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Low-salt dietary intake reduces hunger in patients with chronic renal failure.

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ABSTRACT

The hardest part for patients is adhering to fluid intake restrictions, which can be stressful to the point that patients cannot regulate their fluid intake consumption. The main factor determining the effectiveness of hemodialysis is the patient's adherence to the rules on food and fluid intake. This study aims to determine whether controlling food intake affects how much salt a patient receiving hemodialysis for chronic renal failure feels like they are thirsty. This study is quasi-experimental, using a pre-post test, a control group, successive sampling for sample selection, and up to 15 samples for each intervention and control group. A thirst distress scale (TDS) questionnaire and a visual analog scale (VAS) were used to gauge the respondents' thirst levels.In contrast, the Wilcoxon test and the Mann-Withney test with a significance level of p 0.05 were used in the data analysis for this investigation. There was a difference in thirst as measured by TDS with a meaning fulness of p = 0.008 (p0.05) and VAS with a meaning of p + 0.048 (p0.05) after the intervention, according to the results, which showed that 13 respondents experienced a decrease in TDS values and two people whose TDS values remained with the meaningfulness of 0.000 (p0.05) after treatment in the intervention group. The results of this study allow us to conclude that education is provided continuously. A patient's daily self-care behavior can be improved by the conduct of home visits as a form of supervision of the education that has been given. This behavior includes reducing the patient's daily salt intake to lessen the thirst patients with renal failure receiving hemodialysis frequently experience.

1. INTRODUCTION

Hemodialysis is a kidney replacement therapy widely used worldwide, and its number is increasing yearly (1). Hemodialysis is carried out due to progressive and irreversible kidney damage, so the kidneys cannot adequately filter toxins and waste products from the blood (2).b Hemodialysis as a kidney replacement therapy cannot cure patients, but hemodialysis can prolong the life span and improve the quality of life of kidney failure patients. (3) said that 69- 71% of hemodialysis patients experienced death due to stopping therapy, and only 8-10% continued hemodialysis, with 60% doing therapy irregularly because the costs needed to perform hemodialysis were very expensive. Hemodialysis as a therapy also harms patients such as fever (50-60%), dyspnea (20-30%), pulmonary embolism resulting in chest pain (13%), ischemia heart disease (50%), hypertension (85%), pruritus (20-70%) and thirst (95%) (4

In addition, hemodialysis also results in complications such as hypotension, nausea and vomiting, cramps in the legs, and impaired fluid and electrolyte balance. The success rate of hemodialysis therapy depends mainly on the patient's adherence to following the recommended food and fluid intake restrictions (5). Based on the study's results, non-compliance rates for patients with fluid restriction ranged from 68.1% to 87.9% (6). The results of this study are relevant to a study conducted by (7), which showed the prevalence of patients' non-compliance with fluid restrictions at Margono Soekarjo Purwokerto Hospital was 77.1%. Adherence to fluid intake restrictions is the hardest thing for patients—regulating fluid intake results in increased thirst, which can stress patients.

Patients in countries with temperatures above 35 degrees often have difficulty controlling their fluid intake consumption. Several research results show that around 39-95% of hemodialysis patients have experienced thirst with six main factors that affect it, namely due to depletion of potassium, the presence of an increase in acute urea plasma, hyperglycemia, plasma sodium concentration, angiotensin II and psychological factors (8).

(9) added other factors that influence thirst, reduced saliva secretions, biological and biochemical changes, hormonal abnormalities, and side effects of drugs.

Thirst is the most substantial stimulus for drinking fluids that can increase patients' IDWG (interdialytic weight gain). An increase in IDWG will result in improved mobility and mortality in hemodialysis patients due to cardiovascular complications such as limb edema, ascites, enlargement of the left ventricle and congestive heart failure (CHF), hypertension, and acute pulmonary edema (10).

Thirst is the source of discomfort in patients with serious illnesses (11). Thirst causes a sensation of dry mouth due to a decrease in saliva flow and production, so that saliva viscosity increases and causes various problems such as burning mouth, increased thirst, reduced sensitivity to taste, oral halitosis, difficulty chewing, swallowing, speaking, and breathing through the mouth, foul mouth, increased risk of lesions in the mucosa, gums and tongue, as well as an increased risk of candidiasis, tooth decay, periodontal disease, as well as bacterial and fungal infections of the mouth (12).

Xerostomia is a subjective feeling of dry mouth commonly found in patients experiencing chronic hemodialysis. The percentage of hemodialysis patients who underwent xerostomia was 32-81% (13). This data is relevant to the research conducted, where 69.767% of chronic hemodialysis patients experience xerostomia.

The National Kidney Foundation (NKF) (2016) recommends several ways to overcome thirst and dry mouth (xerostomia) in hemodialysis patients, such as rinsing the mouth, drinking by using small cups to prevent excess fluid consumption, chewing sugar-free chewing gum or hard candies, eating ice cubes and eating cold fruit, and limiting salt intake.

According to Mc, restricting sodium through a low-salt diet is a risk factor that can be altered to reduce the risk of cardiovascular disease due to fluid retention. (14) sodium restriction is a critical principle in the management of hemodialysis patients from the first time patients receive kidney replacement therapy.

Sodium restriction can lower IDWG, lower the need for hypertension medications, and improve the Impact on left ventricular enlargement and reduced thirst. The National Kidney Foundation-Kidney Disease Outcomes Quality Initiative (NK- KDOQI) Guidelines recommend that the recommended amount of sodium intake for hemodialysis patients is as much as the results of the study of Mc. Causland (15) showed that the average daily salt intake of hemodialysis patients in Japan was 12.6 grams (~5.5 grams or 240 mmol sodium). In comparison, hemodialysis patients in Spain were 10 grams (~4.3 grams or 189 mmol sodium) and hemodialysis patients were in America as much as 9.7 grams (~4.2 grams or 183 mmol sodium).

(15) research indicated that the average daily sodium consumed by hemodialysis patients in Brazil was 8.6 grams/day due to the use of salt and additional flavorings of salt-containing foods in their diet, increasing thirst, IDWG, and blood pressure. In the process, the self-management mechanism focuses on the individual or patient as the subject of the actor controlling the success of self-management. Meanwhile, programmatically, interventions and education provided by health professionals are tasks that patients must carry out to achieve outcomes, namely the desired health standards (maximizing health status) (16).

(17) also explains that self-management components include accepting information, drug management, symptom management, psychological consequence management, lifestyle changes, social support, and communication. Adherence to special diets such as low-salt diets and fluid restrictions is a symptom management component in hemodialysis patients.

2. RESULT

Characteristics of Respondents

Table 1. Criteria

Characteristic	Intervention Group (n=15) F	%	Control Group (=15) F	%	X^2	P Value
Age						
Average	Mean: 38.56	S: 14.12	Mean: 42.35	SD: 11.24	13.142	
18-34 years	2	13.3	1	6.7		
35-54 years	6	40.0	7	46.7		0.001
55-64 years	3	20.0	5	33.3		
>65	4	26.7	2	4.5		
Gender						
Male	8	53.3	12	80.0	3.572	
Female	7	46.6	3	20.0		
Education						0045
Primary School	2	13.3	2	13.3	10.081	
Junior School	3	20.0	3	20.0		
Senior School	4	26.7	6	40.0		0.018
High School	6	40.0	4	26.7		
Job						
Civil Servants	2	13.3	7	46.7	6.709	
Private-employed	4	26.6	3	20.0		
No job	9	60.0	5	33.3		0.032
Marital Status						
Unmarried	3	13.3	3	20.0	61.435	
Marry	8	53.3	10	66.7		
Widow/Widower	4	26.7	2	13.3		0.000
Tribe						
Banjar	11	73.3	10	66.7	615.545	
Javanese	2	13.3	3	20.0		
Minang	0	0.0	1	6.7		0.000
Malay	1	6.7	0	0		
Other	1	6.7	1	6.7		
Length of service Hemodialysis						
<1 years	4	26.7	4	26.7	4.149	
>1 years	11	73.3	11	73.3		
Cause						0.032
Hypertension	7	46.7	8	53.3	32.061	
Diabetes Mellitus	5	33.3	4	26.7		
Stones in the kidneys	2	13.3	3	20.0		0.000
Other causes	1	6.7	0	0.0		

Based on table 1 above, the age of 35-54 years was obtained, namely 40.0% in the intervention group and 46.7% in the Control group. By gender, the respondents of this study were the majority of men, 53.3%.

In the intervention group and 80.0% in the control group. Based on educational background, as many as 40.0% of respondents in the intervention group completed education up to university, and 40.0% in the control group were high school graduates/equivalent.

60.0% of respondents did not work in the intervention group, and 46.7% in the control group were still actively working. Based on marital status, 53.3% were married in the intervention group and 66.7% in the control group. Most tribes in this study came from the Banjar tribe, 73.3% in the intervention group and 66.7% in the control group.

Based on the cause of kidney damage suffered, 46.7% of respondents answered that the damage was caused by hypertension in the intervention group and 53.3% from the control group. Meanwhile, based on the duration of hemodialysis therapy, as many as 73.3% of respondents answered that more than one year had undergone hemodialysis for each intervention group of the control group.

Analysis

Table 2. Distribution of TDS, VAS, and IDWG scores

	Light		Moderate pre-test		Weight		Light		Post-test is being		Weight	
	f	%	f	%	f	%	f	%	f	%	f	%
Intervention Group												
TDS	0	0	11	73.3	4	27.0	1	6.7	11	73.0	3	20.0
VAS	0	0	11	73.3	4	27.0	1	6.7	11	73.0	3	20.0
IDWG	1	6.7	12	80.0	2	13.0	6	40.0	9	60.0	0	0.0
Control Group												
TDS	2	13.3	8	53.3	5	33.0	3	20.0	20	53.0	4	26.7
VAS	2	13.3	8	53.3	5	33.0	3	20.0	20	60.0	3	20.0
IDWG	1	6.7	11	73.3	3	20.0	2	13.0	13	73.0	2	13.3

Based on interdialytic weight gain (IDWG), there were 6.7% of respondents experienced mild weight gain, 80.0% of respondents experienced weight gain (on average), and 13.0% of respondents experienced weight gain (insufficient) in the intervention group before treatment. While in the control group, 6.7% of respondents experienced a lightweight increase, 73.3% experienced moderate weight gain (on average), and 20.0% experienced weight gain (inadequate).

After the treatment of food intake management: a low-salt diet for all respondents, as many as 40.0% experienced a lightweight gain, 60.0% of respondents experienced moderate weight gain (average) in the intervention group, and the control group was 6.7% of respondents experienced a lightweight increase, 73.0% of

respondents experienced moderate weight gain (average) and 13.3% of respondents experienced weight gain (insufficient).

Table 3. Mean rank of thirst before and after treatment in the intervention group

Variable	Intervention group		P
	Pre-test	Post-test	value
TDS	18.00	0.00	0.000
VAS	14.50	0.00	0.000

Table 3 shows a difference in thirst before and after the food intake management treatment: a low-salt diet in the intervention group both as measured by TDS and with VAS. The mean rank of TDS in the pre-test is 18.00, and the post-test is 0.00 (p=0.00), while the mean level of the VAS in the pre-test is 14.50 and the post-test is 0.00 (p=0.000).

These results differed from the control group, where the data processing showed no difference in thirst before and after the food intake management treatment: a low-salt diet in the control group was measured by TDS and with VAS. The mean rank of TDS in the pre-test is 18.00, and the post-test is 0.00 (p=0.39), while the mean level of the VAS in the pre-test is 14.50 and the post-test is 00.00 (p=0.57).

In the intervention group, nine respondents experienced a decrease in TDS values, and six people whose TDS values remained at 0.000 (p<0.05) after the treatment of food intake management: a low-salt diet.

Meanwhile, as measured by VAS, eight respondents experienced a decrease in VAS values, and seven respondents whose VAS values remained in the intervention group with a meaning fulness of 0.000 (p<0.05) after the treatment of food intake management: a low-salt diet.

In the control group, four respondents experienced an increase in TDS values, seven people experienced a decrease in TDS values, and four whose TDS values remained with a meaning of 0.29 (p>0.05) after the food intake management treatment was carried out: a low-salt diet. While measuring thirst using VAS, two respondents experienced an increase in VAS values; five people experienced a decrease in VAS values, and eight respondents whose VAS values remained with a meaning of 0.47 (p>0.05) after the food intake management treatment: a low-salt diet.

Table 4. Mean Rank Of Thirst After Treatment In The Intervention And Control Group

Variable	Mean Rank			P Value
	Increase	Decreased	Remain	
Intervention Group				
TDS	0	9	6	0.000
VAS	0	8	7	0.000
Control Group				
TDS	4	7	4	0.299
VAS	2	5	8	0.477

In table 4 of the intervention group, nine respondents experienced a decrease in TDS values, and six people whose TDS values remained with a meaning of 0.000 (p<0.05) after the treatment of food intake management: a low-salt diet. Meanwhile, as measured by VAS, 8 respondents experienced a decrease in VAS values, and 7 respondents whose VAS values remained in the intervention group with meaning fulness of 0.000 (p<0.05) after the treatment of food intake management: a low-salt diet.

In the control group, 4 respondents experienced an increase in TDS values, 7 people experienced a decrease in TDS values, and 4 whose TDS values remained with a meaning of 0.299 (p>0.05) after the food intake management treatment was carried out: a low-salt diet. While the results of measuring thirst using VAS, 2 respondents experienced an increase in VAS values, 5 people experienced a decrease in VAS values, and 8 respondents whose VAS values remained with a meaning of 0.477 (p>0.05) after the food intake management treatment was carried out: a low-salt diet.

Table 5. Influence of food intake management: low salt diet on thirst

Thirst	Intervention group Mean Rank	Control groups Mean Rank	P Value
TDS			
Pre-test	37.45	31.55	0.256
Post-Test	27.36	41.64	0.007
VAS			
Pre-test	35.27	33.73	0.752
Post-test	29.45	39.55	0.038

Based on the results of processing with the Mann Withney Test, it was found that there was an influence of food intake management: a low-salt diet on thirst both as measured by TDS with meaning p= 0.007 (p<0.05) and which was measured with VAS with meaning p = 0.038 (p<0.05).

Table 6. The relationship between the increase in IDWG and the thirst felt by hemodialysis patients

Thirst		IDWG Good	Average	Bad	Total	r	P value
			TDS				
	Low	0	4	1	4	0.020	
Pre	Medium	2	27	12	15		0.743
	High	0	31	8	14		
	Low	0	2	2	3		
Post	Medium	5	50	2	20	0.036	0.353
	High	1	16	4	21		
			VAS				
	Low	0	2	1	3		
Pre	Medium	3	5	2	10	0.113	0.613
	High	1	4	2	7		
	Low	1	3	1	5		
Post	Medium	3	10	1	14	0.134	0.268
	High	1	3	2	6		

Decision-making is carried out with the Somers'd correlation test, which is used to determine the correlation between dependent and independent variables, both of which have an ordinal scale. The data processing results show that the correlation formed is optimistic with the strength r < 0.268, so it can be interpreted that the strength of the correlation between thirst (TDS and VAS) and IDWG has a very weak correlation before and after treatment. Based on the p-value shown that p>0.05, it can be interpreted that there is no meaningful correlation between thirst as measured by TDS and VAS to IDWG both before and after treatment.

Table 7. Percentage of intervention implementation in the treatment group

Items	Yes F	Yes %	No F	No %
Using preserved foodstuffs such as nuggets, sausages, canned fish/vegetables, salted fish, etc.	3	20.0	12	80.0
Adding salt to cooking	4	26.7	11	73.3
Adding additional ingredients in cooking (flavoring sugar soy sauce)	6	40.0	9	60.0
Food is served in soupy form	7	46.7	8	53.3
The patient still consumes soupy foods	6	40.0	9	60.0

Based on the results of supervising home visits to see about the implementation of food intake management treatment: a low-salt diet, it was found that: a) there were 80.0% of respondents processing fresh food or not using packaged food for consumption, b) there were 73.3% of respondents cooking without using salt in their food c) as many as 40.0% of respondents replaced salt with other additives in cooking, d) 46.7% of respondents still cooked using gravy in their food. Serving the food, e) as many as 40.0% of respondents still consume gravy in their diet.

3. DISCUSSION

Thirst before Treatment

The thirst distress scale (TDS) instrument and the thirst visual analog scale were used to collect preliminary data on the patient's level of thirst before managing food intake with a low-salt diet (thirst-VAS). The measurement results revealed that a variety of respondents in the intervention group were more numerous than in the control group when they reported experiencing moderate to severe thirst (18).

Regarding the respondents' ages, the findings revealed that although both groups' average ages were within the same age range, the intervention group's average age was lower than the control group's. (19) His study revealed that young patients with hydration limitations frequently experience excessive thirst, which is a problem.

The research findings support the study's assertion that elderly hemodialysis patients are more conservative and submissive than young and middle-aged persons (21).

The same conclusion was reached by (21), who found that hemodialysis patients had higher levels of adherence to fluid restriction and natriu than younger patients (p0.01 and p0.05, respectively). This finding is in line with his study's prediction that their ability to retain bodily fluids declines as people age, making them less likely to experience thirst.

According to the respondents' characteristics (table 1), there were more men than women among the respondents in both the intervention and control groups. According to these findings, men feel hemodialysis discomfort at a higher rate than women, and male hemodialysis patients also frequently experience thirst.

The findings of this study are consistent with those of research by (22), which demonstrates that the incidence of ESRD is higher in males than in women, according to a survey done by the Japanese Society for Dialysis Therapy. The average age of dialysis patients is higher in women than in men. The reason for this is the disparity in lifestyles between men and women.

A man's chance of developing kidney impairment increases if he smokes and consumes more than 20 grams of alcohol daily. Similar kidney damage also develops in individuals with obesity, metabolic syndrome, and proteinuria, accompanied by hypertension and diabetes mellitus.

(23), in his research, found that because males have a more significant proportion of bodily fluids than women, men who receive hemodialysis experience a thirst that is heavier than the thirst experienced by women. This finding is corroborated by a study (24) demonstrating that women adhere to fluid restriction at a higher rate than males (= 0.207, p0.05).

Thirst after Treatment

A re-measurement of thirst was conducted following the intervention of managing food intake: a low-salt diet for all respondents. According to the measurement results, more respondents in the intervention group than in the control group reported decreased appetite. This was because participants in the intervention group followed a low-salt meal regimen created by researchers for three weeks while under supervision in three weeks.

In week 1, education is regularly provided, and guidance on a low-salt diet is provided. The information on a low-sodium diet and how to measure salt in meals following family dosages was supplied in week 2. Meanwhile, the third week of instruction focuses on dietary limitations that people receiving hemodialysis should avoid.

Counseling was also provided to responders and families throughout the second and third weeks of this study. The researchers' counseling materials are used in this counseling session to discuss the education is given, the challenges that patients and families have while implementing interventions, and strategies for overcoming those challenges. In the meantime, researchers conduct home visits to monitor earlier researchers' instruction and gauge the extent of intervention application.

According to the results of all home visits, 80.0 percent of respondents prepare their meals using fresh ingredients, and 73.3 percent no longer season their food with salt. Up to 60.0 percent of respondents still said they substitute other flavors for salt.

Only 60% of respondents no longer consume soup from this dish, yet 53.3% of respondents prepare it with gravy. According to the research's findings (25), patients who receive instruction at least up to grade 12 have sufficient knowledge and adherence, which significantly impacts treatment. The level of dedication to the treatment regimen is also standard because it was noted in this study that patients with a poor level of education can also have a loss of understanding.

The study's findings demonstrated that the intervention group's education level was higher than that of the control group. Most of the respondents in the intervention group were patients who had completed at least a four-year college degree. In contrast, most responders in the control group had completed high school (25). According to the study, patient education on the hemodialysis diet significantly increases after patients demonstrate their understanding through normal eating behaviors.

The same opinion was supported by another study (26) that found that the increase in patient Knowledge increased during re-education (p=0.07) and negatively impacted adherence to self-care (p=0.01), which in turn influenced both weight loss and a decrease in body sodium levels (p=0.06).

Furthermore, dietary habit is quite complex and significantly impacts treatment, according to (27)'s study. The patient's refusal to follow the sodium-restricted diet results from the patient's refusal to accept the bland flavor that results, the patient's refusal to understand and receive information about low-salt foods, and the health care providers' lack of socializing with low-salt diets.

The study's findings (28) also indicated that if the patient's spouse or other family members also stick to or follow the same dietary restrictions, the patient's adherence to a low-salt diet may rise. The findings of this study also demonstrated that, according to the counseling results, the patient's non-compliance with the sodium

restriction diet was due to the patient's lack of acceptance of tastelessness. Another factor that favored the patient's non-compliance was the absence of support from family or a romantic partner since the low-salt diet only applies to patients.

Salt limitations can be followed if patients, their families, carers, and health professionals work together. To ensure that patients' everyday behavior complies with prescribed guidelines, researchers monitor low-salt diets through education, counseling, and home visits.

Table 4's completed study findings show that some control group respondents reported feeling more thirsty. The majority of respondents in the control group were patients who were still actively working, according to results based on patient characteristics, while the majority of respondents in the intervention group were not. These variations show that the environment influences the patient's adherence to self-care.

(29) found that working hemodialysis patients strictly adhere to their dialysis regimens in their study. However, there was poor compliance with other regimens, such as hydration and dietary limitations. Hemodialysis patients can stick to their treatment regimens more effectively in a family setting than in a friendly one, unaware of their medical needs (29).

This study summarized earlier investigations into hemodialysis patients. Low relief from their buddies is crucial to non-compliance with water and food. To sustain fluid adherence and dietary restrictions, patients must therefore regard their family, close friends, and other social contexts (medical staff, nonprofit workers, or religious leaders) as the most important sources of support.

(30) noted in his research that younger male hemodialysis patients with extensive employment histories and dialysis experience need more care and assistance from medical staff because the patients' level of compliance was greatly influenced by their knowledge and abilities. - effectiveness. Patients' implementation knowledge will increase due to the information given to them by healthcare professionals, and regular counseling sessions will reinforce their understanding of self-care and treatment regimens.

IDWG Before Therapy

According to the IDWG distribution data (Table 2), moderate weight gain (or, more frequently, a gain of 2 kg) on dialysis was experienced by pre-treatment salty diet responders (50 percent) of the intervention and control groups. A few respondents (IDWG > 3 kilograms) in both groups had weight gain, according to the distribution data in Table 2. Even so, the intervention group's proportion was more significant.

According to research (31), IDWG was directly connected to blood pressure before and during hemodialysis, age, and BMI (body mass index). In this study by Gurning (2018), it was discovered that malnourished juvenile hemodialysis patients had an increase in IDWG of more than 5%. The study (32) also found that xerostomia severity, age, and gender were significant factors in elevating the percentage of IDWG in hemodialysis patients, whether they had diabetes mellitus or not.

IDWG Following Treatment

Table 2 of the study findings also revealed that after the intervention group received low-salt treatment for food management, the percentage of respondents with an increase in IDWG of more than 3 kg (weight gain) was no longer present. 13.3% of those surveyed in the control group stated that their IDWG had increased following treatment. These findings indicated that patient adherence declined despite providing both the intervention and control groups with information on the benefits of a low-salt diet without ongoing counseling and training.

The research by (33) demonstrated that the length of hemodialysis and the patient's nutritional status impacted IDWG, a sign of the patient's long-term adherence to the treatment regimen. 34) shows intense repeating instruction is particularly successful in increasing adherence in hemodialysis patients, as seen by dietary behavior and a decrease in aberrant IDWG. This is especially true for education about the daily diet.

Thirst Before And After a Low Salt Diet: Differences

According to the analysis's findings, there are differences between the groups' levels of thirst before and after the treatment intervention as evaluated by TDS and VAS, with the average values of each TDS variable being p = 0.00 and VAS being p = 0.00. (Table 3). T and VAS measurements of thirst in the control group revealed a difference between before and after treatment, with mean TDS: p = 0.299 and VAS: p = 0.477. (Table 4).

Educating about a low-sodium diet may influence patients' behavior in reducing daily salt intake. For patients to manage their psychological health and well-being and make style modifications, patients' awareness of the need for self-management can be increased through the provision of education and monitoring of the execution of that teaching through supervision and guidance (34).

Managing food intake reduces the effects of thirst by eating less salt.

The low salt intake on thirst based on TDS and VAS in the control group with TDS values: p = 0.008 and VAS values: p = 0.048; give p>0.05, according to analysis results, can be interpreted as the influence of food intake management (Table 5).

These findings support (34) that an excess of sodium consumption raises plasma osmotic pressure, which triggers an osmotic thirst response as a fluid and electrolyte balance mechanism. More salt, according to 35, may result in a dry mouth and a better answer to drinking. In hemodialysis patients, a low-salt diet may also raise blood pressure.

This study supports the findings of (34), which suggested that following a sodium-restricted diet (>2000 mg/day; 88 mmol/day) may reduce mortality, IDWG, and blood pressure. Proteinuria in hemodialysis patients may potentially get worse with more salt consumption.

Interdialysis Weight Gain (IDWG) and Thirst: A Relationship

According to the correlation results (Table 6), a positive link exists between thirst (as measured by TDS and VAS) and IDWG. Both before and after the treatment, the resulting correlation strength of these variables is weak (r 0.2 and p>0.05).

Based on these findings, it is clear that hunger can alter IDWG, but it is less likely, or that the patient's wishes may not be the only reason for the increase in IDWG. These findings align with research (36), where thirst and IDWG are positively associated with a very modest energy correlation (r = 0.117, p = 0.05). There was a positive link between hunger and IDWG with a significant difference in the p = 0.88 test, according to the findings of the same study (Lopez, 2017). The results of Mc's study (2018), which found a correlation between thirst as evaluated by VAS and the percentage of IDWG (r = 0.48, p = 0.001), further support these findings.

4. CONCLUSION

1. In hemodialysis patients, a low-salt diet helps lessen thirst.
2. The daily practice of patient self-care can be enhanced by ongoing management education.
3. The knowledge acquired through counseling sessions can be expanded to help patients better understand their treatments and self-care routines.
4. Effect of a low-salt diet on thirst in hemodialysis patients with renal failure (includes education, training, and field monitoring with home visits).

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