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Short Report

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Relationship between Coping and Spiritual Health in Renal Transplant Recipients

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Abstract

Patients with end-stage renal disease (ESRD) encounter various challenges following kidney transplantation, which should be managed appropriately. These problems can be partly controlled by considering spirituality as one of the care components. Regarding this, the aim of this study was to investigate the relationship between coping and spiritual health in the renal transplant recipients. This descriptive correlational study was conducted on 169 patients referring to the Organ Transplantation Center at Montasserieh Hospital in Mashhad, Iran. The study population was selected through convenience sampling method. The data were collected using demographic characteristics form, Renal Transplant Coping Scale by Valizadeh et al. (2015), and Spiritual Health Questionnaire developed by Khorashadizadeh et al. (2015). The mean scores of coping and spiritual health were 321.2±15.3 and 123.3±6.2, respectively, which were desirable. There was a significant linear relationship between coping and spiritual health mean scores ($P<0.001$, $r=0.37$). Based on the findings, the reinforcement of spiritual beliefs in patients could be a strategy to promote their coping level.

Keywords: Coping, Kidney Transplantation, Spiritual Health, Post-transplant problems

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Introduction

Renal or kidney transplantation is an alternative treatment for the patients with end-stage renal disease (ESRD) (1). This therapeutic approach has been estimated to facilitate the treatment of 49% of the patients with ESRD. The advances in the therapeutic methods and immune system suppressors have resulted in the improvement of the survival rate of the transplant patients. In this regard, the one-year survival rate of these patients has had a 90% rising trend (2).

However, every treatment can pose its own challenges, which can have a significant effect on the quality of life among the patients (3). Therefore, renal transplantation is not recognized as a permanent recovery and treatment for the ESRD patients undergoing this surgery (4). Moreover, this medical approach may expose the patients to a chronic situation involving numerous challenges (5).

Several studies have reported the fear of transplant rejection as the most important stressor in the ESRD patients (5, 6). Accordingly, Valizadeh et al. revealed that the kidney transplant patients could face lots of difficulties, including necessity of medication use, diet observance, financial pressures, uncertainty about future, marital problems, and everyday stress (7, 8). The patients interpret this stressful situation as a challenge or threat because they face a lot of problems after transplantation (9). Regarding this, the renal transplant recipients are required to comply with their new life (10).

The ability to cope and return to the prior situation in these patients is considered as a leading factor affecting disease management. Various investigations have suggested a positive relationship between coping and consequences of the disease (11). In this regard, failure to fulfill coping can result in inattention to self-care commitment, rejected transplants, return to the strained road of hemodialysis, and consequently high mortality rate in the patients (7). Therefore, the main responsibility of nurses, especially in terms of changing the health status in individuals and creating new and critical situations, is to evaluate the levels of coping in such clients.

The conceptualization of the coping levels in patients not only contributes to patient care and clinical performance, but also results in the fulfillment of emotional support and care adjusted for patients and their families (12, 13). Furthermore, spirituality can be a useful source for physical and emotional health, which should be included as a care component in order to accomplish coping (14).

Spiritual health involves the coordination of four spiritual dimensions, including individual relationships, inter-individual relationships, relationships with nature, and relationships with the top superior (15). There are numerous studies demonstrating that spirituality and religion can bring about changes in the consequences of health problems, such as mortality, reduction in cardiovascular diseases, and depression. Moreover, spirituality can lead to return to the pre-crisis situation (16).

The results of a study conducted by Giraldo et al. (2012) showed that spirituality had a weak, but significant relationship with coping and adaptation process in the patients affected with HIV/AIDS (17). Furthermore, in another study conducted by Rayyani et al. (2014), faith in God was considered by lots of patients as an important facilitator of coping among renal transplant recipients (18).

The review of the related literature revealed a large number of studies examining the relationship between coping and spirituality. Spiritual health has different definitions in various cultures. To the best of our knowledge, there is no study addressing such a relationship with the use of localized research instruments specific to the Iranian culture. Moreover, no study was found on the relationship between coping and spiritual health in Islam and Shiites. Additionally, there are some contradictory results and a knowledge gap to fill in this domain.

Methods

This descriptive correlational study was conducted on renal transplant recipients in the Organ Transplantation Center at Montasserieh Hospital in Mashhad, Iran, in 2016. The study population was selected based on convenience sampling method. The sample size was determined using the correlation coefficient formula according to a pilot study (r=0.3). The total number of the renal transplant recipients who were willing to participate in this study was 169 cases.

The inclusion criteria were: 1) an elapse of at least two months after transplantation (considering that coping occurs within six weeks after transplantation) (7), 2) age older than 18 years, and 3) no

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history of rejected transplants. On the other hand, the exclusion criteria included incomplete questionnaires and withdrawal during the study. Data collection instruments included the demographic characteristics form, Renal Transplant Coping Scale (RTCS) by Valizadeh et al. (2015) (19), and Spiritual Health Questionnaire (SHQ) developed by Khorashadizadeh et al. (2015) (20).
The RTCS contained 69 items and 5 dimensions, including conscious acceptance of existing situation, conceptualization of self-care commitment, conscious tolerance of difficulties, focus on supportive encouragement, and spiritual tolerance. This instrument is rated on a five-point Likert scale ranging within 1-5. In this respect, the minimum and maximum scores were 69 and 345, respectively. In this research tool, the score ranges of 69-124, 125-180, 181-236, 235-292, and 293-345 were considered as very weak, weak, moderate, good, and very good, respectively. The examination of the validity and reliability of this scale in the Iranian culture in 2014 revealed the validity coefficient of 0.9 and Cronbach's alpha coefficient of 0.94.
The SHQ, designed by Khorashadizadeh et al., comprises of 32 items in 2 dimensions, namely cognition and behavior. This research instrument is rated on a four-point Likert scale, ranging within 1-4. Accordingly, the minimum and maximum scores were 69 and 345, respectively. In this questionnaire, the score ranges of 32-56, 57-80, 81-104, and 105-128 indicated weak, moderate, good, and very good, respectively.
The validity and reliability of this tool have been confirmed in Iran in 2014, rendering the validity coefficient of 0.9 and Cronbach's alpha coefficient of 0.94. In the present study, the reliability of both questionnaires was evaluated through test-retest method, revealing the reliability coefficients of 0.87 and 0.85 for the RTCS and SHQ, respectively.
To collect the data, the questionnaires were given by the researcher to the eligible patients referring to the given center for periodical visits by nephrologists in the mornings and evenings of different weekdays. The questionnaires were completed by the patients; however, for the individuals with inadequate literacy, the researcher filled out the instruments. The sampling process lasted about three months. Data analysis was performed by means of SPSS software, version 19.
At the first step, the normal distribution of the variables was studied using the Kolmogorov-Smirnov test. Then, the mean, standard deviation, percentage, and frequency of the levels of coping and spiritual health as well as demographic characteristics of the participants were described through dispersion indices. The Pearson product-moment and Spearman's rank-order correlation tests were employed to analyze the linear regression of the data. The 95% confidence level was considered for all statistical analyses.
To observe the ethical considerations in this study, a permit was obtained from the Research Deputy of Mashhad University of Medical Sciences, Mashhad, Iran and the Organ Transplantation Center at Montasserieh Hospital. After obtaining an approval from the Ethics Committee of Mashhad University of Medical Sciences, arrangements were made with the management of Montasserieh Hospital, and written informed consent was obtained from the participants. Moreover, the confidentiality of the data and their anonymity, along with the objectives of the study and the way to access the results were emphasized within this research process.

Results

According to the results, the mean age of the patients was 37.3±12.5 years (age range: 18-70 years). Furthermore, the mean durations of transplantation and hemodialysis were 39.2±48.4 and 32.8±24.2 months, respectively. The demographic characteristics of the participants are illustrated in Table 1. The mean total scores of coping and spiritual health were 32.3±15.3 and 123.3±6.2, respectively, which were indicative of good levels.
Based on the results of the correlational study, there was a statistically significant linear relationship between the mean score of coping and that of spiritual health ($P<0.001$, $r=0.37$). Except for the conscious acceptance of existing situation ($P=0.16$), all coping dimensions, including understanding the necessity of self-care , conscious tolerance of difficulties, focus on supportive encouragement, and spiritual tolerance had a significant linear relationship with the dimensions of spirituality and total spirituality ($P<0.001$) (Table 2).

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Table 1. Demographic characteristics of the study participants

Variable		Frequency (percentage)
Gender	Male	86 (50.9%)
	Female	83 (49.1%)
Marital status	Single	50 (29.6%)
	Married	116 (68.6%)
	Divorced	3 (1.8%)
Occupation	Unemployed	109 (64.9%
	Self-employed	48 (28.6%)
	Employed	9 (5.4%)
	University student	2 (1.2%)
Level of education	Illiterate	13 (7.7%)
	Primary school	46 (27.4%)
	Junior high school	32 (19.0%)
	High school	61 (36.3%)
	Academic degree	16 (9.5%)
Type of transplantation	Deceased donor	120 (72.7%)
	Living donor	47 (27.3%)
Islamic sect	Shiite	146 (86.4%)
	Sunni	23 (13.6%)

Table 2. Relationship of coping and spiritual health dimensions in renal transplant recipients

		Dimensions of spirituality		Total spirituality
		Cognitive	Behavioral	
Coping dimensions	Conscious acceptance of existing situation	r=0.10 P=0.20	r=0.10 P=0.18	r=0.11 P=0.16
	Conceptualization of self-care commitment	r=0.24 P=0.002	r=0.36 P<0.001	r=0.32 P<0.001
	Conscious tolerance of difficulties	r=0.29 P<0.001	r=0.32 P<0.001	r=0.32 P<0.001
	Focus on supportive encouragement	r=0.20 P=0.008	r=0.22 P=0.003	r=0.26 P=0.001
	Spiritual tolerance	r=0.50 P<0.001	r=0.38 P<0.001	r=0.52 P<0.001
	Total coping	r=0.32 P<0.001	r=0.33 P<0.001	r=0.37 P<0.001

The results of the Pearson correlation test also suggested no statistically significant relationship between total coping and its components, except for the conscious acceptance of existing situation and duration of transplantation (P=0.32, r=-0.08). Furthermore, there was no significant relationship between total coping and its components, except for the conscious tolerance of difficulties and duration of hemodialysis (P=0.90, r=0.01).

Based on the results of the logistic regression model, the levels of coping and spiritual health showed a significant relationship with marital status (single=0 and married=1). Therefore, spiritual health and marital status were entered into a multiple regression model, and the results revealed that these two variables could predict 0.493 of the variance of the coping levels. The highest predictive power of coping was similarly associated with the marital status. Finally, the amount of spirituality with the beta coefficient of 0.686 could predict coping in patients and was significantly correlated with coping.

Implications for Practice

Coping with a disease and its subsequent consequences and problems is considered as one of the basic concepts and important factors in disease management. The ability of the individuals to deal with various conditions following the disease can play an important role in the implementation of effective nursing interventions. Accordingly, the determination of the amount the transplant recipients, undergoing numerous stressors, cope with the existing situation is of fundamental importance.

Therefore, the nurses, especially those working in the renal transplantation centers, should be able to examine the levels of coping in the patients with renal transplants in order to provide a care-

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promoting program. Accordingly, they can prevent the patients from encountering risks following the lack of coping with rejected transplantation and returning to hemodialysis through the provision of appropriate and timely trainings. Moreover, the establishment of religion-based counseling clinics to increase the levels of spiritual health can be a solution for enhancing the levels of coping in such patients.

Conflicts of Interest

The authors declare that there is no conflict of interest.

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