




Spiritual Health and Resilience Among University Students: the Mediating Role of Self-Esteem

Mitra Borji¹  · Nadereh Memaryan² · Zahra Khorrami¹ · Elahe Farshadnia¹ · Maryam Sadighpour¹

Published online: 7 August 2019

© Springer Science+Business Media, LLC, part of Springer Nature 2019

Abstract

Due to the positive effects of resilience on different dimensions of health, the aim of this study was to propose and examine a model for a deeper understanding of the predictive factors of resilience. In this hypothetical model, self-esteem was suggested as the mediator of the relationship between spiritual health and resilience. This correlational design's statistical sample consisted of 240 university students who were chosen via multilevel cluster sampling from different faculties of Iran University of Medical Sciences in 2018. For data collecting, the Spiritual Health Questionnaire, Coopersmith Self-Esteem Inventory, and the Connor-Davidson Resilience Scale were utilized, and for data analysis, the Pearson correlation method and structural equation modeling were calculated using SPSS 18 and LISREL 8.5 software. According to the results of the current study, self-esteem played a partially mediating role in the relation between spiritual health and resilience. The fitness indices demonstrated satisfying fitness of the model. Since spiritual and religious beliefs are important topics in the lives of the people of Iran, it is possible to strengthen the field of self-esteem and resilience through education on spirituality and increase their positive attitudes toward life.

Keywords Spiritual health · Self-esteem · Resilience · Structural equation modeling

✉ Mitra Borji
mitra.borji@yahoo.com

Nadereh Memaryan
memaryan.n@iums.ac.ir

Zahra Khorrami
Zah.khorami@gmail.com

Elahe Farshadnia
farshadnia.e@gmail.com

Maryam Sadighpour
maryamsadighpour@yahoo.com

Extended author information available on the last page of the article

Background

Throughout life, humans face a variety of stressful situations. Although some people deal with these conditions ineffectively, others are able to resist the stress. One of the psychological factors that can explain this difference is resilience (Martínez-Martí and Ruch 2017). Different descriptions of resilience have been recommended. For example, one of the definitions of resiliency is “the human ability to resist, cope with, recover from, and succeed in the face of adverse life experiences” (Masten and Powell 2003). Another definition is “a dynamic process encompassing positive adaptation within the context of significant adversity” (Luthar et al. 2000). From the personality perspective, resilience is “a set of traits reflecting general resourcefulness and sturdiness of character and flexibility of functioning in response to various environmental circumstances” (Block and Block 1980). And, finally, resilience is defined by Hauser (1999) as a positive outcome that includes mental health, educational achievements, success in doing developmental tasks, self-esteem, and social competence. Ong and colleagues (Ong et al. 2006) found two aspects of resilience: stress resistance and stress recovery. Stress resistance means being more emotionally resistant to the pernicious effects of stress, and stress recovery relates to the capacity to recover more quickly from stressors (Ong et al. 2006).

Resilience can have different functions. Regarding the harm reduction approach, resilience enables people to “spring back” to their base levels of mental, emotional, and cognitive activity after a difficulty. Based on the protection perspective, resilience help to preserve a given measure of health in the face of adversity, and based on the promotion approach, resilience can change people’s perception and promote positive attitudes (Davydov et al. 2010). Higher levels of resilience are associated with greater life satisfaction (Plexico et al. 2018) and quality of life (Kim et al. 2018). Also, resistance is negatively correlated with depressive symptoms and suicidal thoughts and behaviors (Shapero et al. 2018).

There are individual differences in stress resistance and stress recovery due to protective factors that facilitate the process of resilience and can be used as sources of intervention. These protective mechanisms are divided into two categories: personal and social. Personal protective factors, such as cognitive and social skills (Montpetit et al. 2010) and self-esteem (Tian et al. 2018) as well as flexibility in facing new situations, facilitate adaptation to stress. Social support mechanisms include factors such as affectional ties with family members and friends and socioeconomic factors (Montpetit et al. 2010). Based on Werner (1989), these support factors enhance resiliency by supplying a system of beliefs by which to live and make sense of the world as well as by rewarding individual competence and determination (Werner 1989).

One of the factors that plays a crucial role in promoting resilience is spirituality. Along with other desirable consequences of spirituality, including social and general health (Farshadnia et al. 2018), a higher quality of life, and optimism (Poor et al. 2016), there is ample evidence of positive relationships between this variable and resilience (Abraído-Lanza et al. 2004; Fradelos et al. 2018; Hunter-Hernández et al. 2015; Ozawa et al. 2017). Also, in the adolescent resilience model, besides the several variables that result in resilience such as family atmosphere, social integration, and positive coping strategies, spiritual perspective is a crucial factor because it affects the way that individuals derive meaning from events (Haase et al. 1999, Haase 2004). Spiritual health has been defined as “a state of being where an individual is able to deal with day-to-day life issues in a manner that leads to the realization of one’s full potential, meaning and purpose of life and fulfilment from within” (Dhar et al. 2011). Religion has overlaps with spirituality. Spirituality may have a connection with a specific religious belief, whereas religiosity is the behavioral expression of spirituality through different

practices that are associated with a particular religious denomination (Campesino and Schwartz 2006). The blended relationship between spirituality and resilience is more pronounced in the concept of religious coping. Religious coping by using cognitive and behavioral methods that are based on religious beliefs and practices (e.g., praying, seeking comfort or strength from God) has positive influences on mental and physical health during stressful periods (Abraído-Lanza et al. 2004).

Spirituality and self-esteem are closely connected (Joshanloo and Daemi 2015). Based on Rosenberg (1965), self-esteem is a collection of one's own thoughts and feelings about one's own value. Coopersmith (1967) defined self-esteem as an evaluative process of self from which the individual's beliefs about his or her capability, successfulness, and worthiness can be determined. There is a positive association between spirituality and self-esteem (Stern and Wright 2018). This positive relationship has been shown in several studies (Cheadle and Dunkel Schetter 2018; Hayman et al. 2007; Stern and Wright 2018). Along with the strong connection between spiritual health and self-esteem, self-esteem is a necessary source of resilience (Tian et al. 2018). In terror management theory, self-esteem has an anxiety-buffering function (Greenberg et al. 1986). A positive self-attitude through the integrative utilization of several psychological resources moderates the influence of stressors (Pearlin and Schooler 1978). Along with the protective role of self-esteem, several studies have indicated its predictive effects on resilience (Balgiu 2017; Dang 2014; Martínez-Martí and Ruch 2017). This means that self-esteem is a key factor in encountering stressful events (Balgiu 2017).

Researchers have proposed that, in order to develop resilience, improving the resilience-related protective factors might be more efficient than curtailing the risk factors (Martínez-Martí and Ruch 2017). Therefore, determining the protective factors that lead to resilience and consequently to healthiness (Farber and Rosendahl 2018) is crucial. According to the literature already cited, since self-esteem is one of the significant predictors of resilience and can be one of the consequences of spirituality, it is assumed that self-esteem is one of the mediators of the relationship between the spiritual health and resilience. So, this study investigated whether self-esteem is a significant mediator of the relationship between spiritual health and resilience. In addition to the indirect relationship, the direct relationship between spiritual health and resilience was also considered. The model for the current study is shown below (see Fig. 1).

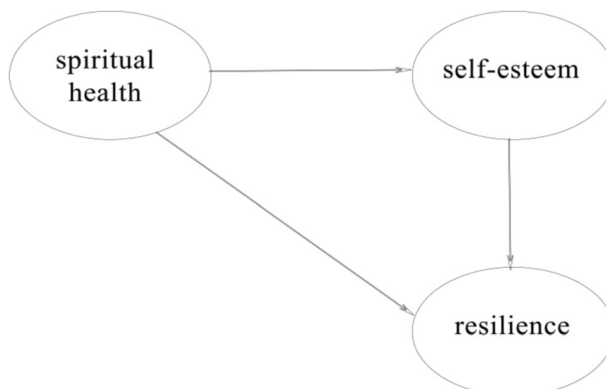


Fig. 1 Model for the current study

Materials and methods

Participants

In the cross-sectional and correlational design of the current study, the statistical population consisted of all students studying at Iran University of Medical Sciences in 2018. The statistical sample for this study, based on the sample size table, should be 189 subjects, but given that some of the subjects might not fully complete the questionnaires or might get a high score on the lie subscale of the Coopersmith Self-Esteem Inventory and thus would be excluded from the study, 300 students were selected to participate. These students were chosen via multilevel cluster sampling. Thus, five faculties, as clusters, were chosen, and then from each faculty two classes were selected randomly. Out of 300 distributed questionnaires, 30 questionnaires were excluded due to incompleteness and 30 questionnaires due to lack of adequate validity based on the lie scale of the Coopersmith Self-Esteem Inventory. In the end, data from 240 participants were analyzed. Regarding the demographic characteristics of the current study's sample, 57.5% (138) of the participants were female and 42.1% (101) were male. Most of the students (62.5%) were in the age group of 18–21.

Materials

Spiritual health questionnaire The spiritual health questionnaire developed by Amiri et al. (2015) for measuring spiritual well-being has 48 items. Each of the three structures of this instrument (insight, tendency, and behavior) measures three subconcepts of relationship with God, oneself, and others. Each item is rated on a 5-point Likert scale ranging from 1 (*completely agree*) to 5 (*completely disagree*). Then, the scores are converted to a format of 0 to 100 (1 = 100, 2 = 75, 3 = 50, 4 = 25, 5 = 0) so that a higher score indicates a higher level of spiritual health. This questionnaire has appropriate internal consistency, test-retest reliability, and content validity (Amiri 2015).

Coopersmith self-esteem inventory The Coopersmith Self-Esteem Inventory (1967) is a self-report measure for evaluating children's attitudes toward the self. This inventory has 58 items, which are scored as 0 or 1. Along with four subscales (general, social, school, and home/parents), this questionnaire also has a lie subscale. If a participant receives more than four points on this subscale, this indicates that the participant is defensive and that their test validity will be low and that their self-esteem score will not be valid. In these cases, such questionnaires were not included in the analysis of the current study. The minimum score in this questionnaire is 0 and the maximum is 50. A higher score indicates higher self-esteem (Coopersmith 1967). In most studies (Jenaabadi 2014; Serinkan et al. 2014), the self-esteem score is expressed in terms of percentages, which is also the case in this study. Test-retest coefficients of this instrument is .88 for a sample of 30 fifth grade children after 5 weeks (Coopersmith 1967). The reliability coefficient of the Persian version of this inventory is acceptable (Cronbach's alpha = 0.70; Neysi et al. 2005).

Connor-Davidson resilience scale The Connor-Davidson Resilience Scale is comprised of 25 items, each rated on a 5-point Likert scale: 0 (*not true at all*), 1 (*rarely true*), 2 (*sometimes true*), 3 (*often true*), and 4 (*true nearly all of the time*). This scale demonstrates good internal consistency (Cronbach's alpha = 0.89), test-retest reliability (intraclass correlation coefficient =

0.87), and convergent and discriminant validity (Connor and Davidson 2003). Factor analysis has shown five factors. The first factor reflects the notion of personal competence, high standards, and tenacity (personal competence). The second factor corresponds to trust in one's instincts, tolerance of negative affect, and strengthening effects of stress (trust). The third factor reflects positive acceptance of change and secure relationships (acceptance). The fourth factor reflects control, and the fifth factor reflects spiritual influences (Connor and Davidson 2003). The Cronbach's alpha of the Persian version is 0.87, so it has appropriate reliability (Samani et al. 2007). The spiritual dimension of the resilience scale was eliminated due to the overlap of the criterion and predicate variables, namely, spiritual health and the spiritual dimension of resilience. After removing this subscale, the Cronbach's alpha was 0.87.

Procedure

After coordination with the presidents of the selected university faculties and obtaining the informed consent of the subjects, the students in the selected classes completed the Spiritual Health Questionnaire, the Coopersmith Self-Esteem Inventory, and the Connor-Davidson Resilience Scale. The data were then analyzed using the SPSS Version 16 and LISREL 8.5 software.

Ethical considerations

To comply with the principles of professional ethics, first, code of ethics approval (31074–226–03-96) was received from the Spiritual Health Research Center of Iran University of Medical Sciences. Then, in order to obtain the students' informed consent, information about confidentiality was provided. Also, the participants were told that their participation in the research was voluntary and they that they could decide to stop completing the questionnaire whenever they wanted.

Statistical analysis

For data analysis using the SPSS Version 16 software, descriptive statistics including frequency, percentage, mean, and standard deviation were calculated. Furthermore, structural equations of variables were assessed via LISREL 8.5 software. Model fit was investigated by applying Bentler's comparative fit index, the goodness of fit index, the root mean square error of approximation, and the chi-square test.

Results

Descriptive statistics and inter-correlations of the variables are shown in Table 1. All the study variables were significantly correlated.

After examining univariate and multivariate normality and the multicollinearity assumption, the hypothetical model was analyzed using structural equation modeling. Evaluation of the hypothetical model by considering the appropriate amount of each index ($\chi^2/df < 3$, CFI > 0.90, GFI > 0.90, RMSEA < 0.10) demonstrated satisfactory fitness of the model ($\chi^2/df = 2.35$, $p = 0.00$, CFI = 0.97, GFI = 0.93, RMSEA = 0.07).

Table 1 Descriptive statistics and intercorrelations of the study variables

	Mean (SD)	Range	Correlations	
			Self- Esteem	Resilience
1) Spiritual health	191.33 (33.48)	55–284	0.24	0.45
2) Self-Esteem	65.68 (12.96)	26–88		0.33
3) Resilience	68.77 (14.79)	24–100		

Note. All correlations are significant at $p < 0.01$

The model, with standardized path coefficients and T-values (T-values are shown in parentheses), is illustrated in Fig. 2.

As shown in Fig. 2, the direct pathway between spiritual health and resilience is nonsignificant. Considering the standardized direct and indirect effects in Table 2, the indirect effect of spiritual health on resilience is greater than the direct effect of this variable on resilience. The mediating role of self-esteem was confirmed.

Discussion

The aim of the present study was to test the mediating role of self-esteem in the relation between spiritual health and resilience in a sample consisting of university students. The overall fit of the suggested model was good. As far as we know, the mediating role of self-esteem has not yet been studied in the relationship between these two variables, but the direct relationship between spiritual health and resilience (Hunter-Hernández et al. 2015; Ozawa et al. 2017), spiritual health and self-esteem (Hayman et al. 2007; Stern and Wright 2018), and self-esteem and resilience (Balgıu 2017; Dang 2014; Izadi-Avanji et al. 2016; Martínez-Martí and Ruch 2017) has been confirmed in many studies. In addition, the mediating role of self-esteem in the relationship

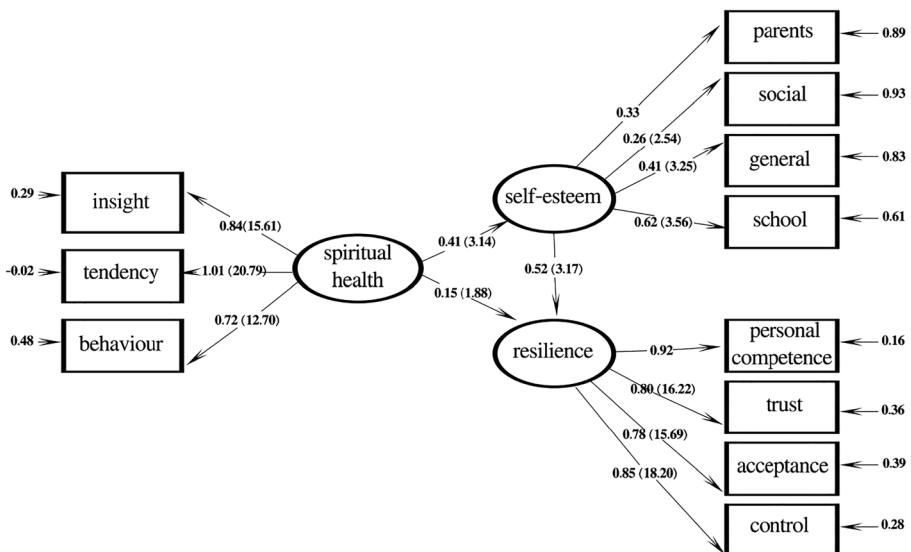


Fig. 2 The structural model with standardized path coefficients and T-values (T-values are in parentheses)

Table 2 Standardized direct and indirect effects of spiritual health on resilience

	Direct effect	Indirect effect	Total effect
Spiritual health→self-esteem→resilience	0.15	0.21	0.36

between spirituality and subjective well-being has been demonstrated (Joshanloo and Daemi 2015). Because subjective well-being can be one of the outcomes of resilience (Satici 2016), it provides support for the results of the current study.

In our model, the effect of spiritual health on resilience was mediated by self-esteem. Although the direct pathway between spiritual health and resilience was not significant in the current study's model, there was a positive correlation between the two ($r = 0.45$). The absence of a significant direct relationship between spiritual health and resilience in the structural model does not mean that there is no correlation between these two variables. The positive correlation is strong confirmation of the research hypothesis that the relationship between spiritual health and resilience should be considered along with the mediating role of self-esteem. This is a new finding that needs further investigation.

The existence of a positive relationship between spiritual health and resilience is in line with the results of studies by Hunter-Hernández et al. (2015) and Ozawa et al. (2017). Although there was a difference between the current study's and these studies' samples in terms of the severity of the problems that subjects faced and the religions that the participants believed in, the existence of a positive correlation between these two variables did not change. This suggests that spiritual health is helpful both in coping with daily problems and in dealing with significant real-life traumas such as cancer, and this is true in various religions, including Islam, Judaism, Christianity, Buddhism, and Shintoism. But this correlation is partly inconsistent with the findings of Hanfstingl (2013) of both positive and negative relationships between spirituality and resilience in relation to different dimensions of spirituality. This difference could be due to the use of different tools and thus shows the importance of the tools that are used in various studies. In the current study, the Spiritual Health Questionnaire is consistent with the Islamic perspective and is suitable for use with Muslims.

The relationship between spirituality and self-esteem is consistent with the results of other studies (Hayman et al. 2007; Joshanloo and Daemi 2015; Stern and Wright 2018). This is compatible with terror management theory, which proposes that spirituality provides answers to a person's existential concerns and therefore enhances his or her sense of value (Greenberg et al. 1986). Subsequently, self-esteem is a source of resilience, and this connection has been shown in various investigations (Balgiu 2017; Dang 2014; Martínez-Martí and Ruch 2017). This means that people who have higher self-esteem have higher resilience as well. Well-established feelings of one own's worth are connected to the belief that one can handle life challenges well (Rutter 1987).

One of the advantages of this study is its proposal of a new model regarding spiritual health, resilience, and self-esteem that can have theoretical implications. The other positive aspect of this research is the use of the Spiritual Health Questionnaire, created by the Iranian Academy of Medical Sciences. Due to the existence of various values and social norms in different societies, using culturally adapted tools in research is extremely important. Amiri and her colleagues' (Amiri et al. 2014) inventory that is designed to measure spiritual well-being is in line with the cultural, social, and religious characteristics of Iranian society and is consistent with the Islamic perspective on spiritual health, so this tool was used in the present study to investigate spiritual health (Amiri et al. 2015).

Conclusion

According to the results of this study, self-esteem mediates the relationship between spiritual health and resilience. So, spiritual training is one of the most influential ways by which human beings can prevent physical and psychosocial illnesses. Since spiritual and religious beliefs are important in the lives of the people of Iran, it is possible to strengthen the field of self-esteem and resilience through education on spirituality and increase Iranians' positive attitudes toward life.

Limitations and future research

This study has a few limitations. The use of self-report instruments and the decision not to include other influential variables in the hypothetical model that could predict resilience are two of the limitations of the study. Although spirituality and religiosity have dimensions that are separate from each other, there is unquestionably overlap between them (Stern and Wright 2018). So, because all of the participants in this study were Muslim, this study should be repeated with other people from different religious. Another issue is the impact of culture on self-esteem. This effect is so obvious that some sources (Hewitt 2002) have even suggested that self-esteem is a product of Western culture and has no place in Eastern culture. Therefore, given the existence of a self-esteem variable in this study, it is necessary to repeat this study in other cultures.

Acknowledgments We wish to thank all the participants in this study and the members of the Spiritual Health Research Center of Iran University of Medical Sciences for their valuable contributions.

Funding The author(s) received financial support for the research, authorship, and/or publication of this article from Spiritual Health Research Center of Iran University of Medical Sciences.

References

- Abraído-Lanza, A. F., Vasquez, E., & Echeverría, S. E. (2004). En las manos de Dios [in God's hands]: Religious and other forms of coping among Latinos with arthritis. *Journal of Consulting Clinical Psychology, 72*(1), 91–102. <https://doi.org/10.1037/0022-006x.72.1.91>.
- Amiri, P., Abbasi, M., Gharibzadeh, S., Asghari Gharib Abadi, M., Hamzavi Zarghani, N., & Azizi, F. (2015). Designation and psychometric assessment of a comprehensive spiritual health questionnaire for Iranian populations. *Medical Ethics Journal, 9*(30), 25–32.
- Balgiu, B. (2017). Self-esteem, personality and resilience: Study of a student's emerging adults group. *Journal of Educational Sciences and Psychology, 7*(69), 93–99.
- Block J. H., & Block, J. (1980). The role of ego-control and ego resiliency in the organization of behavior. In W. a. Collins (Ed.), *Development of cognition, affect and social relations: The Minnesota symposia on child psychology* (Vol. 13, pp. 39–101. Hillsdale Erlbaum.
- Campesino, M., & Schwartz, G. E. (2006). Spirituality among Latinas/os: Implications of culture in conceptualization and measurement. *Advances in Nursing Science, 29*(1), 69–81.
- Cheadle, A. C. D., & Dunkel Schetter, C. (2018). Mastery, self-esteem, and optimism mediate the link between religiousness and spirituality and postpartum depression. *Journal of Behavioral Medicine, 41*(5), 711–721. <https://doi.org/10.1007/s10865-018-9941-8>.
- Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety, 18*(2), 76–82. <https://doi.org/10.1002/da.10113>.
- Coopersmith, S. (1967). *The antecedents of self-esteem*. San Francisco W. H. Freeman.
- Dang, M. T. (2014). Social connectedness and self-esteem: Predictors of resilience in mental health among maltreated homeless youth. *Issues in Mental Health Nursing, 35*(3), 212–219. <https://doi.org/10.3109/01612840.2013.860647>.

- Davydov, D. M., Stewart, R., Ritchie, K., & Chaudieu, I. (2010). Resilience and mental health. *Clinical Psychology Review, 30*(5), 479–495. <https://doi.org/10.1016/j.cpr.2010.03.003>.
- Dhar, N., Chaturvedi, S., & Nandan, D. (2011). Spiritual health scale 2011: Defining and measuring 4 dimensions of health. *Indian Journal of Community Medicine, 36*(4), 275–282. <https://doi.org/10.4103/0970-0218.91329>.
- Farber, F., & Rosendahl, J. (2018). The association between resilience and mental health in the somatically ill. *Deutsches Ärzteblatt international, 115*(38), 621–627. <https://doi.org/10.3238/arztebl.2018.0621>.
- Farshadnia, E., Koochakzaei, M., Borji, M., Khorrami, Z., & Memaryan, N. (2018). Spiritual health as a predictor of social and general health in university students? A study in Iran. *Pastoral Psychology, 67*, 493–504.
- Fradelos, E. C., Latsou, D., Mitsi, D., Tsaras, K., Lekka, D., Lavdaniti, M., Tzavella, F., & Papatthasiou, I. V. (2018). between religiosity, mental health, and psychological resilience in breast cancer patients. *Contemporary Oncology (Poznan), 22*(3), 172–177. <https://doi.org/10.5114/wo.2018.78947>.
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: A terror management theory. In R. F. Baumeister (Ed.), *Public self and private self* (pp. 189–212). New York, NY: Springer New York.
- Haase, J. E. (2004). The adolescent resilience model as a guide to interventions. *Journal of Pediatric Oncology Nursing, 21*(5), 289–299.
- Haase, J. E., Heiney, S. P., Ruccione, K. S., & Stutzer, C. (1999). Research triangulation to derive meaning-based quality-of-life theory: Adolescent resilience model and instrument development. *International Journal of Cancer, 83*(S12), 125–131.
- Hanfstingl, B. (2013). Ego and spiritual transcendence: Relevance to psychological resilience and the role of age. *Evidence-Based Complementary and Alternative Medicine, 2013*, 1–9. <https://doi.org/10.1155/2013/949838>.
- Hauser, S. T. (1999). Understanding resilient outcomes: Adolescent lives across time and generations. *Journal of Research on Adolescence, 9*(1), 1–24. https://doi.org/10.1207/s15327795jra0901_1.
- Hayman, J. W., Kurpius, S. R., Befort, C., Nicpon, M. F., Hull-Blanks, E., Sollenberger, S., & Huser, L. (2007). Spirituality among college freshmen: Relationships to self-esteem, body image, and stress. *Counseling and Values, 52*(1), 55–70. <https://doi.org/10.1002/j.2161-007X.2007.tb00087.x>.
- Hewitt, J. P. (2002). The social construction of self-esteem. In C. R. Snyder & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 135–147). New York Oxford University Press.
- Hunter-Hernández, M., Costas-Muñiz, R., & Gany, F. (2015). Missed opportunity: Spirituality as a bridge to resilience in Latinos with cancer. *Journal of Religion and Health, 54*(6), 2367–2375. <https://doi.org/10.1007/s10943-015-0020-y>.
- Jenaabadi, H. (2014). Studying the relation between emotional intelligence and self-esteem with academic achievement. *Procedia—Social and Behavioral Sciences, 114*, 203–206. <https://doi.org/10.1016/j.sbspro.2013.12.685>.
- Joshanloo, M., & Daemi, F. (2015). Self-esteem mediates the relationship between spirituality and subjective well-being in Iran. *International Journal of Psychology, 50*(2), 115–120. <https://doi.org/10.1002/ijop.12061>.
- Izadi-Avanji, F., Kondabi, F., Reza Afazel, M., Akbari, H., & Zeraati-Nasrabady, M. (2016). Measurement and predictors of resilience among community-dwelling elderly in Kashan, Iran: A cross-sectional study. *Nursing and Midwifery Studies, 6*(1). <https://doi.org/10.5812/nmsjournal.36397>.
- Kim, M., Kim, K., & Kim, J. S. (2018). Impact of resilience on the health-related quality of life of adolescents with a chronic health problem: A structural equation approach. *Journal of Advanced Nursing, 75*(4), 801–811. <https://doi.org/10.1111/jan.13888>.
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 71*(3), 543–562.
- Martínez-Martí, M. L., & Ruch, W. (2017). Character strengths predict resilience over and above positive affect, self-efficacy, optimism, social support, self-esteem, and life satisfaction. *The Journal of Positive Psychology, 12*(2), 110–119. <https://doi.org/10.1080/17439760.2016.1163403>.
- Masten, A. S., & Powell, J. L. (2003). A resilience framework for research, policy, and practice. In S. S. Luthar (Ed.), *Resilience and vulnerability: Adaptation in the context of childhood adversities* (pp. 1–25). New York Cambridge University.
- Montpetit, M. A., Bergeman, C. S., Deboeck, P. R., Tiberio, S. S., & Boker, S. M. (2010). Resilience-as-process: Negative affect, stress, and coupled dynamical systems. *Psychology and Aging, 25*(3), 631–640. <https://doi.org/10.1037/a0019268>.
- Neysi, A., Shahani, M., & Farashbandi, A. (2005). Multiple relationships between self-esteem, general anxiety, perceived social support and hardness with social anxiety in high school female students in Abadan city. *J of Educational Psychology, 3*(3), 52–137.
- Ong, A. D., Bergeman, C. S., Bisconti, T. L., & Wallace, K. A. (2006). Psychological resilience, positive emotions, and successful adaptation to stress in later life. *Journal of Personality and Social Psychology, 91*(4), 730–749. <https://doi.org/10.1037/0022-3514.91.4.730>.

- Ozawa, C., Suzuki, T., Mizuno, Y., Tarumi, R., Yoshida, K., Fujii, K., Hirano, J., Tani, H., Rubinstein, E. B., Mimura, M., & Uchida, H. (2017). Resilience and spirituality in patients with depression and their family members: A cross-sectional study. *Comprehensive Psychiatry*, *77*, 53–59. <https://doi.org/10.1016/j.comppsy.2017.06.002>.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, *19*(1), 2–21. <https://doi.org/10.2307/2136319>.
- Plexico, L. W., Erath, S., Shores, H., & Burrus, E. (2018). Self-acceptance, resilience, coping and satisfaction of life in people who stutter. *Journal of Fluency Disorders*, *59*, 52–63. <https://doi.org/10.1016/j.jfludis.2018.10.004>.
- Poor, H. J., Borji, M., Borji, M., & Moslemi, A. (2016). The relationship between spiritual well-being and quality of life and optimism on the staff of Arak University of Medical Sciences. *Health, Spirituality and Medical Ethics*, *3*(2), 8–15.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton: Princeton University Press.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, *57*(3), 316–331. <https://doi.org/10.1111/j.1939-0025.1987.tb03541.x>.
- Samani, S., Jokar, B., & Sahragard, N. (2007). Effects of resilience on mental health and life satisfaction. *Iranian Journal of Psychiatry and Clinical Psychology*, *13*(3), 290–295.
- Satici, S. A. (2016). Psychological vulnerability, resilience, and subjective well-being: The mediating role of hope. *Personality and Individual Differences*, *102*, 68–73. <https://doi.org/10.1016/j.paid.2016.06.057>.
- Serinkan, C., Avcik, C., Kaymakçı, K., & Alacaoğlu, D. (2014). Determination of students self-esteem levels at Pamukkale University. *Procedia—Social and Behavioral Sciences*, *116*, 4155–4158.
- Shapero, B. G., Farabaugh, A., Terechina, O., DeCross, S., Cheung, J. C., Fava, M., & Holt, D. J. (2018). Understanding the effects of emotional reactivity on depression and suicidal thoughts and behaviors: Moderating effects of childhood adversity and resilience. *Journal of Affective Disorders*, *245*, 419–427. <https://doi.org/10.1016/j.jad.2018.11.033>.
- Stern, S., & Wright, A. J. (2018). Discrete effects of religiosity and spirituality on gay identity and self-esteem. *Journal of Homosexuality*, *65*(8), 1071–1092. <https://doi.org/10.1080/00918369.2017.136876>.
- Tian, L., Liu, L., & Shan, N. (2018). Parent-child relationships and resilience among Chinese adolescents: The mediating role of self-esteem. *Frontiers in Psychology*, *9*(1030), 1–11. <https://doi.org/10.3389/fpsyg.2018.01030>.
- Werner, E. E. (1989). High-risk children in young adulthood: A longitudinal study from birth to 32 years. *American Journal of Orthopsychiatry*, *59*(1), 72–81.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Affiliations

Mitra Borji¹ · Nadereh Memaryan² · Zahra Khorrami¹ · Elahe Farshadnia¹ · Maryam Sadighpour¹

¹ Spiritual Health Research Center, Mental Health Department, School of Behavioral Sciences and Mental Health (Tehran Institute of Psychiatry), Iran University of Medical Sciences, Tehran, Iran

² Community Medicine, Spiritual Health Research Center, Mental Health Department, School of Behavioral Sciences and Mental Health (Tehran Institute of Psychiatry), Iran University of Medical Sciences, Tehran, Iran