

The Relationship between Spiritual Intelligence and Depression in Parents of Children with Cancer

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Abstract

Introduction: Cancer in a family member can be a main source of psychological disorders, especially for the parents of children who are diagnosed with this disease. In recent years, the concept of intelligence has not only been considered as a cognitive power but also extended to other areas such as spiritual intelligence. This study aimed to determine the correlation between spiritual intelligence and depression in parents of children who are suffering from cancer. **Research Methodology:** This study has been based on both descriptive and correlational researches. The research was carried out on community of parents whose children were suffering from cancer in the department of oncology and outpatient clinics within hospitals affiliated to Shahid Beheshti University of Medical Sciences in 2017. In doing so, data from 156 parents were selected based on inclusion criteria, by available sampling method. Two questionnaires were used to collect data; the Spiritual Intelligence, and Beck Depression Inventory. All data were analyzed by Pearson correlation coefficient and T test (SPSS version 21). **Results:** The results showed the level of depression with an average of $17/84 \pm 8/11$ for mothers, and $12/96 \pm 8/20$ for fathers; and the level of spiritual intelligence with an average of $57/55 \pm 13/09$ for mothers, and $55/25 \pm 12/37$ for fathers. Pearson correlation coefficient showed a significant negative relationship between spiritual intelligence and depression in both parents ($P < 0/01$, $r = -0/616$ (mothers) and $P < 0/01$, $r = -0/517$ (fathers)). Results from regression analysis also showed that spiritual intelligence can significantly explain the depression. **Conclusion:** The negative and significant relationship between spiritual intelligence and depression signified that more attention is needed to promote and develop spiritual capacities in psychological damages' reduction programs, especially depression.

Keywords: Spiritual Intelligence, Depression, Children with Cancer, Parents.

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Introduction

Cancer is one of the great obstacles in the route of children's life. It is known as a chronic disease which can be the main reason of death amongst children in developed and developing countries (Hockenberry and Wilson, 2014; Gouveia et al., 2017). Cancer is the disease of cells and is characterized with unlimited and uncontrollable duplication of cells that form malignant neoplasms. Cancer is a disabling disease and it is known to be the second reason of death amongst children under 14, the cause of ultimately 4% of deaths amongst children under 5, and 13% of death amongst children between the age ranges of 5 to 10.

During the recent years, the number of children being diagnosed with cancer and surviving from this disease has remarkably increased due to the improvements in the treatment provided for different types of cancer. Due to an increase in the number of children surviving cancer, the specialists in the field of health cares have been emphasizing on the most important factor, which is the role of parents in taking care of their children. Approximately, all citations indicated that diagnosing cancer in any member of a family can cause a severe emotional crisis for the other family members; especially in parents (Da Silva, Jacob and Nascimento, 2010). In fact, because of challenging characteristics and undetermined outcomes of treating cancer from the very early days of diagnosis, it has always brought high level of ambiguity, emotional and psychological stress for both the child and parents (Hockenberry and Wilson, 2014; Litzelman et al., 2011). Therefore, it is not surprising that many parents experience considerable anxiety such as depression and spiritual challenges during such period.

Psychological and clinical investigations have both indicated an increase in the depression and anxiety level amongst parents whose children are getting worse with such chronic diseases. Asghari – Nekah (2017) have concluded that the rate of medium to high level of depression existed amongst parents whose children have been diagnosed with cancer; i.e. 53.1%; Al-Maliki and et al (2016) found this rate as high as 70.5% on Iraqis parents; Jafary Manesh et al (2014) found the rate to be 31.8% and 27.3% with mild depression disease. Anxiety and depression in parents can be accompanied by the lack of responsibility towards taking care of their children, training and feeding them (Jafary Manesh et al., 2014). Lieb et al (2002) have indicated that despite parents' efforts, the level of anxiety in parents can be passed on to their children, and since parents are considered as the most important factors in terms of supporting their children,

this would result in creation of additional behavioral disorders in children (Marianne, Wamboldt and Reiss, 2006) and hence, they would become more vulnerable to depression (Cerqueira et al., 2016).

Some theorists believed that reducing depression is possible through considering values, intellectual goals and passion to God. Meanwhile, they believed that worshipping, spiritual relationship with God and pursuing intellectual life have been important factors in reducing depression (Koenig, 2015). Over the recent few years, the meaning of intelligence not only has been considered as a cognitive strength, but it has also been expanded to other fields such as emotional intelligence and existential intelligence. Recently, a new sense has been added to this area known as spiritual intelligence (Rostami et al., 2014). Spiritual intelligence is taking advantage of abilities and intellectual sources, so that an individual can make intellectual decisions, on existing cases, and try to solve their routine problems. Therefore, spiritual intelligence synthesizes conceptual and intangible aspects of spirituality to the affairs in concrete and tangible world (Torabi and Nadali, 2016). Over the past few years, scholars have tended towards the spiritual aspect of life; and regarding the studies on the impact of this aspect on human psyche to reduce the negative effects of depression and increase the quality of life, the subject matter of spiritual intelligence and spiritual treatments have been superficially emphasized and taken into consideration. The results of studies reported by Koenig (2015), Torabi and Nadali (2016), Wong and Yau (2010), Khosravi and Nikmanesh (2014), Ebrahimi and Jalilabadi (2015) have indicated that those with spiritual trends could respond better to harms, and could manage better in stressful situations and therefore stay healthier compared to the others (Sotoodeh et al., 2016).

Few studies have been carried out in the field of spiritual intelligence and psychological disorders; such as depression on groups of adults; in addition to the studies carried out on groups of adults with chronic disorders. Outcomes have indicated a negative and meaningful relationship between spiritual intelligence and depression in different groups such as nurses (Khavari et al., 2014), collegiate students (Rostami et al., 2014), pupils (Amini and Karami, 2015; Bayrami, Movahedi and Movahedi, 2014), and organizational staffs (Shafiee, 2014). The results for those with chronic diseases and addictions have indicated that spiritual intelligence both in patients with Multiple Sclerosis (MS) and addictions have had negative correlation.

Considering parents' pivotal role, and specially mothers' role in developing child's health, and also the importance of psychic health and necessity of decreasing parents' psychological disorders, in order to ensure a generally good health for the children, depression has increased amongst these children's parents with the rate of 70% (Al-Maliki et al., 2016); which is approximately 50% in Iran (Asghari-Nekah et al., 2017; Jafary Manesh et al., 2014). Also, due to a new trend of spiritual intelligence, meaning of spirituality, obvious role of spirituality in promoting psychological health, and considering the fact that up to now, the majority of studies have been made over the relationship between spiritual intelligence and depression on

healthy populations, where in few cases populations with different diseases were examined, which were totally different from the original goal of this research, the present study was conducted.

Research Methodology

This analytical research has been carried out based on both descriptive and correlational research methodologies. Research population consisted of all parents having children diagnosed with cancer (including leukemia, brain tumor, bone tumor, vilms tumor, and lymphoma tumor), who have been hospitalized in the departments of oncology and outpatient clinics of all hospitals affiliated to Shahid Beheshti University of Medical Sciences in 2017. In this research, 80 pairs of parents (both fathers and mothers, total of 160) who had their children diagnosed with cancer on the basis of goal-oriented method; both in outpatient and inpatient were selected. The sample size of research in confidence level was evaluated as 1.96 with test power of 0.80, and produced error of 0.01. The criteria included for this research consisted of: conclusiveness of diagnosing with cancer together with registering in children's medical record; children's biological parents should have lived in the same home as the children; passing of at least 6 months from diagnosing cancer; the parents' physical and psychological health; and the exclusion criteria consisted of child's death during the research, and parents' refusal of collaboration prior to the completion of the research.

Research Instruments

Spiritual Intelligence

This criterion has been made by King (2009) and consisted of four subscales including experimental-critical thinking (question numbers 1, 3, 9, 13, 17, 21), generating personal meaning (question numbers 5, 7, 11, 15, 19, 23), raising awareness (question numbers 2, 6, 14, 18, 20, 22) and sobriety spectrum (question numbers 4, 8, 10, 12, 16, 24). The participants answered this criterion based on Likert Scale from "strongly true" to "strongly false", and thus every 5-scale question was graded as 0, 1, 2, 3, and 4. Therefore, the grade limit was from 0 to 4, and the minimum and the maximum grade in this questionnaire was alternatively 0 and 96. In this questionnaire, only question number 6 would grade conversely. King (2009) has stated that Corenbach's Alpha Coefficient of this questionnaire is 0.92. According to Rostami et al in 2014, the subscales of experimental critical thinking, generating personal meaning, and raising awareness were 0.78, 0.78, 0.87 and 0.91; respectively (Rostami et al., 2014), whereas the Corenbach's Alpha Coefficient in Iran was 0.94.

Beck Depression Inventory (BDI)

This inventory was initially presented and standardized in 1974 by Beck, and reconsidered in 1996 (Beck, Steer and Brown, 1996). The questionnaires from this inventory consisted of 21 multiple choice questions, and every question had a score from 0 to 3, and the total score varied from 0 to 63. A characteristic of

profitability for this inventory was its agreement and correlation with a similar method. In this respect, Beck Depression Inventory (BDI), indicated a positive correlation ($r=71\%$) for grading depression with Hamilton Rating Scale which produced an ideal response. Meanwhile, the one-week test-retest produced a high value in terms of reliability ($r=95\%$), which indicated that this method was sensitive to daily mood changes.

After being permitted by the Shahid Beheshti University of Medical Sciences, and some of the selected hospitals (Mofid, Shohaday-e-Tajrish, Imam Hossein and Taleghani), the researcher provided the collected blood to the departments of oncology and outpatient clinics at the above named hospitals, at which point, the consent forms from the participants were acquired; this was followed by the clarification of the research goals and ensuring that all information remained confidential. Finally, the researcher considered the inclusion criteria of the research and distributed the questionnaires amongst the participants. The researcher initially explained the goal of this research to the participants, and asked them to take part in the study and in case the parents were not able to read the questions, the researcher would read to them each of the questions. The researcher tried to be available for all parents while completing the questionnaires, and answered their probable questions, and the parents were reassured that they could complete the questionnaires without any rush. In addition, children's clinical information was gathered and completed by accessing their health records. The data was analyzed by SPSS 21 and in doing so, the following research methods were used: descriptive analysis (frequency, mean, standard deviation, and percentage), inferential analysis (t-test, Pearson correlation coefficient, and regression analysis).

Findings

In this research, 156 parents were examined, where the ratio of females and males were equal i.e. 50% for each gender. 38.5% of mothers were in the age range of 26-31 years old, and 37.2% were in the range age of 32-37 years old. With respect to educational levels, 43.6% of mothers' had diploma, and 33.3% of fathers' had bachelor degrees. Almost 78% of mothers were unemployed, and 51% of fathers were self-employed. Parents' marital status for 89.1% was married. In addition, 66.7% of children with cancer had already been hospitalized once or twice, and about 52% of parents had 2 children.

Table 1. Descriptive Findings of Spiritual Intelligence Variable in Parents Whose Children were Diagnosed with Cancer (N=156)

Variable	Males				Females			
	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum
Spiritual Intelligence								
General Spiritual Intelligence	55.52	12.37	34	76	57.55	13.09	35	78
Experimental Critical Thinking	14.62	3.40	7	20	15.21	3.79	7	21
Personal Meaning	13.46	4.19	4	22	14.19	4.20	6	22

Awareness Transcendence	13.92	3.76	8	21	14.26	3.99	8	22
Vigilance Range	13.24	3.89	6	21	13.87	3.90	7	22

According to Table 1, the mean value for spiritual intelligence in mothers whose children were diagnosed with cancer was 57.55 ± 13.09 , and in fathers whose children were diagnosed with cancer was 55.25 ± 12.37 . Meanwhile, according to T-test analysis, it was determined that fathers and mothers did not have meaningful differences in terms of spiritual intelligence ($T=2.62$, $P>0.05$)

Table 2. Descriptive Findings of Depression Variables in Parents Whose Children were Diagnosed with Cancer (N=156)

Variable	Males				Females			
	Mean	Standard Deviation	Minimum	Maximum	Mean	Standard Deviation	Minimum	Maximum
Depression	12.96	8.20	0	32	17.84	8.11	0	35

According to Table 2, the mean value of depression in mothers and fathers whose children were diagnosed with cancer were 17.84 ± 8.11 and 12.96 ± 8.20 ; respectively. According to the scaling of questionnaire, the majority of mothers (i.e. 38.5%) had mild depression. In this research, the mothers and fathers were found to have significant differences in depression level; the mean value of depression in mothers were found to be more than fathers ($T=3.738$, $P<0.001$).

Table 3. Study of Correlation between Spiritual Intelligence and its Subscales, and Depression in Parents (N=156)

Variables	Depression			
	Mothers		Fathers	
	Correlation Coefficient	P-Value	Correlation Factor	P-Value
General Spiritual Intelligence	-0.616**	0.001	-0.517**	0.00
Experimental Critical Thinking	-0.357**	0.001	-0.273**	0.016
Personal Meaning	-0.465**	0.001	-0.359**	0.00
Awareness Transcendence	-0.587**	0.001	-0.492**	0.001
Vigilance Range	-0.619**	0.001	-0.541**	0.00

($p<0.01$)* ($p<0.05$)**

Considering Table 3, there was a negative and meaningful relationship ($P<0.001$) between spiritual intelligence and depression in both genders of the parents ($r=-0.616$ in mothers; $r=-0.517$ in fathers).

Table 4. Assessment of Regression Coefficients for Depression according to Spiritual Intelligence

Predictor	Non-standard Coefficients		Beta Standard Coefficients	T	P
	B	Non-standard Coefficients			

		Error			
Fixed Effect	36.100	5.257		6.866	000
Spiritual Intelligence	-0.350	0.045	-0.526	-7.800	0.001
Gender	-5.365	1.461	-0.317	-3.671	0.001
Age	-0.359	0.617	-0.041	-0.582	0.561
Education	0.289	0.521	0.039	0.554	0.581
Occupation	-0.281	0.811	-0.032	-0.347	0.729
Number of Hospitalization	0.733	0.782	0.061	0.938	0.350
Number of Children	-0.231	0.711	-0.021	-0.325	-0.745
Matrimony	3.625	1.818	0.133	1.994	0.048

According to Table 4, and by taking into account the sum of T , and the significant level of their equivalent parameter, the findings indicated that the effect of spiritual intelligence ($P < 0.01$), gender ($P < 0.01$) and matrimony ($p < 0.05$) on depression variable has been meaningful. Referring to Beta coefficients, the regression efficiency of spiritual intelligence on depression variable was -0.526 . In other words, in lieu of an increase in standard deviation of spiritual intelligence variable, the rate of depression decreased to -0.526 standard deviation and vice versa. Also, the regressive coefficients of gender and marital status were -0.317 and 0.133 ; respectively.

Discussions and Conclusion

Findings of this research indicated that the difference between parents' mean value of depression variable was significant, but this was not the case for the value of spiritual intelligence variable. On the other hand, it has been found that mothers experienced depression more than fathers; however, it was reported that for spiritual intelligence, it was the same for both mothers and fathers. According to the different grading of depression both in mothers and fathers, the majority of mothers (38.5%) suffered from mild depression disease, whereas the degree of mild depression among fathers were 29.5%. Also due to the fact that the range of grades in spiritual intelligence was 0 to 96, it can be said that the mean value for the range of spiritual intelligence was medium for both parents. By reviewing similar literatures, it can be determined that the results obtained from this study was similar to the results from literature. Asghari Nekah and et al (2017) had taken advantage of DASS-21 questionnaire for 34 mothers who had their children diagnosed with cancer, the results of which indicated that 53.1% of mothers suffered from depression (i.e. 21.9% mild, 28% moderate, and 3.1% severe depression disease). In a separate study, Al-Maliki et al (2016) indicated a high prevalence of depression amongst parents whose children were diagnosed with cancer (i.e. 41.1% among fathers, and 60.7% among mothers), which were approximately similar to the findings of the current study. In this study, some important gender differences were defined with respect to the depression rates among the parents who had children with cancer; therefore, the rate of depression was definitely reported as high among the mothers. Kostak and Avci (2013) stated that the mean values of depression amongst mothers and fathers were 18.3% and 15.2%;

respectively. Also, similar to the outcomes of this research, it was also demonstrated that mothers experienced more depression than fathers. Ebrahimi et al (2012) studied a group of collegiate students, where the findings indicated that there was no clear correlation in spiritual intelligence between the two genders. Moreover, Hossein Chari et al (2010) found no correlation between the gender differences and spiritual intelligence. In another research by Ghana et al (2013) which was carried out on 282 collegiate students; by taking advantage of King's spiritual intelligence questionnaire, where again no significant differences were found between the two genders' spiritual intelligence. In another research carried out on 457 collegiate students of both genders in Lorestan Medical Sciences University; using King's spiritual intelligence questionnaire, again no meaningful differences were found for both genders' spiritual intelligence (Bayrami, Movahedi and Movahedi, 2014).

Gender differences in parents of children who were diagnosed with cancer and its relationship with the rate of suffering from depression were due to different reasons. One of the reasons could be mothers' stressful reactions in comparison to fathers towards diagnosing their children with cancer, and this could be due to the fact that females generally express their emotions more than males. Meanwhile, mothers whose children have been diagnosed with cancer, typically schedule and spend more time to take care of their child in comparison to fathers; since the higher number of females spend most of their time at home, and fathers usually have more access to external sources of support as they spend more time out of their home and consequently they may suffer from depression less than mothers (Al-Maliki et al., 2016). To further explain the reason and sources of depression amongst parents who have children with cancer, it can be added that one of the main reasons that result in such psychological impairments can be disappointment from their child's future, and aspirations they have always had for their children (Asghari-Nekah et al., 2017). Another reason may be the fact that parents compare the physical appearance of their children to the other normal children's who are living and growing with no special problems and are acquiring new abilities (Jafarmanesh et al., 2014).

Although in comparison to depression, the number of studies that have assessed spiritual intelligence have been considerably limited – and can be attributed to new discussion of spiritual intelligence – generally, it could be concluded that it has been expected for woman to be more religious than men and their spiritual intelligence would be higher than men, however, the findings of this study proved the opposite of what has been commonly expected. Perhaps, the possible explication could be that the majority of research findings about the differences of intelligence between females and males would not be so cognitively high which have been due to the conspicuous differences between the two genders (Towhidi, Moghgan and Rahmati, 2014); which seemingly, covered the spiritual intelligence.

The findings showed that there was a clear and a negative relationship between the spiritual intelligence and depression in parents who had children that were diagnosed with cancer. That is

to say, the increase in spiritual intelligence could lead to the decrease of depression level in both mothers and fathers. Meanwhile, considering the results of regression, it could be concluded that the spiritual intelligence explained almost 26% of the variance of depression. The outcomes from some of the similar researches have shown to be parallel to the current research. The findings of Dabiriyani et al (2012) about the spiritual intelligence and psychological health of mothers whose children were either deaf, blind or normal, indicated that those mothers who had spiritual viewpoints, looked for supernatural outlooks, and had positive perceptions; it was also shown that they were open-minded and flexible. In that research, about 7% of variance changes in mothers' psychological health were justified by their spiritual intelligence; while in the current research, 26% of variance changes were predictable which comparatively dominated a higher degree. Research carried out by Safavi et al (2015) on the patients coming down with cancer indicated that the higher spiritual intelligence, the better they could encounter with depression. In fact, when people needed help in encountering with life distresses, their spiritual intelligence could assist them to find out the meaning of occurrences, and thus they could cope better and easier with different situations. Therefore, it can be said that the spiritual intelligence could increase the level of self-esteem and self-efficiency. Akbarizadeh et al (2013) has also established that the spiritual intelligence had a positive and important relationship with the hardiness and general health. Meanwhile, Towhidi et al (2014) proved that by improving the spiritual intelligence, depression and anxiety would decrease in patients suffering from Multiple Sclerosis (MS).

For further exploitation of these results, the advantages from the point of view of mechanisms and the positive and effective consequences of spiritual intelligence over increasing mental health could be taken into consideration. In other words, those who had higher spiritual intelligence, had high mental health for three reasons. Firstly, any type of belief provided a coherent confidence that made people find the meaning of life, and they could therefore be hopeful for the future. Spiritual beliefs would allow people to overcome adversities, mental stress, and inevitable lacks and, in fact, it would create hope, positivity and peace for them. Secondly, taking part in religious activities would provide people with social supports. Finally, the spiritual beliefs have been frequently accompanied with a better life style (Lynch et al., 2012). In fact, the way people felt about metaphysical phenomenon, could help them to provide mental support and it might also be accompanied by the spiritual support which could not be measured from the phenomenological point of view. Due to the grand nature of spiritual experiences, those with spiritual beliefs have been continuously in a path that aided them into more understanding of their life experiences, which consisted of spiritual and divine interferences; which could in turn change life occurrences and human beings' way of thinking and behavior; it could consequently have an effect on how a person confronts the undesired events (Sotoodeh et al., 2016).

One of the most important limitations of the current research was the measuring method (self-measuring) which could affect the

produced results. Although, in this paper, it has been attempted to decrease such bias as much as possible, by taking advantages of interview and personal conversations, however the author could not have full control on this aspect of the research. The findings of the current research can be used in increasing clinical knowledge of pediatric nurses who aim to improve the psychological health of parents whose children have been diagnosed with cancer; i.e. by considering the psychological status, particularly depression signs and symptoms in those parents, trying to detect and then referring them to receive psychological services and counselling together with promoting the quality of nursing through complementary educations for nurses who are working in departments of children's oncology and outpatient clinics.

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References

- Akbarizadeh F, Jahanpour F, Hajivandi A. The relationship of general health, hardiness and spiritual intelligence relationship in Iranian nurses. *Iranian journal of psychiatry*. 2013;8(4):165.
- Al-Maliki SK, Al-Asadi J, Al-Waely A, Agha S. Prevalence and Levels of Depression Among Parents of Children with Cancer in Basrah, Iraq. *Sultan Qaboos University Medical Journal*. 2016;16(3):e329.
- Amini JI ZT, Karami J. The Effectiveness of Spiritual Intelligence Training on Female Students' Depression and Happiness. *Scientific Journal Management System*. 2015;6(22):68-141.
- Asghari-Nekah SM, Jansouz F, Kamali F, Taherinia s. The Resiliency Status and Emotional Distress in Mothers of Children with Cancer. *Clinical Psychology*. 2017; 7(1):15-26.
- Bayrami M, Movahedi Y, Movahedi M. The role of spiritual intelligence in perceived stress, anxiety and depression of Lorestan Medical University Students (Iran). *J Babol Univ Med Sci*. 2014;16(1):56-62.
- Beck AT, Steer RA, Brown GK. Beck depression inventory-II. *San Antonio*. 1996;78(2):490-8.
- Cerqueira C, Pereira F, Figueiredo B, do Céu M, editors. Patterns of Response in Parents of Children With Cancer: An Integrative Review. *Oncology nursing forum*; 2016.
- Da Silva FM, Jacob E, Nascimento LC. Impact of childhood cancer on parents' relationships: An integrative review. *Journal of Nursing Scholarship*. 2010;42, (3) 250-61
- Dabiriyani P, Mahmoodi G, Vatankhah H. A Comparison between Intellectual Aptitude and Mental Health in Mothers Having Deaf, Blind and Normal Children. *Journal of Exceptional Education*. 2012;3(116):16-25.
- Ebrahimi A, Keykhosrovani M, Dehghani M, Javdan M. Investigating the Relationship between Resiliency,

- Spiritual Intelligence and Mental Health of a group of undergraduate Students. *Life Science Journal*. 2012;9(1):67-70.
- Ebrahimi M, Jalilabadi Z, Chenagh KG, Amini F, Arkian F. Effectiveness of training of spiritual intelligence components on depression, anxiety, and stress of adolescents. *Journal of medicine and life*. 2015;8(Spec Iss 4):87.
- Ghana S, Jouybari L, Sharif Nia S, Hekmatafshar M, Sanagoo A, Chehregosha M. Correlation of spiritual intelligence with some of demographic and educational factors among the students of Golestan University of Medical Sciences. *Journal of Health Promotion Management*. 2013;2(1):17-23.
- Gouveia, L., Janvier, A., Dupuis, F., Duval, M., & Sultan, S. (2017). Comparing two types of perspective taking as strategies for detecting distress amongst parents of children with cancer: A randomised trial. *PloS one*, 12(4), e0175342.
- Hockenberry MJ, Wilson D. *Wong's nursing care of infants and children-E-book*: Elsevier Health Sciences; 2014.
- Hossein Chari M ZH. . Effect Fields of Education, Religious Science and Artistic on Spiritual Intelligence: Endeavors for Validated and Reliable Scale Measuring Spiritual Intelligence. *Training Measurement* 2010;1(1), 71-92.
- Jafarmanesh h, Ranjbaran m, Vakilian k, Rezaee k, zand s, Tajik R. Survey of levels of anxiety and depression in parents of children with chronic illness. *Journal of Nursing Education*. 2014;1(4):45-53.
- Jafary Manesh H, Ranjbaran M, Vakilian K, Zand K, Tajik R. Survey of levels of anxiety and depression in parents of children with chronic illness. *Iranian Journal of Psychiatric Nursing*. 2014;1(4):45-53.
- Khavari k, Abbasi r, Afshar A, Talebi M. Determine the relationship between intellectual intelligence with emotional reactions of nurses in hospitals of Tehran University. *Social Welfare*. 2014;14(53):165-77.
- Khosravi M, Nikmanesh Z. Relationship of spiritual intelligence with resilience and perceived stress. *Iranian journal of psychiatry and behavioral sciences*. 2014;8(4):52.
- King DB, DeCicco TL. A viable model and self-report measure of spiritual intelligence. *International journal of transpersonal studies*. 2009;28(1):8.
- Koenig HG. Religion, spirituality, and health: a review and update. *Advances in mind-body medicine*. 2015;29(3):19-26.
- Kostak MA, Avci G. Hopelessness and depression levels of parents of children with cancer. *Asian Pacific journal of cancer prevention : APJCP*. 2013;14(11):6833-5.
- Lieb R, Isensee B, Höfler M, Pfister H, Wittchen H-U. Parental major depression and the risk of depression and other mental disorders in offspring: a prospective-longitudinal community study. *Archives of general psychiatry*. 2002;59(4):365-374.
- Litzelman K, Catrine K, Gangnon R, Witt WP. Quality of life among parents of children with cancer or brain tumors: the impact of child characteristics and parental psychosocial factors. *Quality of life Research*. 2011;20(8):1261-1269.
- Lynch CP, Hernandez-Tejada MA, Strom JL, Egede LE. Association between spirituality and depression in adults with type 2 diabetes. *The Diabetes Educator*. 2012;38(3):427-35.
- Marianne Z. Wamboldt MZ, Reiss D. Explorations of parenting environments in the evolution of psychiatric problems in children. *Am Psychiatric Assoc*; 2006.163(6).951-953.
- Rostami M, mehraban s, baziar s, sharifi M, Mohammad-Alipour Z, Bakhtyari V. Relationships between Spiritual Intelligence and general Health among Students. *Social Welfare*. 2014;14(53):63-151.
- Safavi M, Yahyavi S, Fatehi Narab H, Yahyavi S. Relation between spiritual intelligence and depression coping style in patients with cancer in university hospitals of tehran university of medical science. *International Conference of Social Science, Medicine and Nursing Istanbul*; 2015.
- Shafiee A. The Effect of Spiritual Intelligence on the Mental Health of Human Resources in Organizations. *Studies in Islam & Psychology*. 2014;8(14):153-79.
- Sotoodeh H, Shakerinia I, Kheyrafi M, Dargahi S, Ghasemi Jobaneh R. Surveying the relationship between spiritual and moral intelligence and the psychological well-being of nurses. *Iranian Journal of Medical Ethics and History of Medicine*. 2016;9(1):63-73.
- Torabi M, Nadali IZ. When does spiritual intelligence particularly predict job engagement? The mediating role of psychological empowerment. *Iranian journal of nursing and midwifery research*. 2016;21(6):589.
- Towhidi A, Moghgan A, Rahmati A. The Relationship of Spiritual Intelligence with Depression and Anxiety4T in Multiple Sclerosis Paitents. *International Congress on Culture and Religious Thought*; Qom 2014.
- Wong KF, Yau SY. Nurses' experiences in spirituality and spiritual care in Hong Kong. *Applied Nursing Research*. 2010;23, 242-244.