

Effectiveness of Exercise Training in Dialysis Patients with Restless Leg Syndrome

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Objectives:
End-stage renal disease (ESRD) is very prevalent in Taiwan, and its prevalence and incidence lead the world. Hemodialysis is the main treatment for patients with end-stage renal disease, in which restless legs syndrome (RLS) is a common problem, with the degree of occurrence (RLS) ranging from 6.6% to 70%, and 20% of patients suspend hemodialysis due to RLS symptoms treat. This study explores the serious efficacy of stretching in improving symptoms of restless leg pain in hemodialysis patients..

Table 1 . Demographic information (N=29)

Variables	Num ber of peopl e	%
Age (M.SD)	62.41	12.03
Gender		
Male	14	48.3
Female	15	51.7
Education level		
Illiterate + elementary school	5	17.2
Junior high school	11	37.9
High school or above	13	44.8
Marriage		
Married	19	65.5
Unmarried + Widowed + Divorced	10	34.5
Work		
Have	Twen ty four	82.8
None	5	17.2
How many times do you exercise each week?		
5 times	12	41.4
4 times + 3 times + 2 times + 1 time or 0 times	17	58.6
How long did you participate in exercise?		
More than 30 minutes	6	20.7
No more than 30 minutes	Twen ty three	79.3
How intense is the intensity of exercise you participate in every time (fill in according to your own feelings and take the average)?		
Very intense + intense	1	3.4
Ordinary	Twen ty two	75.9
Relaxed + no feeling	6	20.7
How long have you maintained the above exercise habits?		
1 year	16	55.2
More than half a year + no more than half a year	13	44.8
Types of sports		
None	6	20.7
Walk	13	44.8
Others (hill climbing + resistance + hill climbing +walking + resistance+walking)	10	34.5
Place		
None	6	20.7
At home	8	27.6
Outdoor (park + mountain)	15	51.7

Methods:
The research conducted an empirical care intervention from October 16 to November 30, 2023. A total of 29 participants underwent pre-test and post-test assessments. Descriptive statistics and statistical tests including McNemar chi-square and paired t tests were employed for analysis using SPSS.

Results:
This study has a total sample of 29 people, about half male and female, with an average age of 62.41 years old (SD=12.03), 65.5% are married, 44.8% have a high school education or above, 82.8% are employed, and the number of times they participate in sports per week is less than 5 times accounted for 58.6%, the duration of each exercise did not exceed 30 minutes accounted for 79.3%, the intensity of each exercise was average accounted for 75.9%, the above exercise habits have been maintained for more than a year accounted for 55.2%, and walking accounted for 44.8%(Table 1). and sports venues accounted for 51.7% outdoors.In terms of the severity of restless legs syndrome in exercise-intervention hemodialysis patients, the rate of mild restless legs symptoms was 64.3% in the pre-test and 75.9% in the post-test; the rates of moderate restless legs symptoms were 17.9% and 75.9% in the post-test, respectively. 10.3%; the rates of severe restless legs symptoms were 7.1% and 6.9%. After McNemar's chi-square test, it was found that there was no significant difference in the severity of restless legs symptoms between pretest and posttest (McNemar=4.000, P=0.261). In addition, using the paired t test to measure the average severity of restless legs symptoms before and after, the results showed that although the score decreased, it did not reach a significant level (paired t =1.987, P=0.057) (Table 2).

Table 2. Analysis of effectiveness in improving the severity of restless leg symptoms in dialysis patients (N=28)

Variables	Pretest Frequency(%)	Posttest Frequency(%)	Mcnemar chi-square	P value
Severity			4.000	.261
Mild	18(64.3)	22(75.9)		
Moderate	3(10.7)	2(6.9)		
Serious	5(17.9)	3(10.3)		
Very serious	2(7.1)	2(6.9)		
Severity Mean(SD)	1.68(1.02)	1.50(0.96)	1.987	.057

Conclusion:
This study provides empirical support for the positive impact of stretching on the severity of restless legs syndrome in hemodialysis patients. Although these improvements were not statistically significant, these findings contribute to clinical knowledge. Limitations include the small sample size and short duration of the study, and future samples will need to be expanded and other variables considered to improve reliability.

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