

The Effect of Expressive Writing Therapy on Reducing Stress Levels in Chronic Kidney Disease Patients Undergoing Hemodialysis at Undata Hospital

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Abstract

Chronic kidney disease is a world health problem with a high incidence and prevalence. Someone who suffers from chronic kidney disease must undergo hemodialysis regularly; it causes psychological disorders, including stress. Expressive writing therapy is a psychological therapy that can reduce stress levels by writing to reflect thoughts and feelings. This study aimed to prove the difference in stress levels in patients with chronic kidney disease undergoing hemodialysis at Undata General Hospital before and after being given expressive writing therapy. This type of research was Quantitative with a Pre-experimental design using the One Group Pre Test And Post Test Design. The population in this study amounted to 87 people and a sample of 10 people with a purposive sampling technique. The research results from 10 respondents using the Paired sample t-test obtained a $p = 0.000$ ($p \leq 0.05$). Respondents' stress levels before doing expressive writing therapy were severe stress (30%), moderate stress (40%), and mild stress (30%). Meanwhile, the stress level of the respondents after doing expressive writing therapy was normal stress (50%), moderate stress (20%), and mild stress (30%). In conclusion, expressive writing therapy has an effect on reducing stress levels in patients with chronic kidney disease undergoing hemodialysis at Undata Hospital. It is suggested that the results of this study are expected to be used as material and input for non-pharmacological interventions in reducing stress.

Keywords: Expressive Writing Therapy, Stress, Hemodialysis

Key Messages:

- Non-pharmacological interventions, such as expressive writing therapy, can complement pharmacological treatments and contribute to the overall well-being of patients. It is important to recognize the psychological impact of chronic diseases and the need for holistic approaches in healthcare.

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1. Introduction

Chronic kidney disease (CKD), which is a chronic condition affecting the kidneys, is becoming more widely acknowledged as a significant public health concern. Estimates suggest that between 10% to 15% of the global population is affected by the disease (1). Based on the results of the 2018 Basic Health Research (RISKESDAS) based on a diagnosis by an Indonesian doctor, the prevalence of chronic kidney disease in people aged over 15 years in Indonesia is 713,783 people (2). In 2018, the province of Central Sulawesi ranked fifth in the incidence of chronic kidney disease in Indonesia, with a prevalence rate of 0.52% or 7,847 people.

A person diagnosed with chronic kidney disease must routinely undergo this hemodialysis therapy to replace the damaged secretory and excretory functions of the kidneys in the nephrons, which are the main constituent of the kidneys and play an important role in the process of filtering blood. However, someone who has undergone hemodialysis therapy will result in a lifelong dependence on dialysis machines to replace kidney function, which results in changes in the life of patients with chronic kidney disease both physiologically and psychologically. Most patients with chronic kidney disease undergoing hemodialysis therapy experience psychological disorders, including stress (3).

Stress is a condition where intrinsic and extrinsic drives threaten the body's homeostasis (4). Stress occurs because it is caused by a stressor that is felt by a person and is perceived as a threat, so it can cause excessive feelings of anxiety, resulting in stress (3). Patients with chronic kidney disease undergo hemodialysis therapy 2-3 times each week and spend 4-6 hours in one session undergoing hemodialysis therapy, and this process will result in feelings of tension, anxiety, stress, and depression that are different for each person and have a negative impact on health and quality of life (3). Several ways can be done to overcome the problem of stress using pharmacological and non-pharmacological therapy, one of the non-pharmacological therapies, namely psychotherapy. Psychotherapy, commonly known as psychiatric therapy, is carried out to restore a person's cognitive function, namely the ability to think rationally, concentrate and remember, one of which is expressive writing therapy (5). Expressive writing therapy can be integrated with other psychotherapy or counseling approaches and done individually or in groups. In general, expressive writing therapy aims to increase understanding of oneself and others, increase self-esteem, express excessive emotions, and improve problem-solving and individual adaptive functions (6).

Based on interviews conducted on 6 March 2021, at the Undata Hospital, Hemodialysis Unit, with 10 patients undergoing hemodialysis therapy. About 7 respondents said they still felt anxious and stressed while undergoing hemodialysis therapy, felt irritable, and had trouble sleeping at night; this is due to several factors, they have just undergone hemodialysis therapy for 1-2 years, and there is no support from the family. Meanwhile, the other 3 respondents said they no longer felt anxious or stressed. This was due to several factors, including they had been undergoing hemodialysis regularly for 3-4 years and were elderly; hemodialysis patients who were elderly were more likely to accept the conditions that were experienced, so they are already in the acceptance phase of the conditions they live in.

Based on these problems, researchers are interested in conducting research on the effect of expressive writing therapy on reducing stress levels in chronic kidney disease patients undergoing hemodialysis at Undata Hospital.

2. Methods

This research was quantitative and used a pre-experimental research design, with a one group pre test and post test design approach, a research design uses one group of subjects by measuring before and after treatment. The effectiveness of this treatment was assessed by comparing the post-test values with the pre-test. This research was carried out at the Undata Hospital in Palu City on 14-23 June 2021. In this study, 87 patients with chronic kidney disease had recently undergone hemodialysis therapy. The minimum sample size in the experimental group was 10-20 people (7). In this study, the sample used was 10 people. The sampling technique in this study used purposive sampling. Purposive sampling was taking sample members with certain considerations (7). The inclusion criteria in this study were: a) Patients with chronic kidney disease who had recently undergone hemodialysis \leq 12 months; b) Patients with chronic kidney disease who undergo hemodialysis 2-3 times a week; c) Patients with chronic kidney disease who are willing to be respondents by signing an informed consent. The exclusion criteria in this study were: a) Patients with chronic kidney disease who had other complications; b) Patients with chronic kidney disease undergoing hemodialysis in the presence of transfusion; c) Patients with chronic kidney disease who cannot write.

The independent variable was Expressive Writing Therapy, and the dependent variable was Stress Level. Expressive writing therapy is a therapy for reflecting the deepest thoughts and feelings towards unpleasant events in written form. This reflection facilitates individuals to change their cognition, regulate emotions, become a vehicle for excessive emotions and gain new energy as measured by using notebooks and stationery by adjusting to the Standard Operating Procedures (SOP) for expressive writing therapy. Stress caused by changes in the life of chronic kidney failure patients undergoing hemodialysis and experiencing dependence on dialysis machines, the length of time undergoing hemodialysis 4-5 hours, and the emergence of complications as measured using the Depression Anxiety Stress Scale (DASS 42) which was then divided into 3, namely: 1) Mild stress if the score was: 15-18; 2) Moderate stress if the score was: 19-25; 3) Severe stress if the score was: 26-33.

The procedure for implementing expressive writing therapy consists of 4 stages and 3 meeting sessions with topics that are personal and important, and the time for each stage was 6-30 minutes (8). The procedure for implementing expressive writing therapy was as follows: 1) First stage (recognition/initial writing): Instruct the client to sit quietly and relax, and focus their mind. They then instructed the client to write down any words or phrases that come to mind without paying attention to spelling, sentence structure, or grammar. Time in this stage for 6 minutes. 2) The second stage (examination/writing exercise): at this stage, the writing topic was expanded to be more general and specific. Writing topics included emotional events, past, present, and future events. They instructed the client to describe thoughts and feelings about the event or experience. 3) The third stage (juxtaposition/feedback), the respondent wrote about the same topic with a different point of view and how to reshape life. This stage also made the client gain new awareness, behavior, and attitude toward something. Writing can be read, developed, and discussed with family or other trusted people. Then they asked how the client felt after writing. 4) The fourth stage (application to the self), this last stage, the client was encouraged to apply new knowledge or new awareness, eliminate negative thoughts and feelings, think positively in the future, and be able to apply it in everyday life. Data analysis used the paired sample t-test statistic with a significance level of $p < 0.05$.

3. Results

Table 1 Distribution of the frequency of respondents based on characteristics

Characteristics	n	%
Age		
36-45 y.o	3	30.0
46-55 y.o	3	30.0
56-65 y.o	4	40.0
Gender		
Male	5	50.0
Female	5	50.0
Education		
Elementary school	1	10.0
Junior High School	1	10.0
Senior High School	3	30.0
Bachelor	5	50.0
Occupation		
Housewife	2	20.0
Farmer	1	10.0
Self-employed	1	10.0
Civil Servant/Retirement	6	60.0
Duration of HD (Hemodialysis)		
3 months	1	10.0
4 months	1	10.0
8 months	2	20.0
9 months	1	10.0
10 months	1	10.0
11 months	1	10.0
12 months	3	30.0
Total	10	100%

Table 1 shows that the majority of respondents who underwent hemodialysis in the age range of 56-65 years old, totaled 4 respondents (40%), and a small number of respondents who underwent hemodialysis in the age range of 46-55 years and the age range of 56-65 years each of which amounted to 3 respondents (30%). The education of respondents with bachelor's degrees totaled 5 respondents (50%). Most of them worked as civil servants/Pensioners, amounting to 6 respondents (60%). The length of HD majority of respondents undergoing hemodialysis was 2 months, totaling 3 people (30%).

Table 2 Frequency distribution of stress levels before and after expressive writing therapy

Stress Level	Before		After	
	n	%	n	%
Normal	0	0	5	50,0
Mild	3	30.0	3	30.0
Moderate	4	40.0	2	20.0
Severe	3	30.0	0	0
Total	10	100	10	100

Table 2 shows that of the 10 respondents who underwent hemodialysis after doing expressive writing therapy, most of the respondents experienced a decrease in stress levels to normal stress, totaling 5 respondents (50%), and a small proportion of respondents experienced a decrease in stress levels to moderate stress, amounting to 2 people (20 %).

Table 3. The effect of expressive writing therapy on reducing stress levels in patients undergoing hemodialysis

Stress Level	Mean	SD	SE	P Value	N
Before	22.20	4.158	1.315	0.000	10
After	14.90	4.408	1.394		

Table 3 shows that the results of the paired sample t-test statistic (paired t-test) the average stress level before expressive writing therapy was 22.20 and the standard deviation was 4.158. Meanwhile, the average stress level after expressive writing therapy was 14.90, with a standard deviation of 4.408. It can be seen that the difference between before and after expressive writing therapy was 7.300, with a standard deviation of 1.494. The statistical test results obtained a p-value of 0.000, so it can be concluded that there was an effect before and after the expressive writing therapy was carried out on reducing stress levels in patients with chronic kidney disease undergoing hemodialysis at Undata Hospital

4. Discussion

The results were obtained from the paired sample t-test on 10 respondents before and after expressive writing therapy (p-value = 0.000 $\alpha = 0.05$). The p-value is less than 0.05, so it can be said statistically that expressive writing therapy reduces stress levels in patients undergoing hemodialysis at Undata Hospital. EWT is a writing therapy technique that involves patients writing about their feelings in a free and structured manner. Previous research has shown that EWT is effective in reducing stress in different populations, including patients with chronic illnesses (9) (10).

Researchers assume that the stress experienced by patients with chronic kidney disease who undergo hemodialysis has decreased after doing expressive writing therapy for 2 weeks. The decrease in stress levels in patients with chronic kidney disease undergoing hemodialysis is because the patient can cope with stress and has good coping mechanisms. In the results of this study, there are different scores for each respondent; this is due to the different coping mechanisms and mindsets of individuals; individuals who always think rationally can control situations and tend to experience a small risk of stress, on the other hand, individuals The more you can not control the situation, the more likely you are to experience stress. Not only mindset but also a person's personality and beliefs. The personality of an individual or patient with chronic kidney disease can determine the level of stress tolerance; an example of personality types is introvert and extrovert. Someone who has an introverted personality tends to get stressed easily because of being shy and not talking much and is introverted, while someone who has a personality extrovert is not easily stressed because they have a nature that likes to be sociable and open.

This is in line with research conducted by Suprihatiningsih (2021) concerning the Relationship between Coping Mechanisms and Family Support with Stress Levels in Hemodialysis Patients, which states that 2 factors

influence coping mechanisms in patients with chronic kidney disease, namely internal factors and external factors. Internal factors come from within, including age, personality, intelligence, education, values, beliefs, and culture, while external factors come from outside the self, including social, environmental, economic support, and illness (11).

Individuals with an introverted personality orientation who have low levels of empathy, do not like to socialize, have low work orientation, and have low levels of independence are more prone to experiencing stress compared to extroverted personality orientations who are sociable and open (12). The results of this study are supported by Respati's research (2019) which states that expressive writing therapy can reduce physiological stress experienced by a person, this is because the therapy provided helps individuals develop a more positive and rational understanding of thoughts, feelings, and release inner pressures, someone to be able to develop better-coping strategies (13). Therefore expressive writing therapy is the right choice for healing media and improving mental health such as anxiety, depression, and stress, which is continuously disturbing because this therapy can provide a therapeutic effect on a person's emotions and facilitates expressing emotional feelings (14) (15).

One of the interventions carried out by nurses in the hemodialysis unit of Undata Hospital in dealing with stress in patients undergoing hemodialysis is one of them using therapeutic communication with patients before carrying out the hemodialysis process by conducting and asking about the conditions and feelings felt by patients and accompanying patients when the family does not accompany patients during hemodialysis. The findings of this research can serve as a valuable contribution to the field of nursing care and provide a non-pharmacological or psychological approach to addressing stress, anxiety, and depression in individuals, particularly those with chronic illnesses. The use of expressive writing therapy may prove to be a beneficial intervention in improving the psychological well-being of patients undergoing hemodialysis for chronic kidney disease (16) (17). This approach can be integrated into the standard care provided to patients to enhance their coping mechanisms and improve their overall quality of life.

5. Conclusion

The stress level of chronic kidney disease patients undergoing hemodialysis at Undata Hospital before doing expressive writing therapy with a percentage of 30% experiencing severe stress, 40% experiencing moderate stress, and 30% experiencing mild stress. The stress level of chronic kidney disease patients undergoing hemodialysis at Undata General Hospital after performing expressive writing therapy experienced a decrease in stress levels with a percentage of 20% experiencing moderate stress, 30% experiencing mild stress, and 50% normal stress category. Expressive writing therapy has an effect on reducing stress levels in patients with chronic kidney disease undergoing hemodialysis at Undata Hospital.

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