

The Relationship of Social Support and Spirituality to Resilience in Chronic Kidney Disease Patients Undergoing Regular Hemodialysis at Adam Malik Hospital Medan in 2025

Dinaya Agrivina¹, Bayu Rusfandi Nasution², Tetty Aman Nasution³, Rina Amalia Caromina Saragih⁴

¹Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

²Division of Nephrology and Hypertension, Department of Internal Medicine, Faculty of Medicine, Universitas Sumatera Utara, Adam Malik Hospital, Medan, Indonesia

³Departement of Microbiology, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

⁴Departement of Pediatric, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

ARTICLE INFO	ABSTRACT
<p><i>Article history:</i> Received: March 3, 2026 Accepted: April 13, 2026 Published Online: April 24, 2026</p> <hr/> <p><i>Corresponding Author:</i> Dinaya Agrivina, Department of Internal Medicine, Universitas Sumatera Utara, Medan, Indonesia, dinaya.agrivinaa@gmail.com</p>	<p>Background: End Stage Renal Disease (ESRD) patients undergoing hemodialysis are faced with demanding long-term therapy that often has a psychological impact. Resilience, the ability to adapt and recover from difficult situations, is an important protective factor for patients to manage medication adherence. External factors, such as social support, and internal factors, such as spirituality, were identified as aspects associated with individual resilience.</p> <p>Objective: This study aims to analyze the relationship between social support and spirituality on resilience in patients with chronic kidney disease undergoing regular hemodialysis at Adam Malik Hospital, Medan, in 2025.</p> <p>Methods: This research is an analytic study with a cross-sectional design. Data were obtained through distributing questionnaires at Adam Malik Hospital, Medan, in 2025. Data were processed using the Statistical Package for the Social Sciences (SPSS) software.</p> <p>Results: Based on the analysis of 50 research samples, it was found that respondents had a high (66%) and a moderate (34%) distribution of resilience. Social support and spirituality have a significant positive relationship with individual resilience.</p> <p>Conclusion: The majority of PGTA patients undergoing HD at Adam Malik Hospital have high levels of resilience. Social support and spirituality play an important role in increasing individual resilience. Therefore, good social support and spirituality are necessary in order to support treatment compliance, adaptation, and quality of life for HD patients.</p> <p>Keywords: Resilience, social support, spirituality, hemodialysis, chronic kidney disease.</p>

Introduction

End-stage renal disease (ESRD) is the most advanced stage of chronic kidney disease (CKD), characterized by a progressive decline in kidney function or a glomerular filtration rate (GFR) of less than 15 ml/min in an irreversible manner.¹ Epidemiologically, according to data reports from the Global Burden of Disease, around 10 – 12 million people worldwide suffer from end-stage renal disease.² This condition

requires long-term management in the form of renal replacement therapy, such as hemodialysis (HD), to maintain patient survival.³ Hemodialysis remains the most commonly performed renal replacement therapy worldwide, with approximately 89% of dialysis patients receiving it.⁴

Cite this as:

Agrivina D, Nasution BR, Nasution TA, et al. The Relationship of Social Support and Spirituality to Resilience in Chronic Kidney Disease Patients Undergoing Regular Hemodialysis at Adam Malik Hospital Medan in 2025. *InaKidney*. 2026;3(1):162-168. doi:10.32867/inakidney.v3i1.236



Hemodialysis is a long-term therapy that demands time and lifestyle changes, often causing most hemodialysis patients to experience emotional stress, anxiety, and even depression.⁵ In facing these challenges, resilience, or the ability to adapt and recover from difficult situations, becomes a necessary protective factor.⁶

According to Connor & Davidson (2003), external factors such as social support and internal factors such as spirituality are identified as aspects related to individual resilience.^{7,8} Social support can provide a sense of safety, love, and appreciation, helping patients adapt more quickly.⁹ Meanwhile, spirituality helps patients find meaning and purpose in life and inner peace amid the suffering of chronic illness, thereby directly enhancing individual resilience.¹⁰ This study aims to analyze the relationship between social support and spirituality on resilience in patients with chronic kidney disease undergoing regular hemodialysis at Adam Malik Hospital, Medan, in 2025.

Methods

The research method used was an observational analysis with a cross-sectional study design. The study was conducted at the Hemodialysis Unit of Adam Malik Hospital in Medan from September to October 2025. A sample of 50 individuals was selected using consecutive sampling. Sample measurements and observations were conducted simultaneously, with data collection using a questionnaire. Inclusion criteria included patients aged 18 years or older who had undergone regular HD therapy for at least 3 months, were fully conscious, and could read or write. Exclusion criteria included patients with severe acute clinical conditions or severe cognitive impairment. Resilience levels

were measured using the 10-item Connor-Davidson Resilience Scale (CD-RISC) questionnaire, a validated Indonesian version of which was adapted by Perwitasari & Wulandari in 2024.¹¹ The Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire, developed by Zimet in 1988 and adapted into Indonesian by Winahyu, Hemchayat & Charoensuk in 2015, was used to measure social support.^{12,13} Given the respondents' diverse religious backgrounds, the FACIT-Sp12 instrument was used without modifying the questionnaire items. However, to ensure understanding and contextual relevance, the researcher provided verbal clarification to each respondent before completing the questionnaire, adapting the concepts to each respondent's respective teachings. Data analysis was performed using SPSS statistical software. Bivariate analysis used Spearman's Rank correlation test to determine the strength and direction of the relationship between variables. Next, a multivariate analysis using binary linear regression will examine the simultaneous influence of independent variables on resilience.

Results

The results of the study are shown in Table 1, showing that a large number of respondents were in the pre-senior age group (45-59 years) (28 respondents) (56%), male (30 respondents) (60%), unemployed (34 respondents) (68%), had a high school education (25 respondents) (50%), and had undergone hemodialysis for >12 months (33 respondents) (66%). Respondents also had high levels of social support (35 respondents) (70%), high levels of spirituality (34 respondents) (68%), and high levels of spirituality (33 respondents) (66%).

Table 1. Characteristics of the study population

Characteristics	(N = 50)	%
Age		
Adults (18-44 years)	10	20
Pre-Seniors (45-59 years)	28	56

Elderly (years)	12	24
Gender		
Male	30	60
Female	20	40
Occupation		
Employed	16	32
Not Employed	34	68
Education		
Primary School	3	6
Junior High School	8	16
High School	25	50
College	14	28
Duration of Hemodialysis		
<6 Months	6	12
6-12 Months	11	22
>12 Months	33	66
Social Support		
Moderate Social Support	15	30
High Social Support	35	70
Spirituality		
Moderate Spirituality	16	32
High Spirituality	34	68
Resilience		
Moderate Resilience	17	34
High Resilience	33	66

Spearman's rank correlation was used to assess the strength and direction of the relationship between variables. The decision criterion for this test is a p-value <0.05, indicating a significant relationship or correlation between the two variables.

The test results in Table 2 indicate a positive correlation between social support and resilience, with a strong p-value = 0.000 and $r = 0.636$. Spirituality also showed a significant positive correlation of moderate strength, with p-value = 0.003 and $r = 0.413$.

Table 2. Correlation between Social Support, Spirituality, and Sociodemographic Factors

Variable	r	p-value
Social Support	0.636	0.000
Spirituality	0.413	0.003
Age	-0.085	0.558
Gender	0.241	0.091
Education	-0.143	0.322
Occupation	0.141	0.328
Duration of Hemodialysis	-0.245	0.087

Meanwhile, sociodemographic factors, including age, gender, education, occupation, and duration of hemodialysis, did not show a statistically significant relationship with resilience levels (p-values > 0.05).

Binary logistic regression was conducted to examine the effects of multiple independent variables on resilience simultaneously, with $p < 0.05$ as the significance threshold.

The test results in Table 3 indicate that social support and spirituality are significant factors influencing resilience. Social support had a p-value of 0.003 and an OR of 1.372 (CI: 1.112-

1.693). This indicates that each increase in the social support score significantly increases the patient's chances of having high resilience by 1.372 times.

Table 3. The Simultaneous Effect of Social Support, Spirituality, and Sociodemographic Factors

		Resilience		n	p	OR (CI)
		Moderate	High			
Social Support	Moderate	12 (24%)	3 (6%)	15 (30%)	0,003	1,372 (1,112-1,693)
	High	5 (10%)	30 (60%)	35 (70%)		
Spirituality	Moderate	10 (20%)	6 (12%)	16 (32%)	0,019	1,563 (1,077-2,269)
	High	7 (14%)	27 (54%)	34 (68%)		
Gender	Male	13 (26%)	17 (34%)	30 (60%)	0,253	3,900 (0,378-40,229)
	Female	4 (8%)	6 (32%)	20 (40%)		
Duration of Hemodialysis	<6 Months	1 (2%)	5 (10%)	6 (12%)	0,270	0,451 (0,110 -1,853)
	6-12 Months	2 (4%)	9 (18%)	11 (22%)		
	>12 Months	14 (28%)	19 (38%)	33 (66%)		

Similarly, spirituality also showed a significant effect, with a p-value of 0.019 and an OR of 1.563 (CI: 1.077-2.269). This means that the higher the spirituality score, the greater the 1.563-fold increase in the odds of having high resilience. Meanwhile, gender and hemodialysis duration did not have a significant effect on resilience ($p > 0.05$).

Discussion

The majority of patients were in the pre-elderly age group (45-59 years), accounting for 28 patients (56%). This finding aligns with the study by Hustrini et al., which found that PGTA generally affects middle-aged to elderly individuals, with an average patient age of around 48 years. This can be explained by the decline in kidney function with age, due to reduced nephron number, decreased GFR, and increased comorbidities, which are major risk factors for

CKD.¹⁴ This study found that the majority of PGTA patients were male (30 patients, 60%). This finding aligns with a study by Francis et al., which stated that the majority of PGTA patients undergoing hemodialysis worldwide are male.² The majority of respondents in this study (34, 68%) were unemployed, a finding consistent with Erickson et al., who reported that the demands of hemodialysis therapy limit patients' daily lives and can lead them to stop working.¹⁵

In this study, the age variable did not significantly influence resilience (p-value = 0.558), indicating that age is not a significant factor in psychological variables such as resilience among hemodialysis patients. This result aligns with the research of Kisomi et al., which stated that hemodialysis patients with good social and spiritual support are able to adapt to their illness, regardless of their age.¹⁶ Similarly, the correlation between unemployment and resilience yielded a p-value of 0.328, indicating no significant

relationship between employment status and resilience levels among hemodialysis patients. This finding aligns with the research of Yan et al. and Erickson et al., which stated that unemployed hemodialysis patients can still have high levels of resilience if they receive good social and spiritual support.^{15,17}

In this study, 25 patients (50%) had a high school education. The test for the relationship between education and resilience yielded a p-value of 0.322, indicating no significant relationship between education level and resilience in HD patients. This contrasts with research by Karami, Rahmati, & Abbasi, which found that patients with higher education tend to have greater resilience due to a better understanding of their condition, better problem-solving skills, and access to important information about healthcare services. This relationship was not found in this study.¹⁸

In this study, 33 (66%) patients undergoing HD had been on hemodialysis for more than 12 months. Bivariate and multivariate tests showed p-values of 0.087 and 0.270, respectively, indicating no significant relationship between hemodialysis duration and patient resilience. Theoretically, a study by Antari explains that one factor that can influence the resilience of hemodialysis patients is the duration of therapy. The longer a person undergoes hemodialysis, the greater the potential for decreased resilience due to physical and mental fatigue, increased complications, and boredom with the long-term therapy routine. However, the results of this study do not directly support this theory.¹⁹

The majority of patients undergoing regular hemodialysis at Adam Malik Hospital, Medan, had high levels of social support, with 35 (70%) having moderate levels, followed by 15 (30%). Bivariate and multivariate statistical tests showed $p = 0.000$ and 0.003 , respectively, with $r = 0.636$ and 0.003 , indicating a significant relationship between social support and resilience in hemodialysis patients. This research aligns with the theory proposed by Connor & Davidson in Pratiwi & Yuliandri's study, which states that

social support is an important aspect in building individual resilience because it makes patients feel cared for, appreciated, and loved by others.⁷ High levels of social support from their environment can help kidney patients feel stronger, more energized, more motivated to undergo treatment, and feel well cared for. Patients who feel emotionally and socially supported have a more positive outlook on life, adapt more easily to their physical limitations, and demonstrate better adherence to therapy.²⁰

The majority of patients undergoing regular HD at Adam Malik Hospital, Medan, have a high level of spirituality, namely 34 patients (68%), followed by patients with moderate spirituality, totaling 16 patients (32%). The results of the bivariate and multivariate statistical tests showed p-values of 0.003 and 0.019, respectively, and r-values of 0.413 and 0.019, indicating a significant relationship between spirituality and resilience in HD patients. These results are in line with the theory proposed by Zhang et al., which holds that spirituality is a person's ability to find and understand the meaning of life, experience inner peace, and achieve happiness and satisfaction, helping individuals reach their full potential when facing problems due to chronic illness.¹⁰ In the context of hemodialysis patients, spirituality functions as an effective coping mechanism in dealing with stress, anxiety, and uncertainty about the future.²¹ Thus, this study's results confirm that spirituality plays an important role in shaping the resilience of hemodialysis patients. Patients who have a strong spiritual connection with God, are able to find meaning in suffering, and undergo the treatment process with sincerity will show better mental resilience.

Conclusion

Based on the research results and discussions conducted on 50 patient respondents, the following conclusions can be drawn: Firstly, the sociodemographic characteristics of the study respondents were pre-elderly (56%), male (60%), had a high school education (50%), were unemployed (68%), and had been on HD for

more than 12 months (66%). Secondly, respondents had high levels of resilience (66%), high levels of social support (70%), and high levels of spirituality (68%). Thirdly, there was a strong relationship between social support and resilience ($p = 0.000$ and $r = 0.636$). Fourthly, there was a moderate relationship between spirituality and resilience ($p = 0.003$ and $r = 0.413$). Lastly, the levels of social support and spirituality were simultaneously shown to significantly influence resilience ($p = 0.003$ and 0.019). The researchers also make the following suggestions. Firstly, for future researchers, this study was limited to 50 respondents in one location. Further research is recommended, using a larger sample and multiple hospitals with HD units to obtain more representative results. Secondly, for healthcare professionals, it is recommended to provide more psychosocial support and develop a holistic approach for patients undergoing regular hemodialysis to support adaptation, treatment adherence, and quality of life. Thirdly, for patients, it is recommended that they be more open and actively seek support from family, friends, fellow patients, and healthcare professionals, and increase their spiritual faith. Lastly, for patients' families, it is recommended to consistently provide emotional support, information, and appreciation so that patients feel loved and cared for, thus increasing their optimism during treatment.

Limitations of the Study

This study has limitations: it involved a relatively small sample of 50 respondents. It was conducted at a single location, Adam Malik Hospital, limiting its representativeness of the entire hemodialysis population in Indonesia. This study used a cross-sectional design, in which all variables were measured at a single point in time. Furthermore, as the study was conducted in a hemodialysis unit, respondents' responses may have been influenced by physical or emotional conditions such as fatigue, stress, or discomfort during therapy. This study excluded patients with severe acute clinical conditions or severe cognitive impairment, so the high resilience rate

(66%) may not be generalizable to HD patients with these conditions.

Declarations

Ethics approval and consent to participate

This study received approval from the Ethics Committee of Adam Malik Hospital.

Competing interests

There are no conflicts of interest in writing this article.

Funding source

Not applicable.

Acknowledgments

None.

Author's Contribution

Idea/concept: DA. Design: DA, BRN, TAN, RACS. Control/supervision: BRN, TAN, RACS. Data collection/ processing: DA. Analysis/interpretation: DA, BRN, TAN, RACS. Literature review: DA, BRN, TAN, RACS. Writing the article: DA. Critical review: BRN, TAN, RACS. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

References

1. Shaabna Z, S.Abdalrahim M, Zeilani R. Experiences and needs of family caregivers for patients with End Stage Renal Disease (ESRD) in Palestine. *BMC Palliat Care*. 2025;24(1):81. doi:10.1186/s12904-025-01722-5
2. Francis A, Harhay MN, Ong ACM, Tummalapalli SL, Ortiz A, Fogo AB, et al. Chronic kidney disease and the global public health agenda: An international consensus. *Nat Rev Nephrol*. 2024;20(7):473–85. doi:10.1038/s41581-024-00820-6
3. Rout P, Aslam A. End-Stage Renal Disease.
4. Himmelfarb J, Vanholder R, Mehrotra R, Tonelli M. The current and future landscape of dialysis. *Nat Rev Nephrol*. 2020 Oct 30;16(10):573–85.

- doi:10.1038/s41581-020-0315-4
5. Almutary H, Al-ghamdi R, Miajan Z, Alharbi A, Badokhon R, Alharazi R. Exploring the Needs of Patients Undergoing Hemodialysis: A Qualitative Study. *Cureus*. 2023;15(12):e50076. doi:10.7759/cureus.50076
 6. Babić R, Babić M, Rastović P, Ćurlin M, Šimić J, Mandić K. Resilience in Health and Illness. *Psychiatr Danub*. 2020;32(Suppl 2):226–32.
 7. Pratiwi SA, Yuliandri BS. Anteseden dan hasil dari resiliensi. *Motiv J Psikol*. 2022;5(1):8–15. doi:10.31293/mv.v5i1.5667
 8. Connor KM, Davidson JRT. Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD-RISC). *Depress Anxiety*. 2003;18(2):76–82. doi:10.1002/da.10113
 9. Tsabita N, Anggraini MT, Faizin C. Hubungan antara Dukungan Sosial dan Keluarga dengan Kualitas Hidup Penderita Penyakit Ginjal Kronik di RS ROEMANI SEMARANG. *Innov J Soc Sci Res*. 2025;5(2):1288–97. doi:10.31004/innovative.v5i2.18313
 10. Zhang Y, Xue G, Chen Y, An K, Chen L. Factors related to spiritual health in Chinese haemodialysis patients: A multicentre cross-sectional study. *Nurs Open*. 2020;7(5):1536–43. doi:10.1002/nop2.535
 11. Perwitasari P, Wulandari RP. Validity And Reliability Of Connor-Davidson Resilience Scale (CD-RISC) 10 Items On Pregnant Women. *Int J Midwifery Res*. 2024;4(1):1–8. doi:10.47710/ijmr.v4i1.68
 12. Winahyu KM, Hemchayat M, Charoensuk S. Multidimensional Scale of Perceived Social Support--Indonesian Version. *PsycTESTS Dataset*. 2015; doi:10.1037/t81336-000
 13. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The Multidimensional Scale of Perceived Social Support. *J Pers Assess*. 1988;52(1):30–41. doi:10.1207/s15327752jpa5201_2
 14. Hustrini NM, Susalit E, Lydia A, Marbun MBH, Syafiq M, Yassir. The Etiology of Kidney Failure in Indonesia: A Multicenter Study in Tertiary-Care Centers in Jakarta. *Ann Glob Heal*. 2023;89(1):36. doi:10.5334/aogh.4071
 15. Erickson SJ, Yabes JG, Han Z, Roumelioti ME, Rollman BL, Weisbord SD. Associations between Social Support and Patient-Reported Outcomes in Patients Receiving Hemodialysis. *Kidney360*. 2024;5(6):860–9. doi:10.34067/kid.0000000000000456
 16. Kisomi ZS, Taherkhani O, Mollaei M, Esmacily H, Shirkhanloo G, Hosseinkhani Z. The moderating role of social support in the relationship between death anxiety and resilience among dialysis patients. *BMC Nephrol*. 2024;25(1):100. doi:10.1186/s12882-024-03533-x
 17. Yan S, Zhu X, Huo Z, Wang Z, Cui H. Psychological Intervention for Depression and Anxiety in Hemodialysis Patients: A Meta-Analysis. *Actas Esp Psiquiatr*. 2025;53(1):154–64. doi:10.62641/aep.v53i1.1628
 18. Karami H, Rahmati M, Abbasi P. Investigating the relationship between perceived social support and resilience in patients undergoing hemodialysis: a cross-sectional study. *BMC Nephrol*. 2025;26:278. doi:10.1186/s12882-025-04204-1
 19. Antari GAA. Resiliensi pada pasien hemodialisis: Studi literatur. *COPING*. 2022;31;10(6):6(6). doi:10.24843/coping.2022.v10.i06.p13
 20. Rangganis ST, Mariyanti S, S M. Pengaruh Dukungan Sosial Terhadap Helath Belief Pada Pasien Penurunan Fungsi Ginjal. *J Psikol Media Ilm Psikol*. 2019;17(2):69–77. doi:10.47007/jpsi.v17i2.58
 21. Saedi F, Dehghan M, Mohammadrafie N, Xu X, Hermis AH, Zakeri MA. Predictive role of spiritual health, resilience, and mental well-being in treatment adherence among hemodialysis patients. *BMC Nephrol*. 2024;25(1):326. doi:10.1186/s12882-024-03768-8