

Quasi Experimental Study to Assess the Effectiveness of Hot Water Foot Bath Therapy on the Quality of Sleep Among the Elderly People

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Abstract: “Sleep is a golden chain that ties health and our bodies together”. Ageing is universal phenomenon. The quality and quantity of sleep decreases with age. In this study objectives are: 1) To assess the quality of sleep-in elderly people. 2) To evaluate the effectiveness of hot water foot bath therapy on quality of sleep among elderly people. 3) To rule out association between quality of sleep among elderly people with their selected demographic variable. **Material and Method:** A quasi experimental research design and nonprobability purposive sampling technique was adopted to achieve the goal of the study. The tool consists of two parts, first part consists the demographic data of sample and second part consist of Standardized tool PSQI scale. The sample was 50 old age people living in selected old age home at Anand district. Descriptive and inferential statistics method were used for analysis. **Result:** The finding related to effectiveness of hot water foot bath Therapy in old age people - the majority of moderate sleep disturbance is old age people is (60%) The majority of mild sleep disturbance in old age people is (40%). The chi- square used to determine association between pre-test score with selected demographic variable like age, gender, marital status, education, weight, family history, addiction, dietary pattern. There is significant association between pre-test sleep disturbance score and selected demographic variable with $p < 2.01$ level of significant including age, gender, marital status, education, weight, family history, addiction, dietary pattern.

Keywords: Hot water foot bath therapy, old age home, sleep quality.

1. Introduction

Sleep is a life-sustaining activity that affects every individual's well-being and quality of life. Sleep is a biological function, an active behaviour, crucial and vital for brain health and wellbeing at any age. It influences health status, quality of life, functioning, autonomy, and safety. The elderly people are vulnerable to the psychological illness like insomnia, Alzheimer, dementia. This study is aimed to assess the sleep quality of elderly people and effectiveness of hot water foot bath therapy among elderly people. Hot water foot bath therapy helps in improving blood circulation by dilation of blood vessel. It also releases heat from the body in the form of sweat and provides sufficient oxygen to the brain cells which helps in

removal of toxins. This therapy helps in reducing stress and feels relaxed by boosting up the nerves, muscle functions and improve sleep.

2. Need for Study

Poor sleep is a frequent medical complaint, especially among elderly populations. Inadequate sleep is a prolonged and usually abnormal inability to obtain adequate sleep. The amount and quality of sleep substantially influence health and quality of life because sleep helps regulate physiological functioning. Deprivation of which can cause serious physiological and psychological illness. Sleep problems across the lifespan affect many biological processes leading to a significant reduction in individual wellbeing possibly due to changes of brain homeostasis, which influences age related neuro physiological processes and mood changes. Moreover, mood disorders may exacerbate sleep disturbances in older adults. On the other hand, sleep problems (i.e., insufficient sleep duration) may contribute to the manifestation of mood changes through both hypothalamic, pituitary, adrenal (HPA) axis mis regulation, and excessive activation of the sympathetic nervous system. In this direction, poor sleep is a common manifestation of both depression and anxiety, as they may influence circadian disruption. Not surprisingly, sleep problems are considered symptoms of anxiety and depression. According to the national sleep foundation, elderly people are more likely to find it harder to fall asleep. The foundation has confirmed the prevalence of insomnia. 46% of community members of age 65-74 and older reported symptoms of insomnia. It was estimated that 40-70% of elderly people have chronic sleep problems, of which 50% are undiagnosed.

Masoud Mirzaei, Emsie Glamorize (2017) conducted a study on Quality of sleep and methods of management of sleep disorders in elderly of Yazd city. The study was conducted at Yazd health centre. In a cross-sectional analytical study, 200 elderly aged 60 years and over were randomly selected from Yazd health centres Demographic and Pittsburgh Sleep Quality Index questionnaires were used to collect data from the elderly

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face to face. the results show that sleep quality is poor in elderly of Yazd city. Health promotion interventions are needed to improve the quality and quantity of sleeps in the elderly.

3. Objectives

- 1) To assess the quality of sleep-in elderly people.
- 2) To evaluate the effectiveness of hot water foot bath therapy on quality of sleep among elderly people.
- 3) To rule out association between quality of sleep among elderly people with their selected demographic variable.

4. Hypothesis

H1: There is a significance difference between pre-test and post- test of quality of sleep-in experimental group at the level of significance of 0.05.

H2: There will be significant association between the qualities of sleep among elderly people with their selected demographic variables.

5. Research Methodology and Research Approach

Quantitative research approach.

Research Design:

Quasi-experimental design.

Research Variable:

Independent Variable:

The Independent Variables is Hot water foot bath therapy.

Dependent Variable:

The Dependent Variable is Quality of sleep.

Socio Demographic Variable:

Age, gender, weight, marital status, education, medical or psychiatric disease are socio demographic variables.

Setting of the Study:

Selected old age home of Anand district.

Target Population:

The entire set up individuals or object having some common characteristics selected for a research study. Elderly people staying at selected old age home in Anand district.

Sample Size:

The sample size comprises of 50 sample who fulfilled sampling criteria and willing to participate in the study.

Sampling Technique:

Sampling is the process of selecting a representative part of the population. Non probability convenient sampling technique.

6. Result

The table 1 shows the distribution of weight of respondents. Majority of elderly people in experimental group are having weight of 50-59 Kg (48%). 32% are in age group of 40-49 years while 20% are above the age group of 60 years and above.

In the control group majority are in the age group of 50-59

years constituting 60% while 28% are in age bracket 40-49 years and 12% are above the age group of 60 Years.

On comparing the Mean scores for pre test and post test in both Experimental and control group itis seen that in both experimental group and control group there is significant difference but the amount of decrease in experimental group is more than that in control group.

Table 1
Distribution of weight of respondents

Group		Frequency	Percentage (%)
Experimental	40 – 49	8	32.0
	50 – 59	12	48.0
	60 and above	5	20.0
	Total	25	100.0
Control	40 – 49	7	28.0
	50 – 59	15	60.0
	60 and above	3	12.0
	Total	25	100.0

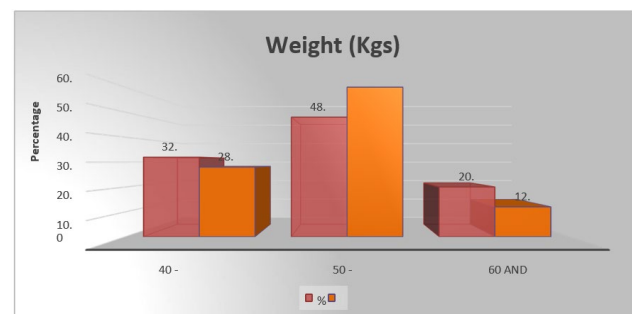


Fig. 1. Weight distribution of respondents

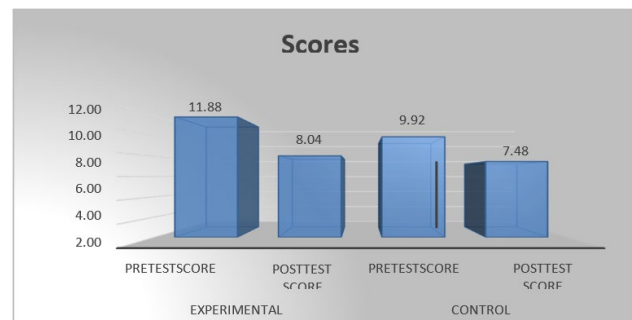


Fig. 2. Score distribution graph

7. Discussion and Conclusion

This section includes conclusion, implication, limitations and recommendations. The following conclusions were drawn from the finding of the present study. The research approach adopted in the present study is quantitative research approach to measure the effectiveness of hot water Foot bath therapy Among elderly people. Effectiveness was assessed by the chi-square(X2) was used to determine association between pre-test score with selected demographic variable like age, gender, marital status, education, weight, family history, addiction,

Table 2
Comparison of Pre and Post test scores

Group		Mean	Std. Deviation	t Test	DF	Table Value	Sig/Non-Sig
Experimental	Pre Test Score	11.88	2.40	5.047	24	2.06	Sig
	Post Test Score	8.04	2.51				
Control	Pre Test Score	9.92	1.96	4.183	24	2.06	Sig
	Post Test Score	7.48	1.78				

dietary pattern. There is significant association between pre-test sleep disturbance score and selected demographic variable with $p < 2.01$ level of significant including age, gender, marital status, education, weight, family history, addiction, dietary pattern. Hence it is indicated that hot water foot bath therapy was effective.

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