

The relationship between spiritual intelligence and happiness in cancer patients referring to selected hospitals of Tehran university of medical sciences

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ABSTRACT

Background and Aims: Cancer patients suffer from high degrees of psychological disorders, such as depression, anxiety, and disease incompatibility. Spiritual intelligence is one of the factors affecting mental health that can calm the person, especially in stressful situations. Happiness is also important to improve the symptoms of the disease. The present study was conducted to determine the relationship between spiritual intelligence and happiness in cancer patients. **Methods:** This study was a descriptive-analytical study, that undertaken in 2014, on 200 cancer patients referring to Tehran University of Medical Sciences' hospitals by using simple random sampling. Data were collected using patients' demographic questionnaires, the "King" Spiritual Intelligence score, and the "Oxford" happiness questionnaire. Data were analyzed using SPSS version 20, t-test and Pearson correlation. **Results:** The mean of the total score of spiritual intelligence and happiness was 97.22 ± 9.64 and 120.2 ± 9.18 , respectively. The results indicated a significant direct correlation between spiritual intelligence and happiness in cancer patients. ($P=0.000$, $r =0.518$). **Conclusion:** According to our findings, Improving Spiritual Intelligence In patients with cancer may lead to increasing their level of happiness. Therefore, it is suggested that authorities and stakeholders pay special attention to the issue of spiritual intelligence and its promotion approaches.

Keywords: Spiritual Intelligence, Happiness, Cancer

Introduction

Cancer is considered as a major health problem of the century^[1], and the second-largest in developing countries and the developing world is the fourth cause of death^[2]. Cancer is one of the disorders that affect all aspects of a person's life, including physical, psychological, social and spiritual dimensions^[3]. To

take care of the patient in a comprehensive way, the total size of these dimensions should be considered^[4]. The spirituality of humans is as important as other dimensions. In stressful situations, especially health-related issues, spirituality is an important source of compatibility^[5].

Patients with high levels of spiritual health can effectively adapt to their illness and pass the end stages well^[6]. In end-stage cancer patients, spiritual and religious well-being is even more important than the physical and mental health^[7]. Different types of health outcomes such as quality of life, biological and psychosocial functions are mainly affected by spiritual intelligence. Spiritual intelligence is a combination of spirituality and intelligence that is representative of capabilities and capacities of spiritual resources, which can be used to increase the daily living adaptability and enable the person to change and evolve^[8]. This kind of intelligence is one of several types of intelligence that encompasses several methods and it can integrate the soul and the inner life with the outer world

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and may lead to happiness and well-being [9]. Spiritual intelligence is the ability to use and represent spiritual values that promote daily function and physical and mental health [10]. Both physical and mental health is directly related to the individual's happiness, and if they are threatened, optimism and happiness will be also disturbed [11]. In cancer patients, the level of happiness decreases naturally due to complications of the disease and treatments and disruptions in daily living [1]. Happiness is a positive concept that is critical for psychological well-being. Based on the results of the studies, happiness plays an important role in improving physical and psychological health and it creates a sense of safety, life satisfaction, a collaborative attitude, and increases life expectancy [12]. Many studies conducted about spiritual intelligence emphasize its' positive impact on compatibility, well-being, anxiety, depression, and distress. Moazdian et al (2016) reported that spiritual intelligence training leads to an increase in family, emotional, and social compatibility. Also, the improvement of patients' attitude toward spirituality reduces psychological illnesses and cause better adaptation to conditions [13]. Fallah et al (2009) indicated that spiritual training can increase the life expectancy, happiness and life satisfaction in women with breast cancer [14]. The results of the study of Abdollah Zadeh et al (2016) also confirm the relationship between spiritual intelligence and resilience in patients with cancer [6]. Elmer et al (2003), in a study titled "The relationship between spirituality and health", found that spiritual intelligence would reduce the incidence of disease and increase life expectancy. It seems that patients, who tend to spirituality, have a better response to the treatments and low incidence of depression [15]. Also, the study of Vachon et al (2008) in assessing the relation of spirituality and health in cancer survivors showed that cancer patients often use their own spiritual beliefs as a way to find meaning in the recovery period and also use it as a way of coping with death [16]. Considering the importance of the issue and the high prevalence of cancer and its various complications and consequences, and also considering that in our society and studies conducted in the other countries, the concept of spiritual intelligence and its related factors in cancer patients is less addressed, Therefore, the present study was conducted to determine the relationship between spiritual intelligence and happiness in patients with cancer.

Methods:

The present study is descriptive-analytical in selected hospitals affiliated to Tehran University of Medical Sciences in 2014. To estimate the required sample size at 95% confidence interval and 80% test power and with the assumption that the minimum correlation coefficient of 0/2 between spiritual intelligence and each of the variables cause statistically significant relationship, the sample size was estimated 200 patients using this

$$\text{formula } n = \frac{(z_{1-\frac{\alpha}{2}} + z_{1-\beta})^2}{d^2} + 3.$$

The study sample included all the cancer patients referring to Shariati Hospital, Valiasr Hospital and Cancer Institute of Imam Khomeini.

The inclusion criteria were: informed consent for participation, definitive diagnosis of cancer, have cancer diagnosis for at least one month, patients aged 15 to 65 years and lack of any mental illness based on the patient records. The exclusion criteria were: refusing to continue the participation during the study and failure to complete all the items in each of the questionnaires. To select the study subjects, among all the hospitals affiliated to Tehran University of Medical Sciences, three hospitals were selected randomly and then from each hospital, 70 patients who met the inclusion criteria were selected using available sampling.

To collect the data, three questionnaires were used: 1. Demographic characteristics questionnaire including age, gender, marital status, educational level, employment status, economic status, Diagnosis, duration of diagnosis and current treatments; 2. " King " Spiritual Intelligence Questionnaire: This questionnaire has 24 items that each item is scored based on five-point Likert Scale from "totally disagree" to "totally agree". The total score of the questionnaire ranges from 24 to 120. The higher total score is representative of the higher level of spiritual intelligence. The reliability of the spiritual intelligence scale was confirmed with Cronbach's alpha coefficient of 0.95 in King's study [17]. Also, in Iran, Raghbiet al (2006), confirmed the reliability of the Persian version of this questionnaire with Cronbach's alpha coefficient of 0.89 and Reliability coefficient of 0.67 through tester-test in a sample of 70 patients at a two weeks interval [18].

3. The "Oxford" Happiness Questionnaire, with 29 items that each item is scored based on the six-point Likert Scale from "totally disagree" to "totally agree". The total score of the questionnaire ranges from 29 to 174. Argyle et al (1990) confirmed the reliability of this questionnaire, with Cronbach's alpha coefficient of 0.90 and simultaneous validity of 0.43 [19]. Also, the Persian version of this instrument gained good reliability with Cronbach's alpha of 0.91 in Alipour et al (2007) study [20]. In the present study, to evaluate the Content Validity of this tool, the questionnaire was sent to ten faculty members of Tehran University of Medical Sciences, Iran University of Medical Sciences and Tarbiat-Modares University. The modifications were considered and the final version of the questionnaire was used to collect the data. The researcher started the data collection after receiving permission from the Ethics Committee of Tehran University of Medical Sciences. All participants received study information and provided their written informed consent. The questionnaires were provided to the participating patients and were completed by self-report. In illiterate patients, the researcher completed it for his/her. Data were collected from November to December 2014.

Statistical analysis was carried out using SPSS ver. 20. Descriptive statistics were presented as means and standard deviations (Mean±SD) for quantitative variables and as frequencies and percentages for categorical variables.

To investigate the probable relationship between the variables, t-test, Pearson and Spearman correlation were used.

Results:

Results of the present study show that of the total number of 200 cancer patients who participated in the study, most of the patients were in the age group of 25-34 years (26.5%) and more than half of the patients were male (51%). Also, the majority of the patients were married (74.5%), with the educational level of diploma (35.5%). the majority were unemployed (39%) and in terms of the economic situation (59%). In terms of the diagnosis, the lowest frequency was related to laryngeal cancer and the highest frequency was allocated to leukemia (35%). Based on the results, more than (57.5%) of the patients underwent chemotherapy as a therapeutic intervention (Table 1).

Table 1. Demographic characteristics of the participating Patients in Selected Hospitals of Tehran University of Medical Sciences in 2014

Patients' demographic characteristics		N(%)
Age	15-24	27 (13.5)
	25-34	53 (26.5)
	35-44	46 (23)
	45-54	43 (21.5)
	55-65	31 (15.5)
Gender	Female	98 (49)
	Male	102 (51)
Marital status	Single	47 (23.5)
	Married	149 (74.5)
	Divorced and widowed	4 (2)
Level of education	Illiterate	18 (9)
	Middle school	65 (32.5)
	Diploma	71 (35.5)
	University Graduated	46 (23)
Employment status	unemployed	78 (39)
	Employed	66 (33)
	Housewife	41 (20.5)
	Retired	15 (7.5)
economic status	Sufficient	82 (41)
	Insufficient	118 (59)
current treatments	Radiotherapy	16 (8)
	Chemotherapy	115 (57.5)
	Surgery	60 (30)
	Surgery and Chemotherapy	9 (4.5)

The results indicated that of the total number of 200 participants, 44.5% had the highest level of spiritual intelligence, 18.5% had the least level, and the rest of the patients (37%) had no comment. Also, 3.5% of the patients had

the lowest level and 13% had the highest level of happiness. The rest of the patients agreed to the other different levels of happiness that are presented in Table 2.

Table 2. Frequency distribution of the variables "spiritual intelligence" and "happiness" in selected hospitals of Tehran University of Medical Sciences in 2014

Variable	Score (%)	Patients (%)	
Spiritual intelligence	Completely Disagree	20	6
	Disagree	40	12.5
	No comment	60	37
	Agree	80	29
	Completely Agree	100	15.5
Happiness	Completely Disagree	17	3.5
	Disagree	34	8.5
	Somewhat disagree	51	17.5
	Somewhat agree	68	38
	Agree	85	19.5
Completely Agree	100	13	

The highest and lowest score of spiritual intelligence was 117 and 71, respectively. This variable had a standard deviation of 9.64 and a mean of 97.22. Also, the lowest total happiness score was 69 and the highest score was 157. Also, the mean and standard deviation for this variable were 120.2 and 9.18 respectively. Correlation between spiritual intelligence variables with the happiness of patients participating in the study was used by the Pearson correlation test. There was a correlation between these two variables ($p = 0.000$ and $r = 0.518$). (Table 3).

Table 3: Mean and standard deviation and correlation between two variables

The relationship between two variables	Kolmogorov-Smirnov amount	Min	max	Sig(P)	P-Value	Average	deviatio	Variable
0.000	0.356	71	117	0.000	0.05	97.22	9.64	Spiritual Intelligence
	0.700	69	157	0.711	0.05	120.2	9.18	Happiness

The results showed that the mean of the total score of spiritual intelligence was 97.22 ± 9.639 . The minimum and maximum of the score are also presented in Table 2. Based on the results the mean of the total score of happiness was 120.2 ± 9.179 . The minimum and maximum of the score are also presented in the Table 2.

Discussion and Conclusion:

According to the results of the present study, there was no significant relationship between patients' demographic

characteristics and their spiritual intelligence, except for the employment status that had a direct significant relationship with happiness.

The results also showed that there was a direct and significant correlation between spiritual intelligence and happiness in cancer patients so that the higher levels of spiritual intelligence increase the level of happiness.

Akbarizadeh *et al* (2011) reported consistent results with the present study and indicated that there was a significant linear correlation between spiritual intelligence and happiness in nurses ^[21]. Also, in the study of Aminijavid *et al* (2015) about the effectiveness of spiritual intelligence training on depression and happiness, it is reported that there was a positive significant correlation between spiritual intelligence and happiness in girl students ($p < 0.001$) ^[22].

Yaghubi *et al* (2010) showed that higher levels of spiritual intelligence increase the happiness of students ^[23]. Also, in the study of Heydari *et al* (2013), to assess the relationship between Spiritual Intelligence and Academic Achievement among the Students of Qom University of Medical Sciences, the results of the Pearson correlation showed that the mean of the total score of spiritual intelligence is significantly correlated with the mean of the total score of happiness ($P = 0.000$) and ($r = 0.599$) ^[24].

In describing the relationship between spiritual intelligence and happiness, according to this Quran verse "Beware that, the hearts become calm with the remembrance of God", one of the benefits of faith in God and acting to the requirements of this belief, is inner peace and happiness. Also, spiritual intelligence as the ultimate intelligence that is representative of the semantic and value issues, and encompasses the psychological adaptation capacities, is based on immaterial and transcendental aspects and includes spiritual resources, values, and features that enhance the daily performance and well-being. Individuals with high levels of spiritual intelligence go beyond the material issues and experience the highest levels of awareness. They also use spiritual resources to solve the problems, and they have desirable characteristics such as humility, forgiveness, and gratitude. These kinds of people have a positive attitude toward the world and they are satisfied with their life and try to improve it, so they experience happiness ^[25].

Since cancer can affect all aspects of a person's life, it is necessary to pay special attention to the psychological and mental problems of these patients. Happiness has critical importance in effective coping with the disease and treatments and controlling the symptoms and physical and psychosocial consequences in cancer patients. Therefore, it is necessary to assess its components and the factors associated with this variable. Also, spiritual intelligence facilitates the adaptation to the changes and increases the capacity of dealing with difficulties, so it makes the person face the problems more gently and with more flexibility, try to find more solutions, tolerate the life difficulties and make it more dynamic. Considering the direct and significant correlation between spiritual intelligence and happiness in cancer patients, addressing the issue of spiritual intelligence and strengthening its basics can facilitate the appropriate activities related to the

health and psychological behaviors in these patients, improve their health status and enhance their happiness. Also, Nurses can train the patients about spiritual intelligence as a rising component, to increase their level of happiness and other variables affecting the disease and help them deal with their disease easier. This study can be used as a basis for future studies. Since patients with spiritual intelligence and high levels of religious beliefs can better face their disease and they are stronger in Coping strategies rather than the other patients, it is suggested to conduct such studies in patients with chronic diseases.

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