



Effectiveness of Structured Teaching Programme on Causes and Prevention of Cervical Spondylosis among Sedentary Workers in Selected Offices, Mahabubnagar, Telangana.

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Chapter 1 INTRODUCTION

Prolonged periods of sitting or other sedentary activity is not good for health and may cause muscle fatigue since the back and abdominal muscles have to work really hard to maintain the body in a single position for prolonged periods. Bones provide protection for vital organs. Skeleton provides a study frame work to support body structures.

Cervical spondylosis is an important public health problem in all industrialized nations. It is associated with major costs, in terms of health resource usage and worker disability and absenteeism and is one of the most common causes of sick leave. Men and women are both prone to work-related neck pain because of their sedentary life style and the first episode usually occurs between the ages of 25 to 45.

Chapter 2 NEED FOR STUDY:

Cervical spondylosis is a degenerative condition of the cervical spine in the general population with incidence rate of 83 per 100000 populations and prevalence of 3.3 cases per 1000 people and occurs mostly in fourth and fifth decades of life. The etiology of cervical spondylosis is associated with the ageing process of life. In a report on radiographic evidence prevalence in male was 13% in 3rd decade and increases to 100% by the age of 70years. But in female it ranges from 5% in 4th decade to 96% by the age of 70years . With change in lifestyle, increased desk work and increased usage of computer incidence of cervical spondylosis is increasing.

Cervical disease is a middle age, worldwide common frequently occurring disease. The Internationally incidence of cervical spondylosis is 2.5 cases per 1000 population and door to door study conducted in India shows an incidence of 3.5 cases per 1000 population. In Andhra pradesh incidence of cervical spondylosis is 7.25 cases per 1000 population .hyderabad prevalence of cervical spondylosis is 23.25 per 10000 population.

Objectives of the study:

- To assess the existing knowledge regarding causes and prevention of cervical spondylosis among sedentary workers.
- To evaluate the effectiveness of structured teaching programme on causes and prevention of cervical spondylosis.
- To findout the association between pre and post knowledge scores on causes and prevention of cervical spondylosis among sedentary workers with selected demographic variables.

Hypothesis

H₁: There will be significant difference between the pre test and post test knowledge scores among sedentary workers regarding causes and prevention of cervical spondylosis.

- **H₂:** There will be significant association between the pre test and post test knowledge scores among sedentary workers regarding causes and prevention of cervical spondylosis with selected demographic variables.

Assumptions

- Sedentary workers possess some knowledge regarding cervical spondylosis.

- Structured teaching programme on cervical spondylosis improves sedentary workers knowledge.

Delimitations

- Study is delimited to the 60 sedentary workers who are working in offices.
- Study is delimited to sedentary workers who are available or willing to participate in the study

Modified change theory (Tran theoretical model):

Conceptual framework;

The present study aimed to evaluate the effectiveness of structured teaching programme on causes and prevention of cervical spondylosis. The framework for the study is based on Tran theoretical model by Prochaska Di Clement et al published in 1992.

The Tran theoretical Model of Behaviour Change assesses an individual's readiness to act on a new healthier behavior, and provides strategies, or processes of change to guide the individual through the stages of change to Action and Maintenance.

Chapter 3 REVIEW OF LITERATURE

Review of literature of the present study is arranged under the following headings:

- **Studies related to Prevalence of cervical spondylosis**
- **Studies related to Causes of cervical spondylosis**
- **Studies related to Symptoms of cervical spondylosis**
- **Studies related to Knowledge of cervical spondylosis among sedentary workers**
- **Studies related to Prevention of cervical spondylosis**
- **Studies related to Structured teaching programme on cervical spondylosis**

Methodology; Research approach evaluative research was considered as an appropriate research approach for the present study.

Research design

The quasi experimental design for the study is depicted in the figure: followed by a study design in figure:

Group	Pre test	Intervention	Post test
Experimental Group	0 ₁	X	0 ₂
Control group	0 ₃	-	0 ₄

Figure 2: Schematic representation of research design

0₁ – Pre test knowledge score in experimental group

0₂ – Post test knowledge score in experimental group

X – Structured teaching programme

0₃ -Pre test knowledge score in control group

0₄ – Post test knowledge score in control group

Variables under study

which include age, gender, education, occupation, type of occupation, designation, duration of work, history of any medical illness, information regarding cervical spondylosis

Sample and sampling technique

purposive sampling method under non-probability sampling method.

Chapter 4 ANALYSIS AND INTERPRETATION

This deals with analysis and interpretation of the data collected for the main study. Data was collected from 60 sedentary workers. Analysis and interpretation was done with the help of descriptive and inferential statistics to meet the objectives of the study

Data was presented in following headings.

Part-I: Frequency and percentage distribution of sedentary workers according to demographic data.

Part-II: Frequency and percentage of sedentary workers according to the level of knowledge scores in pre test and post test on causes and prevention of cervical spondylosis.

Part -III: Paired t test of significance for knowledge of sedentary workers on causes and prevention of cervical spondylosis comparing pre test and post test knowledge scores.

Part-IV: Association between knowledge of sedentary workers on causes and prevention of cervical spondylosis.

frequency and percentage distribution of sedentary workers according to type of occupation, designation and duration of work in experimental and control group (n=30)

Characteristics	Experimental group		Control group	
	Frequency	%	Frequency	%
Type of occupation				
Standing work	0	0	0	0
Sitting work	30	100	30	100
Moving around	0	0	0	0
Designation				
Managers	0	0	7	23.3
Computer operators	10	33.3	8	26.7
Field officers	0	0	5	16.7
Administrative officers	20	66.7	10	33.3
Duration of work				
6-8 hours	4	13.3	0	0
8-10 hours	26	86.7	30	100
10-12 hours	0	0	0	0
More than 12 hours	0	0	0	0

According to designation in experimental group out of 30 subjects , majority of 20(66.7%) were administrative officers , 10(33.3%) were computer operators, managers and field officers were found nil. According to duration of work in experimental group majority of 26(86.7%) were 8 – 10 hrs, 4(13.3%) were 6-8 hrs , 10-12 hrs and more than 12 hrs were found nil.

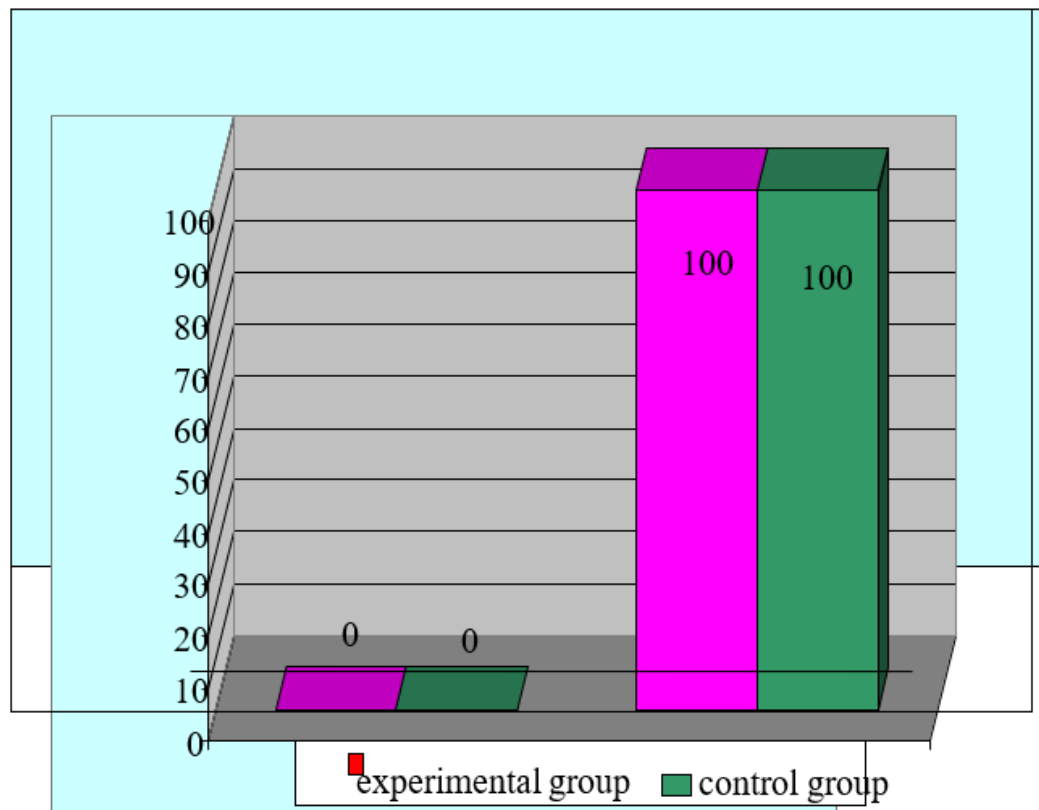


Fig:3.4 Percentage distribution of sedentary workers according to type of occupation in experimental and control group

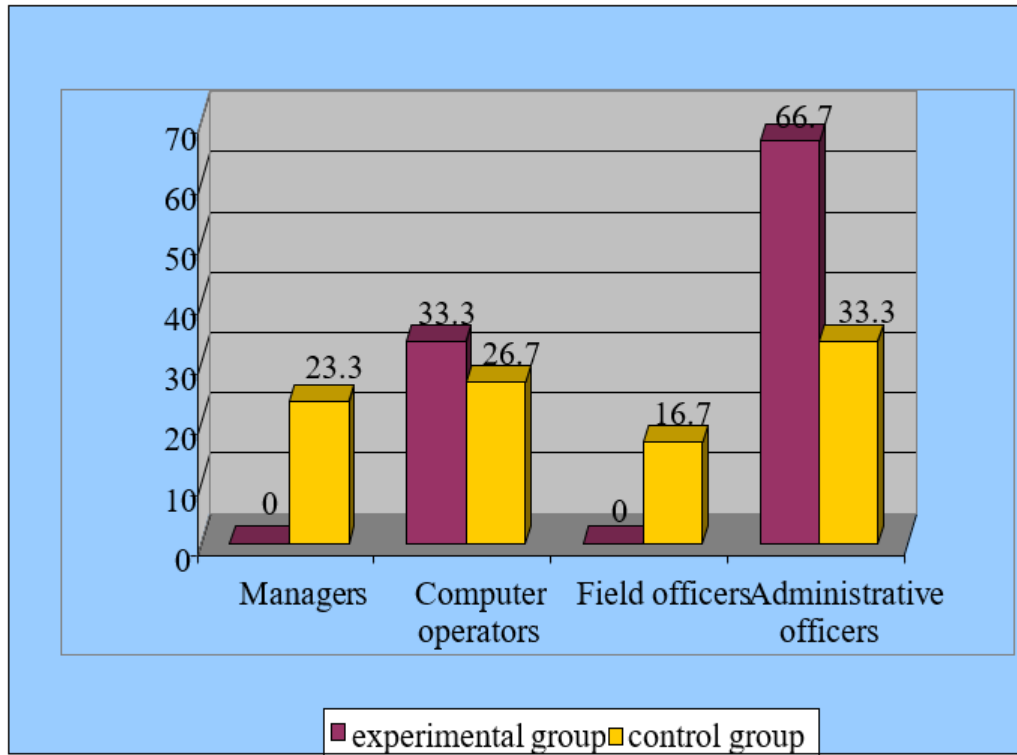


Fig: 3.5 Percentage distribution of sedentary workers according to designation in experimental group and control group

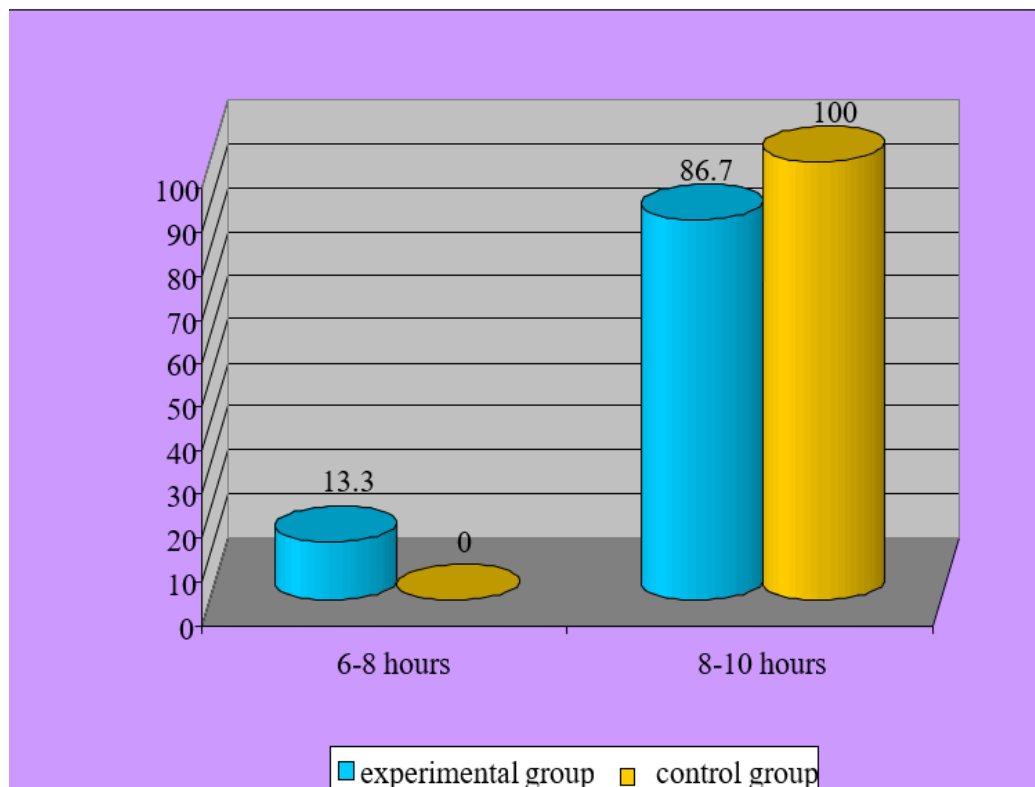


Fig:3.6 Percentage distribution of sedentary workers according to duration of work in experimental and control group

**Frequency and percentage of sedentary workers according to level of knowledge in pre test and post Test on causes and prevention of cervical spondylosis in experimental group and control group
n=30**

Categorization	Experimental group				Control group			
	Pre test		Post test		Pre test		Post test	
	Fre.	%	Fre.	%	Fre.	%	Fre.	%
Below average	10	33.3	0	0	18	60	10	33.3
Average	20	66.7	2	6.7	12	40	15	50
Above average	0	0	28	93.3	0	0	5	16.7

The above table shows that frequency and percentage based on knowledge scores of the sedentary workers regarding causes and prevention of cervical spondylosis. Below average (0-50%) indicates the scores in between 0 to 20, Average (51% -75%) indicates the scores in between 21 to 30 and Above average (76% -100%) indicates the scores in between 31 to 40.

In experimental group, 10 (33.3%) were under below average knowledge level in pretest where as in post test 0% were under below average, 20 (66.7%) were under average knowledge level in pretest whereas in post test 2(6.7%) average knowledge level, 0% were under above average knowledge level in pretest, where as 28 (93.3%) were under above average knowledge level in post test. These differences indicated that structured teaching programme was highly affected on sedentary workers.

In control group, 18(60%) were under below average knowledge level in pretest where as in post test 10(33%) were under below average, 12(40%) were under average knowledge level in pretest, where as in post test 15(50%) were under below average, 0% were under above average knowledge level in pretest where as in posttest 5(16.7%)

According to pretest knowledge comparison between experimental and control group, 10(33.3%) were under below average knowledge level in experimental group but 18(60%) were under below average knowledge level in control group. 20 (66.7%) were under average knowledge level in experimental group but 12 (40%) were under average knowledge level in control group. Above average knowledge level in experimental and control were found nil.

In regards to posttest knowledge comparison between experimental and control group, below average level in experimental group were found nil, but 10(33.3%) were under below average knowledge level in control group. 2 (6.7%) were under average knowledge level in experimental group but 15 (50%) were under average knowledge level in control group. 0% were under above knowledge level in experimental group but 5(16.7%) were under above average knowledge level in control group.

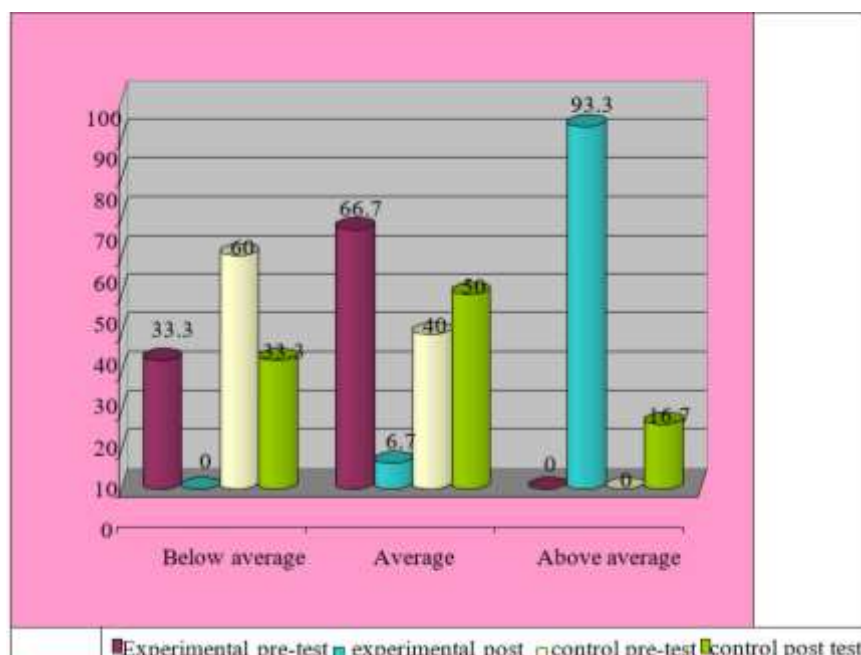


Fig : 3.9 percentage distribution of level of knowledge of sedentary workers in pre test and post test in experimental and control group.

pre test and post test mean knowledge scores and paired t-test of significance on causes and prevention of cervical spondylosis

n=30

Categorization	Experimental group		Control group	
	Pre test	Post test	Pre test	Post test
Mean	18.16	39.1	17.63	30.23
Standard Deviation	3.24	2.86	4.27	5.50
Standard Error	2.71	2.05	1.02	0.32
Paired t-test		6.4		1.42

29DF

Table t-value 2.75

p<0.01

The above table shows that the pretest mean was 18.16 and posttest mean was 39.1. Standard deviation of pretest was 3.24 and posttest standard deviation was 2.86.

The calculated value of 't' (6.4) is greater than the tabulated value of 't' (2.75) at 1% level of significance with 29 df, by means that researcher can conclude that there is significance difference between the knowledge scores of pre and posttest.

Hence it is concluded that after structured teaching programme on cervical spondylosis among sedentary workers, the knowledge scores of the sedentary workers have been increased. This positive result is a clear indication that effectiveness of structured teaching programme on cervical spondylosis among sedentary workers.

The formulated research hypothesis (H_1) for the present study "There will be significant difference between pre-test and post-test knowledge scores of sedentary workers regarding cervical spondylosis" has been accepted.

The above table shows that in control group the pre test mean was 17.63 and post test mean was 30.23. Standard deviation of pre test was 4.27 and post test standard deviation was 5.50..

The calculated value of 't' (1.42) is less than the tabulated value of 't' (2.75) at 1% level of significance with 29 df, by means that researcher can conclude that there is no significant difference between the knowledge scores of pre and post test. Because there is slight improvement in post test mean knowledge scores which is not significant.

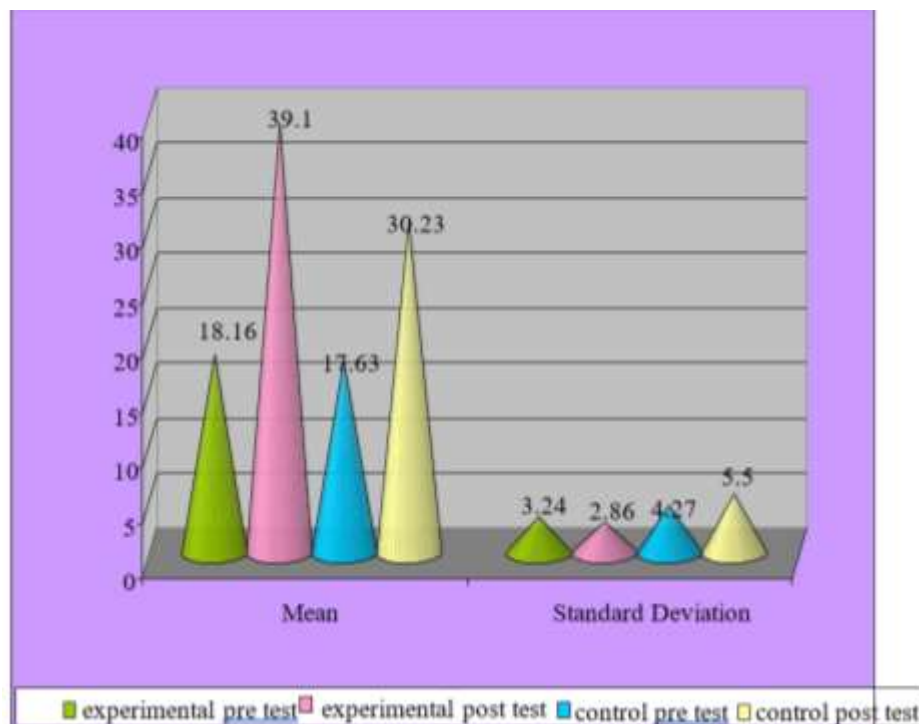


Fig: 4 Mean and standard deviation of knowledge of sedentary workers in pre test and post test in experimental and control group

Association between knowledge of sedentary workers on causes and prevention of cervical spondylosis in pre test according to age, sex, education, occupation and type of occupation

n=30

		Pre test Level of knowledge							Chi-square	P Value	sig
		Below average		Average		Above average		Total			
		Fre.	%	Fre.	%	Fre.	%	Fre.			
Age in years	25-30	2	6.7	2	6.7	-	-	4	4.09	0.05	ns
	30-35	3	10	7	23.3	-	-	10			
	35-40	4	13.3	9	30	-	-	13			
	40-45	1	3.3	2	6.7	-	-	3			
	Total	10	33.3	20	66.7	0	0	30			
Sex	Male	6	20	7	23.4	-	-	13	5.80	0.05	**
	Female	4	13.3	13	44.3	-	-	17			
	Total	10	33.3	20	66.7	0	0	30			
Education	Degree	9	30	18	60	-	-	27	4.81	0.05	**
	PG	1	3.3	2	6.7	0	0	3			
	Total	10	33.3	20	66.7	0	0	30			
Occupation	Government	-	-	-	-	-	-	-	-	--	-
	Private	10	33.3	20	66.7	0	0	30			
	Total	10	33.3	20	66.7	0	0	30			
Type of occupation	Standing	-	-	-	-	-	-	-	-	-	-
	Sitting	10	33.3	20	66.7	0	0	30			
	Total	10	33.3	20	66.7	0	0	30			

** - significant ns- not significant

The above tables shows that there was significant association between the sex and education of the sedentary workers with pre test knowledge on causes and prevention of cervical spondylosis since the obtained chi square value (5.80 and 4.81) was more than table value(3.84) at 1df and 0.05 level of significance. There was no significant association between pre test knowledge with age where the obtained chi square value (4.80) was less than the table value (9.49) at 4df and 0.05 level of significance.

Association between knowledge of sedentary workers on causes and prevention of cervical spondylosis in pre test according to designation, duration of work, history of medical illness and source of information

N=30

		Pre test Level of knowledge							Chi-square	P Value	sig
		Below average		Average		Above average		Total			
		Fre.	%	Fre.	%	Fre.	%	Fre.			
Designation	Computer operators	4	13.3	6	20	-	-	10	2.89	0.05	ns
	Administrative officers	6	20	14	46.7	-	-	20			
	Total	10	33.3	20	66.7	0	0	30			
Duration of work	6-8 hours	3	10	1	3.3	-	-	4	3.98	0.05	**
	8-10 hours	7	23.3	19	63.4	0	0	26			
	Total	10	33.3	20	66.7	0	0	30			
History of medical illness	Hypertension	1	3.3	2	6.7	-	-	3	1.75	0.05	ns
	Convulsions	-	-	1	3.3	----	-	1			
	Obesity	3	10	6	20	-	-	9			
	Arthritis	4	13.3	6	20	-	-	10			
	Others	2	6.7	5	16.7	-	-	7			

Source of information	Total	10	33.3	20	66.7	0	0	30	2.13	0.05	ns
	Mass media	2	6.7	2	6.7	-	-	4			
	Health team members	8	26.6	18	60	-	-	26			
	Total	10	33.3	20	66.7	0	0	30			

** - significant

ns- not significant

The above tables shows that there was significant association between the duration of work of the sedentary workers with pre test knowledge on causes and prevention of cervical spondylosis since the obtained chi square value (3.89) was more than table value(3.84) at 1df and 0.05 level of significance. There was no significant association between pre test knowledge with designation, history of medical illness and source of information where the obtained chi square value (2.89, 1.75 and 2.13) was less than the table value (3.84, 9.49 and 3.84) at 1df, 4df and 1df at 0.05 level of significance respectively.

analysis and interpretation of the data collected from 60 sedentary workers with the help of descriptive and inferential statistics . frequency and percentage distribution of cause and prevention of cervical spondylosis among sedentary workers. Comparison of pre test and post test knowledge scores for effectiveness of structured teaching programme regarding causes and prevention of cervical spondylosis among sedentary workers. Association between the leve of knowledge regarding causes and prevention of cervical spondylosis among sedentary workers with their selected demographic variable

Chapter 5 DISCUSSION

The study findings have been discussed in terms of objectives stated and other research findings.

The first objective to assess the existing knowledge regarding causes and prevention of cervical spondylosis among sedentary workers.

In experimental group out of 30 subjects in pre test 20(66.7 %) have average level of knowledge and 10(33.3%) have below average level of knowledge and post test majority of workers knowledge improved to above average level of knowledge 28(93.3%)

The second objective is to evaluate the effectiveness of structured teaching programme on causes and prevention of cervical spondylosis. Planned, developed, implemented and administered structured teaching programme in view of improving knowledge of sedentary workers regarding cervical spondylosis.

The third objective is to find out the association between pre and post knowledge scores on causes and prevention of cervical spondylosis among sedentary workers with selected demographic variables

Chi square value was computed to determine the association between the pre test and post test knowledge score with selected demographic variables of sedentary workers. Significant association was found between the pre test knowledge score in sex, education and duration of work and significant association between was not found in age, designation, history of medical illness and source of information . Significant association was found between the post test knowledge score in education ,designation,duration of work and source of information and there is no significant association between the post test knowledge scores in age,sex and history of medical illness. Hence H_2 was rejected

Major findings of the study;

The following conclusion was drawn from the findings of the present study. In experimental group out of 30 subjects in pre test 20(66.7 %) have average level of knowledge and 10(33.3%) have below average level of knowledge and post test majority of workers knowledge improved to above average level of knowledge 28(93.3%) and none of them have below level of knowledge. Hence H_1 was accepted.

Implications

Nursing EducationNurses are in a unique position to provide interventions to improve the knowledge of sedentary workers. As the health care providers the sedentary workers should be trained and therefore equipped with current and accurate information.

Nursing practice The nurses must possess highly specialized skills and necessary knowledge essential for professional nursing practice. Nurses have to follow the instructions while taking care of the clients.

Nursing AdministrationNurse administrator ensures professional practice and research based practice, which is clinically effective. Nurse Administrator can organize the staff development programme for nurses to update their knowledge on causes and prevention of cervical spondylosis.

Nursing ResearchNurse researchers should further conduct studies on effectiveness of sedentary workers led on care regarding cervical spondylosis in offices, hospital, and various levels

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