*Original Article*

# The Moderating Role of Existential Thinking in the Association between Health Anxiety and Nurse Empathy with Covid-19 Patients

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## Article Info

## Abstract

**Background:** Nurses' direct exposure to COVID-19 patients and resulting health anxiety can threaten their performance of human and moral duties.

**Materials and Methods:** This work was a descriptive correlational study. The statistical population was all nurses working in the intensive care unit of COVID-19 patients in Ardabil hospitals in the 2021 year, from which 150 people were selected by convenient sampling. Data were collected using the Health Anxiety Inventory, Scale for Existential Thinking, and the Jefferson Scale of Physician Empathy.

**Results:** The Pearson correlation coefficient showed that the association between empathy and health anxiety was negative and significant ($r = -0.47$, $P < 0.001$), and that between empathy and existential thinking was positive and significant ($r = 0.31$, $P < 0.001$). Also, the correlation coefficients between health anxiety and existential thinking showed a negative and significant association between the two variables ($r = -0.28$, $P < 0.001$). In addition, the moderated hierarchical regression analysis showed that the interactive effect of health anxiety and existential thinking on nurses' empathy with patients with COVID-19 was 29%.

**Conclusion:** According to the finding of this study, strengthening the spiritual attitude and existential thinking among the nurses of the COVID-19 ward was necessary to reduce health anxiety and its negative effects on the empathetic comunication with patients.

**Keywords:** Existentialism, Health, Anxiety, Empathy, Covid-19, Nurses

## Introduction

Since late 2019, the new human coronavirus, Coronavirus disease 2019 (COVID-19), was initially reported in Wuhan, China, and spread rapidly worldwide, now becoming a pandemic and international health concern [1,2]. As one of the main occupations at the forefront of the fight against Covid-19, the nursing profession faces some health and occupational challenges [3].

Despite all the problems nurses face during the Covid-19 pandemic, it should be noted that the nature of medical-service jobs is stressful due to their multiple challenges, such as work shifts or exposure to various diseases and patient mortality [4]. In this regard, studies conducted on nurses during the Covid-19 pandemic have shown that they, apart from feeling tired due to overwork, experience emotional fatigue and suffer from

stress in caring for high-risk infectious patients [5,6,7].

During the outbreak of infectious diseases such as COVID-19, health anxiety increases among people living in infected areas; thus, many may experience similar symptoms of the target infectious disease without being infected[8]. Health anxiety is multifaceted with distressing emotions, physiological arousal, body-related emotions, thoughts, images of danger, avoidance, and other defensive behaviors [9]. In general, it represents a wide range of concerns people may have about their health [10]. Researchers have shown the prevalence of depression and anxiety in nurses during the COVID-19 period to be relatively high [11]. However, some studies indicate that people with anxiety disorders experience far more health anxiety [12,13]. Further, researchers have shown that modulating death anxiety in medical staff can help improve their communication with patients and medical services, and reduce burnout [14].

Empirical evidence related to COVID-19 and other infectious respiratory diseases indicates that nurses are increasingly concerned about their personal or family health in facing the potentially deadly virus and balancing it with the ethical obligations of nursing care [15]. According to a study in Iran, the ethical challenges of Iranian nurses in caring for patients with Covid-19 include threats to professional values and the lack of a comprehensive COVID-19-related care approach [16]. Empathy in the nurse-patient association is an important ethical aspect that contributes to the quality of nurses' performance [17] and reduces their burnout [18].

Despite the positive effect of medical staff empathy on the quality of their care for patients, the empassionate staff is more likely to be exposed to psychological problems [18]. Therefore, protection against psychological hurt seems necessary in this group to remain firm in adhering to their moral obligations.

In this regard, some studies conducted in Iran and other countries show spiritual attitude and existential thinking as psychological protective factors, thus strengthening nurses' empathy with patients [19,20]. Existential thinking refers to the tendency of individuals to think about the basic life issues, such as meaning, purpose, death, emptiness, and alienage [21]. Researchers believe that explaining existential issues may contribute to health care quality by increasing awareness and drawing attention to the importance of such issues[22]. Indeed, existential attitude acts as one of the basic personal factors in dealing with job fatigue and burnout and has a significant association with increased quality of professional life; thus, it can help nurses address the caring needs of patients more efficiently [23,24].

According to the available research literature, nurses during the COVID-19 outbreak face various professional and ethical challenges affecting the quality of care they provide. Therefore, the study of nurses' psychological status and factors affecting the quality of their associations is one of the current research priorities. In this respect, studies show that despite the vital role of existential variables in improving nursing care services [23], stressors in the treatment environment, such as death anxiety, may affect medical staff empathy with patients [25,26]. However, no research has investigated the variables' interaction effect on nurses' empathy with patients. Therefore, given the existing research gap, this study investigates the moderating role of existential thinking in the association between nurses' health anxiety and their empathy with patients with COVID-19.

**Materials and Methods**

This research was a descriptive correlational study. The statistical population consisted of nurses working in the intensive care unit of the COVID-19 ward in Ardabil hospitals in the 2021 year, from which 150 people were selected by convenient sampling based on the inclusion criteria. To determine the sample size, the relevant formulas were used. At first, the minimum effect size was considered for correlation; then, the sample size was obtained according to the power of 80%, the error level of .05, and the formula.

**Formula 1.**

$$M = \frac{32}{ES^2} \text{ and } N = (1-\rho)\frac{m}{2}.$$

es2= Expectation of Sample Variance, p=Correlation

Based on this, the required number of people was estimated at 150. Inclusion criteria included nurses in the COVID-19 ward in Ardabil hospitals interested in participating in the study. Also, exclusion criteria included refusal to continue cooperation in the research, nurses working in other hospital wards, absence from work, or withdrawal from nursing during the research. The method of selecting the participants was as follows: after obtaining the necessary authorizations from Ardabil University of Medical Sciences, coordination was made with the managers while referring to the hospitals in Ardabil city. Then, based on the conditions caused by the COVID-19 epidemic and considering nurses' fatigue, the present study was conducted online. This way, after applying for membership in the

nursing groups in social networks while introducing the research objectives, the nurses working in the COVID-19 intensive care unit were invited to participate in the research. Finally, the questionnaire link was provided to them to answer, and in the end, their cooperation was appreciated. In order to observe the ethical principles, the research objectives were explained to the sample members, they were assured about the confidentiality of their details and the optionality of participation in the research, and their informed consent was obtained. This article obtained an ethics code (IR.ARUMS.REC.1400.044) from Ardabil University of Medical Sciences. Its data collection tool was a questionnaire, the full description of which is given below.

**Health Anxiety Inventory (SHAI):** This questionnaire was developed by Salkovskis & Warwick [27] in 2002. It is a self-assessment scale with 18 items; about each of the phrases mentioned above, four options are proposed, of which that best describes his/her condition during the last 6 months is selected. The terms of this test refer to health-related concerns, attention to emotions or bodily changes, and the dire consequences of contracting a disease. A score between 0 and 3 is considered for the options for each item. If a person selects more than one option, those with a higher score are selected for scoring [27]. Panahi et al. (2010) have shown that this scale has good internal consistency. Internal consistency coefficients range from 71% to 95% [28].This questionnaire has been standardized by Nargesi et al. (2017) in Iran, and its validity and reliability have been confirmed [29].

**The Scale of Existential Thinking (SET):** The existential thinking tool is an 11-item questionnaire designed by Allan & Shearer (2011), and its scores are from 11 to 55. Research participants determine their involvement rate in various existential thinking behaviors on a 6-point scale. Scores range from "not at all or rarely" to "I do not know." The general structure of the questionnaire is examined through exploratory factor analysis. The central axes of the scale factor show only one factor and a special value. Cronbach's alpha determines internal consistency as excellent (0.95). Therefore, the scale measures a one-dimensional structure with good internal reliability. The scores of the items are added together to determine the score of existential thinking. Also, construct validity is confirmed by correlating with life meaning, curiosity, and other existential variables [30]. The validity and reliability of this questionnaire in Iran have been confirmed by Fasanghari et al. (2020) [21].

**Jefferson Scale of Physician Empathy:** This questionnaire was developed in 1995 by a team of researchers at Thomas Jefferson University with 20 items. It is currently recognized as the most important questionnaire in the field of empathy with the patient. Its scoring is based on the Likert scale, graded from strongly agree 5 to disagree 1 strongly. The score range of individuals is reported from 20-100, with a higher score indicating high empathy with the patient [31]. Blanco et al. (2018) reported the internal consistency of this scale as 0.82 (range 0.80–0.85) by Cronbach's alpha; its scores were positively correlated with the Interpersonal Reactivity Index, and personality traits were associated with empathy, clinical interview skills, and objective structured clinical examinations [32]. Furthermore, this questionnaire was standardized on medical students by Hashemipour and Karami in 2012 in Iran, and its validity and reliability were confirmed[33].

In order to analyze the data and examine the direct association between the variables, the Pearson correlation coefficient was used. Moreover, to investigate the moderating role of existential thinking in the association between anxiety and empathy, Baron and Kenny's (1986) moderated hierarchical regression method was used [34]. In this method, to examine the interactive association of two continuous independent variables in predicting a dependent variable, initially the first independent variable and then the second independent variable (moderating variable), and finally, their interaction enters regression analysis. If their interaction significantly increases the explained variance of the dependent variable, the moderating variable modulates the association between the first independent variable and the dependent variable [35]. Accordingly, in the present study, the predictor of health anxiety in the first step, the moderating variable of existential thinking in the second step, and the interaction of health anxiety and existential thinking in the third step were included in the regression analysis. Pearson correlation test and moderated hierarchical regression (using SPSS-25 software) were used to analyze the data. The significance level in this test was considered $P<0.05$.

**Results**

The study participants were 150 nurses. The mean age of nurses was 28±6.1 years. Also, 78.7% of the samples were married, and the education level of most people was bachelor's (95.2%). Descriptive findings, including mean and standard deviation and the matrix of correlation coefficients, related to the research variables are presented in

Table 1. In order to normalize the data, their skewness and elongation were examined.

**Table 1.** Correlation between Study Variables, the Mean, and SD

| Statistical indicators | Correlation coefficients | | Mean | Standard deviation | Skewness | Elongation |
|---|---|---|---|---|---|---|
| Variable | 1 | 2 | | | | |
| Empathy | 1 | - | 48.53 | 21.77 | .394 | -1.00 |
| Health anxiety | -.47** | 1 | 35.87 | 8.20 | -.040 | .198 |
| Existential thinking | .31** | -.28** | 29.59 | 9.18 | .317 | .1.03 |

**p < .001      *p < .005

According to Table 1, the Pearson correlation coefficient between health anxiety and empathy (r = - 47, P <0.001) showed a significant negative association, and there was a significant positive association between existential thinking and empathy (r = 31, P <0.001). Also, correlation coefficients between health anxiety and existential thinking (R =. 28, P <0.001) showed a significant negative association between the two variables. In order to test the main hypothesis of the research based on the moderating role of existential thinking in the association between health anxiety and empathy, moderated hierarchical regression was used, the results of which are presented in Table (2). In order to perform regression, the three basic assumptions of normality, regression homogeneity, and dispersion uniformity were examined. The skewness and elongation test was used; the results were between +1.96 and -1.96 in all variables, indicating the data distribution as normal with a 95% confidence. The second hypothesis was the linearity between the predictor variables and the criterion. The results showed the amount of omission in the predictor variables not to be less than 0.01 and the value (variance inflation) not to be more than 10, indicating a linear association between the variables. Levin test was used to identify the equality of variances. According to the results, the significance level of the Levin test in all variables was more than 0.05; therefore, the variance of the data scores was equal to each other. According to the confirmation of regression analysis assumptions, the moderated hierarchical regression method could be used to test the research hypothesis.
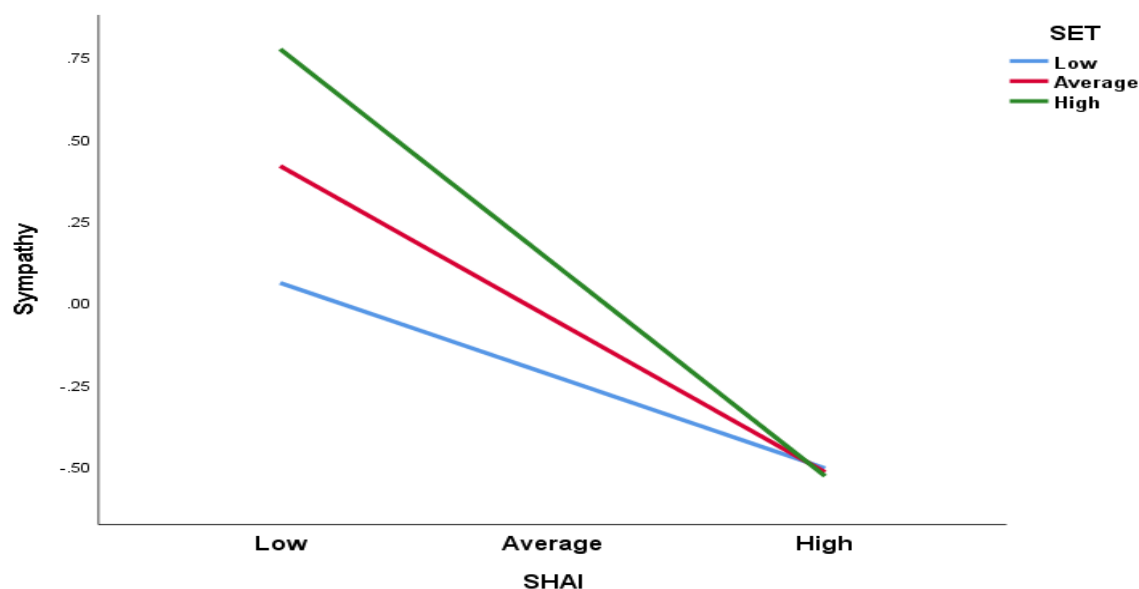
**Table 2.** Results of moderated hierarchical regression analysis for the interactive effects of health anxiety and existential thinking in empathy prediction

| Model | Variable | B | SE | β | t | P | ΔF | R | $R^2$ | $R^2$ justified |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Health anxiety | -1.13 | .171 | -.475 | -6.57 | <.001 | 43.15 | .475 | .226 | .220 |
| 2 | Existential thinking | .510 | .196 | .192 | 2.60 | .010 | 25.79 | .510 | .260 | .250 |
| 3 | ET× ET | -4.01 | 1.57 | -.184 | -2.56 | .011 | 20.04 | .540 | .292 | .277 |

As seen in Table 2, the beta coefficient of anxiety in the first step was -.47, indicating a significant negative association between health anxiety and empathy in nurses. In other words, anxiety represented 23% of empathy variance, being its good predictor. In the next step, by adding a moderator variable (existential thinking) to the regression equation, the explanatory power of the regression model in the prediction of empathy increased to 26%. Finally, the interaction between health anxiety and existential thinking was added to the regression equation, which showed a 29% ability to explain empathy. Because of the increase in the explained variance of the empathy variable, due to the introduction of the interactive variable of health anxiety and existential thinking, the existential thinking variable could mediate the association between health anxiety and empathy. In other words, health anxiety and empathy differed at the existential thinking variable's upper and lower levels. To clarify the nature of the moderating variable, the interactive graph was drawn using the standard regression coefficient for high and low individuals. Figure 1 shows health anxiety and existential thinking interaction concerning empathy.

**Fig. 1** Interactive effects of health anxiety and existential thinking on empathy prediction in nurses; Note: SET: Scale of Existential Thinking, SHAI: Short Health Anxiety Inventory.

## Discussion

This study aimed to determine the moderating role of existential thinking in the association between nurses' health anxiety and their empathy with patients with COVID-19. This study showed a significant negative association between health anxiety and empathy and a significant positive association between existential thinking and empathy. Also, correlation coefficients between health anxiety and existential thinking showed a significant negative association between these two variables.

The negative association between health anxiety and empathy with patients in the present study was confirmed by the reduced impact of anxiety on stress management, increased vulnerability, and decreased responsibility in nurses in the COVID-19 ward [3], consistent with some other studies [18, 23]. Also, some studies show decreased adherence to organizational ethics, recourse to behaviors evading work responsibilities, and impaired effective communication among the consequences of the inability to manage stress in the workplace [37]. Obviously, high health concerns in this group of nurses can lead to uncontrolled anxiety. These concerns can affect their empathy with COVID-19 patients directly and indirectly through burnout [38].Therefore, without proper coping and psychological protection mechanisms, health anxiety and stress in nurses the COVID-19 ward can reduce their tolerance to various workplace problems, making them vulnerable to immoralities. Also, to further explain this finding, Maslow's hierarchy of needs can be considered. According to this theory, until basic needs, such as health and safety, in the individual are met, the others, such as a sense of belonging or empathy with others, are given the next priority [39].Therefore, a nurse with health concerns and does not feel safe in the workplace cannot empathize well with patients.

Furthermore, the present study showed that the existential thinking variable could mediate the association between health anxiety and empathy. In other words, the association between health anxiety and empathy differed at high and low levels of the existential thinking variable. Therefore, existential thinking can mediate and reduce the negative effect of health anxiety on nurses' empathy in the COVID-19 section. Conflict with existential issues, as well as creating a potential capacity for the growth of individuals, makes them aware of the sufferings of existence [40], leading to a decrease in health anxiety. Some studies have suggested the possibility of moderating structures such as life meaning, coping strategies, and religiosity in the association of existential thinking with death and health anxiety [40, 41].

Nurses of high spirituality feel bound to do the right thing at the hospital, fulfilling moral and occupational requirements. These people feel energetic in their work and relationss with colleagues and patients. Indeed, when employees feel meaningful in their profession, they become bound by the principles of occupational ethics [42]. Existential thinking can serve as a psychological protector against health anxiety to perform human duties, including empathy in nurses.

Life meaning is one of the categories of existential thinking dependent on human attitude to life [43]. According to research, giving meaning to any problem and suffering is essential in purposefulness, adaptation to stress, and

resilience [44].Therefore, existential thinking and giving meaning to the nursing difficulties of COVID-19 patients, by increasing resilience against health anxiety, can be effective on nurses' empathy and social Relations.

## Conclusion

This study shows that the existential thinking variable can moderate the association between anxiety and empathy. Therefore, it can be concluded that strengthening the spiritual attitude and existential thinking among the nurses of the COVID-19 ward is necessary to reduce health anxiety and its negative effects on the empathetic communication with patients.

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## References

1. Zandian H, Sarailoo M, Dargahi S, Gholizadeh H, Dargahi A, Vosoughi M. Evaluation of knowledge and health behavior of University of Medical Sciences students about the prevention of COVID-19. Work. 2021;68(3):543-9.
2. Pourfarzi F, Rahim Pouran S, Dargahi A, Karami C, Fouladi N, Zandian H, et al. The healthy behaviours and COVID-19 mortality among Iranian women: a case–control study. BMC Womens Health. 2021;21(1):366.
3. Sarailoo M, Matin S, Vosoughi M, Dargahi A, Gholizadeh H, Damavandi MR, et al. Investigating the relationship between occupation and SARS-CoV2. Work. 2021;68(1):27-32.
4. Dargahi S, Barati Moghadam B, Ahmadboukani S, Ayadi N. The Relationship of Perceived Intimacy from the Main Family and Work-Family Conflict with Empathy and Addiction to Work in Medical Staff. Iran J Med Ethics Hist Med. 2019;12:325-37.
5. Zhang Y, Wei L, Li H, Pan Y, Wang J, Li Q, et al. The psychological change process of frontline nurses caring for patients with COVID-19 during its outbreak. Issues Ment Health Nurs. 2020;41(6):525-30.
6. Manzano García G, Ayala Calvo JC. The threat of COVID-19 and its influence on nursing staff burnout. J Adv Nurs. 2021;77(2):832-44.
7. Murat M, Köse S, Savaşer S. Determination of stress, depression and burnout levels of front-line nurses during the COVID-19 pandemic. Int J Ment Health Nurs. 2021;30(2):533-43.
8. Mohammadi MT, Shahyad S. Health anxiety during viral contagious diseases and COVID-19 outbreak: Narrative review. J Mil Med. 2020;22(6):623-31.
9. Özdin S, Bayrak Özdin Ş. Levels and predictors of anxiety, depression and health anxiety during COVID-19pandemic in Turkish society: The importance of gender. Int J Soc Psychiatry. 2020;66(5):504-11.
10. Fergus TA, Griggs JO, Cunningham SC, Kelley LP. Health anxiety and medical utilization: The moderating effect of age among patients in primary care. J Anxiety Disord. 2017;51:79-85.
11. Zheng R, Zhou Y, Fu Y, Xiang Q, Cheng F, Chen H, et al. prevalence and associated factors of depression and anxiety among nurses during the outbreak of COVID-19 in China: A cross-sectional study. Int J Nurs Stud. 2021;114:103809.
12. El-Gabalawy R, Mackenzie CS, Thibodeau MA, Asmundson GJ, Sareen J. Health anxiety disorders in older adults: Conceptualizing complex conditions in late life. Clin Psychol Rev. 2013;33(8):1096-105.
13. Rachman S. Health anxiety disorders: A cognitive construal. Behav Res Ther. 2012;50(7-8):502-512.
14. Melo CG, Oliver D. Can addressing death anxiety reduce health care workers' burnout and improve patient care? J Palliat Care. 2011;27(4):287-95.
15. Maben J, Bridges J. Covid-19: Supporting nurses' psychological and mental health. J Clin Nurs. 2020;29(15-16):2742-50.
16. Rezaee N, Mardani-Hamooleh M, Seraji M. Nurses' perception of ethical challenges in caring for patients with COVID-19: A qualitative analysis. Iran J Med Ethics Hist Med. 2020;13:23.
17. Teófilo TJS, Veras RFS, Silva VA, Cunha NM, Oliveira JDS, Vasconcelos SC. Empathy in the nurse–patient relationship in geriatric care: An integrative review. Nurs Ethics. 2019;26(6):1585-600.
18. Barello S, Palamenghi L, Graffigna G. Empathic communication as a "Risky Strength" for health during the COVID-19 pandemic: The case of frontline Italian healthcare workers. Patient Educ Couns. 2020;103(10):2200-2.
19. Mardani-Hamooleh M, Ahmadi M, Seyedfatemi N, Haghani H. Relationship between Empathy and Spiritual Attitude among Nursing Students in Tehran. Iran J Med Ethics Hist Med. 2018;11(1):176-88.
20. Wright S, Neuberger J. Why spirituality is essential for nurses. Nurs Stand. 2012;26(40):19-21.
21. Fasanghari M, Roshan Chesli R, Allame Z, Ertezaee B. Examination of the psychometric properties of the persion version of the scale for existential thinking. Clin Psychol Personal.

2020;18(2):173-82.

22. Udo C. The concept and relevance of existential issues in nursing. Eur J Oncol Nurs. 2014;18(4):347-54.

23. Mason HD. The relationship between existential attitudes and professional quality of life among nursing students. J Psychol Afr. 2018;28(3):233-6.

24. Alavi NM, Hosseini F. Educating the Existential View to Nurses in Cancer Care: A Review. Iran J Nurs Midwifery Res. 2019;24(4):243-50.

25. Servaty HL, Krejci MJ, Hayslip B Jr. Relationships among death anxiety, communication apprehension with the dying, and empathy in those seeking occupations as nurses and physicians. Death Stud. 1996;20(2):149-61.

26. Ayuso-Murillo D, Colomer-Sánchez A, Santiago-Magdalena CR, Lendínez-Mesa A, Gracia EB, López-Peláez A, et al. Effect of anxiety on empathy: An observational study among nurses. Healthcare (Basel). 2020;8(2):140.

27. Salkovskis PM, Rimes KA, Warwick HM, Clark DM. The Health Anxiety Inventory: development and validation of scales for the measurement of health anxiety and hypochondriasis. Psychol Med. 2002;32(5):843-53.

28. Panahi S, Asghari Moghadam MA, Shaeeri MR, Eghtedar Nejhad S. Psychometric properties of a Persian version of the short form of health anxiety inventory in non-clinical Iranian populations. Q Educ Meas. 2010;1(2):21-46.

29. Nargesi F, Izadi F, Kariminejad K, Rezaii Sharif A. The investigation of the reliability and validity of Persian version of health anxiety questionnaire in students of Lorestan University of Medical Sciences. Q Educ Measure. 2017;7(27):147-60.

30. Allan BA, Shearer CB. The scale for existential thinking. Int J Transpers Stud. 2012;31(1):21-37.

31. Hojat M, Mangione S, Nasca TJ, Gonnella JS, Magee M. Empathy scores in medical school and ratings of empathic behavior in residency training 3 years later. J Soc Psychol. 2005;145(6):663-72.

32. Blanco JM, Caballero F, García FJ, Lorenzo F, Monge D. Validation of the Jefferson scale of physician empathy in Spanish medical students who participated in an early clerkship immersion programme. BMC Med Educ. 2018;18(1):209.

33. Hashempor MS, Karami MA. Validity and reliability of the Persian version of JSPE-HP questionnaire (Jefferson Scale of Physician Empathy-Health Professionals Version). J Kerman Univ Med Sci. 2012;19(2):201-11.

34. Baron RM, Kenny DA. The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. J Pers Soc Psychol. 1986;51(6):1173-82.

35. Stangor C. Research methods for the behavioral sciences. 5th ed. Boston, Massachusetts, United States: Cengage Learning; 2014.

36. Farivar M, Aziziaram S, Basharpoor S. The Role of Health Promoting Behaviors and Health Beliefs in Predicting of Corona Anxiety (COVID-19) among Nurses. Q J Nurs Manage. 2020;9(4):1-10.

37. Norouzi R, Dargahi S, Aeyadi N, Sarhaddi M. The association between workplace spirituality and Job Stress with occupational ethics through mediating role of Job Enthusiasm among nurses in Zahedan City, 2017. J Occu Health Epidemiol. 2018;7(1):3-10.

38. Motaghedi H, Donyavi R, Mirzaian B. Effectiveness of mindfulness based cognitive therapy on the distress tolerance of nurses and job burnout. J Nurs Midwifery Sci. 2016;3(4):3-12.

39. Mathes EW. Maslow's hierarchy of needs as a guide for living. J Humanist Psychol. 1981;21(4):69-72.

40. Giannone DA, Kaplin D, Francis LJ. Exploring two approaches to an existential function of religiosity in mental health. Ment Health Relig Cult. 2019;22(1):56-72.

41. Juhl J, Routledge C. Finding the terror that the social self manages: Interdependent self-construal protects against the anxiety engendered by death awareness. J Soc Clin Psychol. 2014;33(4):365-79.

42. Akbari T, Fathi D, Dargahi S, Ahmadboukani S. Providing a Structural Model for Workplace Spirituality, Occupational Ethics, and Organizational Loyalty in Nurses of Ardabil Hospitals in 2019-2020. J Occu Health Epidemiol. 2020;9(2):124-9.

43. Korte J, Cappeliez P, Bohlmeijer ET, Westerhof GJ. Meaning and life and mastery mediate the relationship of negative reminiscence with psychological distress among depressed older adults with mild to moderate depressive symptoms. Eur J Ageing. 2012;9(4):343-51.

44. Lau CL, Feher A, Wilson CA, Babcock SE, Saklofske DH. Resiliency, Meaning in Life, and Life Satisfaction: An Examination of Moderating Effects. Action Psychol. 2018;15(2):5-14.