



SPIRITUAL WELL-BEING WITH SLEEP QUALITY OF CHRONIC KIDNEY DISEASE PATIENTS ON HEMODIALYSIS

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ABSTRACT

Hemodialysis can cause side effects such as difficulty falling asleep, patients with kidney disease view Spiritual Well-Being as a multidimensional concept that combines physical and psychological health. This study aims to determine the correlation between spiritual well-being and sleep quality of chronic kidney disease patients undergoing hemodialysis. This study is a type of quantitative research using a cross-sectional design, the research subjects are patients with kidney disease who undergoing hemodialysis with sleep quality disorders, with a total population of 176 patients with sampling techniques using purposive sampling with a sample size of 64 respondents, research at Pringsewu Hospital. Data collection using the Spiritual Well-Being Questionnaire and PSQI Questionnaire, data analysis using the Chi Square Test. The results showed that most respondents with High Spiritual Well-Being were 35 (54.7%), and most respondents with good sleep quality were 36 (56.2%), statistical tests showed that there was a correlation between Spiritual Well-Being and Sleep Quality of Chronic Kidney disease Patients Undergoing Hemodialysis at Pringsewu Hospital with a P-value: 0.000. The results of this study are expected to be a material for learning and deeper knowledge about spiritual well-being and sleep quality of chronic kidney disease patients undergoing hemodialysis.

Keywords: chronic kidney disease; sleep quality; spiritual well-being

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INTRODUCTION

Chronic Kidney Disease (CKD) is a pathophysiological process with various causes (etiology) that results in a progressive decline in kidney function, generally ending in kidney failure. Chronic Kidney Disease (CKD) is a progressive and irreversible impairment of kidney function in which the body fails to maintain metabolism and fluid and electrolyte balance, causing uremia (retention of urea and other nitrogenous wastes in the blood) (Smeltzer, 2015). According to data from the World Health Organization (WHO), chronic kidney disease kills 850,000 people every year. The number of people with chronic kidney disease in Asia, an estimated 434.3 million adults suffer from chronic kidney disease in Asia (Liyanage et al., 2022). Data from the Ministry of Health of the Republic of Indonesia (Kemenkes RI, 2018), around 713,783 or 0.38% of the Indonesian population currently experience CKD. While Lampung contributes to the number of people with kidney failure currently as many as 22,345 people and 16.64% or as many as 93 people with kidney disease undergoing hemodialysis therapy (Riskasdas Lampung, 2018).

The impact of kidney disease is the inability of the kidneys to remove metabolic products in the body so that kidney replacement therapy is needed. Health care facilities provided to clients with kidney disease for kidney replacement therapy in the Hemodialysis Unit are Hemodialysis services 78%, Transplantation 16%, Continuous Ambulatory Peritoneal

Dialysis (CAPD) 3%, and Continuous renal replacement therapy (CRRT) 3%. Currently, hemodialysis is the main therapy for GJK (Aru. W Sudoyo, 2016).

Hemodialysis (HD) which aims to produce kidney function so that it can extend survival and improve the quality of life in patients with GJK (Sukandar in Putri, 2020). The general impact of Hemodialysis for patients with end-stage kidney disease is carried out three times a week with a total time of 9-12 hours. Patients who undergo long-term dialysis have a higher risk of complications and even death (LeMone et al., 2016). HD can cause side effects such as dry, blackened skin, itching, leg cramps, swelling in some parts of the body, difficulty falling asleep, lack of appetite, fatigue when doing strenuous activities so that it will affect body image, quality of life and quality of sleep (Rosliana, 2019). Quality of sleep is a person's satisfaction with their sleep, around 50-80% of patients undergoing HD experience sleep disturbances such as short sleep duration and frequent nighttime awakenings, feeling hot or hot at night (Pius & Herlina, 2019).

Patients undergoing hemodialysis experience psychological symptoms that negatively impact mental health and experience sleep disorder (Almutary et al., 2016). Sleep disorders are much more common in hemodialysis patients than in other populations with the prevalence of sleep disorders ranging from 50% to 80% in people undergoing hemodialysis (Losso et al., 2015). In patients undergoing hemodialysis, decreased sleep quality can be influenced by several factors such as comorbidity factors, demographic factors such as age and gender, psychological factors such as anxiety, stress and depression, dialysis factors such as dialysis schedule, length of time undergoing hemodialysis and hemodialysis adequacy and spiritual factors which are factors that can cause sleep disturbances. This can lead to a decrease in sleep quality in patients undergoing hemodialysis (Wang et al., 2013; Lenggogeni et al., 2020).

The results of a preliminary study at Pringsewu Hospital, on five people who performed hemodialysis, found that the average patient with sleep duration ranged from 4-6 hours with different latency periods. The sleep latency period of 5 patients was more than 30 minutes. Patients experienced sleep disturbances such as frequent awakenings at night due to tightness, leg cramps and headaches. Furthermore, 4 out of 5 patients said they did not sleep well because they thought about the pain and did not sleep well while they prayed and prayed to feel calm and be able to rest. Three people on hemodialysis felt that it was useless to pray, and had just resigned themselves if their illness did not heal. As treatment progresses, they may experience dialysis-related symptoms, to the point of enormous psychological distress that can lead them to depression. This may be due to the influence of physical symptoms, including dietary restrictions, fatigue from treatment, limited physical activity, and muscle cramps (Lin, 2014).

Therefore, early assessment of sleep quality in CRF patients is essential, with CRF patients viewing Spiritual Well-Being as a multidimensional concept that combines physical and psychological health. Those who accept death as a natural process and are willing to abandon their fear can achieve spiritual calm and peace, and are able to understand the meaning of life. In contrast, patients with poor spiritual well-being often want to die, feel helpless and have suicidal intentions. Studies of end-stage chronic diseases suggest that spiritual well-being is closely related to daily life functioning, symptoms of distress and changes in physical condition (e.g. sleep quality and psychological health), and emphasize spiritual well-being as a key indicator of quality of life (Pilger dkk., 2017). This research was conducted to find out

the relationship between spiritual well-being and sleep quality chronic renal failure patients undergoing hemodialysis.

METHOD

This study is a type of quantitative research using a cross sectional design, the research subjects are patients with kidney disease undergoing hemodialysis with sleep quality disorders, with a population of 176 patients with sampling techniques using purposive sampling with a sample size of 64 respondents, the research was conducted at Pringsewu Hospital. Data collection using the Spiritual Well-Being Questionnaire The results of the validity and reliability test in the hemodialysis unit with a value of r table = 0.361, and the results on all questions r result are greater than 0.361. Cronbach’s alpha value is 0.841. and PSQI Questionnaire, The validity test was obtained by Cronbach’s alpha: 0.79. The structural validity shows a good correlation between the components and the global PSQI score. data analysis using the Chi Square Test.

RESULT

Univariate Analysis

Characteristics of Respondents

Table 1
Characteristics of Respondents

Characteristics of Respondents	f	%
Age		
1. Adult (19-44 Years old)	9	14,0
2. Pre-elderly (45-64 Years old)	34	53,1
3. Elderly (>65 Years old)	21	32,9
Gender		
1. Female	12	18,7
2. Male	52	81,3
Education		
1. Elementary	3	4,7
2. Junior high school	15	23,4
3. Senior high school	34	53,1
4. Higher Education	12	18,3
Duration of HD		
1. >24 Months	44	81,9
2. < 24 Months	20	18,1

Based on Table 1, the characteristics of respondents Most of the respondents were Pre-Elderly (45-64 Years) as many as 34 (53.1%), Most of them were male as many as 52 (81.3%), most of them had high school education as many as 34 (53.1%). And Duration of HD > 24 months as many as 44 (81.9%).

Spiritual Well-Being

Table 2
Frequency Distribution of Respondents Based on Spiritual Well-Being of Chronic Kidney Disease Patients Undergoing Hemodialysis at Pringsewu Hospital

<i>Spiritual Well-Being</i>	f	%
High	35	54,7
Low	29	45,3
Total	64	100,0

Based on Table 2, it can be seen that of the 64 respondents, most of the respondents with

High *Spiritual Well-Being* were 35 (54.7%), and Low *Spiritual Well-Being* 29 respondents (45.3%).

Sleep quality

Table 3
Frequency Distribution of Respondents Based on Sleep Quality of Chronic Kidney Disease Patients Undergoing Hemodialysis at Pringsewu Hospital

Sleep Quality	f	%
Good	36	56,2
Bad	28	43,8
Total	64	100,0

Based on Table 3, it can be seen that out of 64 respondents, most of the respondents with good sleep quality were 36 (56.2%), and good sleep quality was 28 respondents (43.8%).

Bivariate Analysis

Tabel 4.
The Correlation of Spiritual Well-Being with Sleep Quality of Chronic Kidney Disease Patients undergoing Hemodialysis at Pringsewu Hospital

		Sleep Quality				Total	P-Value	
		Good		Bad				
		f	%	f	%	f	%	
<i>Spiritual Well-Being</i>	High	27	77,1	8	22,9	35	100	0,000
	Low	9	31,0	20	69,0	29	100	
Total		36	56,2	28	43,8	64	100	

Based on table 4 shows that respondents with low *Spiritual Well-Being* and have poor sleep quality as many as 20 (69.0%), From the results of data analysis obtained the results of *p* value = 0.000. This figure shows that the *p* value <0 .05, meaning that there is a correlation between *spiritual well-being* and the quality of sleep of chronic kidney disease patients undergoing hemodialysis at Pringsewu Hospital.

DISCUSSION

Spiritual Well-Being

It is known that of the 64 respondents, most of the respondents with High *Spiritual Well-Being* were 35 (54.7%), and Low *Spiritual Well-Being* 29 respondents (45.3%). These results are supported by Sopia Tamba (2021) in her research that *spiritual well-being* is indispensable for the quality of life of patients with chronic kidney disease. In patients with chronic kidney disease, the problem of chronic kidney disease makes a person stressed and very depressed, which lowers the body's immunity and worsens the disease by performing religious rituals such as worship and prayer. Teaching patients to pray, listening to their experiences and complaints, asking them to pray before meals, or contacting religious advisors or leaders are examples of *spiritual care*. (Ramadhani, 2019). *Spiritual fulfillment* can help individuals live their lives and maintain relationships with God, others, and the environment. Individuals find meaning, strength, purpose, and inner guidance through *spiritual fulfillment*, leading him to conclude that *spiritual needs* are very important for chronic renal failure patients. Good *spiritual well being fulfillment* in chronic kidney disease patients will make him consider that the disease he is suffering is a test from God and there will be wisdom gained behind his illness (Yustisia et al., 2020). The emergence of positive thoughts *Hidayah* in his research revealed that *spiritual well-being* is needed to overcome the impact of chronic kidney failure both physically and psychologically.

According to the researcher, some respondents have Low Spiritual Well Being, this relates to the psychosocial element of EWB and shows a person's feelings towards others. While patients with High Spiritual Well Being because it increases in the RWB element, low spiritual needs in the form of life satisfaction, life direction, and life goals are found to be low because respondents have just experienced changes in life.

Sleep Quality

It is known that of the 64 respondents, most of the respondents with good sleep quality were 36 (56.2%), and poor sleep quality was 28 respondents (43.8%). In the research of Nurhayati et al., (2021), the results of his research show that there are CKD patients undergoing hemodialysis who experience poor sleep quality due to the time and duration of hemodialysis. In addition, disease factors that cause pain and discomfort, anxiety that leads to insomnia, the habit of consuming coffee because the caffeine in coffee increases alertness and stays awake, and a noisy environment contribute to the continuation of hemodialysis patients waking up in the middle of the night or waking up in the morning. (Ningrum & Rahma, 2017). Research conducted by Damayanti & Anita (2021) most patients with chronic kidney failure who undergo routine hemodialysis therapy for more than three months have poor sleep quality. This is due to increased levels of cytokine inflames caused by several factors, namely physiological factors, physical disease factors, and environmental factors. There is risk factors associated with depression and sleep disorders in female patients undergoing dialysis, namely diabetes, advanced age, and hemodialysis therapy (Al-Ali et al., 2021). Poor sleep quality that is not resolved properly can increase negative impacts on health levels such as, decreased quality of life, risk of accidents, malaise, fatigue, increased risk of falls, cognitive decline, and death (Damayanti & Anita, 2021). Sleep plays an important role in a person's life; quality sleep can help maintain physical and mental health and improve quality of life. Many studies have shown that patients receiving HD therapy have a greater risk of suffering from poor sleep quality (Ezzat & Mohab, 2015). A person who continuously suffers from poor sleep quality affects sleep quality and increases the risk of death (Masoumi, 2015). Researchers concluded that most chronic kidney disease patients who went through routine hemodialysis therapy had poor sleep quality. This is due to increased levels of inflammatory cytokines, poor sleep quality that is not resolved properly can increase negative impacts on health levels such as, decreased quality of life, risk of accidents, malaise, fatigue, increased risk of falls and cognitive decline.

The Correlation of Spiritual Well-Being with Sleep Quality of Chronic Kidney Disease Patients Undergoing Hemodialysis at Pringsewu Hospital

The results showed that respondents with low Spritual Well-Being and had poor sleep quality as many as 20 (69.0%), From the results of data analysis obtained the results of p value = 0.000. This figure shows that the p value <0 .05, meaning that there is a correlation between spiritual well-being and the quality of sleep of chronic kidney disease patients undergoing hemodialysis at Pringsewu Hospital. In line with the results of research conducted by Chia-Yu et al., (2021), showed that Spiritual well-being has a negative correlation with poor sleep disturbances so that it can reduce the sleep quality of hemodialysis patients. In another study, symptoms of physical distress were significantly negatively correlated with spiritual well-being where patients with end-stage renal disease undergoing chronic hemodialysis generally experience severe symptom distress, which can cause sleep disturbances and a decrease in patients' quality of life, and negatively affect their physical and mental health (Wang et. al., 2016).

According to the theory of Gomez and Fisher in (Fitrias and Listyawati, 2018), stating that spiritual well-being is a state that reflects positive feelings, behavior and cognition of relationships with oneself and others, as well as relationships with the Almighty (transcendent) and nature, which ultimately gives individuals a sense of identity, wholeness, satisfaction, joy, beauty, love, respect, positive attitude, inner peace and harmony, as well as purpose and direction in life. Various factors in patients with renal failure that can cause sleep disturbances and poor sleep quality, such as blood ureum and creatinine levels, parathyroid hormone, blood pressure, etc., sleep quality is also influenced by pathophysiological factors, such as diabetes mellitus, hypertension (HTN), factors related to uremia, acid-base, electrolytes, parathyroid hormone (PTH), melatonin metabolism, and anemia (Cengic et al, 2012), psychological factors, such as depression and anxiety (Afsar & Elsurur, 2013; Feroze et al., 2012); and factors related to anemia, 2012); and lifestyle-related factors, dialysis time, and stimulant drinking (Wang et al., 2013). Spirituality factors are also related to sleep disorders that can reduce sleep quality (Lenggogeni et al., 2020; Chia-Yu et al., 2021). Researchers concluded that spiritual well-being is very important for patients with kidney disease, by doing high spiritual well-being it will provide a sense of calmness for the self where the self is free from pressures related to work, household activities, personal problems, family problems, relationships with others. By doing spiritual well-being, it makes oneself calm, so it is easy to fall asleep and the quality / quantity of sleep can be fulfilled, and vice versa if spiritual well-being is low, it will interfere with activities at home and the environment and have an impact on the physical patient and the patient's sleep quality.

CONCLUSIONS

There is a significant relationship between low Spiritual Well-Being and having poor sleep quality as many as 20 (69.0%), From the results of data analysis obtained the results of p value = 0.000. This figure shows that the p value <0 .05, meaning that there is a correlation between spiritual well-being and the quality of sleep of chronic renal failure patients undergoing hemodialysis at Pringsewu Hospital. Spiritual well-being is closely related to the sleep quality of chronic renal failure patients undergoing hemodialysis. Increasing spiritual well being can reduce sleep disturbances in hemodialysis patients.

REFERENCE

- Afsar, B., & Elsurur, R. (2013). The relationship between sleep quality and daytime sleepiness and various anthropometric parameters in stable patients undergoing hemodialysis. *Journal of Renal Nutrition*, 23, 296-301
- Al-Ali, F., Elshirbeny, M., Hamad, A., Kaddourah, A., Ghonimi, T., Ibrahim, R., & Fouda, T. (2021). Prevalence of Depression and Sleep Disorders in Patients on Dialysis: A Cross-Sectional Study in Qatar. *International Journal of Nephrology*, 2021. <https://doi.org/10.1155/2021/5533416>
- Almutary, H., Douglas, C., & Bonner, A. (2016). Multidimensional symptom clusters: an exploratory factor analysis in advanced chronic kidney disease. *Journal of advanced nursing*, 72(10), 2389–2400. <https://doi.org/10.1111/jan.12997>
- Alsolami, M. A., Almohammadi, N. H., Saed, H., Alasmari, M. A., & Aljadaani, H. M. (2020). Classified diagnosis of sleep disorders and treatment : a review. 4(November), 1–6.
- Angraini, F., & Putri, A. F. (2016). Pemantauan intake output cairan pada pasien gagal ginjal kronik dapat mencegah overload cairan. *Jurnal Keperawatan Indonesia*, 19(3), 152–

160. <https://doi.org/10.7454/jki.v19i3.475>
- Berman, A, Snyder, J.S, and Frandsen, G. (2021). *Kozier & Erb's Fundamentals of Nursing: Concepts, Process, and Practice*, 11th Edition. United Kingdom: Pearson Education
- Butarbutar D. T. (2014). Uji Reliabilitas Dan Validitas Fatigue Severity Scale Versi Bahasa Indonesia Pada Dokter Residen Rsup Dr . Pertemuan Ilmiah Regional XXVI Dokter Spesialis Saraf JOGLOSEMARMAS, 0–10
- Buysse, D. J., Reynolds, C. F., 3rd, Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh Sleep Quality Index: a new instrument for psychiatric practice and research. *Psychiatry research*, 28(2), 193–213. [https://doi.org/10.1016/0165-1781\(89\)90047-4](https://doi.org/10.1016/0165-1781(89)90047-4)
- Cahyani, N. D. (2018). Hubungan Kadar Hemoglobin (Hb) Dengan Fatigue Pada Pasien Penyakit Gagal Ginjal Kronik Yang Menjalani Hemodialisis Di Rsu Dr. H. Koesnadi Bondowoso. *Penelitian*, 68–74.
- Cengić, B., Resić, H., Spasovski, G., Avdić, E., & Alajbegović, A. (2012). Quality of sleep in patients undergoing hemodialysis. *International urology and nephrology*, 44(2), 557–567. <https://doi.org/10.1007/s11255-010-9881-x>
- Chia-Yu, L. I., Hsieh, C. J., Shih, Y. L., & Lin, Y. T. (2021). Spiritual well-being of patients with chronic renal failure: A cross-sectional study. *Nursing Open*, 8(5), 2461–2469. <https://doi.org/10.1002/nop2.1004>
- Cho, M. K., & Kang, Y. (2021). Effect of self-care intervention for controlling interdialytic weight gain among patients on haemodialysis: A systematic review and meta-analysis. *Journal of Clinical Nursing*, 30(15–16), 2348–2365. <https://doi.org/10.1111/jocn.15773>
- Craven, R.F., & Hirnle, C.J. (2000). *Fundamental of nursing human health and function* (3rd Ed.). Philadelphia: Lippincott
- Damayanti, M. L., & Anita, D. C. (2021). *Fatigue Dan Kualitas Tidur Pada Pasien Hemodialisa: Literature Review Naskah Publikasi*. Universitas 'Aisyiyah Yogyakarta
- Dias Saraswati, S. S. (2019). Pengaruh Terapi Kelompok Suportif Untuk Meningkatkan Optimisme Pada Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisis. *Jurnal Intervensi Psikologi (JIP)*, 11(1), 55–66.
- Ezzat, H., & Mohab, A. (2015). Prevalence of sleep disorders among ESRD patients. *Renal Failure*, 37(6), 1013–1019. <https://doi.org/10.3109/0886022X.2015.1044401>
- Feroze, U., Martin, D., Kalantar-Zadeh, K., Kim, J. C., Reina-Patton, A., & Kopple, J.D. (2012). Anxiety and depression in maintenance dialysis patients: Preliminary data of a cross-sectional study and brief literature review. *Journal of Renal Nutrition*, 22, 207–210.
- Herdman, H. (2018). *Diagnosis Keperawatan Definisi & Klasifikasi 2*. EGC.
- Heriansyah, A. H. (2019). Gambaran Ureum Dan Kreatinin Pada Pasien. Gagal Ginjal Kronis Di Rsd Karawang. *Binawan Student Journal*, 1(01)
- Jablonski, Anita. (2017). *The Multidimensional Characteristics of Symptoms Reported by*

- Patients on Hemodialysis. *Nephrology Nursing Journal*, 34 (1).
- Karinda, T. U. (2019). Gambaran Komplikasi Penyakit Ginjal Kronik Non Dialisis di Poliklinik Ginjal-Hipertensi RSUP Prof . Dr . R . D . Kandou. *Jurnal E-Clinic (ECl)*, , 7(2), 169–175.
- Kementerian Kesehatan RI. 2019. Hasil Riset Kesehatan Dasar (Riskesdas) 2018. Jakarta: Badan Penelitian dan Pengembangan Kesehatan Kementerian RI.
- Kozier, B. (2014). *Fundamental of Nursing Concepts : Process & Practice*. Jakarta: EGC.
- LeMone, P., Burke, K. M., & Bauldoff, G. (2016). *Buku ajar keperawatan medikal bedah*, ed. 5, vol.3 (5 ed.). Jakarta: Penerbit Buku Kedokteran EGC
- Lenggogeni, D. P., Sitorus, R., & Maria, R. (2020). Sleep Quality among Hemodialysis Patients. *Enhancing Capacity of Healthcare Scholars and Professionals in Responding to the Global Health Issues*, 63–69. <https://doi.org/10.2478/9783110680041-009>
- Liehr, P. (2005). Looking at symptoms with a middle range theory. *Advance Studies in Nursing*, 3(5), 152-157.
- Liu, D., Kahathuduwa, C., & Vazsonyi, A. T. (2021). The Pittsburgh Sleep Quality Index (PSQI): Psychometric and clinical risk score applications among college students. *Psychological Assessment*, 33(9), 816.
- Liyanage T, Ninomiya T, Jha V, et al. Worldwide Access to Treatment for End-Stage Kidney Disease: A Systematic Review. *Lancet*. 2015;385(9981):1975-1982.
- Losso, R. L., Minhoto, G. R., & Riella, M. C. (2015). Sleep disorders in patients with end-stage renal disease undergoing dialysis: Comparison between hemodialysis, continuous ambulatory peritoneal dialysis and automated peritoneal dialysis. *International Urology and Nephrology*, 47, 369-375
- Mailani, F. &. (2017). Hubungan Dukungan Keluarga Dengan Kepatuhan Diet Pada Pasien Gagal Ginjal Kronik Yang Menjalani. *Jurnal Endurance*, , 2(3), 416.
- Malinda, H., Sandra, S., & Rasyid, T. A. (2022). Hubungan penerimaan diri terhadap self management menjalani hemodialisis. *Jurnal Ners*, 6, 209–221.
- Martha Raile Alligood, (2014) *Nursing Theory: Utilization and Application*, ed 5. By Mosby, an imprint of Elsevier Inc.
- Masoumi, M. (2015). Sleep quality in patients on maintenance hemodialysis and peritoneal dialysis. *Sleep Medicine*, 16, S72. <https://doi.org/https://doi.org/10.1016/j.sleep.2015.02.181>
- Muzaenah, T., & Makiyah, S. N. (2018). Pentingnya Aspek Spiritual Pada Pasien Gagal Ginjal Kronik dengan Hemodialisa: A Literature review. *HerbMedicine Journal* , 98-102.
- Narayati, Aisyah, Giri (2023) *Peningkatan Kemampuan Adekuasi Perawat Ruang Hemodialisa*. Jakarta: Tata Mutiara Hidup Indonesia
- Nata, N. (2019). Analisis Praktik Klinik Keperawatan Pada Pasien CKD (Chronic Kidney Disease) Dengan Intervensi Inovasi Teknik Relaksasi. Universitas Muhammadiyah,

Kalimantan Timur

- Nelson, K. L., Davis, J. E., & Corbett, C.F. (2022). Sleep quality: An evolutionary concept analysis. *Nursing forum*, 57(1), 144–151. <https://doi.org/10.1111/nuf.12659>
- Ningrum, A. W. C., & Rahma, S. (2017). Faktor Yang Berhubungan Dengan Kualitas Tidur Pasien Gagal Ginjal Kronik Dengan Terapi Hemodialisa. *Proceeding Seminar Nasional Keperawatan “Implikasi Perawatan Paliatif Pada Bidang Kesehatan,”* 3(1), 279–285.
- Nurhayati, I., Hamzah, A., Erlina, L., Rumahorbo, H., Studi III Keperawatan, P. D., Keperawatan, J., & Kemenkes Bandung, P. (2021). Gambaran Kualitas Tidur Pada Pasien Gagal Ginjal Kronik Yang Menjalani Terapi Hemodialisa: Literature Review Sleep Quality In Chronic Kidney Disease In Hemodialysis Patients: A Literature Review. *Jurnal Keperawatan Indonesia Florence Nightingale*, 1(1), 38–51.
- Parker Gregg, L., Bossola, M., Ostrosky-Frid, M., & Susan Hedayati, S. (2021). Fatigue in ckd epidemiology, pathophysiology, and treatment. *Clinical Journal of the American Society of Nephrology*, 16(9), 1445–1455. <https://doi.org/10.2215/CJN.19891220>
- Pavlova, M. K., & Latreille, V. (2019). Sleep Disorders. *The American Journal of Medicine*, 132, 292–299. <https://doi.org/10.1016/j.amjmed.2018.09.021>
- Pigeon, W. R. (2010). Diagnosis, prevalence, pathways, consequences and treatment of insomnia. *The Indian Journal of Medical Research*, 131, 321–332
- Pilger, C. et al. (2017) ‘Spiritual well-being and quality of life of older adults in hemodialysis’, *Revista brasileira de enfermagem*, 70(4), pp. 689–696. doi: 10.1590/0034-7167-2017-0006.
- Pius, E. S., & Herlina, S. (2019). Faktor-Faktor Yang Berhubungan Dengan Kualitas Tidur Pada Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisis Di Rumah Sakit Tarakan Jakarta. *Jurnal Keperawatan Widya Gantari Indonesia*, 3(1). <https://doi.org/10.52020/jkwgi.v3i1.1081>
- Pratiwi, S. H., Sari, E. A., & Kurniawan, T. (2019). Kepatuhan menjalankan manajemen diri pada pasien hemodialisis. *Jurnal Perawat Indonesia*, 3(2), 131–138.
- Prihati, D. R., & Pangesti, M. D. (2018). Exercise Intradialisis Terhadap Penurunan Tingkat Fatigue pada Pasien Hemodialisa. *Jurnal Manajemen Asuhan Keperawatan*, 2(1), 7–13.
- Priyanto Innike, B. I. (2018). Hubungan Kadar Kreatinin. Dengan Formula Huga (Hematocrit, Urea, Gender) Pada Pasien Penyakit. Ginjal Kronik. *Journal UNDIP*, 1.
- Putri, E., Alini, & Indrawati. (2020). Hubungan Dukungan Keluarga dan Kebutuhan Spiritual Dengan Tingkat Kecemasan Pasien Gagal Ginjal Kronik Dalam Menjalani Terapi Hemodialisis Di RSUD Bangkinang. *Jurnal Ners Research & Learning in Nursing Science*, 4(23), 47–55.
- Rahmawati, F. (2018). Laboratory Aspect Of Chronic Kidney Disease. *Jurnal Ilmiah Kedokteran Wijaya Kusuma*, 6(1), 14–22.
- Ramadhani, H. (2019). Hubungan Pengetahuan Dan Sikap Perawat dengan Kemampuan

- Pemenuhan Kebutuhan Spiritual pada Pasien Cemas di Ruang Rawat Inap RSUD Labuang Baji Makassar. Repository S1 Skripsi Stikes Panakkukang Makasar, 1–91.
- Roslina, T. H. (2019). Adaptasi Pasien Penyakit Ginjal Kronik pada. Efektor Konsep Diri : A Literature Review. *Jurnal EDUNursing*, 3(1), 31– 42.
- Shahid, A., Wilkinson, K., Marcu, S., & Shapiro, C. M. (2017). fss scales. *Fss Scales*, 1–406. <https://doi.org/10.1007/978-1-4419-9893-4>
- Smeltzer, C. &. (2015). Buku Ajar Keperawatan Medikal Bedah. In Brunner, & Suddart. Jakarta: EGC.
- Sopia Tamba. (2021). Hubungan Spiritual Well-Being Dengan Kualitas Hidup Pasien Gagal Ginjal Kronik Yang Menjalani Hemodialisa Di Rumah Sakit Santa Elisabeth Medan Tahun 2021. 5(3), 248–253
- Wang, M. Y., Chan, S. F., Chang, L. I., Chen, T. H., & Tsai, P. S. (2013). Better sleep quality in chronic haemodialyzed patients is associated with morningshift dialysis: A cross-sectional observational study. *International Journal of Nursing Studies*, 50(11),1468–1473. <https://doi.org/10.1016/j.ijnurstu.2013.02.010>
- Wang, R., Tang, C., Chen, X., Zhu, C., Feng, W., Li, P., & Lu, C. (2016). Poor sleep and reduced quality of life were associated with symptom distress in patients receiving maintenance hemodialysis. *Health and Quality of Life Outcomes*, 14(1), 1–8. <https://doi.org/10.1186/s12955-016-0531-6>
- WHO. (2021). Report Of Renal Data. Geneva: WHO.
- Yustisia, N., Aprilatutini, T., & Rizki, T. D. (2020). Gambaran Kesejahteraan Spiritual pada Pasien Chronic Kidney Disease (CKD) di RSUD Dr. M. Yunus Bengkulu. Prodi Keperawatan FMIPA Universitas Bengkulu
- Zasra, R. H. (2018). “Indikasi dan Persiapan Hemodialisis. Pada Penyakit Ginjal Kronis”. . *Jurnal Kesehatan Andala*