



Assess The Effectiveness Of Mckenzie Back Exercise Among People With Back Pain At Selected Rural Community At Gorakhpur

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Abstract: The study aimed to assess the effectiveness of McKenzie back exercise among people with back pain in a selected rural community in Gorakhpur. A quantitative approach with a quasi-experimental non-randomized control group design was used. Sixty participants with back pain (30 in the experimental group, 30 in the control group) were selected using a non-probability convenient sampling technique. Data collection involved a demographic proforma and the Wong-Baker FACES Pain Rating Scale to assess pain levels before and after the intervention. The experimental group received McKenzie back exercises for 15 days, while the control group received routine care. Data was analyzed using descriptive and inferential statistics. Findings showed a significant reduction in back pain in the experimental group after the McKenzie exercise, with a mean post-test pain score of 3.20 (SD 1.86), compared to 7.13 (SD 2.21) pre-test. The control group's pain scores remained largely unchanged (mean pre-test 5.13, post-test 4.98). A significant association was also found between post-test pain levels and selected demographic variables. The study concludes that McKenzie back exercise is an effective intervention for reducing back pain and recommends its incorporation into healthcare practices.

Index Terms - Assess, Effectiveness, McKenzie back exercise, People, Back Pain, Rural community.

I. INTRODUCTION

Pain is a complex, unpleasant sensory and emotional experience often associated with tissue damage, acting as a protective mechanism. It is subjective and influenced by psychological interpretation and past experiences. Pain can result from irritation of pain receptors, damage to the nervous system, or even occur without tissue damage (psychogenic pain). The perception of pain is determined by stimulus strength, individual susceptibility, and resistance. Back pain can be localized or generalized, sometimes radiating to other body areas, and its intensity varies. Causes include mechanical or structural problems, inflammatory conditions, or unidentified factors. Risk factors for low back pain (LBP) include age (first attack typically 30-50), lack of physical fitness, overweight/obesity, genetic predisposition (e.g., ankylosing spondylitis), jobs requiring heavy lifting or prolonged sitting with poor posture, anxiety, mood, depression, and smoking. Back pain is categorized as acute (days to weeks, resolves with self-care) or chronic (12 weeks or longer).

PROBLEM STATEMENT

“A study to assess the effectiveness of McKenzie back exercise among people with back pain at a selected rural community at Gorakhpur.”

OBJECTIVES OF THE STUDY

1. To assess the pretest and post test score for back pain at a selected rural community at Gorakhpur.
2. To evaluate effectiveness of McKenzie back exercise among people with back pain at a selected rural community at Gorakhpur.
3. To find out the association between the post-test level of back pain among people with their selected demographic variables.

II. RESEARCH METHODOLOGY

Research approach: A quantitative research approach is adopted to to assess the effectiveness of McKenzie back exercise among people with back pain.

Research design: A Quasi Experimental Non- randomized pretest -posttest design.

Research setting: The setting selected is Siktaur village, Gorakhpur, UP based on feasibility, permission and availability of sample based on inclusion and exclusion criteria.

Population: The population consists of people with back pain those living in Siktaur village, Gorakhpur.

Sample Size: In this study, the sample size consists of 60 people with back pain in Siktaur village in which Experimental group consists of 30 subjects and Control group consist of 30 subjects.

Sampling technique: In the present study Purposive sampling technique.

CRITERIA FOR SELECTION OF SAMPLE:

Inclusion criteria:

- People those who are suffering from lower back pain.
- Willing to participate in research study.
- Available at the time of data collection.
- Able to communicate in Hindi, English and Bhojpuri.

Exclusion criteria:

- Not cooperative
- Not willing to participate in research study.
- Not present at the time of data collection.
- Already exposed to knowledge and practice regarding exercise.
- People having severe back injury and any other medical illness.
- People who are having consumption of analgesic medication.
- People having surgery or undergone surgery.

III. TOOLS AND TECHNIQUES

Section A: It comprises of demographic variables including items related to age, gender, education, occupation, religion, type of family, duration of pain, previous knowledge regarding McKenzie back exercise, past history of illness and consumption of analgesic medication.

Section B: The tool used to identify the level of pain is Wong-Baker FACES Pain Rating Scale. It is a tool that uses a combination of faces, numbers, and words to help a person effectively communicate the severity of their physical pain.

The phrase relating to each numerical value is as follows:

1. Mild: 0-3
2. Moderate: 4-6
3. Severe: 7-10

Section C: It involves checklist for McKenzie back exercise. A checklist is an assessment tool that lists the specific criteria for the skills, behaviours, or attitudes that participants should demonstrate to show successful learning from training.

1. Poor: 0-26
2. Average: 27-53
3. Good: 54-80

CONTENT VALIDITY: A total 5 experts consisting of 4 experts from various department of nursing and 1 Physiotherapist have validated tool.

RELIABILITY: Reliability of Wong-Baker FACES Pain Rating Scale was done by the ‘Karl Pearson’ correlation co-efficient formula represented by “r”. The calculated value for “r” is 0.629

DATA COLLECTION:

After obtaining formal ethical clearance from the Gram Pradhan of Siktaur village, Gorakhpur, Uttar Pradesh. The data collection procedure was conducted. 60 sample of people were selected using purposive sampling technique. Then the level of pain during pre test and post test was assessed using Wong-Baker FACES Pain Rating Scale.

DATA ANALYSIS:

The collected data analysed in terms of objectives of the study using descriptive and inferential statistics. The descriptive statistics involves analysis of demographic data done by frequency and percentage. The inferential statistics involves percentage, mean, standard deviation, “t” test to determine the association between the post-test level of back pain with the selected demographical variables and to find the effectiveness of McKenzie back exercise.

IV. RESULTS AND DISCUSSION

SECTION I: Findings Related to Demographic Data:

- Among 60 sample 31.66 % of the sample were in the age group of 19-35 years, 30 % of the sample were in the age group of 36-60 years, 23.34 % of the sample were in the age group of 61 years and above and 15 % of the sample were in the age group of 12-18 years.
- Among 60 sample 60 % of the sample were female, 40 % of the sample were male.
- Among 60 sample 43.33 % of the sample were having primary education, 35 % of the sample were uneducated and 21.67 % of the sample were having secondary education.
- Among 60 sample 53.34 % of the sample were unemployed, 30 % of the sample were having private job and 16.66 % of the sample were self-employed.
- Among 60 sample 90% of the sample were Hindu and 10% of the sample were Muslim.
- Among 60 sample 48.33 % of the sample were having nuclear family, 43.33 % of the sample were having single family and 8.34 % of the sample were having joint family.
- Among 60 sample 46.66 % of the sample were having pain duration between 1-4 weeks, 36.66 % of the sample were having pain duration between 5-6 weeks, 13.34 % of the sample were having pain duration more than 9 weeks and 3.33 % of the sample were having pain duration less than 1 week.
- Among 60 sample 100% of the sample had no previous knowledge regarding McKenzie back exercise.
- Among 60 sample 55 % of the sample were having no past history of illness and 45 % of the sample were having past history of illness.
- Among 60 sample 80 % of the sample were having no consumption of analgesic medication and 20 % of the sample were having consumption of analgesic medication.

SECTION II: Findings Related To Level of Back Pain.**PRE-TEST LEVEL OF BACK PAIN IN EXPERIMENTAL GROUP**

Among 30 samples, 6.66% were having mild pain, 36.66% were having moderate pain, 56.67% were having severe pain, and the mean value level of back pain is 7.13 with standard deviation 2.21 during pre-test.

POST-TEST LEVEL OF BACK PAIN IN EXPERIMENTAL GROUP

Among 30 samples, 53.33% were having mild pain, 43.33% were having moderate pain, 3.34% were having severe pain, and the mean value level of back pain is 3.20 with standard deviation 1.86 during post-test.

PRE-TEST LEVEL OF BACK PAIN IN CONTROL GROUP

Among 30 samples, 20% were having mild pain, 50% were having moderate pain, 30% were having severe pain, and the mean value level of back pain is 5.13 with standard deviation 2.65 during pre-test.

POST-TEST LEVEL OF BACK PAIN IN CONTROL GROUP

Among 30 samples, 23.33% were having mild pain, 53.33% were having moderate pain, 23.34% were having severe pain, and the mean value level of back pain is 4.98 with standard deviation 2.39 during post-test.

Section III: Effectiveness Of Mckenzie Back Exercise On Back Pain.

Paired “t” test was used to find out the effectiveness of McKenzie back exercise on back pain.

-EXPERIMENTAL GROUP-The calculated “t” value for experimental group is 12.10, at 0.05 level of significance table “t” value is 2.045 and inference is significant.

-CONTROL GROUP- The calculated “t” value for control group is 3.08, at 0.05 level of significance table “t” value is 2.045 and inference is significant.

Effectiveness Of Mckenzie Back Exercise On Back Pain:**N=60**

S. NO	GROUP	PAIN CATEGORY	PRE-TEST			POST-TEST			MEAN DIFFERENCE	CALCUATED “T” VALUE	INFERENCE
			FREQUENCY	MEAN	S.D	FREQUENCY	MEAN	S. D			
1.	EXPERIMENTAL GROUP	MILD (0-3)	2	7.13	2.21	16	3.20	1.86	3.9	12.10	S
		MODERATE (4-6)	11			13					

		SEVERE (7-10)	17			1					
2.	CONTROL GROUP	MILD (0-3)	6	5.13	2.65	7	4.98	2.39	0.26	3.08	S
		Moderate (4-6)	15			16					
		SEVERE (7-10)	9			7					

V. CONCLUSION: The present study was aimed to assess the effectiveness of McKenzie back exercise among people with back pain at selected rural community at Gorakhpur. It was concluded that in pre-test 55% of sample having inadequate knowledge, 45% of sample having moderately adequate knowledge and no one sample having adequate knowledge. In post-test 60% of sample having adequate knowledge, 40% of sample having moderately adequate knowledge and no one having inadequate knowledge.

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