

Research Paper



Association Between Religious Coping and Body Image in Patients With Chronic Kidney Failure Undergoing Hemodialysis

Hamid Sharif-Nia^{1,2} , Reza Fatehi^{3*} , Poorya Nowrozi³ , Mohammad Hashem Gholampour³ , Alireza Ghanbari³ , Amir Hossein Goudarzian⁴ , Fatemeh Miraghai³

1. Psychosomatic Research Center, Mazandaran University of Medical Sciences, Sari, Iran.

2. Department of Nursing, Amol School of Nursing and Midwifery, Mazandaran University of Medical Sciences, Sari, Iran.

3. Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran.

4. Department of Psychiatric Nursing, School of Nursing and Midwifery, Tehran University of Medical Science, Tehran, Iran.



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ABSTRACT

Background and Objective: Despite the impact of hemodialysis on patients' lives, religious strategies are effective in reducing dependence and maintaining self-esteem. Additionally, a positive body image can enhance the quality of life (QoL). This study investigates the association between religious coping and body image in hemodialysis patients to predict their QoL.

Materials & Methods: This descriptive-correlational study was conducted from March to June 2023 on 280 hemodialysis patients. The participants were selected through purposive sampling. The data collection instruments included a demographic form, Littleton's body image concern inventory (BICI) and the religious coping questionnaire (RCOPE). The associations between variables were analyzed using linear regression in SPSS software version 26.

Results: The participants had an Mean±SD age of 56.92±13.42 years. The results indicate that increasing age (B=0.128) and female gender (B=3.356) are associated with reduced body image concerns. In contrast, marital status (B=-4.246) and religious coping (B=-0.578) effectively decrease body image concerns.

Conclusion: Religious coping serves as a predictor of positive body image among hemodialysis patients, highlighting the significance of religious beliefs and values in how patients perceive their bodies. Enhanced levels of religious coping assist patients in adapting to physical challenges and fostering a more positive body image. This discovery can be valuable in crafting psychological interventions to enhance body image and boost the mental well-being of patients. Acknowledging spiritual dimensions proves effective in managing chronic illnesses.

Keywords: Body image, Religious coping, Hemodialysis

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* Corresponding Author:

Reza Fatehi

Address: Student Research Committee, Mazandaran University of Medical Sciences, Sari, Iran.

Phone: +98 (902) 1552055

E-mail: r3fatehi@gmail.com



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Introduction

Chronic kidney disease (CKD) is a prevalent health concern that ultimately develops into end-stage renal disease (ESRD) [1]. In 2017, the global count of individuals with ESRD exceeded 850 million, with projections indicating that by 2040, it will emerge as a leading cause of mortality among individuals undergoing hemodialysis [2]. The prevalence of ESRD in the US, Europe and Iran has been documented at 1500, 800 and 360 cases per million, respectively. Notably, in Iran, the prevalence of this advanced chronic ailment notably surged in 2006 compared to 2000. Hemodialysis stands out as one of the most prevalent treatment modalities for ESRD [3]. Estimates suggest a surge of 5.4 million individuals in hemodialysis patients by 2030 [4].

Hemodialysis effectively enhances CKD management and elevates these patients' quality of life (QoL) [5]. Despite advancements in hemodialysis that have bolstered the survival rates of ESRD patients, individuals with ESRD contend with various physical and psychosocial symptoms, and traditional treatments can disrupt their QoL [1, 6]. While hemodialysis treatment preserves the lives of those with ESRD, it does not avert the disease's complications, anxiety, despair and similar challenges. Hence, the strategies patients employ to confront these obstacles hold significant importance. Religious coping is crucial for navigating stressful circumstances [1, 6].

Religious coping entails an individual's ability to integrate religious beliefs and values into daily life and experiences. This capability assists individuals in effectively addressing life's challenges and uncertainties, particularly through aligning with religious principles and faith in a higher power, enhancing their productivity, and fostering a sense of psychological security [7]. It can serve as a criterion for improving an individual's mental and spiritual well-being and fortifying their connection with spirituality and religion [7, 8]. Despite the impact of dialysis on both the patient and their family, there exists a necessity for an efficient strategy to diminish dependency, uphold self-esteem, and alleviate concerns regarding body image. Research indicates that healthcare providers often lack sufficient knowledge regarding body image [9]. These patients encounter lifestyle constraints due to their condition, which can influence social interactions, beliefs, and their sense of control. Body image, integral to personal identity formation, significantly affects how patients perceive themselves and individuals undergoing hemodialysis confront physical and psychological challenges like fear, anxiety, and despair. Moreover, they

encounter difficulties accepting changes in their physical appearance, which can result in concerns about body image [10].

Body image distortion is distressing and can lead to adverse consequences. A negative body image can impact physical and mental well-being, self-esteem, mood, competence and social and occupational performance [11]. Religion holds significant influence in the lives of numerous individuals [12]. Over recent years, the correlation between religiosity and psychosocial coping has garnered attention in the healthcare domain. It appears that religious or spiritual aspects, broadly defined, play a crucial role in the adaptation process for many patients, particularly those confronting severe illnesses like CKD patients undergoing hemodialysis [13].

With the escalating number of patients undergoing hemodialysis and encountering specific challenges like chronic treatment, lifestyle constraints and substantial alterations in body image and functionality, fostering a positive body image can significantly enhance the QoL for these individuals. Studies indicate a heightened prevalence of body image disorders among hemodialysis patients, with levels notably surpassing those in the general population [13-15]. Effective strategies to address negative body image include encouraging patients to concentrate on positive attributes beyond their physical appearance, such as their values and relationships [14], engaging in suitable physical activities, utilizing cosmetics and employing religious coping mechanisms [9]. Leveraging religious support and coping strategies can prove more efficacious in addressing the psychological and emotional hurdles faced by hemodialysis patients compared to alternative approaches [16, 17].

Given the elevated prevalence of body image disorders among hemodialysis patients and the significant influence of religion in Iran, understanding the correlation between religious coping and body image in hemodialysis patients holds paramount importance in addressing their mental well-being challenges. Understanding the impact of religious coping on shaping the body image of hemodialysis patients is crucial for various reasons. Firstly, it can offer insights into the psychological and emotional effects of religious coping on body image perception, which is vital for addressing the overall well-being of these individuals. Furthermore, such investigations can help in crafting tailored interventions and support mechanisms that consider the religious and spiritual aspects of coping with body image issues within this demographic. Similarly, exploring this connection can contribute to a broader comprehension of the intricate

interplay between religious coping, mental health, and physical well-being within the realm of chronic illness and medical care. Hence, conducting a study on the relationship between religious coping and body image in hemodialysis patients becomes imperative to bridge this knowledge gap and advance comprehensive care and assistance for these individuals.

Materials and Methods

Design and participants

The study design employed in this research was descriptive-correlational and was carried out from March to June 2023. The sample size was 280 individuals using G*Power software version 3.1.7, considering the Equation 1:

$\alpha=0.05$, test power=80% and effect size (d)=0.3.

$$n = \frac{\omega^2}{(1-\omega^2)^2} \left(\frac{Z_{1-\alpha/2} + Z_{1-\beta}}{\omega} \right)^2 + 3$$

Confidence interval for the correlation coefficient

The study population comprised patients diagnosed with ESRD undergoing hemodialysis, selected from the Shahrvand Dialysis Center in Sari City, Iran, using the available sampling method. The inclusion criteria encompassed the ability to read and write and the age of 18 years and above. The exclusion criteria involved alcohol addiction, mental, emotional and verbal issues, reduced consciousness levels, and digestive ailments like gastric ulcers, gastric reflux, and congestive heart failure [9].

Research tools

Data collection instruments comprised a demographic checklist (including age, gender, depression, marital status, education level, economic status and occupation), Littleton's body image concern inventory (BICI) and the religious coping questionnaire (RCOPE) developed by Pargament et al. [19]

Body image concern inventory (BICI)

The BICI questionnaire comprises 19 items initially developed and validated by Littleton et al. (2005), with confirmed validity and reliability [18]. The BICI assesses an individual's discontent, apprehension, and embarrassment concerning their appearance, including behaviors like checking and concealing perceived flaws and the extent to which fear about one's appearance hampers social functioning. Responses are rated on a 5-point Likert scale ranging from never=1 to always=5. The total scale score ranges from 19 to 95, with higher scores in-

dicating increased dissatisfaction with one's body image or appearance [18]. In this study, the questionnaire's reliability was assessed using the Cronbach α coefficient, yielding a value of 0.943.

Religious coping questionnaire (RCOPE)

The investigation into religious coping methods utilized the short form of RCOPE, a tool with confirmed validity and reliability. This standardized instrument comprises 14 items designed by Pargament et al. [19] to assess positive and negative religious coping strategies. Each scale, positive and negative, consists of seven religious coping items. RCOPE responses are rated on a 4-point Likert scale ranging from "not at all" to "very much." Positive religious coping involves confronting adverse life events, and an individual embraces these events by deriving positive insights and changes linked to divine assistance [19]. In this study, the questionnaire's reliability was assessed using Cronbach's α , resulting in a value of 0.707.

Data analysis

The obtained data were analyzed using SPSS software, version 26. The normal distribution of continuous quantitative data was assessed using the Kolmogorov-Smirnov test. Simple linear regression was employed to examine the relationship between religious coping variables and body image among hemodialysis patients. Furthermore, variables that exhibited significance in simple linear regression were concurrently assessed in multiple linear regression. A significance level of <0.05 was considered for all tests.

Results

Demographic characteristics

The mean age of the participants was 56.92±13.42 years. Additionally, 35.90% were married, 56.1% were male, 60.35% had a moderate economic status and approximately 86.07% of patients held a diploma (Table 1). The average religious coping score was 34.21±5.20 and the mean body image concern score was 30.87±13.49.

Table 2 displays the outcomes of simple linear regression investigating the relationship between age, gender, education level, marital status, history of depression, economic status, occupation and religious coping with concerns regarding body image. Age (B=0.164, β =0.163, P=0.007), gender (B=4.169, β =0.154, P=0.011), marital status (married) (B=-6.031, β =-0.131, P=0.03) and religious coping (B=-0.565, β =-0.153, P<0.001) emerged as

Table 1. Demographic characteristics of the patients (n=280)

Variables	Category	No. (%) / Mean \pm SD
Gender	Male	157(56.1)
	Female	123(43.9)
Marital status	Single	17(6.07)
	Married	253(90.35)
	Divorced	10(3.57)
Economic status	Poor	77(27.5)
	Moderate	169(60.35)
	Good	34(12.14)
Education	Diploma	241(56.07)
	BSc and MSc	32(11.42)
	PhD	7(2.5)
History of depression	Yes	71(25.35)
	No	208(74.28)
Occupation	Non-governmental	100(35.71)
	Employee	18(6.42)
	Housewife	110(39.28)
	Unemployed	18(6.42)
	Retired	31(11.07)
Age (y)		56.92 \pm 13.42

Current Psychosomatic Research

predictors of body image concerns. Conversely, no significant associations were found between marital status (divorced), education level, economic status, history of depression and occupation with body image concerns (as per the ANOVA results). Additionally, [Table 2](#) outlines the findings of multiple linear regression. Upon inclusion of age ($B=-0.128$, $\beta=0.128$, $P=0.041$), gender ($B=3.356$, $\beta=0.124$, $P=0.036$), marital status (married) ($B=-4.246$, $\beta=-0.116$, $P=0.046$) and religious coping ($B=-0.578$, $\beta=-0.223$, $P<0.001$), the multiple regression model achieved significance. This model accounted for 10.4% of the predictors of body image concerns among hemodialysis patients.

Discussion

The objective of this study was to explore the correlation between religious coping and body image among

patients with CKD undergoing hemodialysis. The findings indicated that variables such as economic status, education level, history of depression, and occupation did not exhibit a significant relationship with body image concerns. Conversely, factors like female gender and age (associated with increased body image concerns), marital status (being married) and religious coping (linked to reduced body image concerns) emerged as predictors of body image concerns in hemodialysis patients. This outcome aligns with prior research [\[20-24\]](#); however, it contrasts with a study conducted by Chen on factors influencing body image, where individuals with higher education displayed lower body image concerns [\[25\]](#). This discrepancy could be attributed to heightened health awareness, elevated expectations, increased sensitivity to physical alterations and adherence to societal norms among individuals with higher education levels [\[15\]](#). In the current study, no significant correlation was

Table 2. The variables predicting body image concern (n=280)

Variables	Category	Simple Linear Regression			Multiple Linear Regression			Correlation Coefficient	Coefficient of Determination
		P	β	B	P	β	B	r	R ²
Gender	Male*	0.011	0.154	4.169	0.036	0.124	3.356		
	Female								
Marital status (single)*	Married	0.03	-0.131	-6.031	0.046	0.116-	-4.246		
	Divorced	0.893	0.008	0.617	-	-	-		
Economic status (poor)*	Moderate	0.204	0.078	1.624					
	Good	0.254	0.032	0.976					
Education (diploma)*	BSc and MSc	0.658	0.019	0.579					10.4%
	PhD	0.823	0.02	0.594					
History of depression (yes)*	No	0.818	-0.014	-0.429					
Occupation (non-governmental)*	Employee	0.737	0.020	0.177					
	Housewife	0.621	-0.07	-0.240					
	Unemployed	-0.09	-0.21	-0.831					
	Retired	-0.405	-0.34	-0.957					
Age		0.007	0.163	0.164	0.041	0.128	0.128	0.42	
Religious coping		<0.001	-0.153	-0.565	<0.001	-0.223	-0.578	-0.564	-

*Baseline.

Current Psychosomatic Research

observed between education and body image, consistent with the findings of Sharif Nia et al. indicating that education does not impact body image [9]. As a multidimensional construct, body image encompasses perceptions, thoughts, emotions, and behaviors associated with the body’s appearance, capabilities and functions.

Consequently, alterations in physical, mental and social functions can influence one’s body image [26]. The findings also revealed that women, married individuals, and older people exhibited higher body image concerns. Numerous studies on the impact of gender on body image affirm that women undergoing hemodialysis may harbor greater apprehensions about their body image compared to men [27, 28]. Moreover, Sadeghian et al.’s results, which examined hemodialysis patients, corroborate our conclusions [29].

Our results indicate that married hemodialysis patients are less concerned about their body image than single patients. This observation can be analyzed from social

support and psychological security perspectives. Married patients tend to receive more emotional and psychological backing due to their partners. This support helps them better manage physical transformations and challenges stemming from the illness [30]. A partner who offers love and attention can instill a sense of worth and acceptance in patients, even amidst physical difficulties. Social and emotional support can enhance the QoL for individuals with chronic conditions and alleviate concerns related to body image [31, 32].

Conversely, single, divorced and widowed patients may encounter heightened emotional and psychological challenges stemming from a lack of emotional and social support, often feeling isolated and uncared for [33]. Such sentiments can precipitate anxiety, depression, and heightened concerns regarding body image. These individuals might perceive themselves as less accepted due to physical issues, potentially undermining their self-assurance and body contentment [33, 34]. Studies indicate that feelings of loneliness and social iso-

lation can detrimentally impact mental well-being and one's body image perception [35]. Hence, marital status plays a pivotal role in diminishing concerns and anxieties about body image among hemodialysis patients. On the other hand, the absence of a significant relationship between economic status and body image concerns can be rationalized by the notion that hemodialysis patients may gradually acclimate to their condition and develop a form of adaptation to the illness. This adjustment process could mitigate the influence of economic status on body image concerns [9, 36].

The current study's findings align with previous research outcomes regarding the capacity to predict body image concerns through religious coping among individuals undergoing hemodialysis treatment [37-42]. Hence, a correlation exists between religious coping and body image concerns, suggesting that enhancing religious coping mechanisms can mitigate body image concerns in individuals receiving hemodialysis treatment. Individuals with a strong bond with God and heightened spirituality levels tend to exhibit lower levels of body image concerns. Akrawi et al. similarly demonstrated that robust religious convictions correlate with reduced body image concerns [43]. Conversely, religion (religious beliefs) and spirituality (connection with a higher being) can enhance body image perceptions. People with religious beliefs usually have better body image and body satisfaction due to attributing life events to spiritual concepts [44]. In addition, religious people believe that the body is God's creation and surrounds him. This belief reduces the importance of appearance, emphasizes the unconditional acceptance of the body, and causes people to pay limited attention to the opinions of others about their appearance [40, 45]. Addressing the religious and spiritual needs of hemodialysis patients can be a valuable component of comprehensive and patient-centered care. Helping patients use religious coping mechanisms may increase their ability to adapt to the physical challenges of illness and maintain a more positive self-perception. Therefore, the promotion of religious coping reduces the concern about body image in people undergoing hemodialysis treatment.

Individuals with religious beliefs typically experience enhanced body image and body satisfaction by attributing life events to spiritual concepts [44]. Moreover, a religious and spiritual perspective views the body as a creation of God and a vessel for divine presence. This viewpoint diminishes the significance of physical appearance, underscores the unconditional acceptance of the body, and encourages individuals to place limited emphasis on others' opinions regarding their appearance [40, 45]. Addressing the religious and spiritual needs of

hemodialysis patients can serve as a valuable component of comprehensive and patient-centered care. Assisting patients in utilizing religious coping strategies may enhance their capacity to adapt to the physical challenges of illness and foster a more positive self-perception. Therefore, promoting religious coping mechanisms can alleviate concerns about body image among individuals undergoing hemodialysis treatment.

As this study solely explored the correlation between religious coping and body image concerns among individuals undergoing hemodialysis in Iran, conducting a longitudinal study to assess how variations in religious coping over time impact body image and other psychological outcomes in hemodialysis patients or developing and evaluating the efficacy of tailored religious/spiritual support or counseling programs to enhance body image in hemodialysis patients, alongside examining the differing impacts of such interventions between genders, could prove beneficial in this domain. Conversely, research to probe how religious coping interrelates with other crucial psychosocial variables like self-esteem, depression, and QoL, as well as investigating specific religious/spiritual factors (such as beliefs, practices and social support) potentially linked to body image, appears to be highly significant and impactful.

Conclusion

The results of this study reveal that increased religious coping is associated with improved body image among hemodialysis patients. Specifically, individuals with higher levels of religious coping exhibited a more favorable body image. This correlation likely stems from the role of religion in bolstering self-acceptance, fostering an appreciation for body appearance, and aiding in the adjustment to physical changes induced by illness. Religion can serve as a source of support and spirituality for hemodialysis patients, assisting them in embracing and adapting to the physical transformations brought about by the disease. Hence, offering religious and spiritual interventions can enhance hemodialysis patients' body image. Additionally, it appears essential to consider the religious and spiritual dimensions in the rehabilitation and care programs tailored for these patients.

Ethical Considerations

Compliance with ethical guidelines

This study stems from a research project (Code: 17740), that was approved by the Ethics Committee of Mazandaran University of Medical Sciences (Code:

IR.MAZUMS.REC.1402.683). Written informed consent was obtained from all patients. The researchers visited the [Shahrvand Dialysis Center](#), elucidating the study's objectives to interested participants, who were then requested to complete the questionnaire during hemodialysis (post-connection to the machine). Throughout the questionnaire completion process, the researcher was present to provide necessary clarifications for accurate responses in case of any ambiguity. Before data collection and questionnaire completion, the physician and nurses were consulted regarding the patient's clinical status, ensuring that patients had complete physical and mental well-being. Sampling procedures were conducted outside treatment sessions and meal times to prevent errors. Additionally, the authors are prepared to provide the raw data supporting the paper's conclusions upon reasonable request.

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Authors' contributions

Data collection: Amir Hossein Goudarzian; Data analysis and editing: Hamid Sharif Nia; Writing the manuscript: Reza Fatehi, Poorya Nowrozi, Mohammad Hashem Gholampour, Alireza Ghanbari and Fatemeh Miraghai.

Conflict of interest

The authors declared no conflict of interest.

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