



## **A study to assess the effect of warm foot bath on quality of sleep among cancer patients**

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### **Abstract**

People with cancer, better sleep may help in feeling better both physically and emotionally, improving their ability to cope with cancer. The quality of sleep was assessed by using Groningen sleep quality scale. Warm foot bath was administered by the researcher for 20 minutes in experimental group. For control group, routine care without warm footbath was given. Post-test was done to assess the quality of sleep in experimental group and control group by using Groningen sleep quality scale. Descriptive and inferential statistical techniques were used to analyze the data.

Insomnia is defined as a subjective complaint of inadequate nocturnal sleep. It is the most common sleep disorder reported by cancer patients. Although alterations in sleep patterns are endemic among this population, sleep problems are rarely assessed in a typical patient evaluation.

Unpaired 't' test was used to compare the effect of warm foot bath on quality of sleep among patients with cancer in the experimental and control group. It was identified that the mean value of quality of sleep among patients with cancer in the experimental and control group was 4.66 (SD=2.24) and 7.76 (SD= 1.66) I found Calculated "value is 6.026 is greater than the table "t" value of 2. 0 at 0.05 level of significance where DF Value was 58. Above mentioned values reject the null hypothesis ( $p < 0.05$ ) and accept the research Hypothesis. There results show highly significant difference in the quality of sleep.

**Keywords:** Warm, foot bath, quality of sleep, cancer patients

### **Introduction**

Sufficient sleep is an effective element in physical and mental health<sup>[1]</sup>. A good sleep provides physical restoration through anabolic functions such as protein and tissue synthesis.

Quality sleep is an essential element to tissue repair, proper immune function, and mental health. Chronic lack of sleep has been associated with depression, anxiety, and decreased cognitive function. In people with cancer, poor quality of sleep reduces quality of life, but unfortunately, most patients with cancer do not mention sleep problems unless explicitly asked. Most of the work addressing quality of life issues in patients with cancer has focused primarily on insomnia and fatigue, but both patients living with cancer and long-term Survivors are at risk of having other sleep problems.

A cross-sectional survey study conducted by Judith R. Davidson *et al.* examined the prevalence of reported sleep problems in patients attending six clinics at a regional cancer center. The study showed that the most prevalent problems were excessive fatigue (44% of patients), leg restlessness (41%), insomnia (31%) and excessive sleepiness (28%). The breast clinic had a high prevalence of insomnia and fatigue. Insomnia commonly involved multiple awakenings (76% of cases). In 48% of cases, insomnia onset was reported to occur around the time of cancer diagnosis (falling within the period 6 months pre-diagnosis to 18 months post-diagnosis). The most frequently identified contributors to insomnia were thoughts, concerns,

and pain/discomfort among patients with cancer after warm foot bath.

### **Research design**

The research design used for the present study is True experimental post-test only control group design. Samples were randomized assigned to the experimental and the control group.

### **Samples and Sample size**

60 Cancer patient admitted in the Hospital.

A warm-water footbath is a local moist heat application. It is a non-invasive and easy technique to apply at home. The findings provide empirical support that a warm water footbath relieves fatigue and insomnia problems of patients undergoing chemotherapy. It can be a non-pharmaceutical method to help patients overcome fatigue and sleep problems during chemotherapy.

Sleep disturbance is reported to be a significant problem for patients across the cancer care. Footbath has been found to be a powerful alternative therapy used for sleep induction in spite of sleep medications which has a lot of side effects. The effect of footbath on sleep onset latency and to determine the relaxation level among patients with cancer showed that majority (87%) experienced maximum relaxation and footbath is effective for early sleep onset latency and relaxation.

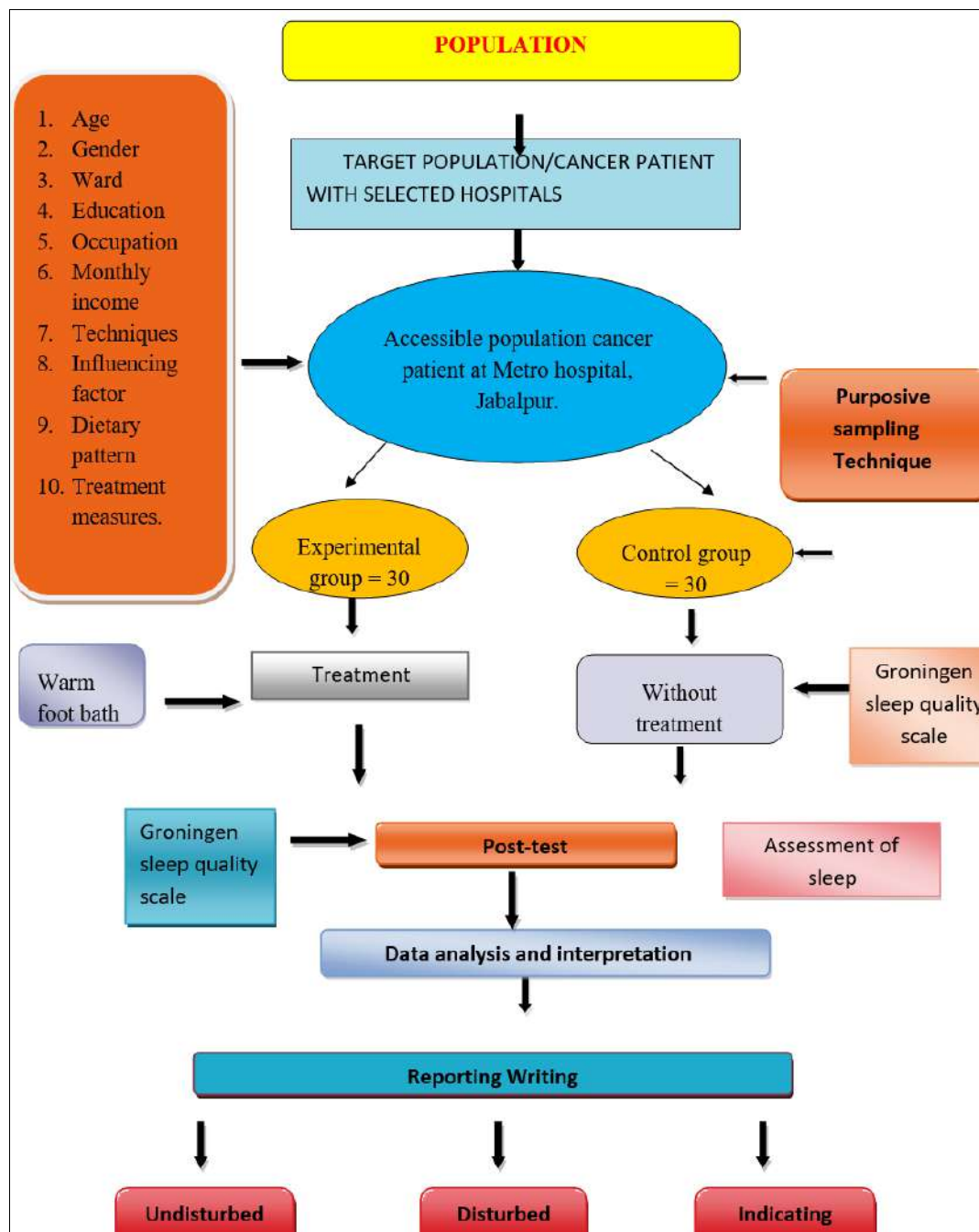
## Objectives

1. To assess the quality of sleep among patients with cancer.
2. To evaluate the effect of warm footbath on quality of sleep among patients with cancer.

3. To find out the association between quality of sleep among patient with selected demographic variables.

## Research Design

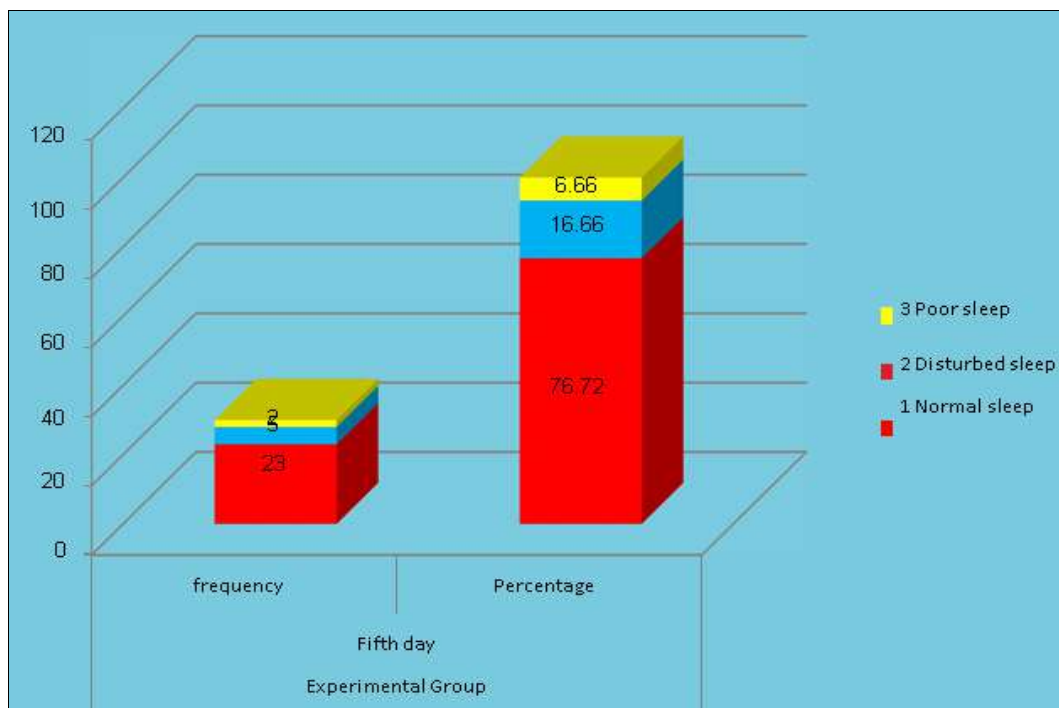
### Schematic diagram of research design



## Data collection procedure

60 patients with cancer were selected based on the inclusion criteria and were assigned to experimental and control group alternatively. The experimental group consisted of 30 patients and control group consisted of 30 patients. On the day of admission, demographic variables screening were done for patients with cancer. On the next day, warm

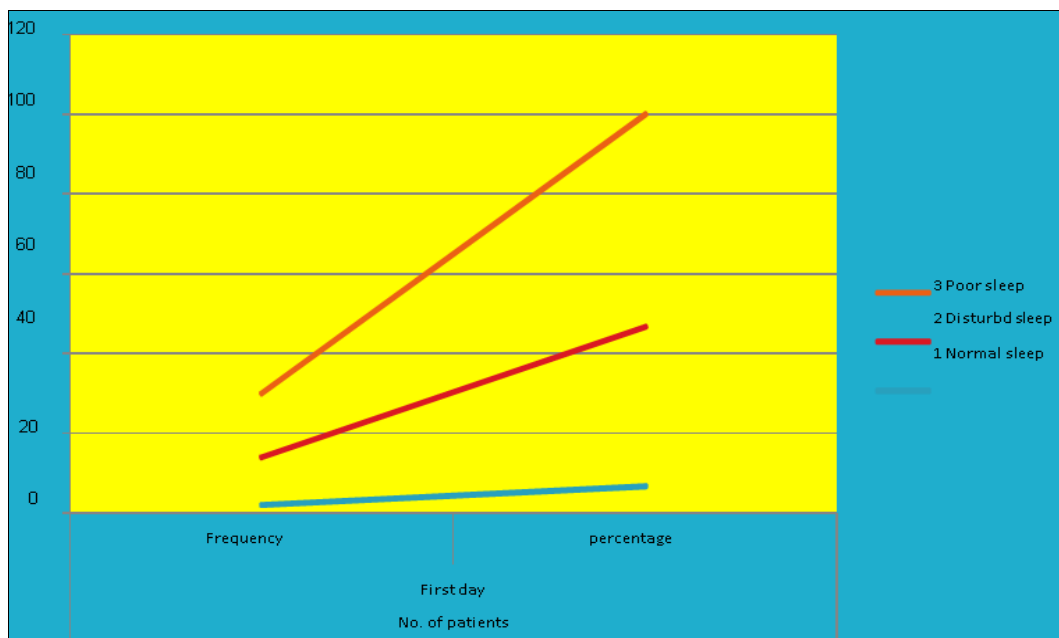
foot bath was administered by the researcher with the duration of 20 minutes for five consecutive days in patients of experimental group. On the other hand, routine care was given for patients in control group. Post-test was done for both experimental and control group to assess the quality of sleep among patients with cancer by using Groningen sleep quality scale.



**Fig 1:** Assessment on quality of sleep among patients with cancer in experimental group after warm footbath

The quality of sleep among patients with cancer in the experimental group after warm footbath. The results show that in the experimental group 23 (76.72%) patients had

normal sleep, 5 (16.66%) patients had disturbed sleep and 2 (6.66%) patients had poor sleep.



**Fig 2:** Showing assessment on quality of sleep among patients with cancer in control group

The quality of sleep among patients with cancer in the control group. The results shows that in the control group, 2 (6.66%) patients had normal sleep, 12 (40%) patients had disturbed sleep and 16 (53.33%) patients had poor sleep.

### Major findings

Regarding the age of experimental group 10 (16.66%) 20-40 years 16 (26.66%) 41-60 years 4 (6.66%) 61-80 years none is come under above 80 years and in the control group 5 (8.33%) 20-40 years 10 (16.66%) 41-60 year 3 (5%) above

80 year. Majority of patients come under the age group between 41-60 year and minority of patient age come under the 61 -80 years.as regards Gender in experimental group 15 (25%) samples were male and 15 (25%) samples were female. And in control group 13 (21.66%) samples were male and 17 (28.66%) samples were female. In the Experimental group both genders have equal number but in the control group majority is female gender and minority comes in the male gender, Regarding ward in experimental group 22 (36%) samples were in medical ward 2 (3%) in

surgical ward 1 (1%) ortho 5 (8%) other in ward and in control group 13 (21%) samples were in medical ward 12 (20%) in surgical ward 2 (3%) ortho 3 (5%) in other ward. Majority in experimental group of patient in Medical ward and minor patient is come under in the ortho ward. And in the control group majority patients in the medical ward and minority comes in the ortho ward.

### Result

Unpaired 't' test was used to compare the effect of warm footbath on quality of sleep among patients with cancer in the experimental and control group. It was identified that the mean value of quality of sleep among patients with cancer in the experimental and control group was 4.66 (SD=2.24) and 7.73 (SD= 1.63) I found Calculated "t" Value is 6.025 is greater than the table "t" value of 2. 0 at 0.05 level of significance where DF Value was 58. Above mentioned values reject the null hypothesis ( $p < 0.05$ ) and accept the research Hypothesis.

### Conclusion

About the dietary pattern distributions among the cancer patients, the calculated chi-square value is 0.59 & the df is 6. The tabulated chi-square value for df 6 is 22.46. So the calculated chi-square value is lower than the tabulated chi-square. There was not significant association. Hence researcher accepted the null hypothesis and rejects the research hypothesis.

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