

Negative Religious Coping, Positive Religious Coping, and Quality of Life Among Hemodialysis Patients

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Abstract

Background: Religious coping is known as a main resource influencing how individuals cope with the complications and stressors of chronic disease.

Objectives: The aim of this study was to assess the relationship between religious coping and quality of life among hemodialysis patients.

Methods: This cross-sectional study was conducted in Qom, Iran, from June 2012 to July 2013. Ninety-five end-stage renal disease (ESRD) patients undergoing hemodialysis were selected via the convenience sampling method. Data were collected via a questionnaire comprising items on sociodemographic information, quality of life, the anxiety and depression scale, and religious coping. Following this, the data were analyzed using descriptive statistics and logistic regression analysis.

Results: The mean age of patients was 50.4 (standard deviation [SD] = 15.7) years, and most were male (61%). The mean score for positive religious coping was 23.38 (SD = 4.17), while that for negative religious coping was 11.46 (SD = 4.34). It was found that 53.6% of patients had higher than the mean score of positive religious coping, while those with negative religious coping made up 37.9%. Negative religious coping was associated with worse quality of life, including physical functioning (odds ratio [OR] = 0.72; $P = 0.009$), role physical (OR = 0.79; $P = 0.04$), vitality (OR = 0.62; $P = 0.005$), social functioning (OR = 0.69; $P = 0.007$), and mental health (OR = 0.58; $P = 0.01$) after controlling for sociodemographic, clinical, and anxiety and depression variables.

Conclusions: The results indicated that patients with negative religious coping abilities were at risk of a suboptimal quality of life. Incorporating religious support in the care of hemodialysis patients may be helpful in improving quality of life in this patient population. Further longitudinal studies are needed to determine whether these associations are causal and the direction of effect.

Keywords: Negative Religious Coping, Positive Religious Coping, Quality Of Life, Hemodialysis

1. Background

The end-stage renal disease (ESRD) is an important health problem worldwide. Advances in chronic hemodialysis have improved the survival of ESRD patients (1). However, patients with ESRD suffer from several physical and psychosocial symptoms, and conventional treatment can impair quality of life (QOL) in these patients. Thus, the strategies that patients use to cope with these challenges are of prime importance (2-4).

Religious coping is an important strategy that can be used to cope with stressful situations (5). This is described as "the use of cognitive and behavioral techniques, in the face of stressful life events" (6). Religious coping is a multi-dimensional construct and can have both positive and negative effects on outcomes (7). Thus, not all religious coping strategies are useful. Positive religious coping is thought to be associated with benefits in psychosocial adjustment, whereas negative religious coping leads to poorer consequences and is therefore considered maladaptive (8).

In several studies, religious coping has been consistently found to be an important factor affecting QOL in most chronic conditions, including breast cancer (9), chronic pain (10), cancer (11), pulmonary disease (12), and

human immunodeficiency virus (HIV) (13). However, limited research has been done on the effects of religious coping and QOL in hemodialysis patients. Recently, Lucchetti evaluated 205 hemodialysis patients and found that religiousness was positively associated with QOL in Brazilian dialysis patients (14). In addition, Zamanian et al. found that the religious dimension of spirituality was positively associated with health-related QOL (15). QOL could also be related to religion and culture, but no studies have evaluated the relationship between religious coping and QOL among patients with ESRD in Muslim countries, such as Iran.

2. Objectives

The purpose of this study was to assess the relationship between religious coping and QOL in hemodialysis patients.

3. Methods

3.1. Design and Patients

This cross-sectional study was conducted from June 2012 to July 2013 in Qom, a holy city in the central region

of Iran. A group of ESRD patients referred to the main hemodialysis centers in the city were selected via the convenience sampling method. Patients were included in the study if they were aged 15 and above, had a hemodialysis history of more than 3 months without previous transplantation, and had no previous psychiatric disease or psychoactive medicine use. Patients were asked to complete the study questionnaires.

3.2. Instruments

We used a four-part questionnaire, as follows:

3.2.1. Part 1

Collected clinical and sociodemographic information. The questionnaire consisted of questions about age, marital status, educational status, economic and status employment, comorbidity, number and duration of hemodialysis, smoking, and body mass index (BMI).

3.2.2. Part 2

In part 2, QOL was measured using the SF-36. This has eight subscales, namely physical functioning, body pain, general health, vitality, social functioning, role limitations due to physical problems, role limitations due to emotional problems, and mental health. Scores in each subscale range of 0 - 100, with 0 representing the worst conditions and 100 representing the best possible score. Previous evaluations of the original and Persian versions of SF-36 indicated good reliability and validity (16).

3.2.3. Part 3

In part 3, religious coping was measured using the brief religious coping (RCOPE). It is a 14-item questionnaire that was developed by Pargament in older US populations. The instrument categorizes religious coping into seven positive attributes (e.g., looked for a stronger connection with God) and seven negative attributes (e.g., questioned God's love for me). Each attribute is rated on a four point Likert scale ranging from 1 to 4 (1 = not at all, 2 = rarely, 3 = sometimes, and 4 = a great deal) (17).

3.2.4. Part 4

Finally, in part 4 the hospital anxiety and depression scale (HADS) was applied to evaluate anxiety and depression occurring in the hemodialysis patients. The HADS consists of seven items for anxiety and seven for depression. Items are scored on a 4-point scale from 0 (not present) to 3 (considerable) and scores are added, giving subscale scores on the anxiety and the depression from 0 to 21 (18).

3.3. Ethical Considerations

The research followed the tenets of the declaration of Helsinki, and it was approved by the ethical committee of Qom University of Medical Sciences. All patients were included after providing informed consent. Participation in this study was voluntary; patients were free to withdraw at any time without any effect on their treatment process.

3.4. Statistical Analysis

All analyses were performed using SPSS version 16. Descriptive statistics were used to explore the data. An independent t-test and one-way analysis of variance were used for comparison. Logistic regression analysis was performed to assess the relationship between religious coping and health-related QOL while controlling for sociodemographic characteristics, clinical variables, and anxiety and depression.

4. Results

4.1. Patient Characteristics

In all, 120 patients with ESRD were approached. Of these, 95 individuals agreed to participate in the study (response rate, 79.1%). The mean age of patients was 50.4 (standard deviation [SD] = 15.72) years; 61% were male, and 76.8% were married. The mean time on hemodialysis was 37.83 (SD = 39.14) months. The characteristics of the study participants are shown in Table 1.

4.2. Patient Quality of Life and Religious Coping

The mean score for health-related QOL variables and religious coping are presented in Table 2. Higher and lower scores were seen for social functioning (59.37 ± 26.57) and role limitations due to physical health problems (30.91 ± 35.15), respectively. The mean scores for positive and negative religious coping were 23.38 ± 4.17 and 11.46 ± 4.34 , respectively.

4.3. Linear Regression Analysis

To assess the relationship between QOL and religious coping, multiple logistic regression analysis was performed. Each subscale was treated as a dependent variable; religious coping, as well as the sociodemographic, clinical, and anxiety and depression variables were considered independent factors. The results obtained from the multiple logistic regression model showed that negative religious coping was associated with worse physical functioning (odds ratio [OR] = 0.72; $P = 0.009$), role physical (OR = 0.79; $P = 0.04$), vitality (OR = 0.62; $P = 0.005$), social functioning (OR = 0.69; $P = 0.007$), and mental health (OR = 0.58; $P = 0.01$) after controlling for sociodemographic, clinical,

Table 1. Clinical and Sociodemographic Information of the Study Sample (N = 95)

	No. (%)
Age, y, Mean (SD)	50.40 (15.72)
Gender	
Male	58 (61.1)
Female	37 (38.9)
Educational status	
Illiterate	30 (31.5)
Primary	30 (31.5)
Secondary	28 (29.4)
Higher	7 (7.6)
Marital status	
Single	12 (12.6)
Married	73 (76.8)
Divorced/widowed	10 (10.6)
Employment status	
Employed	21 (22.1)
Unemployed/housewife	74 (77.9)
Place of living	
Urban	88 (92.6)
Rural	7 (3.4)
Comorbidity	
Yes	55 (57.9)
No	40 (42.1)
Body mass index, Mean (SD)	20.16 (3.11)
Economic status	
Poor	45 (47.3)
Intermediate	40 (42.1)
Good	10 (10.6)
Smoking status	
Smoker	16 (16.8)
Nonsmoker	79 (83.2)
Time on dialysis, mo, Mean (SD)	37.83 (39.14)
Dialysis number, Mean (SD)	2.92 (0.30)

and anxiety and depression variables. There was no association between positive religious coping and the QOL subscales.

5. Discussion

According to our study results, greater use of negative religious coping was associated with worse QOL in most

Table 2. Descriptive Statistics for Quality of Life and Religious Coping

	Mean (SD)
Religious coping, possible score range from 7 to 28^a	
Negative	11.46 (4.34)
Positive	23.38 (4.17)
Quality of life scores, possible score range, 0 - 100^b	
Physical functioning	43.82 (27.60)
Role physical	30.91 (35.15)
Bodily pain	45.51 (29.52)
General health	39.54 (19.76)
Vitality	37.44 (23.74)
Social functioning	59.37 (26.57)
Role emotional	45.31 (41.81)
Mental health	47.23 (23.23)

^a A higher score on positive coping indicates better condition, while a higher score on negative coping is considering destructive.

^b Higher scores indicate better conditions.

of domains among hemodialysis patients. ESRD not only destroys the physical wellbeing of the patients, but it also threatens their social, functional, and emotional wellbeing. This condition causes patients to ask about themselves and the meaning of their lives, creating a sense of disconnectedness with the religious community and an unstable relationship with God. This negative coping leads to poorer QOL. Our study findings are consistent with previous studies in populations facing advanced illnesses, such as acquired immunodeficiency (AIDS), advanced cancer (19), schizophrenia (20), breast cancer (21), epilepsy (22), asthma (23), and ESRD (24). In their study of hemodialysis patients in Brazil, Ramirez et al. reported a reverse significant correlation between religious struggle and QOL, while positive religious coping was associated with improved QOL (24). Another study including 170 patients with advanced cancer found that greater reported use of negative religious coping was related to poorer overall QOL (11). In addition, Tedrous indicated negative coping is associated with a reduced QOL (22).

We did not find any significant relationships between positive religious coping and QOL. Perhaps this was the result of other variables, such as social support and self-efficacy, which we did not control for in the study. Another reason may be the low sample size in our research. However, negative religious coping would be more consistently predictive of health outcomes than positive religious coping. In a cross-sectional study of 69 patients with advanced cancer, religious coping was associated with improved QOL in multivariate analyses. However, in their

Table 3. Results of Logistic Regression Analysis

	PF, OR (95% CI)	P	RP, OR (95% CI)	P	BP, OR (95% CI)	P	GH, OR (95% CI)	P	VI, OR (95% CI)	P	SF, OR (95% CI)	P	RE, OR (95% CI)	P	MH, OR (95% CI)	P
Socio-demographic variables																
Age	0.95 (0.90 - 1.02)	0.19	1.02 (0.97 - 1.08)	0.32	0.96 (0.90 - 1.03)	0.30	0.93 (0.88 - 0.99)	0.04	0.99 (0.94 - 1.05)	0.96	0.89 (0.82 - 0.97)	0.009	1.02 (0.96 - 1.08)	0.37	1.04 (0.96 - 1.12)	0.26
Gender, Male 1.0 (ref)	1.63 (0.28 - 9.37)	0.58	0.54 (0.10 - 2.92)	0.47	4.17 (0.74 - 23.34)	0.10	0.33 (0.06 - 1.80)	0.20	1.51 (0.24 - 9.38)	0.65	1.93 (0.29 - 12.64)	0.49	0.59 (0.11 - 3.20)	0.54	11.10 (0.83 - 148.71)	0.06
Marital status	0.09 (0 - 1.35)	0.08	0.64 (0.07 - 5.20)	0.67	0.19 (0.01 - 2.26)	0.18	0.35 (0.03 - 3.40)	0.36	3.40 (0.29 - 39.91)	0.33	0.01 (0.01 - 0.34)	0.01	1.49 (0.16 - 13.50)	0.71	6.10 (0.32 - 114.85)	0.22
Education	1.33 (0.74 - 2.39)	0.32	1.48 (0.85 - 2.56)	0.16	1.44 (0.84 - 2.46)	0.17	0.84 (0.48 - 1.45)	0.53	1.13 (0.60 - 2.12)	0.69	1.08 (0.59 - 1.99)	0.78	1.43 (0.80 - 2.54)	0.22	0.91 (0.39 - 2.09)	0.82
Employment status	1.16 (0.22 - 5.94)	0.85	1.99 (0.42 - 9.39)	0.38	0.25 (0.04 - 1.31)	0.10	0.67 (0.14 - 3.18)	0.62	0.23 (0.04 - 1.33)	0.10	1.43 (0.23 - 8.67)	0.69	0.99 (0.19 - 5.05)	0.99	0.06 (0.01 - 0.59)	0.01
Clinical variables																
Time on dialysis	0.99 (0.97 - 1)	0.26	1.02 (0.98 - 1.02)	0.84	1.01 (0.99 - 1.03)	0.21	0.98 (0.97 - 1)	0.17	0.98 (0.97 - 1.06)	0.18	1.02 (0.99 - 1.05)	0.07	1.03 (1.01 - 1.05)	0.01	0.99 (0.97 - 1.01)	0.42
Number of dialysis	2.60 (0.26 - 25.88)	0.41	0.64 (0.27 - 1.53)	0.32	0.16 (0.01 - 1.79)	0.14	0.05 (0.004 - 0.90)	0.04	1.46 (0.11 - 18.56)	0.76	1.72 (0.18 - 15.78)	0.62	1.73 (0.12 - 24.98)	0.68	0.49 (0.03 - 7.77)	0.62
Current smoker	0.95 (0.14 - 6.28)	0.95	1.12 (0.16 - 7.55)	0.90	1.73 (0.05 - 53.92)	0.54	0.33 (0.03 - 3.46)	0.35	0.53 (0.04 - 6.05)	0.61	0.45 (0.05 - 3.79)	0.46	2.82 (0.36 - 21.77)	0.31	0.08 (0.01 - 3.23)	0.18
Comorbidity, Yes	0.15 (0.03 - 0.62)	0.008	0.76 (0.22 - 2.55)	0.37	0.57 (0.16 - 2.01)	0.38	0.30 (0.08 - 1.05)	0.06	0.34 (0.09 - 1.32)	0.12	0.25 (0.05 - 1.11)	0.06	0.31 (0.08 - 1.10)	0.07	0.04 (0.01 - 0.34)	0.003
Psychological distress																
Anxiety	1.02 (0.76 - 1.37)	0.86	0.95 (0.73 - 1.24)	0.75	0.69 (0.49 - 0.98)	0.03	0.83 (0.62 - 1.10)	0.19	0.83 (0.61 - 1.13)	0.24	0.73 (0.52 - 1.02)	0.06	0.66 (0.47 - 0.94)	0.02	0.47 (0.27 - 0.83)	0.01
Depression	1.08 (0.80 - 1.47)	0.59	1.21 (0.88 - 1.66)	0.22	0.94 (0.70 - 1.26)	0.69	0.97 (0.72 - 1.30)	0.84	1.03 (0.76 - 1.41)	0.81	1.11 (0.80 - 1.54)	0.52	1.31 (0.96 - 1.78)	0.08	1.02 (0.69 - 1.50)	0.90
Religious coping																
Negative religious coping	0.72 (0.57 - 0.92)	0.009	0.79 (0.62 - 0.99)	0.04	0.99 (0.83 - 1.19)	0.95	0.96 (0.82 - 1.12)	0.64	0.62 (0.45 - 0.86)	0.005	0.69 (0.52 - 0.90)	0.007	1.02 (0.87 - 1.19)	0.78	0.58 (0.38 - 0.88)	0.01
Positive religious coping	0.86 (0.72 - 1.01)	0.08	0.88 (0.75 - 1.02)	0.10	0.95 (0.81 - 1.10)	0.51	1.01 (0.87 - 1.18)	0.84	0.90 (0.75 - 1.07)	0.23	1.05 (0.89 - 1.24)	0.55	0.97 (0.83 - 1.14)	0.75	0.93 (0.74 - 1.16)	0.54

Abbreviations: BP, bodily pain; GH, general health; MH, mental health; PF, physical functioning; RP, role physical; RE, role emotional; SF, social functioning; VI, vitality.

study of AIDS patients, Michael et al. found no significant correlation between positive religious coping and QOL (25), which is congruent with the present study.

5.1. Conclusion

In conclusion, the findings from the study highlight the importance of religious coping for QOL of hemodialysis patients. Negative religious coping predicts worse quality of life in patients with ESRD. This indicates the need for psychosocial and religious support in caring for Iranian hemodialysis patients.

5.2. Limitations of the Study

Several limitations of this research should be noted. This cross-sectional study did not allow for measurement of variables over time. The nonrandom sampling and limited sample size reduced the generalizability of the findings in this study; carrying out a study with a larger sample

size could help to address this limitation. Moreover, a longitudinal study should be performed that controlled for other variables, such as depression, anxiety, self-efficacy, and physical and psychological symptoms, to generate a better understanding of the effects of religious coping on health and how to improve hemodialysis patients' QOL. Despite these limitations, the current study appears to be unique in that we assessed QOL, religious coping, and their association among hemodialysis patients in an Islamic context.

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Footnotes

Authors' Contribution: Zahra Taheri-Kharameh acted as the main investigator, designed the study, collected the data, and wrote the first draft. Hadi Zamanian was the study supervisor and contributed to the writing process and analysis. Ali Montazeri was the study supervisor, contributed to all aspect of the study, and provided the final manuscript. All authors read and approved the paper. Azadeh Asgarian and Roya Esbiri collected the data.

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