e - ISSN – 2349-0691

AMERICAN JOURNAL OF ADVANCES IN NURSING RESEARCH

Journal homepage: www.mcmed.us/journal/ajanr

EFFECT OF THERAPEUTIC BACK MASSAGE ON QUALITY OF SLEEP AMONG ELDERLY HOSPITALIZED PATIENTS AT SRI RAMAKRISHNA HOSPITAL, COIMBATORE

Shrikant K. Nair*

Nursing Faculty College of Nursing All India Institute of Medical Sciences, Jodhpur, Rajasthan, India.

Article Info

Received 05/11/2017
Revised 29/11/2017
Accepted 06/12/2017

Key word: Quality of sleep, Hospitalized, Elderly, Therapeutic, Back Massage.

ABSTRACT

An interventional study was conducted to assess the effect of therapeutic back massage on quality of sleep among elderly hospitalized patients at Sri Ramakrishna hospital, Coimbatore. Quasi Experimental Pre-Test Post Test Control group design was used to conduct the study. A convenient sample of 32 elderly hospitalized patients with disturbance in quality of sleep, were randomly assigned to experimental and control group in the study. Quality of sleep was assessed by using Groningen sleep quality scale. Therapeutic back massage was given as one session of twenty-two minutes for 3 consecutive nights to the patients of experimental group along with routine nursing care and for the control group only routine nursing intervention was given. The obtained data was analyzed by using the appropriate descriptive and inferential statistical methods. The results show that there was a significant improvement in the quality of sleep after the administration of therapeutic back massage in the patients of experimental group and there was no significant change in the quality of sleep of patients in control group. Hence it was concluded that therapeutic back massage was effective in improving the quality of sleep among elderly hospitalized patients.

INTRODUCTION

Sleep and rest are basic human needs essential to all individual's physical and psychosocial wellbeing. The purpose of sleep is mystery; however, it is necessary to maintain health and a sense of wellbeing. [1] Health focus has always been on getting enough sleep each night, to make our body and minds ability to renew and refresh which is termed as quality of sleep. Quality of sleep is sufficient duration and depth of sleep which results in one feeling awake and refreshed throughout the day. Nearly half of elderly people report difficulty in initiating and maintaining their sleep. [2] With increasing age, many changes occur that can place one at risk for sleep disturbance including increased prevalence of medical conditions, increased usage of medications, age-related environmental and lifestyle alterations. Though complaints in sleep are common among all age groups, elderly people have increased prevalence of many sleep disorders. Insomnia is a common complaint in hospitalized patients, especially the elderly and is characterized by an increase in sleep latency (trouble falling asleep), a decrease in sleep maintenance (trouble staying asleep), or a decline in sleep quality. Multiple factors can lead to insomnia among hospitalized patients and they include sleep disorders, physical and psychological, certain medical conditions and

Corresponding Author

Shrikant K. Nair
Email:- nairshrikantk@gmail.com

medications, environment, clinical activities and poor sleep hygiene. [3]

Massage is one of the most common complementary therapies in nursing practice. Massage, which produces relaxation by decreasing the tension in the muscles, is the opposite of the stress response. The massage sessions can vary from single session to a regular massage for a short period of span. The massage therapy is usually rendered to treat certain health conditions, to boost up the overall immunity or as a distressing mechanism. Massage therapy provides varied benefits such as improvement in blood circulation, release of pain reducing endorphins, recovery from injuries or chronic illness and improvement in sleep. [4]

Materials and methods

RESEARCH APPROACH: Quantitative experimental research approach was considered to be appropriate for the study.

RESEARCH DESIGN: Quasi experimental pretest and posttest control group design

SETTING: The study was conducted at Sri Ramakrishna Hospital, Coimbatore.

POPULATION: The target population included was the elderly hospitalized patients with disturbance in quality of sleep to whom the results will be generalized. The accessible population was all the elderly hospitalized patients admitted in the general wards of the Sri RamaKrishna hospital.

CRITERIA FOR SAMPLE SELECTION: The patients were selected on the basis of the following inclusion and exclusion criteria.

Inclusion Criteria:

1. Patients who were receiving treatment on second day of hospitalization.
2. Patients who could speak and write Tamil or English.

Exclusion Criteria:

1. Patients who are unconscious and in post-operative state.
2. Patients who are taking medication for sleep and who are not willing to participate.

SAMPLING: A convenient sampling technique was used to select a total of 32 patients from the population, patients were randomly assigned to experimental and control group respectively.

VARIABLES OF THE STUDY: The Independent variable in the study is Therapeutic Back Massage whose effect is being assessed on the Dependent variable Quality of Sleep.

MATERIALS: The tool consists of three sections.

Section I: Background Profile

Section II: Groningen Sleep Quality Scale (Mulder-Hajonides Van Der Meulen et al; 1980)

Section III: Technique of Therapeutic Back Massage.

Background Profile:

Demographic profile: This includes Age, Gender, Education, Occupation and Diagnosis.

Regular Sleep Pattern: This includes normal sleep duration, any other techniques used for sleeping, any influencing factors

Groningen Sleep Quality Scale

This tool was developed in Groningen by Mulder-Hajonides Van Der Meulen et al in 1980. The outcome measure was quality of sleep and it is assessed by using the fourteen item Groningen Sleep Quality Scale (1980). GSQS scores range from 0 to 14, a higher score indicating a lower subjective quality of sleep. These statements are related to patients feeling about the difficulty in falling asleep, sleep fragmentation duration of sleep and early morning awakening. The reliability score of the Groningen sleep quality scale is 0.88. The content validity of the tool was obtained from the experts in the department of Medical Surgical Nursing and necessary suggestions were incorporated in the study.

Therapeutic Back Massage:

Therapeutic back massage is a technique of manipulation of thoraco lumbar region and is found to be effective in improving the quality of sleep by increasing lymphatic drainage, removal of toxins, releasing of endorphins and improving circulation which induces sleep.

Step 1: Whole Hand Effleurage (5minutes)

Warm the massage oil in hands, and apply a modest amount with whole hand "effleurage" (smooth rhythmic stroking): Use the whole surface of hands to stroke reasonably and firmly upwards from the lower back all the way up to the neck, then (gentler pressure), circle around and back to the lower back region.

Step 2: Effleurage using Heel of the Hand (5 minutes)

The area of contact by the heel being small, the pressure applied is deeper. Both the hands work in circles by starting at the lower back and move in a circle, first outward, then upward and again returning to the centre and gradually progressing to the upper back.

Step 3: Effleurage using reinforced Fingers (5 minutes)

Stand on the opposite side to the one to be worked on. Push with the flats of fingers (one hand on top of the other) away from the centre line, and then glide back to the spine. Start at the lower back and work up to the upper back.

Step 4: Stripping, using the Reinforced Thumb (3 times each side -1 minute)

Glide with deep sustained pressure up the full length of the "sausage shaped" muscles either side of the spine and back off the pressure a little as you cover the neck and move slowly, feeling knots or sensitive spots while gliding from lower to the upper back. It should be done three times each side, alternating with a couple of minutes of effleurage (techniques one to three above), and again repeating the strippping.

Step 5: Frictions, Using the Reinforced Middle Finger (5 frictions at each spot-1 minute)

Firm deep movements either side of each spinous process with the reinforced middle finger. Start to the side of the lower spine and move upward. Apply 5 frictions each side.

Step 6: "Effleurage" using Forearms (6 strokes- 1 minute)

Apply firm downwards pressure, and move the arm closest to the head up to just below the shoulder blades. 6 strokes should be done. For the first stroke, precaution maintained for the possibility of lower back pain

Step 7: Trigger point release using sustained pressure of the reinforced thumb (if the patient have any back pain- 2 minutes)

Place thumb over any tender spots or knots that patient may have told about, and press firmly and with increasing pressure to facilitate compression and relaxation and then release the pressure.

Step 8: Finishing with Effleurage (2 minutes)

Apply effleurage (stroking moves) with supported fingers (step 3), then effleurage with the heel of the hand (step 2), then full handed effleurage (step 1). This will enhance the good that is done with the stripping and trigger point release. Then leave the patient quiet and check for condition of the patient.

The quality of sleep among elderly hospitalized patients was assessed with Groningen sleep quality scale after administration of therapeutic back massage. The main study results reveal the mean percentage of quality of sleep scores in experimental group was 17% after administration of therapeutic back massage as compared to the control group where it was 79% with routine nursing care. The calculated 't' value (11.792) of the experimental group is greater than table value at 0.05 level of significance. Thus, the alternative hypothesis H_1, **"there is a significant difference in the quality of sleep of experimental group before and after administration of therapeutic back massage",** is accepted**.**

The quality of sleep after intervention among the experimental group elderly hospitalized patients was undisturbed sleep and among control group patients, they still experienced poor sleep at night. 't' test for independent samples is used to check significance in the mean scores. The calculated 't' value 9.882 is greater than the table value at 0.05 level of significance. Thus, the research hypothesis H_2, **"there is a significant difference between the quality of sleep of experimental group and control group after the administration of therapeutic back massage",** is accepted**.**

RESULTS

Table 1. Distribution of Demographic Variables **(N=32)**

Demographic data	Experimental Group		Control Group	
	No. of Patients	Percentage (%)	No. of Patients	Percentage (%)
Age in years				
61 – 70	12	75	14	87
71 – 80	4	25	2	13
81 – 90	-	-	-	-
Gender				
Male	16	100	16	100
Female	-	-	-	-
Education				
≤ higher secondary	15	94	15	94
Graduate	1	6	1	6
Post graduate	-	-	-	-
Occupation				

Agriculture	7	44	4	25
Retired Managerial	7	44	7	44
Others	2	12	5	31
Diagnosis				
Stroke	5	31	3	19
COPD	4	25	4	25
Diabetes	1	6	2	12
Others	6	38	7	44
Normal Sleep Hours				
0 – 5 hrs	2	13	4	25
6 – 10 hrs	14	87	12	75

Table 2. Assessment on Quality of Sleep Scores Among Patients before and after administration of Therapeutic Back Massage

(N=32)

Sleep Pattern	Experimental Group				Control Group			
	Before		After		Before		After	
	No. of Patients	%	No. of Patients	%	No. of Patients	%	No. of Patients	%
Undisturbed sleep	-	-	14	87	-	-	-	-
Disturbed Sleep	-	-	-	-	-	-	-	-
Poor sleep	16	100	2	13	16	100	16	100

Table 3. Analysis on Quality of Sleep among Experimental and Control Group Patients before administration of Therapeutic Back Massage

(N=32)

Quality of sleep score	Mean	Mean %	Standard deviation	't' value
Experimental Group	11.4375	82	0.788	0.7270
Control Group	11.1875	80	1.073	

Table 4. Analysis on Quality of Sleep among Experimental Group Patients

(N=32)

Quality of sleep score	Mean	Mean %	Standard deviation	Mean difference	't' value
Initial score	11.4375	82	0.7880	9.125	11.792*
Final score	2.3125	17	3.234		

Significance at 0.05 level

Table 5. Analysis on Quality of Sleep among Control Group Patients

(N=32)

Quality of sleep score	Mean	Mean %	Standard deviation	Mean difference	't' value
Initial score	11.1875	80	1.073	0.1875	0.9
Final score	11	79	1.060		

Table 6. Analysis on Quality of Sleep among Experimental and Control Group Patients after intervention

(N=32)

Quality of sleep score	Mean	Mean %	Standard deviation	't' value
Experimental Group	2.3125	17	3.234	9.882*
Control Group	11	79	1.060	

*Significance at the level of 0.05

DISCUSSION

The mean percentage of quality of sleep in the experimental group improved by 65% after the intervention. This shows that therapeutic back massage is significantly effective in improving the quality of sleep among elderly hospitalized patients.

RECOMMENDATIONS

1. Sleep assessment questionnaires should be included with other health assessment techniques to assess and manage the disturbed quality of sleep among hospitalized patients.
2. Therapeutic back massage can be included in the nursing protocol of hospital setting as a routine nursing intervention.

REFERENCES

1. Eser I, Khorshid L, Cinar S. (2007) Sleep quality of older adults in Nursing homes in Turkey. Enhancing the quality of sleep improves quality of life. *Journal of gerontology nursing*, 33(10), 42-49.
2. Richard KC. (1998) Effect of back massage and relaxation intervention on sleep in critically ill patients. *American journal of critical care*, 7(4), 288-299.
3. Olney CM. (2005) The effect of therapeutic massage in hypertensive patients: a preliminary study. *Biological research for Nursing*, 7(2), 98-105.
4. Holland B, Pokorny ME. (2001) Slow stroke back massage: its effect on patients in rehabilitation setting. *Journal of association of rehabilitation Nurses*, 26(5), 182-186.