Original Research

MANAGEMENT OF DEPRESSION IN HEMODIALYSIS PATIENTS: A PILOT STUDY

Nurul Mawaddah , **Mujiadi Mujiadi** and **Robby Wicaksono Utomo**

Nursing Department, Sekolah Tinggi Ilmu Kesehatan Majapahit, Mojokerto, East Java, Indonesia

CORRESPONDING AUTHOR
Nurul Mawaddah
mawaddah.ners@gmail.com
Nursing Department, Sekolah Tinggi Ilmu Kesehatan Majapahit, Mojokerto, East Java, Indonesia

ABSTRACT

Introduction: Depression is a common mental health problem in patients undergoing hemodialysis therapy. However, handling the problem of depression in the hospital has not become a treatment concern, resulting in increasing non-adherence to dialysis patient therapy. This study aims to determine the effect of depression management on the depression score of patients undergoing hemodialysis.
Method: This study used pre-experimental designs with One Group Pretest-Posttest. The study was conducted at the Malang Regional Hospital. The study population was chronic kidney failure patients undergoing routine hemodialysis in the hospital, with the sample criteria for depression based on the Beck Depression Inventory-II instrument, using the simple random sampling technique obtained from a total of 40 respondents. Data were analyzed quantitatively by univariate and bivariate analysis.
Results: Before interventions almost all respondents (95%) had mild depression, and post-test scores showed that most respondents (72.5%) did not experience depression after depression management interventions. The results of the Wilcoxon Signed Rank Test, found that there was an effect of depression management on the depression score of patients undergoing hemodialysis, and almost all respondents (92.5%) experienced a decrease in depression score. Providing depression management interventions carried out in 2 meetings was able to reduce depression scores. The management of depression used in this study is nursing care for depressed patients with a diagnosis of helplessness, namely training in controlling life situations that can be controlled, training in controlling negative thoughts and irrational thoughts, training in developing positive expectations and doing positive affirmations, and training in roles that can be performed. and provide reinforcement and praise.
Conclusions: Depression management has been shown to be effective in reducing depression in patients with all categories of depression, both mild, moderate, and severe depression to not depressed. Provision of interventions in the management of depression is necessary for patients who experience depression as a result of undergoing hemodialysis therapy to avoid non-adherence to therapy.

Keyword: chronic kidney failure; dialysis; disobedient; hospital; therapy

1. INTRODUCTION

Chronic kidney failure is a disease that has characteristics that are persistent, incurable and require complex treatment in the form of kidney transplantation, peritoneal dialysis, hemodialysis and outpatient for a long time (Black & Hawks, 2014). Hemodialysis has certain effects on patients,

namely lack of control over activities of daily and social living, loss of freedom, early retirement, financial stress, disruption in family life (Tartum et al., 2016), changes in self-image, and reduced self-esteem resulting in psychosocial problems such as anxiety, social isolation, loneliness, helplessness, hopelessness and depression (Badariah et al.,

2017). Keskin and Engin's (2020) research shows that patients undergoing hemodialysis often experience depression, suicidal ideation increases when experiencing severe levels of depression and increasing age in patients with chronic renal failure. Study results (Inker et al., 2014) also say that end-stage renal failure patients lose physical and cognitive abilities which eventually leads patients to sadness and despair leading to dialysis disconnection, this behavior is considered suicidal thoughts, suicide triggered due to failure to cope with dialysis stress. Depression in chronic kidney failure patients undergoing hemodialysis is caused by factors related to social life, psychological and biological mechanisms, as well as factors of loss of something that previously existed such as freedom, work and independence (Musthafa & Armelia, 2019). In addition, the condition of being dependent on dialysis machines forever, as well as adapting to illness conditions results in changes in the patient's life such as poor welfare, loss of activity opportunities, decreased sex drive, and increased living expenses incurred (Anggraeni et al., 2017; Lukman et al., 2013).

In Indonesia, the number of people with chronic kidney disease is increasing very quickly. Chronic kidney disease becomes a life-threatening disease, as well as a social and economic problem for sufferers and their families. Riskesdas Data in 2018 (Kemenkes RI, 2019) The prevalence of chronic kidney failure in Indonesia reached 0.38%, while those undergoing hemodialysis reached 19.33%. Depressive symptoms are present in 30% of patients undergoing hemodialysis These depressive symptoms are associated with increased mortality and decreased quality of life of patients undergoing hemodialysis. The prevalence of major depression in the general population is about 1.1%-15% in men and 1.8%-23% in women, but in hemodialysis patients the prevalence is around 20%-30% and can even reach 47% These depressive symptoms are associated with increased mortality and decreased quality of life of patients undergoing hemodialysis(Setiati et al., 2016).

The results of a preliminary study by researchers in the Hemodialysis Room of a Hospital in one of the Malang regions conducted within three days, found that almost a quarter (15-25%) of patients showed signs and symptoms of depression based on the Beck Depression Inventory-II (BDI II) instrument. In addition, based on the results of researcher interviews, it was found that most patients said sometimes they felt hopeless, inferior, anxious, and worried about their condition. Three of the patients also said they lacked interest or motivation in their daily actions, and were not eager to chat or socialize with friends or neighbors. Almost all patients encountered complained of physical effects due to depression such as feeling tired, difficulty sleeping, feeling dizzy and not appetizing. These signs and symptoms are characteristic of the diagnosis of helplessness, namely a state of loss of control that the patient feels about events (undergoing hemodialysis) that affect the patient's well-being and personal life (Nursing Diagnosis, Definitions and Classification 2021-2023). In this study, researchers provided depression management interventions, namely nursing interventions for patients with a diagnosis of helplessness. Depression management is an act of identifying and managing patients who are depressed. The depression management intervention refers to the management of nurses in the technical guideline for depression services by the Indonesian Ministry of Health, because in a situation where the patient is in the hemodialysis room, the intervention is aimed at patients who have been diagnosed with helplessness. The depression management intervention provided is training on how to control life situations that can be controlled, training on how to control negative thoughts and irrational thoughts, training on how to develop positive expectations and doing positive affirmations, practicing roles that can be performed, and providing reinforcement and praise (Direktorat Jenderal Pencegahan dan Pengendalian Penyakit Kementerian Kesehatan RI, 2021).

The effectiveness of depression management in patients undergoing hemodialysis has been carried out in previous studies in the form of providing health education about depression and its management and providing relaxation technique training with instrumental music techniques. The study results show a decrease in depression from moderate to mild with an average decrease of 5.56 points (Yanah, 2019). However, depression management interventions in this study not only increased the knowledge of hemodialysis patients about their depression, but also increased their ability to identify signs and symptoms of depression and manage problems of helplessness that lead to depression.

The importance of paying attention to patients with signs and symptoms of depression is very important because depression in chronic medical diseases has been associated with a lack of adherence to treatment regimens, suicidal tendencies and survival rates. A holistic approach is required in treating hemodialysis patients. Psychiatrists and nephrologists are involved as part of a multidisciplinary team to effectively improve patients' quality of life. The stress of undergoing treatment and the burden of disease due to hemodialysis cannot be avoided for life by the patient and the whole family, especially when the patient is the head of the household (Prima et al., 2023). Based on this, researchers conducted a

study on how the application of depression management measures to the level of depression in patients with chronic renal failure.

2. MATERIALS AND METHODS

2.1 Design

This research is quantitative research with pre-experimental designs with One Group Pretest-Posttest. This study aims to determine the effect of depression management on the depression score of patients undergoing hemodialysis.

2.2 Population and Sampling

This research was conducted in the Hemodialysis Room of the East Java Provincial Hospital in 2022. The total sample of 40 respondents was carried out using a simple random sampling technique. the sample taken from the population is from all patients undergoing hemodialysis who are identified as having depression based on the signs and symptoms of depression from the results of previous visits to the hemodialysis unit of this hospital. then at the next visit a depression measurement was carried out using the BDI II instrument and in accordance with the sample criteria which included: (1) aged 15 years and over, (2) routinely undergoing Hemodialysis at the hospital, (3)) is depressed based on the BDI II measurement, and (4) is fully conscious (not in a state of reduced consciousness).

2.3 Variable

The dependent variable in this study was the depression score of patients undergoing hemodialysis, while the independent variable is depression management

2.4 Instrument

The instruments used were the demographic data questionnaire, BDI II depression questionnaire and depression management workbook. The first part of the instrument was to collect demographic data, including age, gender, education, occupation, income, marital status, and length of time undergoing hemodialysis. the second part of the instrument is the Indonesian version of the BDI II questionnaire. BDI II instruments have high sensitivity and specificity, the reliability value measured by Cronbach's alpha was 0.90 and the validation value was $r = 0.55$, p 0.01 (Sierra et al., 2013). The BDI II questionnaire consists of 21 statements and describes 21 categories, including feelings of sadness, feelings of pessimism, feelings of failure, feelings of dissatisfaction, feelings of guilt, feelings of being punished, self-loathing, self-blame, suicidal ideation, crying easily, irritability, withdrawing from social relationships, unable to make decisions, body image deviation, work decline, sleep disturbance, fatigue, loss of appetite, weight loss, somatic preoccupation, and loss of libido. The total score of all depression items shows the following interpretation: if the score is 0-13: no depressive

symptoms, 14-19: mild depression, 20-28: moderate depression, and 64-84: severe depression.

2.5 Procedure

The research procedure was started by explaining to the respondents about the research being conducted and asking for their willingness to join as respondents. The research procedure begins with explaining to respondents about the research being conducted and asking their willingness to join as respondents. Respondents were all patients undergoing routine hemodialysis for at least 1 year, aged over 15 years and it was previously known that all patients undergoing hemodialysis for more than 1 year had signs and symptoms of depression identified from patient complaints during interviews in the hemodialysis unit room at the previous visit. Furthermore, respondents who are willing to be asked to fill out a willingness form that has been provided and fill out a questionnaire. For respondents who could not read, the researcher read it to them and asked for answers from them. The average time for respondents to complete the instrument was about 15 minutes. All respondents who were approached agreed to participate in the research and filled out the instrument. after completing the pre-test questionnaire. Respondents who met the sample criteria, namely all respondents who experienced depression based on the BDI II instrument, were over 15 years old and had undergone hemodialysis for at least 1 year, then were given 2 sessions of depression management intervention, session 1 was carried out during the current visit, and session 2 was carried out during the visit. in the hemodialysis unit of this hospital. Interventions are carried out individually after the assessment and initial health examination phases are completed. Each intervention session takes about 15 minutes. interventions in session 1 include: (1) training in life situations that can be controlled, (2) training in controlling negative thoughts and irrational thoughts, (3) training in how to develop positive expectations and carry out positive affirmations, and (4) training in acceptable roles done. Implementation of Session 2 is carried out when the respondent makes the next hemodialysis visit which contains activities evaluating the Session 1 exercises. The researcher evaluates the Session 1 exercises by identifying the exercises that the respondent has done through interviews and documentation of the exercises that have been carried out on the worksheets or guidelines for daily exercise activities provided researcher. Then proceed with giving reinforcement of the exercises that have been done, giving praise, and filling out the posttest questionnaire.

2.6 Analysis

Data were analyzed using univariate and bivariate analysis. Univariate analysis in this study showed the frequency distribution of age, sex, education, occupation, income, marital status, and length of time on hemodialysis. While the bivariate analysis was

used to determine the effect of the application of depression management on the depression scores of patients undergoing hemodialysis. The results of the statistical analysis of the Test of normality showed that the data distribution was not normal, so that data were analyzed using the Wilcoxon Signed Rank Test.

2.7 Ethical Clearance

This research has passed an ethical test conducted in March 2022. The ethical test was conducted by the health research ethics committee of STIKES Majapahit. The results have been declared ethical and obtained an ethical approval certificate with number 033/KEPK-SM/2022. All research respondents have also been informed of the purpose of the research conducted by the researcher and have been given written consent. Researchers also asked respondents to give actual answers and implement depression management interventions well.

2 RESULTS

Table 1 Shows respondents' characteristics based on age, sex, education, occupation, income, marital status, and length of time on hemodialysis. The results of the study showed that most respondents aged 56-65 years (late elderly), most are female, most have a high school education, most respondents do not work and do not earn, marital status, most are married and have undergone hemodialysis for a long time mostly > 3 years. . before the depression management intervention showed that most of the respondents experienced mild depression, and after the intervention most of them did not experience depression.

Based on Table 2 shows that the average depression score before depression management measures was 16.6 points (mild depression), while after depression management actions the average depression score was 11.15 (no signs of depressive symptoms). The analysis test uses the Wilcoxon Signed Rank Test because both variables have abnormal data distribution. The test results showed a significant effect of depression management on the decline in depression scores (p = 0.000). The results of this test also showed that almost all respondents experienced a decrease in depression scores after depression management interventions (92.5%).

3 DISCUSSION

Based on the results of the study it was known that most of the respondents (95%) experienced mild depression due to undergoing hemodialysis. In addition, moderate depression and severe depression also occur in respondents with the same proportion, namely 2.5%. The results of the study also showed that almost all respondents experienced a decrease in depression scores after the depression management intervention (92.5%), with an average score reduction of 5.45 points. Based on the results of the Wilxocon test, it is known

that the value of p = 0.000 or p <0.05, which means that there are differences in the level of depression in patients undergoing hemodialysis before and after administration of depression management interventions. The results of this study also show that the management of depression in depressed patients undergoing hemodialysis at the hospital is effective in reducing depression in patients from mild to non-depressed.

Depression can occur in patients undergoing hemodialysis because hemodialysis can result in changes in the physical and psychological aspects of the patient's life, so that it can trigger excessive stressors that can cause depression. In addition, the duration of using the dialysis machine has an impact on changes in the patient's daily life (Lukman et al., 2013). Depression is also caused because patients have low family support (Anggraeni et al., 2017; Tartum et al., 2016). Because the impact of depression is not only felt by the patient, but also the patient's family, especially the patient's spouse, can experience depression as a result of seeing a loved one suffer, so it will affect the support and motivation that will be given to the patient, especially for patients undergoing hemodialysis who must undergo a washing process. blood for life, so that patients get low family support so that it has an impact on the causes of patient depression (Tartum et al., 2016).

Depression is also caused by work factors or activities interacting with friends and family. The results of this study indicate that the majority of respondents who experience depression have undergone hemodialysis for more than 3 years. These results are consistent with the results of the study by Maulina et al., that depression is influenced by various daily activities of patients such as the place of residence, the surrounding environment and significant patient activities (Maulina et al., 2019).

The results of further research analysis, respondents who experienced moderate depression generally showed psychological symptoms, typical physical and social symptoms, such as moody, prolonged sadness, sensitive, irritable and irritable, loss of enthusiasm, loss of confidence, loss of concentration, and decreased endurance based on filling out the BDI II questionnaire. This is in line with the results of Rahayu & Ariana's study (Rahayu & Ariana, 2021) that depression is an emotional condition that is usually characterized by extreme sadness, feelings of meaninglessness and guilt, withdrawal from others, sleeplessness, loss of appetite, sexual desire and interest and pleasure in usual activities. Depression is often associated with a variety of other psychological problems, such as panic attacks, substance abuse, sexual dysfunction and personality disorders (Davison et al., 2014).

Researchers argue that many respondents who experience moderate depression may be related to

Table 1. Characteristics of respondents with chronic renal failure undergoing hemodialysis

Respondents Characteristic	Total (n)	Percentage (%)
Age		
17-25 (late adolescence)	1	2.5
26-35 (early adult)	2	5.0
36-45 (late adult)	11	27.5
46-55 (early elderly)	5	12.5
56-65 (Late Elderly)	21	52.5
Gender		
Man	18	45.0
Woman	22	55.0
Education level		
Elementary School	7	17.5
Junior High School	4	10.0
High School	21	52.5
Bachelor	7	17.5
Masters	0	0
Doctoral	1	2.5
Work		
Jobless	23	57.5
Entrepreneurship	9	22.5
Aparatur Sipil Negara	5	12.5
Swasta	3	7.5
Income		
No income	14	35.0
Less than UMR (Provincial Minimum Wage)	7	17.5
UMR	8	20.0
More from UMR	11	27.5
Marital status		
Unmarried	3	7.5
Marry	33	82.5
Divorce	4	10.0
Duration of hemodialysis		
1-3 Years	14	35.0
>3 years	26	65.0
Depression before intervention		
No depressed	0	0
Mild depression	38	95.0
Moderate depression	1	2.5
Deep depression	1	2.5
Depression after intervention		
No depressed	29	72.5
Mild depression	10	25.0
Moderate depression	1	2.5
Deep depression	0	0

Table 2. Effect of depression management on depression scores of patients undergoing hemodialysis

Variable	Total (n)	Average	SB	p
Depression score				
Pre	40	16.60	2.54	0,000
Post	40	11.15	4.14	

the state of dependence on dialysis machines throughout their lives resulting in changes in the lives of CRF sufferers. Health status, economic conditions, and the hemodialysis process itself can affect changes in the patient's life, which are all triggers or causes of stress. CRF patients undergo hemodialysis therapy 2-3 times per week and spending several hours will make them experience different tension, anxiety, stress and depression after the individual which negatively affects their quality of life and health.

The results of further analysis based on filling out the questionnaire found that most respondents agreed that there were physical changes such as

decreased appetite, sleep disturbances, fatigue, headaches without apparent cause and decreased sexual quality. This is in accordance with the American Psychiatric Association (2020) that people with depression can find some common signs and symptoms, namely physical changes with signs of decreased appetite, sleep disorders, fatigue or lack of energy, agitation, pain, headaches without physical causes. The second is a change of mind with signs of feeling confused, slow thinking, difficult to make decisions, lack of confidence, feeling guilty or unwilling to be criticized, and suicidal thoughts. Third, changes in feelings with characteristics of decreased attraction to the opposite sex, feeling sad, often crying for no apparent reason, irritability, irritability and sometimes aggressiveness. Fourth, changes in daily habits with signs of distancing from the social environment, decreased activity, and postponing homework (American Psychiatric Association, 2020).

The results of this study show that the provision of depression management interventions carried out as many as 2 sessions can have a positive impact on patients, through coordinated and systematic activities for 2 sessions, which in the sessions contain activities and information that support the addition of information and knowledge to hemodialysis patients so that patients will feel the impact, one of which is a decrease in depression. Where hemodialysis patients will go through many changes, physically and psychologically. Patients diagnosed with kidney disease who undergo hemodialysis for the first time will have a bad psychological impact, not a few patients who are in a condition of grieving denial with this situation. Health education modified with depression management information has a positive impact, because when providing health education there is a process of transferring information and knowledge, so that after someone understands the information will take action, then the action will be carried out at any time becomes a habit of the health education process. The expected outcome of a health education is a health behavior, or behavior to maintain and improve health that is conducive to the target of health education, one of which is the treatment of depression (Notoatmodjo, 2014).

This research is in line with Dalimunthe's (2014) research which suggests the role of nurses as consultants. Depression management consultation conducted to hemodialysis patients will have a positive impact such as a significant reduction in depression levels. This can happen because of increased knowledge about depression management so that it affects a person's coping mechanisms in dealing with stress and depression. The role of nurses through health services in patients when carrying out hemodialysis is very important, namely in the form of safe nursing care to prevent the continuation of complications (Dalimunthe, 2014).

According to Waluyo, et al., facts in the field in the hemodialysis room show that the busy and routine of nurses in preparing tools to carry out hemodialysis procedures and control the course of hemodialysis therapy has taken up a lot of nurses' time in the hemodialysis room so that efforts to provide interventions in the form of depression management needed by kidney failure patients undergoing routine hemodialysis therapy are often forgotten. In these circumstances, depression management becomes important even though there is a busy life that is difficult to avoid in patients who undergo hemodialysis. It is important for the nurse to bring up her role as an educational counselor through the act of depression management. The role of nurses to provide depression management as well as education about kidney disease, hemodialysis therapy and diit in hemodialysis patients is important to increase patient knowledge in order to reduce the factors that cause depression (Waluyo et al., 2016).

The results of the study of Shi et al., show that depression management with a positive psychological intervention approach carried out by nurses can reduce depression and improve the causality of life of patients hospitalized with chronic diseases (Shi et al., 2020).

The results of this study are in accordance with the results of Cuijpers et al's (2020) study, that psychotherapy (depression management) can effectively overcome mild depression patients, while the combination of psychotherapy and pharmacotrerapi is effective for moderate to severe depression (Cuijpers et al., 2020). The depression management intervention provided by the researcher uses an interpersonal therapy approach (IPT), which is carried out with an individual approach to patients who experience depression, and cognitive-behavioral therapy (CBT) by controlling negative thoughts with positive thoughts and patients are asked to apply them in daily life. The results of this study are in accordance with the study of Zhou et al and Cuijpres et al, that IPT and CBT effectively control depression patients (Cuijpers et al., 2016, 2021; Zhou et al., 2015)

Management of depression includes family therapy, family problems can play a role in the development of depressive disorders, so family support for patients is very important. The goal of therapy for families of depressed patients is to relieve feelings of frustration and hopelessness, change and improve attitudes or structures in the family that hinder the patient's healing process. Cognitive-behavioral therapy, aims to change the patient's mindset that is always negative (poor self-perception, gloomy future, useless self) towards a neutral or positive mindset (Setiawan et al., 2018). In addition, art therapy is widely used as a means of resolving emotional conflicts, increasing self-awareness, developing social skills, controlling behavior, solving problems, reducing anxiety,

increasing self-esteem and various other psychological disorders (Mustika, 2019).

Research that has been done shows that depression management treatment greatly affects the reduction of depression in hemodialysis patients. Researchers have assumed that it is possible that the reduction in depression is also supported by other factors such as family support, medication and also the length of suffering and treatment of hemodialysis. Researchers did not control for other factors that could have influenced the decline. Other factors, for example, that in Lavalette Hospital, hemodialysis units and other wards there are educational activities in addition to depression management. Education is often done for patients to provide information about the disease suffered so that with this education, patients can reduce depression although not too significant because it is not specific compared to depression management.

Researchers argue that long treatment or long suffering from kidney failure is another factor that can also affect the level of depression. Long time treated or suffering from chronic kidney failure undergoing hemodialysis describes that a person has become accustomed to experiencing the condition. People who are used to experiencing circumstances, such as illness, will have little awareness of their state. They will understand the state of pain better than people who have just experienced pain. Based on the results of the study of Sompie et al (2015) and Wahyuni et al (2019) explained that patients who have just undergone hemodialysis have depression levels that vary from no depression, mild depression, moderate depression and even major depression, While patients who have been on hemodialysis for a long time still have depression but only mild ones. This happens because the stress response experienced by new patients will be more than in old patients, old patients must have experienced this phase so that the coping mechanism will be more adaptive. Those who experience hemodialysis longer will show a more resigned attitude and accept the condition they experience (Sompie et al., 2015; Wahyuni et al., 2019).

4   CONCLUSSION

The results of the study showed depression management carried out as many as 2 interventions, effective in reducing depression scores by 5.45 points. The results of the study also showed that almost all respondents experienced a decrease in depression scores, and the most decrease in patients who experienced mild depression became non-depressed. Depression management has been shown to be effective in reducing depression in patients with all categories of depression, whether mild, moderate, severe to non-depressed depression. The provision of depression management interventions is very necessary for patients who experience depression

due to undergoing hemodialysis therapy to avoid non-compliance with therapy. Early detection or early screening of signs and symptoms of depression needs to be done in all hospitals, especially for patients with chronic diseases and undergoing long-term treatment, and then determine the follow-up of depression management both by medical personnel and nurses. Therefore, it is necessary to prepare SOPs for depression management to be applied in hospitals and referral flows for hemodialysis patients who are depressed based on screening results. In addition, family involvement in handling depression problems is needed by patients so that depression management becomes better.

5   REFERENCES

American Psychiatric Association. (2020). *What Is Depression?* American Psychiatric Association. https://www.psychiatry.org/patients-families/depression/what-is-depression

Anggraeni, K. N., Sarwono, B., & Sunarmi, S. (2017). Hubungan Dukungan Keluarga Dengan Tingkat Depresi Pada Pasien Yang Menjalani Terapi Hemodialisa Di Unit Hemodialisa Rumah Sakit Tentara Dr. Soedjono Magelang. *Jurnal Keperawatan Sudirman (The Soedirman Journal of Nursing)*, *12*(2), 109–117.

Badariah, B., Farida, H., & Novita, D. (2017). Karakteristik Pasien Penyakit Ginjal Kronik Yang Menjalani Hemodialisis Di RSUD Kabupaten Kota Baru. *Jurnal Kesehatan Universitas Tribhuwana Tunggadewi Malang*, *2*(2), 281–285.

Black, J. M., & Hawks, J. H. (2014). *Keperawatan Medikal Bedah: Manajemen Klinis untuk Hasil yang Diharapkan* (8th ed.). Salemba Medika.

Cuijpers, P., Cristea, I. A., Karyotaki, E., Reijnders, M., & Huibers, M. J. H. (2016). How effective are cognitive behavior therapies for major depression and anxiety disorders? A meta-analytic update of the evidence. *World Psychiatry*, *15*(3), 245–258. https://doi.org/10.1002/wps.20346

Cuijpers, P., Noma, H., Karyotaki, E., Vinkers, C. H., Cipriani, Andrea, & Furukawa, T. A. (2020). A network meta-analysis of the effects of psychotherapies, pharmacotherapies and their combination in the treatment of adult depression. *World Psychiatry*, *19*(1), 92–107. https://doi.org/10.1002/wps.20701

Cuijpers, P., Quero, S., Noma, H., Ciharova, M., Miguel, C., Karyotaki, E., Cipriani, A., Cristea, I. A., & Furukawa, T. A. (2021). Psychotherapies for depression: a network meta-analysis covering efficacy, acceptability and long-term outcomes of all main treatment types. *World Psychiatry*, *20*(2), 283–293. https://doi.org/10.1002/wps.20860

Dalimunthe, N. N. (2014). *Peningkatan Nilai Parameter Status Besi Reticulocyte Hemoglobin Equivalent Setelah Pemberian Suplemen Besi*

Intravena Pada Pasien Hemodialisis Reguler. Universitas Sumatera Utara.

Davison, G. C., Neale, J. M., & Kring, A. M. (2014). *Psikologi Abnormal (diterjemahkan oleh Nurmalasari Fajar)*. Rajawali Pers.

Direktorat Jenderal Pencegahan dan Pengendalian Penyakit Kementerian Kesehatan RI. (2021). *Petunjuk Teknis Layanan Depresi*. Kementerian Kesehatan RI.

Inker, L. A., Astor, B. C., Fox, C. H., Isakova, T., Lash, J. P., Peralta, C. A., Kurella, T. M., & Feldman, H. I. (2014). KDOQI US commentary on the 2012 KDIGO clinical practice guideline for the evaluation and management of CKD. *American Journal of Kidney Diseases*, *63*(5), 713–735.

Kemenkes RI. (2019). *RISKESDAS 2018*.

Lukman, N., Kanine, E., & Wowiling, F. (2013). Hubungan Tindakan Hemodialisa Dengan Tingkat Depresi Klien Penyakit Ginjal Kronik Di Blu RSUP Prof.Dr.R.D.Kandou Manado. *Ejournal Keperawatan (e-Kp)*, *1*(1), 1–6. https://doi.org/https://doi.org/10.35790/jkp.v1i1.2207

Maulina, S., Mawaddah, N., & Puspitaningsih, D. (2019). Medica Majapahit Pengaruh Life Review Therapy Terhadap Depresi Lansia Di Unit Pelaksana Teknis (UPT) Pesanggrahan Penyandang Masalah Kesejahteraan Sosial (PMKS) Majapahit Mojokerto. *Medica Majapahit*, *11*(1), 60–70.

Musthafa, S., & Armelia, L. (2019). Prevalence of Depression in Hemodialysis Patient Evaluated Using Beck Depression Inventory. *Majalah Kesehatan Pharmadika*, 116–122.

Mustika, F. A. (2019). Terapi-terapi untuk menurunkan depresi. *Prosiding Seminar Nasional Magister Psikologi Universitas Ahmad Dahlan* , 305–309.

Notoatmodjo, S. (2014). *Ilmu Perilaku Kesehatan*. Rineka Cipta.

Prima, A., Mortin Andas, A., Wada, F. H., Puspitasari, I., Shoaliha, M., Saputri Ilyas, A., Studi Keperawatan D-, P., Keperawatan Medikal Bedah, D., Ilmu Kesehatan dan Farmasi, F., Bani Saleh, U., Studi Keperawatan S-, P., Keperawatan Anak dan Maternitas, D., & Keperawatan Jiwa dan Komunitas, D. (2023). Beban Dan Psychological Well Being Pada Keluarga Pasien Yang Menjalani Hemodialisis. *Jurnal Ilmiah Keperawatan IMELDA*, *9*(1). http://jurnal.uimedan.ac.id/index.php/JURNAL KEPERAWATAN

Rahayu, N. A. H., & Ariana, A. D. (2021). Hubungan Body Dissatisfaction dengan Depresi pada Remaja dengan Obesitas pada Masa Pandemi COVID-19. *Buletin Riset Psikologi Dan Kesehatan Mental (BRPKM)*, *1*(2), 1420–1426. https://doi.org/https://doi.org/10.20473/brpkm.v1i2.29704

Setiati, S., Alwi, I., Sudoyo, A. W., Simadibrata, M., Setiyohadi, B., & Syam, A. F. (2016). *Buku ajar ilmu penyakit dalam* (6th ed., Vol. 1). Interna Publishing.

Setiawan, E., Attwells, S., Wilson, AA., Mizrahi, R., Rusjan, P. M., Miler, L., Xu, C., Sharma, S., Kish, S., Houle, S., & Meyer, J. H. (2018). Association of translocator protein total distribution volume with duration of untreated major depressive disorder: a cross-sectional study. *The Lancet Psychiatry*, *5*(4), 339–347.

Shi, Y., Cai, J., Wu, Z., Jiang, L., Xiong, G., Gan, X., & Wang, X. (2020). Effects of a nurse-led positive psychology intervention on sexual function, depression and subjective well-being in postoperative patients with early-stage cervical cancer: A randomized controlled trial. *International Journal of Nursing Studies*, *111*, 1–12. https://doi.org/10.1016/j.ijnurstu.2020.103768

Sierra, J. C., Haynes, S. N., Eysenck, M. W., Buela-Casal, G., Ginting, H., Näring, G., Van Der Veld, W. M., Srisayekti, W., & Becker, E. S. (2013). Validating the Beck Depression Inventory-II in Indonesia's general population and coronary heart disease patients. *International Journal of Clinical and Health Psychology*, *13*. www.elsevier.es/ijchp

Sompie, E. M., Kaunang, T. M. D., & Munayang, H. (2015). Hubungan Antara Lama Menjalani Hemodialisis Dengan Depresi Pada Pasien Dengan Penyakit Ginjal Kronik Di Rsup. Prof. Dr. R. D. Kandou Manado. *Jurnal E-Clinic (ECl)*, *3*(1), 306–310.

Tartum, V. V. A., Kaunang, T. M. D., Elim, C., & Ekawardani, N. (2016). Hubungan lamanya hemodialisis dengan tingkat depresi pada pasangan hidup pasien gagal ginjal kronik di RSUP Prof. Dr. R. D. Kandou Manado. *Jurnal E-Clinic (ECl)*, *4*(1), 46–52. https://doi.org/https://doi.org/10.35790/ecl.v4i1.10832

Wahyuni, A., Kartika, I. R., Asrul, I. F., & Gusti, E. (2019). Korelasi Lama Hemodialisa Dengan Fungsi Kognitif. *Real in Nursing Journal (RNJ)*, *2*(1), 2685–1997. https://ojs.fdk.ac.id/index.php/Nursing/index

Waluyo, A., Mustikasari, M., & Setiawan, A. (2016). Peningkatan Pengetahuan Dan Penurunan Tingkat Depresi Pasien Penyakit Ginjal Kronik Yang Menjalani Terapi Hemodialisa Dengan Terapi Psikoedukasi. *Jurnal Ilmiah Permas : Jurnal Ilmiah STIKES Kendal*, *6*(1), 11–15.

Yanah, Y. (2019). *Pengaruh Pendidikan Kesehatan Manajemen Depresi terhadap Tingkat Depresi Pada Pasien Hemodialisa yang mengalami Gagal Ginjal Kronik di RST. TK. II dr. Soedjono Magelang*. Universitas Muhammadiyah Magelang.

Zhou, X., Hetrick, S. E., Cuijpers, P., Qin, B., Barth, J., Whittington, C. J., Cohen, D., Del Giovane, C., Liu, Y., Michael, K. D., Zhang, Y., Weisz, J. R., & Xie, P. (2015). Comparative efficacy and acceptability of psychotherapies for depression in children

and adolescents: A systematic review and network meta-analysis. *World Psychiatry*, *14*(2), 207–222. https://doi.org/10.1002/wps.2021