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## The effect of back massage on vital parameters and comfort among hospitalised patients with hypertension in selected hospitals at Gwalior (M.P.)

**Bharti Batra and Faurkh Khan**

### Abstract

Massage is the oldest and simplest form of medical care. Massage is a sure cure for many diseases especially when the patients are unable to do any physical activities due to old age or suffering from chronic disease for quite a long time. [50] According to researcher the average participant receiving massage therapy experience reduction of state of anxiety greater than 64% of the participants were receiving other treatments. Massage as one of the alternative therapies is useful in hypertension. [52] It is one of the best non pharmacologic methods and is also beneficial in reducing complications of hypertension such as heart failure and stroke.

Aim of the study was to identify the effect of back massage on vital parameters among patients with hypertension in terms of change in vital parameters as measured by a sphygmomanometer and stethoscope.

**Materials and methods:** A pre-experimental research design was used for the present study. The sample consisting of 100 patients with hypertension who met the inclusion criteria were assigned, received back massage. Vital parameters of hypertensive patients were checked before the intervention immediately and after the intervention Comfort scale was administered. On the third day of intervention to assess the level of comfort. The data was analyzed using descriptive statistics and inferential statistics, paired 't' test, Karl Pearson's Co-efficient of Correlation and chi-square test.

**The Study Result:** showed a significant difference the vital parameters (BP and HR) of ( $t_{(99)} = 1.98; P < 0.05$ ). Correlation between post-intervention vital parameters there was significant difference in the comfort level of patients after the intervention. Karl Pearson's coefficient of correlation was used. There was weak negative correlation between post-intervention blood pressure reading and comfort level of patients. No association was found between pre-intervention blood pressure readings with age and duration of admission. ( $\chi^2(3) = 7.81; P < 0.05$ ) This was analyzed using chi-square test. The results showed after giving twenty minutes of back massage there is a reduction in the systolic blood pressure of patients after ten minutes of rest period. There was no change in the diastolic blood pressure and heart rate after the back massage.

**Conclusion:** Hypertension is a chronic disease and the sometimes fail to realize alternative methods which can be used optimally in the reduction of hypertension. Back massage is one of the effective methods which will help in the reduction of blood pressure and thereby providing comfort and relaxation to the patient while comparing it with back care.

**Keywords:** Effect; back massage; comfort; heart rate; blood pressure

### Introduction

Massage may be the oldest and simplest form of medical care. Ayurveda, the traditional Indian system of medicine, places great emphasis on the therapeutic benefits of massage with aromatic oils and spices. It is practiced very widely in India [1]. Massage therapy is one of the fastest growing forms of alternative medicines [1]. About twenty to thirty percent adults in rural areas of India have hypertension. Hypertension is usually diagnosed between thirty-five years and fifty-five years [2] High blood pressure (hypertension) can quietly damage your body for years before symptoms develop. Left uncontrolled, you may wind up with a disability, a poor quality of life or even a fatal heart attack. Roughly half the people with untreated hypertension die of heart disease related to poor blood flow (ischemic heart disease) and another third die of stroke [3] A study conducted at the Bowling Green University in 1997 found that workplace massage is beneficial. This study evaluated the effectiveness of 15-minutes on-site massage while workers were seated on the chair. Participants showed reduction in systolic and diastolic blood pressure after massage [4].

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**Objective of the study**

1. To determine the vital parameters of hospitalised patients with hypertension before introducing the intervention as measured by a sphygmomanometer and stethoscope.
2. To identify the effect of back massage on vital parameters among patients with hypertension in terms of change in vital parameters as measured by a sphygmomanometer and stethoscope.
3. To find out the relationship between post-intervention vital parameters and comfort of patients with hypertension.

To find out the Association between pre-intervention blood pressure readings and selected variables such as age and duration of diagnosis.

**2. Methodology:** One group pre-test post-test design (O<sub>1</sub> x O<sub>2</sub>) was adopted for the study. While the sample for the study comprised of 30 staff nurses. Random sampling technique was used to select 30 staff nurses working in S.C.S Hospital, Gwalior. In this study, the tool consisted of structured knowledge questionnaire on management of patients with chest tube drainage for staff nurses in SCS Hospital, Gwalior. The data was analyzed using descriptive statistics and inferential statistics, paired 't' test, Karl Pearson's Co-efficient of Correlation and chi-square test. Tools: The tool consisted of demographic performa & structured knowledge questionnaire on management of patients with chest tube drainage for staff nurses in SCS Hospital, Gwalior.

**Reliability of the tool:** The reliability of the tool was established by administering the tool to 10 staff nurses working in intensive care units and the trauma unit in the selected hospital. Simple Random sampling was adopted. Informed written consent was obtained. To find out the coefficient of internal consistency of the tool (Comfort Scale) Split-Half method was used. The reliability of the tool was found out using Karl Pearson Coefficient of Correlation with a reading of 0.8.

**Description of the tool:** The tool consisted of two parts: **Part 1: Baseline proforma** It consisted of 7 items, such as subject number, designation, clinical area, age, sex, professional qualification and total years of experience. **Part 2:** Structured knowledge questionnaire on management of patients with chest tube drainage consisted of 35 knowledge questionnaire covering areas like anatomy and physiology of chest, meaning and indication of chest tube drainage and signs and symptoms of pneumothorax, 15 items (43%), mechanisms and principles involved in chest tube drainage, 6 items (17%), assessment and care of patient with chest tube drainage and prevention of complications, 14 items (40%). The total possible score was 35.

**Pilot study:** The pilot study was conducted in a KDJ hospital in Gwalior from 14<sup>th</sup> October to 21<sup>st</sup> October. The written permission to conduct the study was obtained from the managing director of the institution. The data was collected from 10 staff nurses working in intensive care units and the trauma unit in the selected hospital. Simple Random sampling was adopted. Informed written consent was obtained. Confidentiality was assured to

all the subjects. The investigator informed the subjects to go through the self-instructional module for 7 days and called them for post-test on the 8<sup>th</sup> day which was also a day for the follow up. Each written test was completed within 35-40 min. Data analysis was done using descriptive and inferential statistics. The findings of the pilot study revealed that the tool was feasible, practicable and acceptable. The investigator then proceeded for the main study.

**Data collection process:** Data collection was done in the Medical Wards in Govt. District hospital from 22/10/17 to 31/11/2017. Formal permission was obtained from the Dean before data collection. The purpose of the study was explained to the staff nurses, the investigator met the respondents individually in the respective wards and units. The purpose of the study was explained to them and informed consent was obtained. Confidentiality was assured to all the subjects to get their co-operation. The pre-test was conducted using a structured knowledge questionnaire. The time taken to conduct pre-test was 40-45 min. The pre-test was conducted on 30 staff nurses and Self Instructional Module was administered on the same day, Post-test was conducted on the 8<sup>th</sup> day to find out the effectiveness of SIM in terms of their gain in knowledge.

**3. Result**

Highest percentage (56.6%) of the respondents were in the age group, 20- 30years. Age of 23.33 percentage of respondents were between 31-40 years and 13.33% of respondents were between 41-50 years. Age of 6.67% of respondents were above than 50years. Distribution of staff nurses according to their gender shows 66.67% of them were females and 33.3% of them were males. Percentage distribution of staff nurses according to their professional qualification shows that majority, (50%) of the samples were B.sc nurses and 46.6% of the sample were general nurses. Only a minority of 3.33% of the sample were post basic B.sc nurses. Percentage distribution of staff nurses according to total years of experience reveals that the majority of samples (56.67%) had below 5 years of experience. Thirty percentage of the samples had 6-10 years of experiences and a majority of 13.33% of samples had experience above 11years. The findings revealed that majority of respondents (90%) had only average knowledge whose percentage of scores ranged between 35-70. Only 3.33% of the respondents had good knowledge and 6.67% of the respondents had poor knowledge level regarding management of patients with chest tube drainage.

**4. Conclusion**

It is concluded from the present study Most of the people (49%) admitted in the hospital were in the age group of 51-60 yrs. Patients had reduction in vital parameters (systolic BP and Diastolic BP) There was significant change in the systolic blood pressure after administering the back massage on all the three days. All the patients expressed more comfort. There was negative correlation between post-intervention vital parameters and comfort level. There was no significant association in the pre-intervention blood pressure readings with age and duration of admission.

**5. Recommendations**

On the basis of the findings of the study can be replicated on a large sample to have generalization. A similar study can

be done only on female or male patients. A comparative study can be done to see the effect on male and female patients. A comparative study can be conducted to find out the most effective complementary therapy in comparison to massage in reducing vital parameter. A similar study can be conducted on any other group of patients.

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