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## The Relationship Between Severity Level And Quality Of Worship Among Muslim Patients Undergoing Hemodialysis At PKU Muhammadiyah Hospital, Gamping

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### Abstract

*The quality of worship is related to the level of devotion and spiritual appreciation in daily life. Chronic kidney failure is a condition that progressively affects kidney function and requires hemodialysis as replacement therapy. This condition can affect the ability of Muslim patients to perform their daily worship. Although spiritual aspects are important in health care, research on the relationship between disease severity and quality of worship in hemodialysis patients is still limited, especially in Indonesia. This study aims to analyze the relationship between disease severity and the quality of worship among Muslim patients undergoing hemodialysis at PKU Muhammadiyah Gamping General Hospital. This study used a descriptive correlational method with a cross-sectional approach. A total of 62 respondents were selected using random sampling. Data were collected using a research instrument that had been tested by three experts. Data analysis was performed using Spearman's rank correlation. The results showed that there was no significant relationship between disease severity and the quality of worship among Muslim patients undergoing hemodialysis ( $r = 0.174$ ;  $p = 0.175$ ). This study indicates that disease severity does not affect the quality of worship among hemodialysis patients, meaning that patients can maintain their worship practices despite experiencing severe illness.*

**Keywords:** *Quality Of Worship, Chronic Kidney Failure, Hemodialysis, Disease Severity, Muslim Patients, Correlational Study, Cross-Sectional.*

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### INTRODUCTION

The quality of worship is related to the level of solemnity, appreciation, and integration of spiritual aspects in daily life. Quality worship practices are able to provide positive benefits such as reducing stress or conflict, while also improving moral values and personal resilience (Coelho-Júnior et al., 2022). The quality of worship among Chronic Kidney Disease patients is associated with the level and depth of worship practices carried out sincerely and consistently, which contribute to enhancing the patients' mental and spiritual resilience in facing chronic kidney disease (Tínel et al., 2024).

According to data from the International Society of Nephrology (ISN) in 2023, approximately 850 million people worldwide suffer from chronic kidney disease. Its prevalence is estimated at around 10% of the global population. This indicates that one in ten people in the world suffers from chronic kidney disease. In Indonesia, data from the Indonesian Health Survey show that 638,178 individuals suffer from Chronic Kidney Disease. For Muslim patients, worship is an important part of daily life, including practices such as the five daily prayers, fasting during Ramadan, reading the Qur'an, and various forms of dhikr. However, declining physical conditions due to chronic kidney disease and the hemodialysis process can affect patients' ability to perform these acts of worship optimally. For example, fatigue and physical weakness may make it difficult for patients to perform prayer movements, while strict hemodialysis schedules may disrupt worship routines (Tínel et al., 2024). In this context, severity level becomes a measure of how serious or severe a condition or disease is in affecting the body or organ function, usually classified as mild, moderate, or severe depending on its impact on health and organ function (Charles & Ferris, 2020).

Although spiritual aspects are important in healthcare, research regarding spirituality in hemodialysis patients remains limited. The study by Okhli et al. (2019) only examined the relationship between religious belief and the level of patient suffering, without measuring the quality of daily worship. Meanwhile, the study by Rozaine Osman et al. (2024) used qualitative methods to identify

spiritual needs, but has not quantitatively measured the relationship between disease severity and quality of worship.

The results of the preliminary study showed that 22 patients (73.3%) did not perform prayers during hemodialysis, with 25 patients (83.3%) specifically missing the Asr prayer due to undergoing hemodialysis in the second session. Nevertheless, 8 patients (26.7%) continued to attempt to perform worship under limited conditions, such as performing tayammum or praying while lying down. It was found that they experienced barriers in performing prayer during the hemodialysis process. Therefore, this study was conducted to determine how the severity level of Chronic Kidney Disease is related to the quality of worship among Muslim patients undergoing hemodialysis.

## RESEARCH METHODS

This study is a quantitative research with a descriptive correlational design using a cross-sectional approach. The research was conducted at the Hemodialysis Unit of PKU Muhammadiyah Gamping Hospital in January 2026. The sample in this study consisted of 62 respondents selected using a probability sampling technique. Data collection was carried out using a research instrument sheet that had undergone expert validation by three experts, namely two hemodialysis nurses from PKU Muhammadiyah Gamping Hospital and one nursing lecturer, covering respondent identity, severity level based on clinical aspects, and quality of worship. The validity test used the Content Validity Index (CVI) with results of I-CVI = 1.00 and S-CVI = 1.00 across all 25 items, indicating that the instrument was valid. Reliability testing used the Intraclass Correlation Coefficient (ICC) with values of Single Measures = 0.002 and Average Measures = 0.007 ( $p = 0.476$ ). Data analysis involved univariate and bivariate methods. Univariate analysis was conducted to describe the frequency distribution and percentage of each variable. Bivariate analysis was performed to examine the relationship between the two main variables using the Spearman Rank correlation test. This study has obtained ethical approval with No. 016/KEP-PKU/I/2026.

## RESULTS AND DISCUSSION

This study involved 62 hemodialysis patients as respondents, with the following characteristics:

**Table 1. Distribution of Demographic Data (N=62)**

No	Respondent Characteristics	n	Percentage (%)
1.	<b>Age</b>		
	9 – 44 (Early adulthood)	6	9,7
	45 – 59 (Middle age)	22	35,5
	≥60 (Elderly)	34	54,8
	Total (n)	62	100
2.	<b>Gender</b>		
	Male	33	53,2
	Female	29	46,8
	Total (n)	62	100
3.	<b>Education Level</b>		
	Primary education	5	8,1
	Lower secondary education	23	37,1
	Upper secondary education	26	41,9
	Higher education	8	12,9
	Total (n)	62	100
4.	<b>Occupation</b>		
	Working population	44	71,0
	Non-working population	18	29,0
	Total (n)	62	100
5.	<b>Marital Status</b>		
Married	61	98,4	

	Divorced	1	1,6
	Total (n)	62	100
6.	<b>Religion</b>		
	Islam	62	100,0
	Total (n)	62	100
7.	<b>Duration of Hemodialysis</b>		
	New (<12 month)	4	6,5
	Moderate (12-24 month)	23	37,1
	Long (>24 month)	35	56,5
	Total (n)	62	100

Based on Table 1 regarding the frequency distribution of respondent characteristics of hemodialysis patients at PKU Muhammadiyah Gamping Hospital, it shows that the characteristics of hemodialysis patients based on age were predominantly elderly  $\geq 60$  years totaling 35 people (54.8%), followed by middle-aged individuals 45–59 years totaling 22 people (35.5%), and the minority were adults aged 22–44 years totaling 6 people (9.7%).

The characteristics of hemodialysis patients based on gender showed that the majority were male totaling 33 people (53.2%) and the minority were female totaling 29 people (46.8%). The characteristics of hemodialysis patients based on education level showed that the majority had senior high school education totaling 26 people (41.9%) and the minority had basic education totaling 5 people (8.1%). The characteristics of hemodialysis patients based on duration of hemodialysis showed that the majority had undergone hemodialysis for >24 months totaling 35 people (56.6%) and the minority who had recently undergone hemodialysis totaled 4 people (6.5%). All hemodialysis patients who became respondents in this study were Muslim totaling 62 people (100%).

**Table 2. Severity Distribution Data (N=62)**

Severity Level	n	Percentage %
Light	11	17,7
Moderate	36	58,1
Heavy	15	24,2
<b>Total (n)</b>	<b>62</b>	<b>100</b>

Based on Table 2 regarding the frequency distribution of severity levels among Muslim patients undergoing hemodialysis, it shows that the majority of patients were in the moderate severity category totaling 36 people (58%), while the minority of Muslim patients undergoing hemodialysis were in the mild severity category totaling 11 people (17.7%).

**Table 3. Data Distribution of Worship Quality (N=62)**

Quality of Worship	N	Percentage %
Not Qualified	7	11,3
Less Qualified	18	29,0
Qualified	37	59,7
<b>Total (n)</b>	<b>62</b>	<b>100</b>

Based on Table 3 regarding the frequency distribution of worship quality among hemodialysis patients, it shows that the majority of patients had good-quality worship totaling 37 people (59.7%), while the minority had poor-quality worship totaling 7 people (11.3%).

**Table 4. Results of Spearman's Rank Correlation Test of the Relationship between Severity Level and Worship Quality of Muslim Patients Undergoing Hemodialysis at PKU Muhammadiyah Gamping Hospital (N=62)**

Severity Level	Quality of Worship						Total		r	p-value
	Not Qualified		Less Qualified		Qualified		N	%		
	N	%	N	%	N	%				
Light	0	0	5	45,5	6	54,5	11	17,7	0,174	0,175
Moderate	7	19,4	10	27,8	19	52,8	36	58,1		
Heavy	0	0	3	20,0	12	80,0	15	24,2		
Total	7	11,3	18	29,0	37	59,7	62	100		

Based on Table 4, the results of the Spearman Rank correlation test showed that there was no significant relationship between severity level and the quality of worship among Muslim patients undergoing hemodialysis ( $p = 0.175 > 0.05$ ). The weak positive correlation value (0.174) indicates a tendency toward a unidirectional relationship; however, it is very weak and not statistically significant. These findings indicate that patients are able to maintain the quality of worship despite experiencing different levels of severity.

## **Discussion**

Based on the results of the univariate analysis, the majority of hemodialysis patients at PKU Muhammadiyah Gamping Hospital were in the elderly age group ( $\geq 60$  years), male, had a middle to higher level of education, and had undergone hemodialysis for a long duration ( $>24$  months). The dominance of older age is consistent with the increasing prevalence of chronic kidney disease in the elderly population due to progressive decline in kidney function with advancing age, as explained by Tang et al. (2024) and Kovesdy (2022). In addition, the higher proportion of male patients is in line with the findings of Carrero et al. (2020), which state that hormonal factors in women, particularly estrogen, provide a protective effect against the progression of chronic kidney disease.

From a social and clinical perspective, most patients had a middle to higher level of education, which according to Bello et al. (2022) is associated with better health literacy and treatment adherence. The majority of patients had also undergone long-term hemodialysis, indicating an adaptation process to both the disease and the therapy, although prolonged hemodialysis duration still carries the risk of chronic complications as explained by Jager et al. (2020). All respondents in this study were Muslim, reflecting the characteristics of the research institution and serving as an important context in understanding patients' religious coping mechanisms. This is relevant to the findings of Lucchetti et al. (2020), which state that religiosity plays a role in improving resilience among patients with chronic diseases.

Based on clinical conditions, the majority of patients were at a moderate severity level, which is generally associated with physiological impairment but still allows patients to perform adaptive activities, including worship. Meanwhile, the quality of worship among patients showed that most were in the good category. These findings indicate that worship practices have become part of patients' spiritual coping mechanisms in dealing with chronic illness, as explained by Pargament et al. (2021), who emphasized that worship and spirituality can provide peace and meaning in life despite limited health conditions.

Based on the results of the Spearman Rank correlation test analysis, there was no significant relationship between disease severity level and the quality of worship among Muslim patients undergoing hemodialysis ( $r = 0.174$ ;  $p = 0.175 > 0.05$ ). The very weak correlation value indicates that differences in severity level were not followed by differences in patients' quality of worship.

The absence of this relationship can be explained through respondent characteristics based on the results of the univariate analysis. This study showed that the majority of respondents were elderly ( $\geq 60$  years) and had undergone hemodialysis for a long duration ( $>24$  months). This condition allows patients to experience physical, psychological, and spiritual adaptation processes toward the disease and the hemodialysis therapy they undergo.

Patients who have undergone hemodialysis for a long period generally develop more stable coping mechanisms, including religious coping. This is consistent with the concept of religious coping proposed by Pargament et al. (2021), which states that spirituality functions as a source of internal strength that is relatively independent of physical conditions. Therefore, despite differences in disease severity, patients' quality of worship can still be maintained.

In addition, the results of the univariate analysis showed that the majority of patients had a good quality of worship. This finding indicates that worship has become part of the patients' routine and spiritual commitment, rather than being solely influenced by clinical conditions. Koenig (2020) explained that religious practices among patients with chronic diseases are often maintained through

adaptation, family support, and assistance from healthcare professionals, making them less affected by disease severity.

Research conducted by Osman et al. (2024) also found that Muslim hemodialysis patients continue to prioritize worship practices such as prayer, dhikr, and recitation of the Qur'an despite experiencing severe health conditions. These findings support the results of this study, indicating that disease severity is not the main barrier to maintaining the quality of worship.

Patients' ability to adapt in performing worship also contributes to explaining the findings of this study. Hartiti et al. (2020) explained that hemodialysis patients are able to adjust worship practices, such as performing tayammum or praying in sitting or lying positions. These adaptations allow patients to continue practicing worship despite physical limitations caused by increased disease severity.

The results of this study are also consistent with studies by Okhli et al. (2022) and Şanlı et al. (2023), which showed that the relationship between religious aspects and clinical conditions among hemodialysis patients tends to be weak or non-significant. This indicates that religiosity is more influenced by internal factors rather than disease severity.

Thus, the absence of a significant relationship between disease severity and quality of worship in this study can be understood as the result of a combination of factors, including older age, longer duration of hemodialysis, already good worship quality, as well as patients' adaptive abilities and spiritual commitment. These factors make the quality of worship relatively stable despite variations in patients' clinical conditions.

In addition to individual adaptation factors, the absence of a significant relationship between disease severity and quality of worship can also be explained by the relatively stable nature of spirituality among patients with chronic diseases. Cruz et al. (2021) explained that spiritual well-being in hemodialysis patients is formed through a long-term process of coping with disease-related stress, and therefore does not always change according to current physical conditions. Thus, the quality of worship does not reflect temporary physical status but rather reflects previously established spiritual strength.

In line with this, Almutary et al. (2022) stated that spiritual well-being among patients with chronic kidney disease is more strongly influenced by disease acceptance, meaning in life, and psychosocial support rather than disease severity itself. Furthermore, Lee et al. (2023) found that patients who have undergone long-term hemodialysis tend to maintain consistent spiritual coping patterns despite changes in their health conditions. This indicates that worship practices have become part of patients' routines and spiritual identity, allowing them to be maintained regardless of differences in disease severity.

## CONCLUSION

This study showed that there was no significant relationship between disease severity and the quality of worship among Muslim patients undergoing hemodialysis at RS PKU Muhammadiyah Gamping. The quality of worship is not determined by the severity of physical illness, but is more strongly influenced by internal spiritual factors such as faith, religious commitment, and the use of religious coping. The ability to adapt worship practices, family support, as well as Islamic theological perspectives on patience (*sabar*) and trust in God (*tawakkal*) also contribute to maintaining the quality of worship regardless of physical condition. The implementation of systematic spiritual care within hemodialysis units can help ensure that the spiritual needs of all patients are fulfilled, which ultimately contributes to improving patients' psychological and spiritual well-being as well as their overall quality of life.

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