EFFECTIVENESS OF ISOMETRIC EXERCISES ON NECK PAIN AMONG COMPUTER PROFESSIONALS

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ABSTRACT

Neck pain is a very common problem in young professionals having a computer job. They sit for almost 7 – 9 hours every day in front of computer screen in bad posture, straining the neck. The number reason for neck pain in this age is sitting in front of the computer or laptop in awkward position.

An isometric exercise is a form of exercise involving the static contraction of a muscle without any visible movement in the angle of the joint. During isometric exercises the muscle doesn't noticeable change length and the effected joint doesn't move. Isometric exercises help maintain strength. They can build strength but not effectively.

A study was undertaken to evaluate the Effectiveness Of Isometric Exercises On Neck Pain Among Computer Professionals at selected companies, Hyderabad, Telangana in partial fulfilment of the requirement for the degree of Master of Science in Nursing at Princess Durru Shehvar College of Nursing.

METHODOLOGY

The methodology of research is how data is gathered in order to answer the question or analyze the research problem, which enables the research person to form a blue print for the study undertaken.

This chapter includes research approach, research design, description of variable, setting of the study, population, sample, sampling technique, sample criteria, method of data collection, development and description of the tool for data collection, pilot study and plan for data analysis and interpretation.

The study was designed to elicit the "Effectiveness Of Isometric Exercises On Neck Pain Among Computer Professionals At Selected Companies, Hyderabad, Telangana.

Research Approach :

According to Polit (2010) the research approach is the broad based procedure of studying the selected problem drawing conclusions. The research approach refers to general set of orderly disciplined procedure used to acquire dependable and useful information. The selection of research approach is a basic procedure for conducting a study.

In this study the investigator adopted the Quantitative Approach, since the investigator aims to evaluate the "Effectiveness Of Isometric Exercises On Neck Pain Among Computer Professionals At Selected Companies, Hyderabad, Telangana.
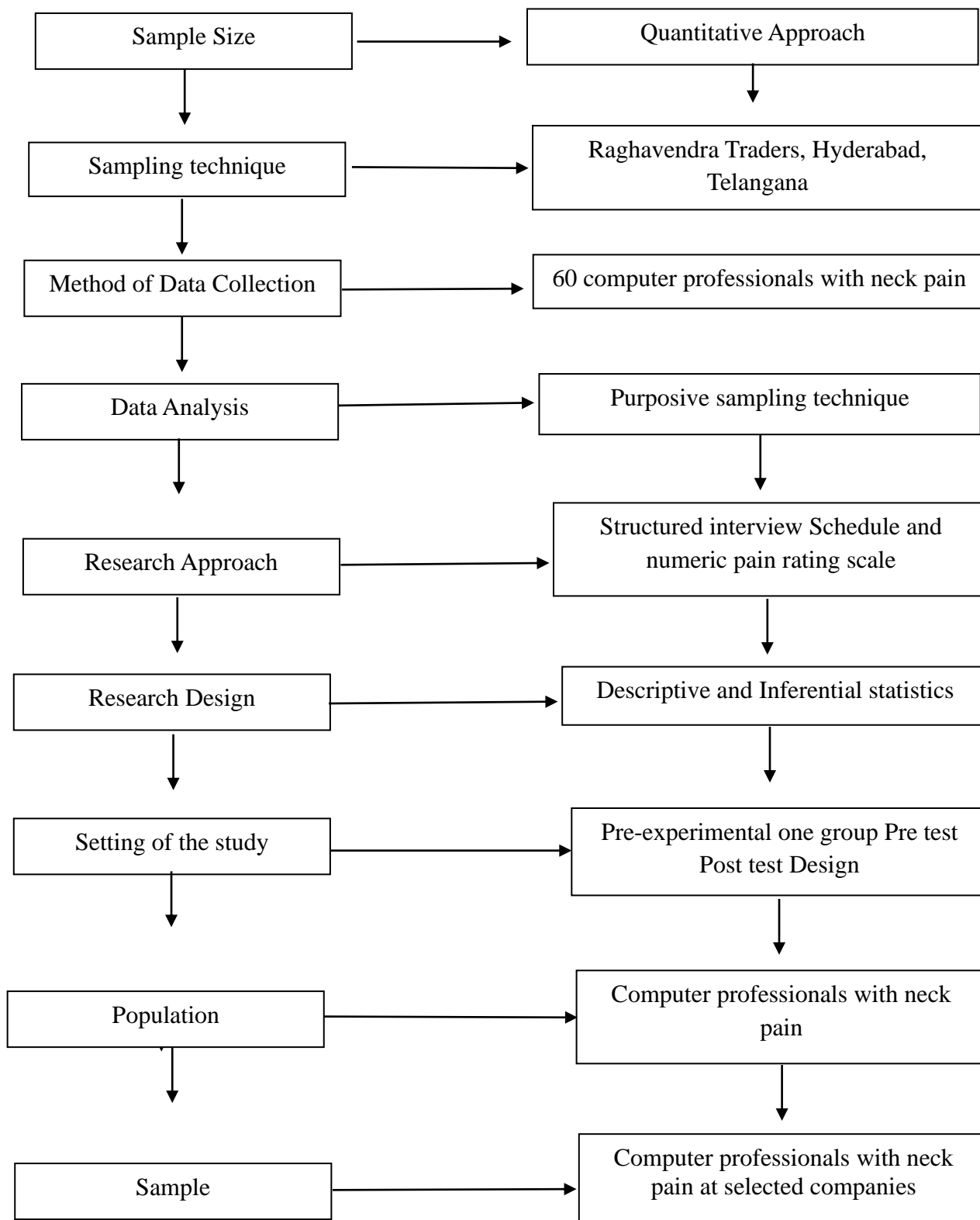
Table – 2 Research design of the study

Group	Pre test	Intervention	Post test
Experimental	O_1	X	O_2

KEY :

O_1 - Assessment of pre interventional level of neck pain by using numeric pain rating scale

X - Isometric exercises

O_2 - Assessment of post interventional level of neck pain by using numeric pain rating scale

Sample Size →	Quantitative Approach
Sampling technique →	Raghavendra Traders, Hyderabad, Telangana
Method of Data Collection →	60 computer professionals with neck pain
Data Analysis →	Purposive sampling technique
Research Approach →	Structured interview Schedule and numeric pain rating scale
Research Design →	Descriptive and Inferential statistics
Setting of the study →	Pre-experimental one group Pre test Post test Design
Population →	Computer professionals with neck pain
Sample →	Computer professionals with neck pain at selected companies

Description of Variables :
The identified independent variable, dependent variable and attribute variable are as follows

Independent variable :
The identified independent variable is isometric exercises.

Dependent variable :
The Identified dependent variable is Neck pain among computer professionals.

Attribute variables :
In the present study the investigator has identified the attribute variable which influence the neck pain are Age, gender, educational status, religion, family history of neck pain, food habits, habits, duration of neck pain, working hours and mode of transport.

Setting of the study :
Setting refers to the physical locations and conditions in which data collection takes place. The setting for the present study was in Raghavendra Traders, Hyderabad, Telangana.

Population :
Polit and Hungler [2008], specify the population is the entire set of individuals or objects having some common characteristics. Population for the present study was computer professionals with neck pain.

Sample :
A part or subset of population selected to participate in research study the sample for the present study are computer professionals with neck pain at Raghavendra traders, Hyderabad, Telangana.

Sample Size: Sample size is the number of subjects required to test research hypothesis adequately. 60 computer professionals with neck pain were selected.

Sampling Technique :
Sampling technique refers to the process of selection of the portion of the population to represent the entire population. The sampling technique adopted for the present study was purposive sampling technique. The advantage is that the researcher can purposively select the sample at convenience.

Criteria for sample selection:
Inclusion criteria:
- With the history of neck pain.
- Computer professionals who were willing to participate in the study.
- Able to read and understand Telugu and English.

Exclusion criteria:
- Who were under medical treatment for neck pain.
- Who were sick to participate.

Method of the Data Collection:
Method of data collection is a method of gathering information form respondents in a standardized fashion.

In the present study the investigator collects the data regarding demographic variables by structured interview schedule and level of pain was assessed by numeric pain rating scale assessment of effectiveness of isometric exercises among computer professionals will be done.

Description of Tool:
The tool was developed with the help of extensive review of literature from various text books and

journals and discussions with experts in the field of Nursing Research. The investigator prepared numeric pain rating scale to identify the level of neck pain among computer professionals.

The tool has 2 sections:
Section A:
Deals with the demographic data of the clients such as Age, gender, educational status, religion, family history of neck pain, food habits, habits, duration of neck pain, working hours and mode of tranport.

Section B:
Numeric pain rating scale was used to assess level of neck pain before and after intervention. This tool will be used to assess the level of pain among clients who are practicing isometric exercises and will be scored as No pain – 0, Mild pain – 1-3, Moderate pain – 4-7, Severe pain – 8-10.

Validity of tool :
Validity is a quality criteria referring to the degree to which inferences made in a study are accurate and well founded, in measurement what it is intended to measure. The tool was given to experts in the field of Nursing research to determine is validity. Their valuable suggestions were incorporated and necessary modifications were made accordingly.

Reliability of tool:
The reliability of the tool was tested by test and retest method. The correlation coefficient (r) was calculated by using Karl Pearson coefficient of correlation formula. The "r" value obtained was 0.09. It showed that the tool was reliable and practicable.

Pilot study:
Pilot study is the small scale version or trial run of the major study. Its function is to obtain information of improving the project or for assessing feasibility. The principle focus is the assessment of adequacy of measurement.
Pilot study was conducted at Ushodaya Enterprises Pvt. Ltd, Hyderabad among 6 Computer professionals with neck pain on 24-2-2020 to 29-2-2020.

Procedure for data collection :
According to **polit and hungler (2002)** data collection is the gathering of information needed to address a research problem. Pre test was conducted by using structured questionnaire and numeric pain rating scale. Then Investigator demonstrated isometric exercises to the participants and post interventional level of pain scores was assessed by numeric pain rating scale.

Plan for Data Analysis :
It is planned to analyze and interpret the data with the help of descriptive and inferential statistics i. e, mean, standard deviation, standard error, paired 't' test and chi square test.
The analysis and interpretation of the data was planned as follows
Part I : Description of sample characteristics according to demographic variable of computer professionals.
Part II : Distribution and comparison of pre and post interventional level of pain scores.
Part III : Deals with identifying the association between post interventional level of pain scores among computer professionals with selected demographic variables.

Epilogue :
This chapter dealt with research approach, research design, description of variables, setting, population, sample, sampling technique, criteria for sample selection, method of data collection, development and description of tool, validity, pilot study, reliability, procedure of data collection and plan for data analysis.