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Effectiveness of Evening Partial Bath on Quality of Sleep Pattern among Immobilized Male Orthopaedic Clients at Southern Railway Hospital, Chennai

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Abstract:-
Background: Comfort is a basic physiological need for human beings. The need for rest and comfort is an important need for maintaining a good quality of life[1]. Although the individual needs are unique. Adequate rest and sleep is vital for optimal physical and psychosocial functioning of the individual. For sick patients rest and sleep must be considered as one of the important components of their therapy[2]. Nurses must help patients to achieve optimum rest and sleep in order to expedite the process of their healing and recovery. It is, therefore, crucial to review the various aspects of sleep, factors affecting the sleep patterns in orthopedic patients and related nursing interventions in order to reduce and prevent sleep disturbances in high dependency patients in orthopedic wards[1]. Methods: A quantitative quasi-experimental study conducted among conveniently selected sixty (30 experimental and 30 control) immobilized orthopedic male clients. Quality of sleep was assessed using modified sleep quality scale for both experimental and control group and partial bath was given between 6 pm to 8 pm for five days to experimental group whereas control group received no intervention. Results: Majority of the males are aged between 30 – 50 years, married and doing moderate work. More than half of the patients were staying 8-13 days in hospital postoperatively. In pre-test all the patients from both experimental and control group had severe sleep disturbance and at the end of the post test 73.33% of them from experimental group had no sleep disturbance. The t-value (0.097) with p=0.360 in pretest between experimental and control group shows that there is no significant difference which proved both the groups are equal statistically and the post test result shows that the t-value is -28.192 with the p=<0.0001 which is highly significant deference between experimental and control group. Hence the result proved the evening partial bath is effective in improving the quality of sleep. Conclusion: The present study was aimed to assess the effectiveness of evening partial bath on quality of sleep among immobilized orthopedic male clients, the results of this study proved that the evening partial bath is effective in improve the quality of sleep among the male orthopedic clients.

Keywords:- *Evening partial bath, quality of sleep, male orthopedic clients, Sleep disturbance, Effectiveness.*

I. INTRODUCTION

Sleep is an experience that occupies nearly one-third of our lives it is a recurrent altered state of consciousness that occurs for sustained periods restoring a person's energy and well being. Sleep is a part of rhythm and pattern that encompasses rest and activity and affects our entire state of each and every day and night[3].

National Sleep Foundation (NSF) reports millions of people do not get enough sleep and many suffer from lack of sleep[4]. Sleep disturbances has become an interdisciplinary field, perhaps best illustrated in the area of sleep induced breathing disorders, particularly, obstructive sleep apnea. These disorders are a major cause of social and work disability, as well as a contributor to systemic hypertension, cardiac arrhythmia and other cardiovascular consequences[5]

Sleep disturbance is a common occurrence among hospitalized orthopaedic clients, though it is frequently overlooked by nurses and other health care providers[6]. Pain, and stress contribute to the inability of hospitalized clients to get adequate restful sleep, of particular concern are immobilized orthopaedic clients[7]. according to Dogan, patients in orthopaedic ward experienced worse sleep quality than the other patients[8]. Belmont says luke–warm (37.5 – 38.5 degrees C) baths 1.5 hours before bed time enhances the sleep. Hence it is important to care the orthopedic, this study aimed to assess the Effectiveness Of Evening Partial Bath On Quality Of Sleep Pattern Among Immobilized Male Orthopaedic Clients[7].

II. METHODES AND METERIALS

A quantitative quasi-experimental study conducted among conveniently selected sixty (30 experimental and 30 control) immobilized orthopedic male clients. Formal permission was obtained from institution and informed consent was taken before the study. Quality of sleep was assessed using modified sleep quality scale for both experimental and control group and partial bath was given between 6 pm to 8 pm for five days to experimental group whereas control group received no intervention to achive the objectives of,

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- To assess the level of quality of sleep pattern among immobilized male orthopedic clients before rendering evening partial bath in both experimental and control group.
- To assess the level of quality of sleep pattern after rendering evening partial bath in experimental group and without rendering evening partial bath in control group.
- To compare the effectiveness of evening partial bath among immobilized male orthopedic clients between experimental and control group.

Present study excluded the Clients on sedatives, Clients who are taking other non-pharmacological measures to induce sleep and Ambulatory orthopedic clients. Collected data was entered into MS Excel 2013 and analyzed using Epi Info 7.0. Both descriptive and inferential statistical methods used to find the results.

III. RESULTS

The results of the study were presented as Tables and graphs as per the objectives of the study.

S.No.	*Demographic Variables*	Experimental Group (n=30)		Control Group (n=30)	
		No.	%	No.	%
1.	Age(in years)				
	20 – 30	5	16.67	5	16.67
	31 – 40	10	33.33	11	36.67
	41 – 50	10	33.33	7	23.33
	51 – 60	5	16.67	7	23.33
2.	Marital Status				
	Unmarried	7	23.33	8	26.67
	Married	19	63.34	19	63.33
	Divorced	4	13.33	3	10.00
3.	Education				
	Illiterate	3	10.00	4	13.33
	Primary level	8	26.67	3	10.00
	Secondary level	10	33.33	10	33.33
	Higher Secondary level	4	13.33	7	23.34
	Graduate	5	16.67	6	20.00
4.	Nature of work				
	Sedentary workers	10	33.33	5	16.67
	Moderate workers	14	46.67	18	60.00
	Heavy workers	6	20.00	7	23.33
5.	Post operative period (in days)				
	5 - 7	4	13.33	7	23.33
	8 - 10	10	33.33	16	53.34
	11 - 13	16	53.34	7	23.33

Table 1: Frequency and percentage distribution of demographic variables in experimental and control group

Table 1 shows the frequency and percentage distribution of demographic variables in experimental and control group.

With regard to the age, majority 10 (33.33%) clients were in the age group of 31 – 40 years, 10 (33.33%) were in the age group of 41 – 50 years and 5 (16.67%) were in the age group of 20 – 30 years and 5 (16.67%) were in the age group of 51 – 60 years in the experimental group and with that of control group majority 11 (36.67%) were in the age group of 31 – 40 years. 5 (16.67%) were in the age group of 20 – 30 years, 7 (23.33%) were in the age group of 41 – 50 years and 7(23.33%) were in the age group of 51 – 60 years.

Considering the marital status of the clients majority 19 (63.33%) were married, 7 (23.33%) were found unmarried and 4 (13.33%) were divorced in experimental group and in the control group majority 19 (63.33%) were married, 8 (26.67%) were unmarried and 3 (10%) were divorced.

Considering the educational status of the clients majority 10 (33.33%) studied secondary 3 (10%) were found to be illiterate, 8 (26.67%) were studied primary, 4 (13.33%) has studied higher secondary and 5 (16.67%) has studied degree in experimental group and in the control group majority 4 (13.33%) were found illiterate, 3 (10%) studied primary, 7 (23.34%) studied higher secondary and 6 (20%) were degree holders.

Regarding nature of work, majority of the clients 14 (46.67%) were moderate workers, 10 (33.33%) were sedentary workers and 6 (20%) were heavy workers in the experimental group and in the control group majority of the clients 18 (60%) were moderate workers, 5 (16.67%) were sedentary workers and 7 (23.33%) were heavy workers.

Related to the post operative period of the client, majority 16 (53.34%) were in 11 – 13 days, 4 (13.33%) were in 5 – 7 days and 10 (33.33%) were in 8 – 10 days in the experimental group and in the control group majority 16 (53.34%) were in 8 – 10 days, 7 (23.33%) were in 5 – 7 days and 7 (23.33%) were in 11 – 13 days.

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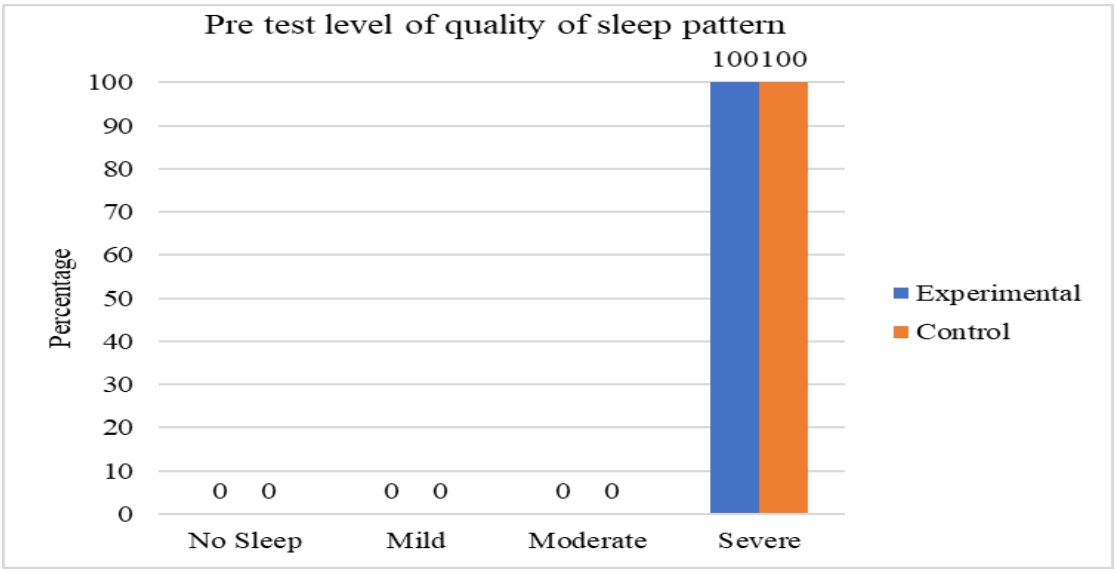

Fig. 1: Percentage distribution of Pre test level of quality of sleep pattern among immobilized male orthopedic clients in experimental and control group

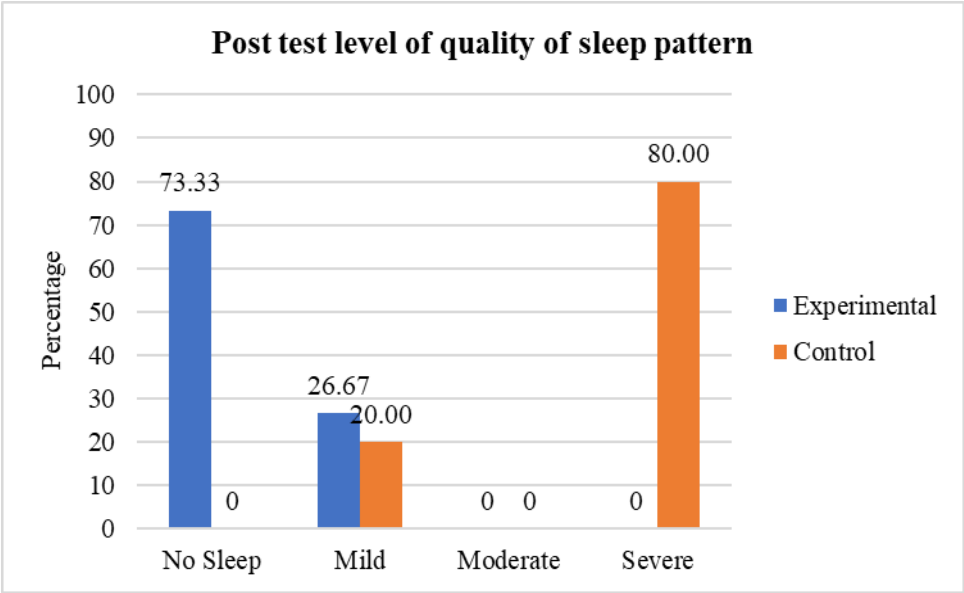

Fig. 2: Percentage distribution of Post test level of quality of sleep pattern among immobilized male orthopedic clients in experimental and control group

N = 60

Group	Mean	SD	Mean Difference	t-value	p-value
Experimental	71.5	0.7	0.9	0.970	0.360
Control	70.6	0.4			

Table 2: Pretest comparison of mean quality of sleep score between experimental and control group

Table 2 shows that the pretest mean quality of sleep score was 71.5±0.7 and 70.6±0.4 in experimental and control group respectively. The calculate t-value was 0.970 with p = 0.360 which is not significant. Hence both the groups are equal before rendering the intervention.

N=30

Experimental Group		*Mean*	SD	F value	P Value
Pretest		71.5	0.7	34.92	<0.001
Post test	Day 1	55.6	1.4		
	Day 2	45.7	5.7		
	Day 3	31.2	4.9		
	Day 4	30.1	5.8		
	Day 5	28.9	4.6		

Table 3: Pretest and posttest comparison of mean quality of sleep score within experimental group

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Table 3 Shows that comparison of each day mean quality of sleep scores within experimental group. ANOVA test was employed to identify the differences in the mean score, the result revealed that the F-value is 34.92 with the p = <0.001 which is highly significant. therefor the evening partial bath reduced the sleep disturbances and improved the quality of sleep.

n=30

Control Group		Mean	SD	F value	P Value
Pretest		70.6	0.4	1.01	>0.05
Post test	Day 1	70.3	0.4		
	Day 2	69.2	0.6		
	Day 3	63.6	1.8		
	Day 4	64.3	4.6		
	Day 5	61.8	5.4		

Table 4: Pretest and posttest comparison of mean quality of sleep score within control group

Table 4 Shows that comparison of each day mean quality of sleep scores within control group. The ANOVA result revealed that the F-value is 1.01 with the p = >0.05 which is not significant.

N=60

Group	Mean	SD	Mean Difference	t-value	p-value
Experimental	28.9	4.6	32.9	28.192	<0.001
Control	61.8	5.4			

Table 5: Posttest comparison of mean quality of sleep score between experimental and control group

Table 5 shows that the posttest mean quality of sleep score was 28.9±4.6 and 61.8±5.4 in experimental and control group respectively. The calculate t-value was 28.192 with p = <0.001 which is highly significant. Hence the result concludes that there is a significant deferent between experimental and control group after rendering the evening partial bath.

IV. DISCUSSION

Sleep disturbance among hospitalized clients are most common, especially orthopedic immobilized clients. Providing nursing care to improve the quality of sleep is important. present study revealed that in pretest both experimental and control groups 30 (100%) had severe sleep disturbance. In posttest 73.33% of them from experimental group had no sleep disturbance and 80% from control group still had severe sleep disturbance. The comparison analysis shows that there is significant differences between both experimental and group as well as within pre and post experimental group.

IV. CONCLUSION

The present study was aimed to assess the effectiveness of evening partial bath on quality of sleep among immobilized orthopedic male clients, the results of this study proved that the evening partial bath is effective in improve the quality of sleep among the male orthopedic clients.

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