MSP.REC.1401.249) approved the study protocol.

Informed consent

Before the start of the study, informed written Oral informed consent was obtained from all participants included in the study.

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

REFERENCES AND NOTES

1. Akbari V, Rahmatinejad P, Shater MM, Vahedian M, Khalajinia Z. Investigation of the relationship of perceived social support and spiritual well-being with postpartum depression. J Educ Health promot 2020; 9.
2. Alnofaiey YH, Alshehri HA, Alosaimi MM, Alswat SH, Alswat RH, Alhulayfi RM, Alghamdi MA, Alsubaie RM. Sleep disturbances among physicians during COVID-19 pandemic. BMC Res Notes 2020; 13(1):493. doi: 10.1186/s13104-020-05341-6
3. Arellano-Vilela GL, Tume-Zapata VN. Patient Health Questionnaire (PHQ-9): psychometric evidence in Piuran university students 2021.
4. Bailey K. The use of evidence-based clinical tools in occupational medicine. Occup Med (Lond) 2008; 58(8):556-60. doi: 10.1093/occmed/kqn128
5. Banerjee D. The COVID-19 outbreak: Crucial role the psychiatrists can play. Asian J Psychiatr 2020; 50:102014. doi: 10.1016/j.ajp.2020.102014
6. Bjelland I, Dahl AA, Haug TT, Neckelmann D. The validity of the Hospital Anxiety and Depression Scale: An updated literature review. J Psychosom Res 2002; 52(2):69-77. doi: 10.1016/s0022-3999(01)00296-3
7. Braam AW, Koenig HG. Religion, spirituality and depression in prospective studies: A systematic review. J Affect Disord 2019; 257:428-438. doi: 10.1016/j.jad.2019.06.063
8. Budimir S, Probst T, Pieh C. Coping strategies and mental health during COVID-19 lockdown. J Ment Health 2021; 30(2):156-163. doi: 10.1080/09638237.2021.1875412
9. Cai W, Lian B, Song X, Hou T, Deng G, Li H. A cross-sectional study on mental health among health care workers during the outbreak of Corona Virus Disease 2019. Asian J Psychiatr 2020; 51:102111. doi: 10.1016/j.ajp.2020.102111
10. Chehrazi M, Faramarzi M, Abdollahi S, Esfandiar M, Shafierizi S. Health promotion behaviours of pregnant women and spiritual well-being: mediatory role of pregnancy stress, anxiety and coping ways. Nurs Open 2021; 8(6):3558-3565.
11. Chen L, Alston M, Guo W. The influence of social support on loneliness and depression among older elderly people in China: Coping styles as mediators. J Community Psychol 2019; 47(5):1235-1245. doi: 10.1002/jcop.22185
12. Dadfar M, Kalibatseva Z, Lester D. Reliability and validity of the Farsi version of the Patient Health Questionnaire-9 (PHQ-9) with Iranian psychiatric outpatients. Trends Psychiatry Psychother 2018; 40(2):144-151. doi: 10.1590/2237-6089-2017-0116
13. De-Pablo GS, Vaquerizo-Serrano J, Catalan A, Arango C, Moreno C, Ferre F, Shin JI, Sullivan S, Brondino N, Solmi M. Impact of coronavirus syndromes on physical and mental health of health care workers: Systematic review and meta-analysis. J Affect Disord 2020; 275:48-57. doi: 10.1016/j.jad.2020.06.022
14. Gecewicz C. Few Americans say their house of worship is open, but a quarter say their faith has grown amid pandemic, Pew Research Center, 2020.

15. Genia V. Evaluation of the spiritual well-being scale in a sample of college students. Int J Psychol Relig 2001; 11(1):25-33.
16. Gheisari Z, Abdollahi A, Hashemi Z. Psychometric assessment of the Persian version of the protective factors of resilience scale (PFRS). Brain Behav 2023; 13(7):e3061. doi: 10.1002/brb3.3061
17. Hamadeh-Kerbage S, Garvey L, Willetts G, Olasoji M. Undergraduate nursing students' resilience, challenges, and supports during corona virus pandemic. Int J Ment Health Nurs 2021; 30 Suppl 1:1407-1416. doi: 10.1111/inm.12896
18. Hamby S, Grych J, Banyard V. Life paths measurement packet. Sewanee, TN: Life Paths Research Program 2013.
19. Health NCCfM. Common Mental Health Disorders: Identification and Pathways to Care. Leicester (UK): British Psychological Society (UK); 2011.
20. Herrmann C. International experiences with the Hospital Anxiety and Depression Scale-a review of validation data and clinical results. J Psychosom Res 1997; 42(1):17-41. doi: 10.1016/s0022-3999(96)00216-4
21. Hiyoshi A, Udumyan R, Osika W, Bihagen E, Fall K, Montgomery S. Stress resilience in adolescence and subsequent antidepressant and anxiolytic medication in middle aged men: Swedish cohort study. Soc Sci Med 2015; 134:43-9. doi: 10.1016/j.socscimed.2015.03.057
22. Horta BL, Rollins N, Dias MS, Garcez V, Pérez-Escamilla R. Systematic review and meta-analysis of breastfeeding and later overweight or obesity expands on previous study for World Health Organization. Acta Paediatr 2023; 112(1):34-41. doi: 10.1111/apa.16460
23. Huang Y, Zhao N. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. Psychiatry Res 2020; 288:112954. doi: 10.1016/j.psychres.2020.112954
24. Imam SS, Karim NHA, Jusoh NR, Mamad NE. Malay version of spiritual well-being scale: is Malay spiritual well-being scale a psychometrically sound instrument? J Behav Sci 2009; 4(1):59-69.
25. Kato T. Frequently used coping scales: A meta-analysis. Stress Health 2015; 31(4):315-23. doi: 10.1002/smi.2557
26. Kuo BC, Roysircar G, Newby-Clark IR. Development of the Cross-Cultural Coping Scale: Collective, Avoidance, and Engagement Coping. Meas Eval Couns Dev 2006; 39(3):161.
27. Leys C, Kotsou I, Shankland R, Firmin M, Péneau S, Fossion P. Resilience predicts lower anxiety and depression and greater recovery after a vicarious trauma. Int J Environ Res Public Health 2021; 18(23):12608.
28. Löwe B, Kroenke K, Herzog W, Gräfe K. Measuring depression outcome with a brief self-report instrument: sensitivity to change of the Patient Health Questionnaire (PHQ-9). J Affect Disord 2004; 81(1):61-6. doi: 10.1016/S0165-0327(03)00198-8
29. Mariani R, Renzi A, Di-Trani M, Trabucchi G, Danskin K, Tambelli R. The impact of coping strategies and perceived family support on depressive and anxious symptomatology during the coronavirus pandemic (COVID-19) lockdown. Front Psychiatry 2020; 11:587724. doi: 10.3389/fpsyt.2020.587724
30. Miller MA, Cappuccio FP. A systematic review of COVID-19 and obstructive sleep apnoea. Sleep Med Rev 2021; 55:101382. doi: 10.1016/j.smrv.2020.101382
31. Milstein G, Hybels CF, Proeschold-Bell RJ. A prospective study of clergy spiritual well-being, depressive symptoms, and occupational distress. Psychol Relig Spiritual 2020; 12(4):409.
32. Montazeri A, Vahdaninia M, Ebrahimi M, Jarvandi S. The Hospital Anxiety and Depression Scale (HADS): translation and validation study of the Iranian version. Health Qual Life Outcomes 2003; 1:14. doi: 10.1186/1477-7525-1-14
33. Moret-Tatay C, Murphy M. Anxiety, resilience and local conditions: A cross-cultural investigation in the time of covid-19. Int J Psychol 2022; 57(1):161-170. doi: 10.1002/ijop.12822
34. Nia HS, Mohammadinezhad M, Allen KA, Boyle C, Sharif SP, Rahmatpour P. Psychometric evaluation of the Persian version of the spiritual well-being scale (SWBS) in Iranian patients with cancer. Palliat Support Care 2022; 20(1):113-121. doi: 10.1017/S1478951521000407
35. Norton S, Cosco T, Doyle F, Done J, Sacker A. The Hospital Anxiety and Depression Scale: a meta confirmatory factor analysis. J Psychosom Res 2013; 74(1):74-81. doi: 10.1016/j.jpsychores.2012.10.010
36. Ogueji IA, Okoloba MM, Demoko-Ceccaldi BM. Coping strategies of individuals in the United Kingdom during the COVID-19 pandemic. Curr Psychol 2022; 41(11):7493-7499. doi: 10.1007/s12144-020-01318-7
37. Rajkumar RP. COVID-19 and mental health: A review of the existing literature. Asian J Psychiatr 2020; 52:102066.
38. Ran L, Wang W, Ai M, Kong Y, Chen J, Kuang L. Psychological resilience, depression, anxiety, and somatization symptoms in response to COVID-19: A study of the general population in China at the peak of its epidemic. Soc Sci Med 2020; 262:113261. doi: 10.1016/j.socscimed.2020.113261
39. Rodríguez-Rey R, Alonso-Tapia J, Hernansaiz-Garrido H. Reliability and Validity of the Brief Resilience Scale's (BRS) Spanish Version. Psychol Assess 2016; 28(5):e101-e110. doi: 10.1037/pas0000191
40. Rohani C, Khanjari S, Abedi HA, Oskouie F, Langius-Eklöf A. Health index, sense of coherence scale, brief religious

coping scale and spiritual perspective scale: Psychometric properties. J Adv Nurs 2010; 66(12):2796-806. doi: 10.1111/j.1365-2648.2010.05409.x

41. Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. Asian J psychiatr 2020; 51:102083.
42. Sameer AS, Khan MA, Nissar S, Banday MZ. Assessment of mental health and various coping strategies among general population Living Under Imposed COVID-LockDown Across World: A Cross-Sectional Study. Ethics Med Public Health 2020; 15:100571. doi: 10.1016/j.jemep.2020.100571
43. Sanne B, Mykletun A, Dahl AA, Moen BE, Tell GS. Occupational differences in levels of anxiety and depression: the Hordaland Health Study. J Occup Environ Med 2003; 45 (6):628-38. doi: 10.1097/01.jom.0000069239.06498.2f
44. Sharma P, Asthana H, Gambhir I, Ranjan JK. Death Anxiety among Elderly People: Role of Gender, Spirituality and Mental Health. Indian J Gerontol 2019; 33(3):240-254.
45. Sher L. COVID-19, anxiety, sleep disturbances and suicide. Sleep Med 2020; 70:124. doi: 10.1016/j.sleep.2020.04.019
46. Sim K, Chua HC. The psychological impact of SARS: a matter of heart and mind. CMAJ 2004; 170(5):811-2. doi: 10.1503/cmaj.1032003
47. Sinclair VG, Wallston KA. The development and psychometric evaluation of the Brief Resilient Coping Scale. Assessment 2004; 11(1):94-101. doi: 10.1177/1073191103258144
48. Smith BW, Dalen J, Wiggins K, Tooley E, Christopher P, Bernard J. The brief resilience scale: assessing the ability to bounce back. Int J Behav Med 2008; 15(3):194-200. doi: 10.1080/10705500802222972
49. Snaith RP. The hospital anxiety and depression scale. Health Qual Life Outcomes 2003; 1:29. doi: 10.1186/1477-7525-1-29
50. Stern AF. The hospital anxiety and depression scale. Occup Med (Lond) 2014; 64(5):393-4. doi: 10.1093/occmed/kqu024
51. Vanistendael S, Lecomte J. La felicidad es posible: Despertar en niños maltratados la confianza en sí mismos: construir la resiliencia. Gedisa 2002.
52. Wong MK, Brooks DJ, Ikejezie J, Gacic-Dobo M, Dumolard L, Nedelec Y, Steulet C, Kassamali Z, Acma A, Ajong BN. COVID-19 mortality and progress toward vaccinating older adults—World Health Organization, worldwide, 2020–2022. Morb Mortal Wkly Rep 2023; 72(5):113.
53. Xiang YT, Yang Y, Li W, Zhang L, Zhang Q, Cheun T, Ng CH. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. Lancet Psychiatry 2020; 7(3):228-229. doi: 10.1016/S2215-0366(20)30046-8
54. Yang F. Coping strategies, cyberbullying behaviors, and depression among Chinese netizens during the COVID-19 pandemic: a web-based nationwide survey. J Affect Disord 2021; 281:138-144.
55. Zielinski MR, McKenna JT, McCarley RW. Functions and mechanisms of sleep. AIMS Neurosci 2016; 3(1):67–104. doi: 10.3934/Neuroscience.2016.1.67