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A study to assess the effect of warm water foot bath on quality of sleep among the patients admitted at selected Hospital, Lucknow

Verma S[1], Ghosh G[2]
[1] Department of Medical Surgical Nursing, Era College of Nursing, Era University Lucknow, Uttar Pradesh, India
[2] Associate Professor and Head, Department of Medical Surgical Nursing, Era College of Nursing, Era University Lucknow, Uttar Pradesh, India

Abstract
The research titled Effect of Warm Water Foot Bath on Quality of Sleep Among the Patients Admitted at Selected Hospital was conducted by Smita Verma in partial fulfilment of the requirements for the award of the degree of master of science in Nursing at ERA college of Nursing, Lucknow.
Aim: to improve the quality of sleep among admitted patients.
Objectives: (1) Assess the pre- test and post- test quality of sleep among the patients in Experimental group and Control group. **(**2**)** Evaluate the effect of Warm Water Foot Bath on quality of Sleep among the patients in Experimental group. (3) Association between pre- test and post-test quality of Sleep among the patients in Experimental group and Control group with selected demographic variables.
Methodology: A Quasi-Experimental study was carried out to assess the effect of warm water foot bath. 30 samples (15 control and 15 experimental group) were selected by using non probability Convenience sampling technique. The quality of sleep was assessed by using The Structured Sleep Quality Scale.
Results: The finding of the study shows that the experimental group pre-test mean is 9.2 with the Standard Deviation 1.67. the post-test mean is 1.8 with the Standard Deviation 1.35. In control group pre-test mean is 6.6 with the Standard Deviation 2.74. The post-test mean is 6.4 with the Standard Deviation 2.60. In the experimental group pre-test mean is 9.2 with the Standard Deviation 1.67. the post-test mean is 1.8 with the Standard Deviation 1.35. Mean difference between pre and post test is 7.4; standard error is 0.75 and paired 't' test value of experimental group is 6.05 which is highly significant.
Conclusion: The study concluded that warm water foot bath therapy is effective in improving the quality of sleep among the admitted patients in hospital.

Keywords: Warm water foot bath therapy, quality of sleep, patients, the structured sleep quality scale

Introduction

Sleep is the basic human need and universal biological process common to all the people. Human spend about one third of their lives asleep. We require sleep for more reasons: to cope with daily stresses, to prevent fatigue, to conserve energy, to restore the mind and body, to enjoy life successfully. Sleep can be defined as a normal state of altered consciousness during which the body rests; it is characterized by decreased responsiveness to the environment, and a person can be aroused from it by external stimuli.

Sleep provides healing and restorations. Achieving the best possible sleep quality is important for the promotion of good health as well as the recovery from illness. Ill clients often require more sleep and rest than healthy client. Sleep is a cyclical physiological process that alternates with longer periods of wakefulness. The sleep wake cycle influences and regulates physiological function and behavioral responses.

Sleep is a complex physiologic and cyclic phenomenon influenced by an individual's biologic clock that regulates not only sleep but also levels of alertness throughout the day. During illness there may be either actual a potential sleep disturbance and this lack of sleep extends the time to recover from illness. Therefore, sick patient rest and sleep may be considered as one of the important components of their therapy.

A study to conduct on effects of warm-water footbath on relieving fatigue and insomnia of the gynaecologic cancer patients receiving chemotherapy shows that warm-water footbath intervention resulted in reduced fatigue and insomnia symptoms for gynaecologic cancer patients during chemotherapy. A warm footbath warms the skin, which causes vessel dilation and induces heat dissipation. Intervention that enhances heat dissipation prior to sleep will improve the sleeping pattern of the subject.

A warm water foot bath is the immersion of both feet and ankles in warm water at the temperature 40-44^0 c for 15–20 minutes.

Title of the Study

"A Study to Assess the Effect of Warm Water Foot Bath On Quality Of Sleep Among The Patients Admitted At Selected Hospital, Lucknow."

Objectives of the Study

- Assess the pre- test and post- test quality of sleep among the patients in Experimental group and Control group.
- Evaluate the effect of Warm Water Foot Bath on quality of Sleep among the patients in Experimental group.
- Association between pre- test and post-test quality of Sleep among the patients in Experimental group and Control group with selected demographic variables.

Hypothesis

- **H1:** There is a significant effect of warm water foot bath on quality of sleep at $p<0.05$ level of significance.
- **H2:** There is a significant association of pre test and post test quality of sleep with selected demographic variables at $p<0.05$ level of significance.

Material and Method

Research Design: A Quasi-Experimental research design with two group pre-test-post-test design was adopted for this study. There is non-randomization control group design in this study.

Setting of the Study: The study was conducted at Aastha Hospital Lucknow.

Sample Size: 30 Samples (15 Experimental group and 15 control group) were selected by using non probability Convenience sampling technique. The quality of sleep was assessed by using The Structured Sleep Quality Scale.

Data Collection Procedure: On the fast Day of collection, demographic data were collected for both the Experimental group and Control group. The pretest quality of sleep was assessed by using The Structured Sleep Quality Scale among the admitted patient in both groups. After the pretest warm water foot bath was administered for a period of 15-20 minutes at the temperature of 40-44℃ at bedtime in the Experimental group for seven consecutive days. The control group is allowed to do routine daily living activities without warm water footbath. The post-test was done on the seventh day to assess the quality of sleep in the experimental group and control group by using the same The Structured Sleep Quality Scale.

Results

Table 1: Assess of pre-test quality of sleep and post test quality of sleep in Experimental Group and Control Group. (N=30)

Quality of sleep	Scores	Frequency and percentage distribution			
		Experimental Group		Control Group	
		Pre-test	Post-test	Pre-test	Post-test
Normal sleep	0-2	0(0%)	10(66.67%)	0(0%)	0(0%)
Intermediate sleep	3-5	1(6.66%)	5(33.34%)	8(53.33%)	10(66.67%)
Disturbed sleep	6-15	14(93.34%)	0(0%)	7(46.66%)	5(33.34%)

The table indicates the overall quality of sleep of admitted patients.

According to quality of sleep of pre-test among 15 Experimental Group 0(0%) were having normal, refreshing sleep, 1(6.66%) were having intermediate sleep disturbance and 14(93.34%) were having disturbed sleep.
According to quality of sleep of post test among 15 Experimental Group 10(66.67%) were having normal, refreshing sleep, 5(33.34%) were having intermediate sleep disturbance and 0(0%) were having disturbed sleep.

According to quality of sleep of pre-test among 15 Control Group 0(0%) were having normal, refreshing sleep, 8(53.33%) were having intermediate sleep disturbance and 7(46.66%) were having disturbed sleep.
According to quality of sleep of post test among 15 Control Group 0(0%) were having normal, refreshing sleep, 10(66.67%) were having intermediate sleep disturbance and 5(33.34%) were having disturbed sleep.

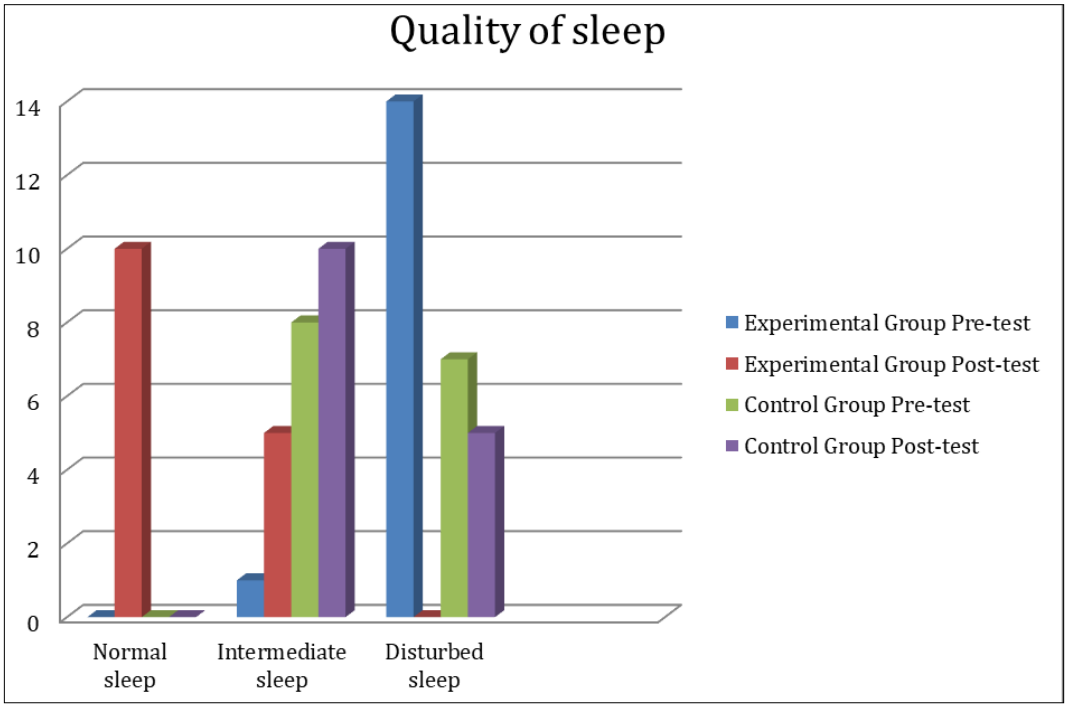

Fig 1: Column chart showing Frequency Distribution of subjects according to their quality of sleep of pre-test and post test in Experimental Group and Control Group.

Evaluate the effect of Warm Water Foot Bath on quality of Sleep among the patients in Experimental Group.

Table 2: Paired 't' test showing significant effect of warm water foot bath on quality of sleep in Experimental Group

	Experimental Group				Control Group			
	Mean	S.D.	't' value	P value	Mean	S.D.	't' value	P value
Pre-test	9.2	1.67	13.58	2.14	6.6	2.74	0.32	2.14
Post test	1.8	1.35			6.4	2.60		

S=Significant at p value <0.05

The table revealed that the mean of pre-test in Experimental Group and Control Group is 9.2 and 6.6. In post test the mean in Experimental Group and Control Group is 1.8 and 6.4.

The Standard Deviation of pre-test in Experimental Group and Control Group is 1.67 and 2.74. In post test the mean in Experimental Group and Control Group is 1.35 and 2.60.

The paired 't' value show that there is significant difference between pre-test and post test quality of sleep at 0.05 level of significance. It indicates the effect of warm water foot bath is improving the quality of sleep among patients admitted in hospital.

Table 3: Unpaired 't' test value showing the difference of post test score in Experimental Group and Control Group.

	Mean	SD	SE	df	Table value	t-value
Experimental Group	1.8	1.35	0.75	28	2.05	6.05
Control Group	6.4	2.60				

Significant at 0.05 level

The above table depicts that there was significant association exist in experimental and Control Group subject at p value <0.05.

In Unpaired 't' test, calculated value is more than table value, therefore research hypothesis is accepted.

The Unpaired 't' value show that there is significant difference of post test quality of sleep in Experimental Group and Control Group at 0.05 level of significance. It indicates the effect of warm water foot bath is improving the quality of sleep among patients admitted in hospital.

Limitations

- Study is limited in Aastha old Age Hospital, Lucknow.
- Study is limited to the admitted patients.

Conclusion

On the basis of finding of the study that "A Study to assess the effect of Warm Water Foot Bath on Quality of Sleep among the patients admitted at Selected Hospital, Lucknow." The below said conclusions were drawn. It brings out of limitations of the study in the picture, the implications are given on various aspects like nursing education, nursing practice, nursing administration and nursing research. It also gives an insight to further studies.

References

1. Karthi RM. A Study to Assess the Effectiveness of Hot Water Foot Bath Therapy on Quality of Sleep Among Elderly Staying in Selected Old Age Home at Villupuram District, Tamilnadu, ISSN: 2455-7587. Available from: https://www.ijshr.com/IJSHR_Vol.4_Issue.04_Oct2019/IJSHR0014.pdf (viewed 03/05/2019).
2. Kaur A, Kumar CN. Effectiveness of Warm Water Foot Bath on Quality of Sleep among Hospitalized Patients, ISSN: 2249-9571. Available from: https://www.ijhsr.org/IJHSR_Vol.7_Issue.10_Oct2017/25.pdf (viewed 03/05/2019).
3. Suneesh PM, Thangavel K. A Study to Assess the Effectiveness of Warm Foot Bath on Sleep Onset Time among Cancer Patients with Insomnia in Nath Lal Parekh Cancer Hospital at Rajkot. Asian J Nurs Educ Res,2017:7(2):21. ISSN Print: 2231-1149. ISSN Online: 2349 2996. Available from: http://ajner.com/HTMLPaper.aspx?Journal=Asian%20Journal%20of%20Nursing%20Education%20and%20Research: PID=2017-7-2-21 (viewed 05/05/2019).
4. Kim HJ, *et al*. The Effects of Footbath on Sleep among the Older Adults in Nursing Home: A Quasi-experimental Study. Complement Ther Med,2016:24:38-44. DOI:10.1016/j.ctim.2016.02.005. Available from: https://www.researchgate.net/publication/294724982_The_Effects_of_Footbath_on_Sleep_among_the_Older-Adults_in_Nursing_Home_A_Quasi-experimental_Study (viewed 06/06/2019).
5. Aliabadi S, Moodi M, Miri MR, Tahergorabi Z, Mohammadi R. Sleep Quality and Its Contributing Factors Among Elderly People: A Descriptive-Analytical Study. Mod Care J,2017:14(1):e64493. Available from: https://pdfs.semanticscholar.org/b20e9283540387d433.pdf.
6. Zisberg A, Gur-Yaish N, Shochat T. Contribution of Routine to Sleep Quality in Community Elderly. Sleep,2010:33(4):509-514. Available from: https://academic.oup.com/sleep/article/33/4/509/2454611. DOI: 10.1093/sleep/33.4.509.
7. Seyyedrasooli A, *et al*. The Effect of Footbath on Sleep Quality of the Elderly: A Blinded Randomized Clinical Trial. Complement Ther Clin Pract,2013:19(3):151-155. PMCID: PMC4134151. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4134151/ (viewed 06/07/2020).
8. Schubert CR, Cruickshanks KJ, Dalton DS, Klein BEK, Klein R, Nondahl DM. Prevalence of Sleep Problems and Quality of Life. Sleep,2002:25(8):48-56. Available from: https://watermark.silverchair.com/sleep-25-8-48.pdf.
9. Tel H. Sleep Quality and Quality of Life Among the Elderly People. Neurol Psychiatry Brain Res,2013:19(1):48-52. Available from: https://www.sciencedirect.com/science/article/pii/S0941950012000917.