



# A STUDY TO ASSESS THE EFFECTIVENESS OF THERAPEUTIC BACK MASSAGE ON QUALITY OF SLEEP AMONG HOSPITALIZED PATIENTS IN SELECTED HOSPITALS, BANGALORE.

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## ABSTRACT

Sleep is essential for good health and recovery from illness. Any illness that causes pain, physical discomfort, and or depression can result in sleep disturbances. These are several measures like Massage therapy, Music therapy, pharmacotherapy, bright light therapy and yogas etc. to treat sleeplessness of which therapeutic back massage is considered to be effective methods to induce sleep. Aim: to assess the effectiveness of therapeutic back massage on quality of sleep among hospitalized patient. Material and methods: A study was conducted using Non -randomized control group design in with 40 samples, were exposure to massage therapy. However due to sickness and environment in hospital setting they were not able to enjoy quality sleep. The massage therapy was helpful in inducing sleep and improving the quality of sleep. The findings of the study revealed that therapeutic back massage helps in improving the quality of sleep among hospitalized patients.

**Keywords: Massage therapy, Quality of sleep**

## INTRODUCTION

Sleep is essential for good health and recovery from illness. Any illness that causes pain, physical discomfort, and or depression can result in sleep disturbances. These are several measures like Massage therapy, Music therapy, pharmacotherapy, bright light therapy and yogas etc. to treat sleeplessness of which therapeutic back massage is considered to be effective methods to induce sleep.

As an individual is admitted in a hospital, their rest and sleep habits can easily be changed by hospital routines. Inadequate sleep causes fatigue, irritability and can cause inability to cope with the stressors.

Now a day's massage therapy is commonly used in clinical practice. The analysis of survey revealed that promoting relaxation was the main motivation for nurses using massage.

## NEED FOR THE STUDY

- ▶ A person's need for rest and sleep changes throughout life. A client with a chronic disease requires more rest than a healthy person of same age.
- ▶ The prevalence of insomnia increases with age.
- ▶ Massage is one of the non pharmacological methods to induce sleep.
- ▶ In the whole world, America has the largest number of insomniacs associated with hospitalization. In India 20-40% of all adults experience insomnia during their hospitalization. Over half of those above the age of 65 experience disturbed sleep. In Karnataka, survey of general population suggest that 49% of adult experienced difficult sleep during their hospitalization. A descriptive study was conducted in the Medical

and Surgical wards of KEM Hospital in Mumbai to find out the effect of selected Nursing interventions in promoting the sleep of those patients. The data was gathered using a semi structured interview schedule and an observation check list that fulfilled the required criteria. The intervention group received back massage for 10mts and deep breathing exercises for 6 minutes. The findings of the study showed that there is a significant difference of the sleep score of 2 groups ( $t=8.87$ ) at 0.01 and 0.05 level, where as in the control group there was a significant difference ( $t=2.59$ ) only at 0.05 level. The study revealed that there was a significant difference in the quality and quantity of sleep between study group and control group.

- ▶ From all the above reports and the researcher's personal and clinical experiences in hospitalized patients, the researcher found that the hospitalized patient suffering from disturbed sleep. Hence in my study I emphasize on sleep disturbances rather than their disease causes.

## OBJECTIVES

1. To determine the quality of sleep among hospitalized patients.
2. To assess the effectiveness of therapeutic back massage on quality of sleep among the experimental and control group by comparing pre test and post test score.
3. To associate the effectiveness of therapeutic back massage among hospitalized patients with selected demographic variables.

## HYPOTHESIS

- ▶ RH1: There will be a significant difference in quality of sleep before and after intervention (Therapeutic Back Massage).
- ▶ RH2: There will be significant difference in quality of sleep among hospitalized patients between experimental and control group.
- ▶ RH3: There will be a significant association between the quality of sleep among hospitalized patients with selected demographic variables.

## Operational Definitions

- ▶ **EFFECTIVENESS:** It is the extent to which an action produces an intended or desired outcome. In this study effectiveness refers to the extent to which Back massage have achieved the desired effect on quality of sleep of patients.
- ▶ **THERAPEUTIC BACK MASSAGE:** Therapeutic back massage refers to the manipulation of muscles in the thoraco-lumbar region by means of effleurage, stroking and circular kneading.
- ▶ **QUALITY OF SLEEP:** In this study it is the outcome of back massage and for the gradual improvement of the sleep pattern and is the subjective feelings of freshness in the morning.
- ▶ **HOSPITALIZED PATIENTS:** Hospitalized patients are those subjects having inadequate sleep even after 1-2 days of hospitalization.

## ASSUMPTIONS

1. Good sleep is essential for good health and recovery from illness.
2. Non pharmacological interventions also induce sleep.
3. Inadequate sleep is common among hospitalized patients.

## REVIEW OF LITERATURE

In the present study the literature review has been organised in categories under the following headings:

1. **Studies related to quality of sleep among hospitalized patients**
2. **Studies related to effectiveness of back massage to promote sleep among hospitalized patients.**

**Research Design:** Non randomized control group design

Group	Pre test	Intervention	Post test
Experimental	O <sub>1</sub>	X	O <sub>2</sub>
Control	O <sub>1</sub>	-	O <sub>2</sub>

**VARIABLES**

In this study

**Independent Variable** : Therapeutic Back Massage.

**Dependent Variables** : Quality of sleep among hospitalized patients.

**INCLUSION CRITERIA**

1. Subjects who were having inadequate sleep for 1-2 days after hospitalization..
2. Subjects who were able to verbalize their sleep pattern
3. Subject who could speak Kannada or English

**EXCLUSION CRITERIA**

Subjects who were

1. Unconscious
2. Not able to understand either Kannada or English
3. Taking sedation
4. Post operative patient
5. Not willing to participate
6. Taking medication for sleep

**Tools used in the study**

- ▶ Section A: Demographic Data
- ▶ Section B: Groningen Sleep Quality Score

**Content validity**

The content validity of the tool was established in consultation with 5 experts in the field of medical and surgical nursing , 2 Physiotherapists and 3 doctors.

**Reliability**

To establish reliability the tool was administered to 5 samples other than the study samples. Test- retest method used. The calculated 'r' value was 0.99. Hence the tool is considered to be reliable.

**Pilot study**

Pilot study was conducted in Neha Prakash Hospital, Bangalore, from 09-04-2012 to 16-04-2012 to find the feasibility of the study. Ten patients were selected by using convenient sampling technique. The subjects for the pilot study possessed the same characteristics as that of sample for final study.

The samples in the pilot study are not included in the main study.

**Data collection**

Data was collected from 01-05-2012 to 30-05-2012. On the first day, a pre test with standardized questionnaire in Kannada was administered to experimental and control group. After collecting the data, therapeutic back massage was given only to the experimental group on the same day 10 minutes prior to sleep. The next day morning post test were conducted with the same standardized tool for both the groups to evaluate the effectiveness of the therapeutic back massage.

## ANALYSIS AND FINDINGS

The findings of the study are organized in terms of the objectives tested. The data are presented under the following headings.

**Section A:** Distribution of subjects according to demographic variables.

**Section B:** Assessment of quality of sleep scores among hospitalized patients in experimental and control group

**Section C:** Domain wise Comparison of pretest and post test scores of experimental and control group.

**Section D:** Association of post test quality of sleep with selected demographic variables.

**Section A: Distribution of subjects according to demographic variables.**

### Frequency and Percentage distribution of subjects according to Demographic Variables

S.No	Demographic variables	Experimental Group (n=20)		Control Group (n=20)	
		(f)	%	(f)	%
1	Age (in Years)				
	a. 31--40	6	30	5	25
	b. 41--50	3	15	4	20
	c. 51--60	4	20	5	25
	d. Above 60	7	35	6	30
2	Sex				
	a. Male	12	60	15	75
	b. Female	8	40	5	25
3	Marital status				
	a. Single	12	60	1	5
	b. Married	8	40	19	95
4	Type of Illness				
	a. Acute	17	85	14	70
	b. Chronic	3	15	6	30
5	Duration of Hospitalization				
	a) 2 <sup>nd</sup> day	13	65	10	50
	b) 3 <sup>rd</sup> day	4	20	7	35
	c) 4 <sup>th</sup> day	3	15	3	15
	d) 5 <sup>th</sup> day and above	0	0	0	0

6	Economic Status				
	a. High class	4	20	5	25
	b. Middle class	9	45	9	45
	c. Low class	7	35	6	30

7	Educational Qualification				
	a. Illiterate	2	10	3	15
	b. Primary	4	20	2	10
	c. Secondary	8	40	10	50
	d. Degree	6	30	5	25
8	History of smoking				
	a. Smoker	8	40	6	30
	b. Non-Smoker	12	60	14	70
9	History of alcoholism		0		0
	a. Alcoholic	7	35	6	30
	b. Non Alcoholic	13	65	14	70

### Section B: Assessment of quality of sleep scores among hospitalized patients in experimental and control group

Frequency and Percentage distribution of patients according to level of pre test score on quality of sleep in experimental and control group.

Level of Quality of sleep	Experimental Group (n=20)		Control Group (n=20)	
	No. (20)	%	No. (20)	%
Very Good ( $\leq 5$ )	0	0	0	0
Good(6-10)	9	45	7	35
Poor (<10)	11	55	13	65

Frequency and Percentage distribution of patients according to level of post test score on quality of sleep in experimental and control group. N=40

Level of Quality of sleep	Experimental Group (n=20)		Control Group (n=20)	
	(f)	%	(f)	%
Very Good ( $\leq 5$ )	17	85	0	0
Good(6-10)	3	15	9	45
Poor (<10)	0	0	11	55

**Section C: Domain wise Comparison of pretest and post test scores of experimental and control group.  
Domain wise Mean and SD of Pre test level of quality of sleep among Hospitalized patients in experimental and Control group**

N=40

Domain	Max Score	Mean	SD	Mean %
Experimental Group	14	10.05	2.66	71.79
Control Group	14	10.25	2.09	73.21

**Domain wise Mean and SD of Post test level of quality of sleep among Hospitalized patients in experimental and Control group**

N=40

Domain	Max Score	Mean	SD	Mean %
Experimental Group	14	3.9	1.86	27.86
Control Group	14	9.9	2.4	70.71

**Effectiveness of therapeutic back massage on quality of sleep between the experimental and control group by comparing pre test and post test score.**

N=40

Domain	Pre test		Post test	
	Mean	SD	Mean	SD
Experimental Group	10.05	2.66	3.9	1.86
Control Group	10.25	2.09	9.9	2.4
Unpaired 't' test	0.74 N.S		2.81**	

\*\* Significant at P<0.01 level at df 38, t-value 2.43

**The effectiveness of therapeutic back massage on quality of sleep with in the experimental and control group of pre test and post test score.**

N=40

Domain	Experimental Group		Control Group	
	Mean	SD	Mean	SD
Pre test	10.05	2.66	10.25	2.09
Post test	3.9	1.86	9.9	2.4
Enhancement	6.15	3.78	0.35	0.76
Paired 't' test	7.26**		2 N.S	

N.S- Not significant \*\* Significant at  $P < 0.01$  level at df 19, t-value 2.09

### **NURSING IMPLICATIONS**

#### ***NURSING PRACTICE:***

Nurses should be trained to practice therapeutic back massage.

Nurses should teach the patient about the advantages of back massage so that the patient can practice them even in the home settings.

Nurses caring for hospitalized patients should be motivated to use therapeutic back massage during care of clients.

#### ***NURSING EDUCATION:***

The nursing curriculum can highlight alternative therapies such as therapeutic back massage for various disease conditions.

Nursing students should be taught about the advantages of therapeutic back massage.

The nurse educator can provide in- service education to nursing personal to update their knowledge on alternative method of treatment like therapeutic back massage.

#### ***NURSING RESEARCH:***

- Findings of the present study suggest that more interventional studies have to be conducted to make the nurses as well as the public aware of the alternative therapies.

#### ***RECOMMENDATIONS:***

- Study can be replicated with larger samples for better generalization.
- A similar study can be conducted on long term basis to prove the summative effect of therapeutic back massage.
- Different treatment modalities can be compared in improving quality of sleep among patients with inadequate sleep.
- Similar study can be conducted for other specific illnesses.
- A similar study can be conducted in other areas of medicine like cardiology, pulmonology, immunology, geriatric etc.

#### ***CONCLUSION:***

- The main conclusion from this present study is that most of the cardiac patients who had severe, moderate level of insomnia in pre test have mild, moderate in post test Day-1,2,3,4,5,6,7. This shows the imperative need to understand the purpose of back massage regarding reduction of insomnia levels and improvement in quality of sleep in cardiac patients with insomnia and it will improve the quality of life which includes the stability in physiological, psychological, sexual, vocational and lifestyles aspects.

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