

# The Impact of Spiritual Well-being on Psychological Distress in Patients with Spinal Cord Injury: The Mediating Role of Loneliness and Hopelessness

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## Abstract

**Background and Objective:** Spiritual well-being is one of the fundamental concepts in chronic diseases and is considered an important approach to improve public health. Given the importance of spiritual well-being and its role, the purpose of this study is a structural model which examines the impact of spiritual well-being on psychological distress with regard to loneliness and hopelessness as mediators.

**Method:** This descriptive study is correlational. Participants were 144 patients with spinal cord injury in Isfahan selected through convenience sampling. The data were collected using the Spiritual Well-Being Scale (SWBS), UCLA Loneliness Scale, Beck Hopelessness Scale and DASS-21 Scale. Structural equation modeling (SEM) was employed as statistical technique for data analysis of the study. All ethical issues were observed in this study and the researchers declared no conflict of interests.

**Results:** The results demonstrated that Spiritual Well-being, Loneliness and Hopelessness significantly correlated with Psychological Distress. Further, the test of mediation by bootstrapping method established significant mediating role of Loneliness and Hopelessness in the relationship between Spiritual Well-being and Psychological Distress.

**Conclusion:** These findings can beneficially contribute to the clinical settings in treatment of psychological distress among the patients with spinal cord injury.

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## Summary

**Background and Objective:** The injuries to the spinal cord are among the most dangerous physical injuries which can not only disrupt the function of different organs but also be even life-threatening (1). Quadriplegia is injury to spinal cord for any reason, including stroke, brain tumor or cancer, cerebrovascular conditions, car accidents, or congenital problems in which spinal cord from the myelencephalon down to the network of cauda equina protected by the sheath of spinal cord is partly or completely damaged experiencing crushing and degenerative changes; consequently, there will be motor and sensory or autonomic disruptions in one or more organs and torso (2). No matter what the reason, spinal cord injury will have profound effects on one's physical and mental health as well as his lifestyle (3).

Following this life-changing incidence, many individuals whose spinal cord is injured will experience depression, anxiety, disorientation, and loneliness. Depression is a state of mind that reduces self-esteem, making the person feel useless, incompetent with an undesirable self-image. Anxiety is a painful feeling which is related either to a current trigger or to an impending threat with an unknown root (4). Loneliness has been a matter of focus as one of the symptoms of depression and also an independent factor in causing psychological damage. A depressed person usually evades social relationships, and loneliness is one of the most commonly observed disorders in those with spinal cord injuries (5). The results of the previous studies have shown that there is a positive and significant relationship between loneliness and depression and frustration among patients (6). Thus, given the importance of the issue, the present study aims to

examine whether spiritual well-being is associated with psychological anxiety in patients with injured spinal cord and if there is a mediating role of loneliness and hopelessness in the relationship between spiritual well-being and psychological distress of these patients.

**Method:** This study is descriptive and correlational. The statistical population included all males with spinal cord injury in Isfahan who referred to Borna Institute of Science and Sport for rehabilitation purposes in 2016. 144 patients were selected from this statistical population through convenience sampling. The participants aged from 19 to 52. Their disability afflicted them from waist down and was related to car accidents and the like, not being congenital. The participants' consent was initially obtained and then in the specified time they filled out the questionnaires. Instructions were given to the participants upon their completion of questionnaires. In this study, the data were collected using four questionnaires, namely Depression, Anxiety, Stress Scale (DASS-21), the Spiritual Well-being Scale (SWBS), Loneliness Scale, and Beck Hopelessness Scale.

**Results:** The Kolmogorov-Smirnov test was employed to check the normality of the data. The results showed that the assumption of zero on the normality of the data was confirmed in this study ( $P > 0.05$ ), suggesting that this assumption is supported. Furthermore, calculating correlation coefficient indicated that all the correlation coefficients at the  $P \leq 0.001$  levels are significant and the highest correlation coefficient is related to stress and anxiety (0.77) and the lowest correlation coefficient is related to spiritual well-being and hopelessness (-0.27). The results also showed that spiritual well-being, loneliness, and hopelessness had a significant relationship with psychological distress ( $P \leq 0.001$ ). In order to evaluate the proposed model, structural equation modeling was utilized. The fitness of the proposed model was based on a combination of fitness versions to determine the suitability of fitting the proposed model with the data. The results indicated the desirable fit of the pattern. In addition, the test of mediation by bootstrapping method showed significant mediating role of loneliness and hopelessness in the relationship between spiritual well-being and psychological distress.

**Conclusion:** The findings indicate that in the proposed model of this study, the fitting indices were very good, implying that the data fitted to this pattern is appropriate. Moreover, the results show that there is a negative and significant relationship between spiritual well-being and the mediators of loneliness and hopelessness. In their study, Palutzin and Ellison concluded that there is a negative relationship between spiritual well-being and loneliness, and that spirituality is an important predictor of loneliness (7). The negative relationship between spiritual well-being and loneliness has been corroborated by Miller et al. (6) and Michley et al (5 & 6). Other findings of this study adduce the argument that there is a negative and significant relationship between spiritual well-being and hopelessness among patients with spinal cord injuries.

A review of advanced cancer patients by Mckleen et al. showed that patients with a higher spiritual level are less likely to feel hopeless (8). Hopelessness is one of the major symptoms of depression. The results of the studies conducted in Iran also show that spiritual education and interventions as well as spiritual cognitive counseling can lower depression in patients (9).

Based on the other part of the findings, a negative and significant correlation between spiritual well-being and hopelessness (10), emotional instability and temperament disorder (11) and stress (12) has been reported. Hoffman et al. (13) conducted a longitudinal study on depression in 1035 patients with spinal cord injury. The results showed that 21% of patients who had been suffering from the injury for one year; and 18% of patients who had been affected for five years had major depression. Therefore, psychological clinical intervention seems essential in identifying risk factors among this group of people. Given the findings of this study and the dominant religious culture of the Iranians, it seems that by developing a comprehensive medical care that includes spiritual well-being, nursing and therapeutic interventions for patients with injured spinal cord and easing loneliness and hopelessness in them will be more effective.

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