

A STUDY TO ASSESS THE EFFECTIVENESS OF MCKENZIE THERAPY ON SHOULDER PAIN AMONG STAFF NURSES IN SELECTED HOSPITALS IN KANYAKUMARI DISTRICT OF TAMIL NADU

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ABSTRACT:

Pain is one of the most serious health problems of tremendous medical and socio-economic dimension and a major cause of disability. Nurses are known to be a high risk group for occupational pain. The investigator realised the burden of the condition and conducted a study on effectiveness of McKenzie therapy on shoulder pain among hospital staff nurses. The objectives of the study were to assess the pre-test and post-test levels of shoulder pain among staff nurses in experimental group and the control group; to evaluate the effectiveness of McKenzie therapy on shoulder pain among staff nurses in experimental group and to associate the level of pain with their selected demographic variables **Methods:** *The research design used for this study was quasi-experimental pre-test and post-test control group research design. Conceptual framework adopted in the present study was Wiedenbach's "the helping art of clinical nursing" theory.* **Findings:** *The analysis of pre-test revealed that in the experimental group majority 16 (53.3%) had severe shoulder pain and 14 (46.7%) had moderate shoulder pain. In post-test, majority 17 (56.7%) had Moderate shoulder pain, 13 (43.3%) had normal pain and none of them had severe shoulder pain. The analysis of pre-test revealed that in control group majority 16 (53.3%) had moderate shoulder pain and 14 (46.7%) had severe shoulder pain. In post-test, majority 18 (60%) had moderate shoulder pain and 12 (40%) had severe shoulder pain. The mean values were 29.03 in pre-test and 18.5 in post-test respectively. The paired 't' value for pain were 15.04 which is significant at $p < 0.05$ level. It shows that McKenzie was effective in reducing the level of shoulder pain. In control group the mean score on level of shoulder pain among staff nurses were 28.1 in pre-test and 27.7 in post-test respectively. The estimated paired 't' value for pain were 0.85 which is non-significant at $p < 0.05$ level.* **Conclusion:** *The findings of the study concluded that McKenzie was effective in reducing the level of shoulder pain.*

Key Words: McKenzie, Shoulder pain, staff nurses.

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INTRODUCTION:

“Remember that any exercise is better than no exercise” (J Health Research)

Health is a positive quality of life which helps us to live life to the fullest and serve our fellowmen to the best of our ability. Staff nurses typically use a shift work model of scheduling to care for patients around-the-clock. Nurses are known to be a high risk group for occupational pain. McKenzie therapy include greater muscular strength, relieved shoulder pain, improved muscle tone and appearance, increased endurance and enhanced bone density.

PROBLEM STATEMENT

‘A STUDY TO ASSESS THE EFFECTIVENESS OF MCKENZIE THERAPY ON SHOULDER PAIN AMONG STAFF NURSES IN SELECTED HOSPITALS IN KANYAKUMARI DISTRICT OF TAMIL NADU’

OBJECTIVES

- To assess the pre-test and post-test levels of shoulder pain among staff nurses in experimental group and the control group.
- To evaluate the effectiveness of McKenzie therapy on treating shoulder pain among staff nurses in the experimental group.
- To find out the association between the pre-test level of shoulder pain among staff nurses with their selected demographic variables in experimental group and the control group.

HYPOTHESES

H₁: There will be a significant difference between the pre-test and post-test levels of shoulder pain among staff nurses in experimental group and the control group.

H₂: There will be a significant association between the pre-test level of shoulder pain among staff nurses with their selected demographic variables in experimental group and the control group.

OPERATIONAL DEFINITION**McKenzie therapy:**

It refers to the method of assessing and treating shoulder pain and related extremity pain. In this study it refers to two steps of active exercise that include pendulum and crossover arm stretch which improves the range of motion without pain. It will be done for 20 minutes, twice a day, for 5 days.

ASSUMPTIONS

- Staff nurses may experience mild and moderate shoulder pain.
- McKenzie therapy may reduce shoulder pain and improve joint function.
- Level of pain may vary from individual to individual.

DELIMITATIONS

The study is delimited to —

- The staff nurses within the age group of 26-40 years
- Sample size of 60.
- The McKenzie therapy being limited to 4 weeks only.

CONCEPTUAL FRAME WORK

The conceptual framework selected for the study was based on "**Wiedenbach's prescriptive**" theory which was described as a system of concept, invented for a purpose. The conceptual model of nursing practice according to this theory consists of 3 steps which are as follows: —

Step 1: Identifying the need for help.

Step 2: Ministering to need.

Step 3: Validating the need met.

RESEARCH DESIGN AND METHODOLOGY**Research Design**

In this study, quasi-experimental pre-test and post-test Control group design was used to assess the effectiveness of McKenzie therapy among staff nurses.

The diagrammatic representation of this design is as follows —

Group	Pre test	Intervention	Post test
Experimental Group	E ₁	X	E ₂
Control group	C ₁	—	C ₂

E1 - Pre-test assessment of shoulder pain among staff nurses in experimental group

E2 - Post-test assessment of shoulder pain among staff nurses in experimental group

X - Intervention with McKenzie therapy.

C1 - Pre-test assessment of shoulder pain among staff nurses in control group

C2 - Post-test assessment of shoulder pain among staff nurses in control group

Variables —**Dependent Variable**

In the present study dependent variable was level of shoulder pain.

Independent Variable

In the present study independent variable was McKenzie therapy.

Setting of the Study

'Vinod hospital' at Marthandam was selected for the experimental group, and 'Dominic hospital' at Kulasekharam was selected for the control group.

Population —

In the present study, population comprised of staff nurses in the selected hospitals.

Target Population

In the present study, target population comprised of staff nurses between the age group of 26 – 40 years in the selected hospitals.

Accessible Population

In the present study, accessible population comprised of staff nurses between the age group of 26 – 40 years with shoulder pain in the selected hospitals in Kanyakumari district.

Sample

In this study, the sample consisted of staff nurses who were between the age group of 26 – 40 years in Kanyakumari district fulfilling the inclusion criteria.

Sample Size

In this study, the sample size was 60, out of which 30 samples were randomly assigned to experimental group and 30 to the control group.

Sampling Technique

In this study, purposive sampling technique was used to select the samples.

Criteria for Sample Selection —**Inclusion criteria**

Staff nurses who were —

- In the age group of 26 – 40 years.
- Willing to participate in the study.

- Experiencing mild and moderate level of shoulder pain.
- Available at the time of data collection.

Exclusion criteria

Staff nurses who were –

- Not willing to participate in the study.
- Unable to understand either Tamil or English.
- Experiencing severe level of shoulder pain.

Description of the Tools:

Section - A: Demographic variables:

This section deals with demographic variables such as age, education, marital status, BMI, associated disease, family type, dietary pattern, habit of doing exercise, duration of shoulder pain and work experience .

Section - B: Modified Oswestry shoulder pain scale:

It involves the scoring levels shoulder pain.

Interpretation:

1 – 16: Mild shoulder pain

17 – 32: Moderate shoulder pain

33 – 50: Severe shoulder pain

Reliability:

The reliability was done by the test-retest method. The reliability of the tool is with the score of 0.91. Hence, the tool was considered reliable for proceeding with the study.

Pilot Study:

The pilot study was conducted for 1 week in the selected hospitals. The samples were selected using purposive sampling technique. Based on inclusion criteria, 6 samples were selected, 3 samples for experimental group and 3 samples for the control group. McKenzie therapy was given for 20 minutes, twice a day, for 5 days, to staff nurses who had shoulder pain. The post-test level of shoulder pain was evaluated on the 5th day for both groups using modified Oswestry shoulder pain scale. Descriptive and inferential statistical methods were used for data analysis. The data collected were amenable to statistical analysis and thus the study was found to be feasible.

Data Collection Procedure:

Based on inclusion criteria, samples were selected by using purposive sampling technique. Pre-test was conducted for both groups by using modified Oswestry shoulder pain scale. Information about procedure was given to the samples of experimental group. McKenzie therapy was given for 20 minutes, twice a day, for 5 days. On the 5th day post-test was conducted on the same people in control group and experimental group for checking the effectiveness of McKenzie therapy by using modified Oswestry shoulder pain scale. All samples were cooperative during the time of data collection procedure.

The data was analysed and tabulated using descriptive and inferential statistics. The effectiveness of McKenzie therapy was assessed by frequency and percentage. Paired 't' test and chi-square test were used to find out the association of the level of shoulder pain with their selected demographic variables.

MAJOR FINDINGS OF THE STUDY

- The analysis of pre-test revealed that in experimental group, majority 16 (53.3%) had severe shoulder pain and 14 (46.7%) had moderate shoulder pain. In post-test, majority 17 (56.7%) had Moderate shoulder pain, 13 (43.3%) had normal pain and none of them had severe shoulder pain.
- The analysis of pre-test revealed that in the control group, majority 16 (53.3%) had moderate shoulder pain and 14 (46.7%) had severe shoulder pain. In post-test, majority 18 (60%) had Moderate shoulder pain and 12 (40%) had severe shoulder pain.
- The mean scores of the level of shoulder pain among staff nurses in experimental group were 29.03 in

pre-test and 18.5 in post-test, respectively. The paired 't' value for stress were 15.04 which is significant at $p < 0.05$. It shows that McKenzie therapy was effective in reducing the level of shoulder pain. Hence the research hypothesis (H_1) is accepted. In control group, the mean scores of the level of shoulder pain among staff nurses were 28.1 in pre-test and 27.7 in post-test, respectively. The estimated paired 't' value for stress was 0.85 which is non-significant at $p < 0.05$ level.

- The mean score on the level of shoulder pain among staff nurses in post-test study group was 18.46 and in the control group, the mean score was 27.73. The estimated unpaired 't' value was 8.26 which is significant at $p < 0.05$ level. It shows that the McKenzie Therapy was effective in reducing the level of shoulder pain.
- The data findings showed that there is no significant association between the pre-test level of shoulder pain and the selected demographic variables like age, education, marital status, BMI, associated disease, type of family, dietary pattern, habit of doing exercise, duration of shoulder pain and work experience.

CONCLUSION

The present study was to assess the effectiveness of McKenzie therapy on treating shoulder pain among staff nurses in the selected hospitals in Kanyakumari district of Tamil Nadu. Based on statistical findings, it is evident that in experimental group the mean values were 29.03 in pre-test and 18.5 in post-test, respectively. The paired 't' value for shoulder pain was 15.04 which is significant at $p < 0.05$. It shows that McKenzie therapy was effective in reducing the level of shoulder pain. Hence the research hypothesis (H_1) is accepted.

RECOMMENDATIONS

- A similar study can be conducted in a larger setting.
- A similar study can be conducted to assess the effectiveness of McKenzie therapy on neck pain among nurses.
- A similar study can be replicated for staff nurses.

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