

Relation between Spiritual Intelligence and Depression Coping Style in Patients with Cancer in University Hospitals of Tehran University of Medical Science

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Abstract—Spiritual intelligence is a source of resistance against critical conditions. The aim of this study was to investigate the association between spiritual intelligence with depression coping styles in patients with cancer receiving chemotherapy in university hospitals of Tehran University of Medical Sciences. This correlation-descriptive study was carried out on 276 patients with cancer receiving chemotherapy in university hospitals of Tehran University of Medical Sciences during 2013-2014. Data collection tools included patients' medical history, demographic questionnaire developed by researcher, spiritual intelligence self-report inventory (SISRI) questionnaire and ways of coping questionnaire (WOCQ). Pearson correlation and multiple regression analyses were conducted to analyze the data using SPSS20. The mean total score for spiritual intelligence was 70.18 ± 16.59 for patients with cancer, indicating moderate score. The mean total scores for depression was 39.16 ± 71.11 . There was inverse significant relationship between spiritual intelligence and depression ($r = -0.317$ and $p = 0.000$) based on Pearson correlation analysis. Spirituality beliefs had central and pivotal role in adjusting of patients to cancer and reducing of depression in patients with cancer.

Index Terms— Spiritual intelligence, Depression, Cancer

I. INTRODUCTION

CANCER is the leading cause of death worldwide. Number of global cancer deaths is projected to increase 45% from 2007 to 2030. Studies show that a considerable number of new cancer cases is annually occurred in Asia. Cancer is also the third most common cause of death in Iran. It is expected that cancer incidence will increase twice over the next two decades. Therefore, adopting scientific and correct cancer prevention measures is important to control and reduce the cancer incidence rates in Iran [1], [2]. Despite treatment with several methods, cancer is considered to be an incurable and lethal disease by many patients. It has also been shown that disease severity and prognosis and treatment method had not significant effect on patient adjustment to cancer. However, those patients who are capable to overcome their condition can adjust to cancer [3]. The studies show that

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depression is the most common consequences of cancer development in patients. Until recently, there was little information on the emotional reactions impact on patient resistance against diseases. In recent years, spirituality has been increasingly regarded as a basis for human existence and healing [4]. Spiritual forces as source of peace and happiness for patients have been prominent in many nursing theories over past decade [5].

The present study was carried out to determine the impact of spiritual intelligence on depression coping style in patients with cancer in university hospitals of Tehran University of Medical Science.

II. MATERIAL AND METHODS

This study was carried out on 276 patients with cancer receiving chemotherapy in university hospitals of Tehran University of Medical Sciences during 2013-2014. The subjects were selected using cluster sampling. Data collection tools included patients' medical history, demographic questionnaire developed by researcher, spiritual intelligence self-report inventory (SISRI) questionnaire and ways of coping questionnaire (WOCQ). Demographic questionnaire included quantitative variables (age, gender, number of chemotherapy sessions, period of time after cancer diagnosis) and qualitative variables (type of cancer, type of treatment, marital status, level of education, occupation). SISRI Scale was used to assess the spiritual intelligence. SISRI included four subscales - critical existential thinking (CET), personal meaning production (PMP), transcendental awareness (TA) and conscious state expansion (CSE) [6].

Pearson correlation and multiple regression analyses were conducted to analyze the data using SPSS20. Differences were considered significant at the $p < 0.05$ level.

III. RESULTS

A total of 267 (126 female and 151 male) cancer patients on chemotherapy with mean age of 52 (age range 18-84) years old participated in the study. Number of chemotherapy sessions was 1-51. The least period of time after cancer diagnosis was 6 months. The majority of patients had education level of under high school diploma. There was inverse relationship between spiritual intelligence and depression based on Pearson correlation analysis (Table I).

TABLE I RELATIONSHIP BETWEEN SPIRITUAL INTELLIGENCE AND DEPRESSION IN PATIENTS WITH CANCER

Spiritual intelligence Variable	Transcendental awareness	Conscious state expansion	Personal meaning	Critical existential thinking	Results
Depression	r=-0.363** P=0.000	r=-0.301** P=0.000	r=-0.423** P=0.000	r=-0.080** P=0.184	r=- 0.317** P=0.000

r and ** indicates Pearson correlation coefficient and $\alpha < 0.05$, respectively.

IV. DISCUSSION

The results of our study showed that total mean score for spiritual intelligence was moderate in patients. It has also been shown that spiritual intelligence can reduce feeling of pain in patients suffering pain resulted from various diseases [7]. The studies show that spiritual intelligence is an effective coping strategy to solve problems of everyday life [8]. According to King (2008), when people need assistance to deal with life pressures, the spiritual intelligence can help them find meaning in stressful situations and through that, they can more easily cope with the circumstances. Development of spiritual intelligence improves self-confidence and helps people to achieve self-consistency [6].

In our study, total scores for depression scale was significantly higher in patients with cancer compared to normative data. In line with this finding there are other reports indicating that depression is prevalent in cancer patients [9]. It can be said that diagnosis of cancer often precipitate intense emotions such as fear, sadness, and anger which in turn may lead to depression [10].

There was reverse relationship between spiritual intelligence and depression indicating that among patients those with higher scores for spiritual intelligence had lower depression, according to which, having higher scores for spiritual intelligence was a significant protective factor against depression occurrence.

Spirituality and religious beliefs had central and pivotal role in adjusting of patients to cancer and help patients to achieve the sense of meaning and purpose in the course of disease. Religion and spirituality are important source of strength for adjusting to cancer in patients with cancer.

V. CONCLUSION

We have shown that the patients with higher scores for spiritual intelligence had lower depression, according to which, it is suggested that the priority should be given to promote the spiritual intelligence in patients with cancer to reduce depression.

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