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The correlation between spiritual well-being and psychological resilience in patients with liver transplant

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Abstract

This study was conducted to determine the correlation between spiritual well-being and psychological resilience in patients with liver transplant. 127 patients determined via power analysis participated in the correlational descriptive study. The study was conducted at a liver transplant hospital in the east of Turkey between October 2017 and October 2018. Introductory Characteristics Form which was prepared by the researcher as well as Spiritual Well-Being Scale and Brief Resilience Scale were used in order to collect the data. It was determined that the patients' spiritual well-being was 34.85 ± 6.70 and their psychological resilience was 19.96 ± 3.54 . In the study, it was determined that there was a statistically positive correlation between the patients' spiritual well-being and psychological resilience and as their spiritual well-being increased, their psychological resilience increased. It is required for healthcare professionals to examine the well-being and psychological status of patients at certain intervals and develop skills of establishing a therapeutic relationship with patients and patient relatives.

Keywords: Patient, liver transplant, spiritual well-being, psychological resilience

Introduction

Liver transplant is a very important and successful treatment method for patients who suffer from acute and chronic liver failure [1,2]. 6341 liver transplants were performed in the United States of America in 2011 [3] and 4941 in Europe in 2010 [4]. The transplant extends the survival duration of patient, reduces the rates of morbidity and mortality and enhances the quality of life [5]. While approximately 75% of organ transplants in Turkey are performed from a living donor to a living recipient, more than 80% of transplants in European countries are performed with organs taken from cadavers [6,7]. İnönü University Medical Faculty Turgut Özal Medical Center Liver Transplant Hospital is ranked as the first in Europe and second in the world with liver transplant performed from a living donor to a living recipient, which started in 2002. According to the figures shared at the World Liver Transplantation Congress, 1391 transplants were performed in Turkey, which is ranked as the first in terms of the living donor liver transplantation in the world, in 2017 [7].

Patients who have had liver transplant may face physical problems such as limitations in their social life, difficulties in performing social activities, infection, immobility and pain. Liver transplant brings along not only physical problems, but also mental troubles in patients [8]. Even though medicine and science improve further each passing day, liver transplantation still causes stress, anxiety and depression for patients [9,10]. The studies have indicated that anxiety varies between 6-35% [11] and depression varies between 3-58% in patients who have had liver transplant [11-13]. Karayurt et al., determined that liver transplant recipients experienced a sense of guilt due to getting transplant from a living donor and thus, had a high level of anxiety [14].

Patients may have anxieties such as uneasiness, affect changes, loss of function, return to work, medical care expenditures and rejection of organ after the transplant [15,16]. In the study by Goetzmann et al., it was stated that approximately 16% of patients waiting for liver transplant needed psychological support [17]. Majority of individuals may face a destructive, traumatic

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and stressful situation in the process of transplantation. Each individual has a different strategy of coping with these situations. While some individuals have a negative mood throughout the disease, some may lead their normal life. Individuals' ability of pulling themselves together and returning to their normal life is known as psychological resilience. Psychological resilience is pulling the self together and recovering after stressful experiences. Somasundaram and Devamani determined that psychological resilience reduced hopelessness in cancer patients [18]. Lim et al., stated that psychological resilience reduced the distress of cancer patients [19]. Naghi et al., determined that psychological resilience increased the quality of life and positively affected the recovery in patients with heart failure [20]. A patient's psychological and spiritual well-being after the transplant affects the recovery process positively [21].

Spiritual support and spiritual well-being in transplant patients make a contribution to the reinforcement of physical and psychological sources. Abundance of positive emotions develops the skill of rapid recovery after stressful transplants. Spiritual well-being is the patient's consistency and stability with god, society and himself whom he values spiritually [22]. A high level of spiritual well-being will positively affect individuals who have liver transplant to relax spiritually and cope with the disease [23]. Gonzalez et al., determined that feeling spiritually well increased the possibility of feeling mentally well [24].

The study was conducted to determine the correlation between spiritual well-being and psychological resilience in patients who had liver transplant.

In the study, the following questions were tried to be answered

- What is the spiritual well-being level of patients who have liver transplant and to what extent do descriptive characteristics affect the spiritual well-being level?

- What is the psychological resilience level of patients who have liver transplant and to what extent do descriptive characteristics affect the psychological resilience?

- Is there a correlation between spiritual well-being and psychological resilience in patients who have liver transplant?

Material and Methods

Type of the Study

The study was conducted as a correlational descriptive study.

Time and Place of the Study

The study was conducted at İnönü University Turgut Özal Medical Center Liver Transplant Hospital between September 2017 and November 2018.

Population and Sample of the Study

The population of the study consisted of 450 transplant patients receiving treatment at İnönü University Turgut Özal Medical Center Liver Transplant Hospital. As a result of the power analysis performed to determine the sample of the study, the sample size was found to be 127 with significance level of 0.05, effect size of 0.08, and the power of representing the

population of 0.95. The study sample was composed of a total of 150 patients. However, 22 patients declined to participate the study. The names of patients listed and numbered. And then 127 transplant patients receiving treatment were selected with using a computer-aided simple random sampling method.

Inclusion Criteria

- Being 18 years and over
- Being open to communication
- Having had liver transplant for at least a week

Exclusion Criteria

- Having any mental problem
- Not agreeing to participate in the study

Data Collection Tools

Introductory Characteristics Form, Spiritual Well-Being Scale, and Brief Resilience Scale were used to collect the data.

Introductory Characteristics Form: Introductory Characteristics Form consists of a total of 6 questions including sociodemographic characteristics of patients (age, gender, marital status, educational background, level of income, working condition).

Spiritual Well-Being Scale: Spiritual Well-Being Scale was developed by Peterman et al., in 2002 [25]. Peterman et al., determined that the Cronbach's alpha of the scale varied between 0.81 and 0.83 [25]. The Turkish validity and reliability of the scale were performed by Aktürk et al., in 2017 [26]. The Cronbach's alpha coefficient of the scale varies between 0.81 and 0.89. The five-point likert scale consists of 3 subscales as meaning (2, 3, 5, 8), peace (1, 4, 6, 7) and faith (9, 10, 11, 12). Each item of the scale is scored between 0-4 points. While the items 4 and 8 of the scale are scored reversely, the other items are scored directly. The total score of the subscales is 0-16. The total score interval of the scale is 0-48. Higher score means a higher spiritual well-being [26]. In the study, the Cronbach's alpha coefficient of the scale was found to be 0.88.

Brief Resilience Scale: Developed by Smith et al. (2008) [27], the scale was adapted into Turkish by Doğan [28]. A total of 295 university students participated in the study by Doğan (2015) and the researcher examined the psychometric characteristics of the scale (internal consistency, results of the exploratory and confirmatory factor analysis and criterion dependent validity). As a result of EFA and CFA, it was determined that the scale was single factoral and the internal consistency coefficient was 0.83. Factor loads of the scale items varied between 0.63 and 0.79 [28].

Data Collection

The data were collected by the first researcher with face-toface interview method in patient rooms at the Liver Transplant Hospital services in October 2017 and October 2018. Introductory Characteristics Form which was developed by the researchers, as well as Spiritual Well-Being Scale and Brief Resilience Scale were used in order to collect the data. The data were collected by interviewing the transplant patients individually and according to the answers given to the questions read by the first researcher. Each interview lasted for approximately 15 minutes.

Data Analysis

In analysis of data that conforms to the normality distribution test; percentage distribution was used in determining the descriptive characteristics, arithmetic mean in determining the total mean scores of the scale, independent samples t-test in comparing gender and working condition and the total mean scores of the scale, Mann Whitney U test in comparing marital status and the total mean scores of the scale, Kruskal Wallis test in comparing age groups, educational background, level of income and the total mean scores of the scale, advanced analysis in determining which group caused the significant difference and Correlation in comparing the total mean score of the two scales.

Ethical Considerations

An approval from the Inonu University Health Sciences Non-Invasive Clinical Trials Ethics Committee and the legal permission from the institution where the study was carried out were obtained to conduct the study (App. No: 2018/6-3). Before starting the study, the patients were informed about the purpose of the study and their verbal consents were obtained. In the study, relevant ethical principles of "Informed Consent", "Voluntariness", and "Protection of Confidentiality" were fulfilled because the use of the phenomenon of human requires the protection of individual rights.

It was determined that the patients who participated in the study had a total mean score of 34.85 ± 6.70 from the Spiritual Well-Being Scale and 19.96 ± 3.54 from the Brief Resilience Scale (Table 2). When considering the scores obtained from the scales, it was observed that the patients had a higher spiritual well-being and psychological resilience.

Results

In the study, it was determined that 42.5% of the patients who had liver transplant were in the group of 51 years and over, 61.4% were male, 36.2% were primary school graduate, 78% were married, 79.5% had middle income level and 74.8% were unemployed (Table 1).

When the descriptive characteristics of the patients who had liver transplant and their total mean scores of the Spiritual Well-Being Scale were compared in the study, it was seen that the difference between gender and spiritual well-being was statistically significant (p<0.05). As a result of the advanced analysis, it was determined that men had a higher spiritual well-being. The difference between the patients' educational background and spiritual well-being was found to be statistically significant (p<0.05). In the advanced analysis, it was determined that individuals who had a higher educational level had a higher spiritual well-being. There was no statistically significant difference between the patients' age, marital status, working condition, income level and spiritual wellbeing (p>0.05). The difference determined between the descriptive characteristics of the patients who had liver transplant and their total mean scores of the Brief Resilience Scale was not statistically significant (p>0.05, Table 3).

The difference between total mean scores obtained by the patients

with liver transplant from spiritual well-being scale and brief resilience scale was found to be statistically significant (p<0.05). It was determined that there was a positive correlation between the spiritual well-being and psychological resilience of the patients. As the spiritual well-being of the patients with liver transplant increased, their psychological resilience increased (Table 4).

Table 1. Distribution of the Patients in Terms of Descriptive Characteristics (n=127)

Descriptive Characteristics	n	%
Age Groups		
18-28 years	26	20.5
29-39 years	24	18.9
40-50 years	23	18.1
51 years and over	54	42.5
Gender		
Male	78	61.4
Female	49	38.6
Educational level		
Literate	22	17.3
Primary Education	46	36.2
Secondary Education	34	26.8
Higher Education	25	19.7
Marital Status		
Married	99	78.0
Single	28	22.0
Working Condition		
Employed	32	25.2
Unemployed	95	74.8
Income Level		
Low	14	11.0
Middle	101	79.5
High	12	9.4
TOTAL	127	100.0

 Table 2. Total Scores and Mean Scores Obtained from the Spiritual Well-Being

 Scale and Brief Resilience Scale

Scale	Min-Max Score	Mean
Spiritual Well-Being	16-47	34.85±6.70
Brief Resilience Scale	7-27	19.96±3.54

 Table 4. The Correlation between Total Mean scores of the Spiritual Well-Being Scale and Brief Resilience Scale

Total Score of Spiritual Well-Being Scale	Total Score of Brief Resilience Scale	
	r	0.54**
	р	0.04

Table 3. Comparison of Total Mean scores of the Spiritual Well-Being Scale and Brief Resilience Scale According to the Descriptive Characteristics of the Patients

Descriptive Characteristics		n	%	Total Score of the Spiritual Well-Being Scale	Total Score of the Brief Resilience Scale
	18-28	26	20.5	34.38±7.89	18.15±1.82
	29-39	24	18.9	35.79±6.21	18.75±2.67
Age Crowne	40-50	23	18.1	36.21±6.55	18.21±2.17
Age Groups	51 years and over	54	42.5	34.12±6.39	19.14±2.35
	Test Value			KW=2.153	KW=7.561
	Significance			p=0.05	p=0.54
	Male	78	61.4	33.89±6.80	20.12±3.26
	Female	49	38.6	36.38±6.31	19.69±3.97
Gender	Test Value			t=-2.065	t=0.670
	Significance			p=0.04	p=0.50
	Literate	22	17.3	37.31±5.52	18.13±2.43
	Primary Education	46	36.2	35.82±6.86	19.28±2.27
Educational Local	Secondary Education	34	26.8	32.50±6.54	18.38±2.42
Educational level	Higher Education	25	19.7	34.12±6.78	18.56±1.95
	Test Value			KW=9.365	KW=5.518
	Significance			p=0.02	p=0.13
Marital Status	Married	99	78.0	34.89±6.12	18.69±2.33
	Single	28	22.0	34.71±8.55	18.71±2.25
	Test Value			MWU=1269.500	MWU=1055.500
	Significance			p=0.49	p=0.05
Working Condition	Employed	32	25.2	34.25±6.33	20.12±3.27
	Unemployed	95	74.8	35.06±6.83	19.90±3.64
	Test Value			t=0.670	t=0.670
	Significance			p=0.50	p=0.50
Income Level	Low	14	11.0	36.64±8.49	18.71±2.52
	Middle	101	79.5	34.55±6.53	18.69±2.32
	High	12	9.4	35.33±6.00	18.75±2.09
	Test Value			KW=2.475	KW=0.824
	Significance			p=0.29	p=0.66

Discussion

The results obtained from this study conducted to determine the correlation between the spiritual well-being and psychological resilience in patients who had liver transplant were discussed in accordance with the literature.

In the study, it was determined that majority of the patients were 51 years and over, male, primary school graduate, married, had middle income level and were unemployed. In the study conducted by Karayurt et al., with patients who had liver transplant, it was determined that most of the patients were male [14]. In another study conducted by Kaçmaz and Barlas with patients who had liver transplant, it was found that majority of the patients were male, married, primary school graduate and were unemployed [29]. The abovementioned studies support the results of the study.

It was determined that the participants had a total mean score of 34.85 ± 6.70 from the Spiritual Well-Being Scale. When

considering the scores obtained from the scales, it was observed that the patients had a higher spiritual well-being. Rezaie et al., determined that cancer patients had a higher spiritual well-being. [30]. Al-Natour et al., also determined that cancer patients had a high spiritual well-being [31]. Borras et al., found that spiritual well-being was important for the course of disease in patients with schizophrenia [32]. Mohr and Huguelet reported that religious belief created a positive effect in the recovery process of patients with schizophrenia [33].

It was determined that total mean score of the patients who participated in the study was 19.96 ± 3.54 for Brief Resilience Scale. When considering the scores obtained from the scales; it was observed that the patients had a higher psychological resilience. In the study conducted by Dong et al., with patients with colorectal cancer, it was determined that the patients had a high psychological resilience [34]. Tuck determined that spirituality was important in mental diseases and increased psychological well-being [35]. While high spirituality of the patients may be associated with

positive course of the treatment process and higher hope for recovery, higher energy and motivation may be associated with a higher psychological resilience.

In the study, when the descriptive characteristics of the patients who had liver transplant and their total mean scores of the Spiritual Well-Being Scale were compared, it was observed that there was a statistically significant difference between gender and educational level and spiritual well-being (p<0.05). It was determined that spiritual well-being was higher in men and those who had a higher educational level. Cultural and power expectations of society from men may be considered the reason of higher spiritual wellbeing of male patients. Conditions such as increase of disease awareness, use of coping strategies with disease more effectively, acceptance of disease and positive thinking, and having a positive environment with the increase of educational level may increase spiritual well-being.

The difference between the total mean scores obtained by the patients with liver transplant from the Spiritual Well-Being Scale and Brief Resilience Scale was statistically significant (p<0.05). As the spiritual well-being of the patients increased, their psychological resilience increased. In the study by Younossi et al., it was determined that patients had less anxiety about death and their energy and physical well-being gradually returned to basic levels after the transplantation [36]. Psychological treatment and care are an essential part of mental treatment and care in transplant patients [37]. According to the study by Karayurt et al., it is thought that compatible behaviors and spiritual well-being of patients might be associated with a sense of responsibility toward their relatives who donate their organs [14]. Thus, it can be thought that patients who feel spiritually strong also have a higher psychological resilience.

Limitation of the study

The study was conducted in a single hospital and the lack of effective communication with patients from different cultures constitutes the limitation of the study. It is believed that the study will be leading for further studies because it is the first in the literature. It is recommended to conduct the study on a larger sample.

Conclusion

In the study, it was determined that the patients with liver transplant had a higher spiritual well-being and psychological resilience and as their spiritual well-being increased, their psychological resilience increased.

Recommendation

Accordingly to results, patient relatives and medical personnel have important tasks to fulfil. It is essential for patient relatives to train both for themselves and patients in terms of holding on to the life. Medical personnel should examine the psychological condition and well-being of patients at certain intervals and develop the skill of establishing a therapeutic relationship with patients and patient relatives. They should evoke the social support systems of patients and patient relatives. Medical personnel can provide training to the patients, provide them with spiritual support and add family to patient care.

Competing interests

The authors declare that they have no competing interest.

Financial Disclosure

The financial support for this study was provided by the researchers themselves.

Ethical approval

Consent of ethics was approved by the local ethics committee.

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