

# THE EFFECT OF DISCHARGE PLANNING ON THE DECREASE OF INTERDIALYTIC WEIGHT GAIN IN HEMODIALYZED PATIENTS

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## THE EFFECT OF DISCHARGE PLANNING ON THE DECREASE OF INTERDIALYTIC WEIGHT GAIN IN HEMODIALIZED PATIENTS

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### Abstract

Chronic Kidney Failure known as progressive and irreversible renal function disorder in which the body fails to maintain metabolism, fluid and electrolyte balance, causing uremia. The objective of this research to determine the effect of discharge planning on the value of interdialytic weight gain in hemodialysis patients. The research was a quasi-experimental research with a pretest-posttest design with a control group. The population was 150 patients with chronic kidney disease in the hemodialysis room in a month of RSUD Dr. M. Yunus Bengkulu. The samples taken by simple random sampling technique as 38 patients (19 for each intervention group and control group). The research instrument used a discharge planning, then analyzed using the Wilcoxon signed rank test and the Mann Whitney Test with a significance degree. The results showed there was a significant difference between the interdialytic weight gain average before and after the education was given ( $p=0.004$ ). The discharge planning has an effect on the value of interdialytic weight gain in hemodialysis patients at RSUD Dr. M. Yunus Bengkulu. It is recommended to use discharge planning to patients chronic kidney disease in the hemodialysis room.

**Key words:** *Discharge planning, interdialytic weight gain, hemodialized patients*

### INTRODUCTION

Chronic Kidney Disease has become a serious health problem in the world. Data from the World Health Organization (WHO) showed the growth number of patients with kidney failure in 2016 has increased by 50% from the previous year by 50%, while only 25% are known to receive treatment and 12.5% are well treated. The Centers for Disease Control and Prevention; CDC (2014) states more than 20 million Americans suffer from chronic kidney failure, this figure is increasing by about 8% every year with the highest incidence of chronic kidney failure found in people over 65 years of age.

The results of data collection from the Indonesian Nephrology Association (Pernefri) in 2017, stated that as many as 90% of chronic kidney failure patients were undergoing hemodialysis. The results of Riskesdas (2018), stated that age 15 years diagnosed with chronic kidney failure with the highest rate

of 6.4% in North Kalimantan Province. The smallest number of sufferers is nutmeg in West Sulawesi Province with 1.8%, while it is at 4.3%. Data on the proportion of patients who have had or are on dialysis at the age of 15 years is highest in DKI Jakarta with 38.7% and the lowest is in Southeast Sulawesi Province at 1.99%, Bengkulu province at 20.26%.

Dialysis is a process used to remove fluids and waste products from the body when the kidneys are unable to carry out the process. In the hemodialysis process, the blood flow full of toxins and nitrogenous waste is transferred from the patient's body to the dialyzer where the blood is cleaned and returned to the patient's body (Smeltzer & Bare, 2002). The majority of patients receiving hemodialysis therapy in Indonesia are on dialysis 2 times per week, and 4-5 hours per dialysis, which means the body has to endure excess fluid between the two times of therapy (YGDI, 2008).

Interdialytic weight gain is an increase in fluid volume manifested by an increase in body weight between two consecutive dialysis sessions, depending on fluid and sodium intake. Ideally, the increase in body weight between hemodialysis times should not exceed 5% of dry body weight (Kresnawan, 2012). The patient's body weight is routinely measured before and after hemodialysis to determine the condition of the fluid in the body, then calculated based on dry weight after hemodialysis (Neumann, 2013).

## **METHODS**

### **Research Design and Subject**

The design in this study was a quasi-experimental study with a pretest-posttest design with a control group. The research was carried out on November 5 to December 5, 2020. The population in this study were patients with chronic kidney disease in the hemodialysis room at RSUD Dr. M Yunus Bengkulu. Based on the results of a preliminary survey in the hemodialysis room, the average data for HD patients is 150 patients per month. Sampling in this study using simple random sampling. The sampling process is carried out by giving each member of the population the same opportunity to become a member of the sample.

The calculation of the number of samples in this study was determined based on the formula for a difference of 2 means from the results of the calculation of the minimum sample size above, the number of research samples was 19 patients for each intervention group and control group. The total patients were 38.

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### **Instruments and Data Analysis Procedures**

The independent variable in this study was an intervention in the form of discharge planning. The dependent variable was interdialytic weight gain in hemodialysis patients. The research instrument used discharge planning. The data obtained then analyzed using the Wilcoxon signed rank test and the Mann Whitney Test with a significance degree of  $p < 0.05$ . Normality of the data analyzed using Shapiro Wilk, then the equality test. Using the T test or Wilcoxon Test to determine the mean pre-post difference in the intervention group and the control group. Meanwhile, to compare the mean differences between the intervention group and the control group, the independent T or Mann Whitney test was used.

### **RESULTS**

**Table 1. Differences in average interdialytic weight gain values before being given education in the intervention group and control group 2020**

interdialytic weight gain	Intervention	Control
Difference	0,452	0,036

Table 1 showed the average of difference in the control group is 0.036 and in the intervention group is 0.452.

**Table 2. The difference in the mean of interdialytic weight gain values before and after being educated in the control group and the intervention group (n=38)**

Variable	N	Mean Rank		P Value
interdialytic weight gain Pre dischaage planning Post dischaage planning i	19	4,040	0,6752	0,004
		0,028	0,9602	
interdialytic weight gain Pre dischaage planning Post dischaage planning	19	4,036	0,6867	
		4,000	0,7724	
<b>TOTAL</b>	<b>38</b>			

Table 2 showed that the average (mean) of interdialytic weight gain before being given education was 4.036 and the average of interdialytic weight gain after being given education was 4,000. The p value of 0.780 means that there is no significant difference between the average interdialytic weight gain before and after being given education.

In the intervention group with 25 respondents, it can be seen that the mean (mean) of interdialytic weight gain before being given education was 4,040 and the average after education was 3,588. The p value is 0.004 which means that there is a significant difference between the average of interdialytic weight gain before and after being given education.

## **DISCUSSION**

Respondents in this study who had undergone hemodialysis for more than a year were 68.4% in the control group and 89.5% in the intervention group. Rifka's research (2015) explains that the length of hemodialysis is 12-60 months, as many as 20 respondents (66.7%). The length of time patients undergo hemodialysis affects knowledge, attitudes and dietary compliance. Each patient takes a different amount of time in their level of knowledge. In line with Sandra's research (2012) that from 36 respondents, 20 respondents (55.6%) underwent hemodialysis >12 months. The longer the patient undergoes hemodialysis, the better the ability to think and be more critical of the disease.

The mean of interdialytic weight gain in the control group before being given treatment was 4.036 while in the intervention group it was 4.040. After being treated, the mean interdialytic weight gain was 4,000 in the control group and 3,588 in the intervention group. The difference between the two means in the control group was 0.036. The difference between the two intervention groups is 0.452. The results of this study illustrate that respondents who were given discharge planning actions with direct explanations experienced a decrease in interdialytic weight gain and respondents who were only given explanations in the room did not experience a decrease in interdialytic weight gain values. The decrease in interdialytic weight gain of patients in the treatment group was due to the provision of discharge planning media booklets and individual explanations. Discharge planning by providing education is an interactive process that encourages learning, and learning is an effort to add new knowledge, attitudes, and skills through strengthening practitioners and certain experiences (Potter & Perry, 2009).



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The mean value of interdialytic weight gain in the control group before being given treatment was 4.036 and after being given treatment was 4.000. The difference between the two averages is 0.036. In the intervention group before discharge planning was carried out it was 4.040, while after being given the intervention the average interdialytic weight gain value was 3.588. The difference between the two averages is 0.452. The results of the analysis of the effect of giving discharge planning in the control group to the difference in interdialytic weight gain, it is known that the mean value of the measurement results after being given treatment does not decrease. It can be concluded that there is no significant difference between the average interdialytic weight gain before and after being given treatment ( $p=0.780$ ).

The results of the analysis of the effect of giving discharge planning to the intervention group on the difference in interdialytic weight gain, it is known that the mean value of the measurement results after the intervention is given decreases. The results of statistical tests using a dependent t test in the intervention group before and after being given discharge planning individually (in the third measurement) obtained p value ( $0.004 < (0.05)$ ) so that there was a difference. This is in line with Rifka's (2015) study which found that there were differences in body weight in the intervention group before and after the intervention ( $p=0.009$ ). This is also in line with Hidayati's research (2012) which stated that the average decrease in interdialytic weight gain in the intervention group was different from 51.90 to 51.33 ( $p = 0.003$ ). Non-compliance in limiting fluid intake can result in excessive interdialytic weight gain, this can be prevented by setting good fluid intake so that it can prevent excessive of interdialytic weight gain (Denhaerynck, et; Istanti, 2013). The average difference in interdialytic weight gain obtained in the control group is 0.036 and in the intervention group is 0.452. It can be concluded that there is a difference in the mean interdialytic weight gain value in the control and intervention groups who were given discharge planning with direct explanations and only given leaflets ( $p=0.038$ ).

Health education is a planned process to influence or invite other people, either individuals, groups or communities to carry out healthy living behaviors (Nursalam & Efendi, 2008). According to Lawrence Green's concept, the health of a person or society is influenced by 2 main factors, namely behavioral causes and non-behavioral causes. Behavioral factors include disposition factors (knowledge, attitudes, beliefs), supporting factors (health care facilities), and driving factors (attitudes and behavior of health

workers) (Notoatmodjo, 2007). According to L.Green's concept of behavior, one of the things that affect a person's health is a person's knowledge and attitude. Knowledge certainly plays an important role, because by having good knowledge about fluid restriction, patients can decide what attitudes can be taken to overcome health problems, especially reducing the risk of increasing interdialytic weight gain (Umrahwati et al, 2013).

Increased knowledge is not absolutely obtained from formal education, but can also be obtained in non-formal education. A person's knowledge of an object also contains two aspects, namely positive and negative aspects. These two aspects will ultimately determine a person's attitude towards a particular object. The more positive aspects of the known object, the more positive attitude towards the object will be (Syahrani et al, 2012). This level of knowledge will later shape a person's attitude towards something. Attitude is not yet an action or activity, but it is still a predisposition to the action of a behavior. A person's attitude will affect health behavior, a person's positive attitude will produce positive health behavior as well (Notoatmodjo, 2007).

### **CONCLUSIONS AND SUGGESTIONS**

The discharge planning has an effect on the value of interdialytic weight gain in hemodialysis patients at RSUD Dr. M. Yunus Bengkulu. It is recommended to use discharge planning to patients chronic kidney disease in the hemodialysis room.

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