Original Research Paper

Nursing

A STUDY TO ASSESS THE EFFECT OF TEACHING ACHARYA TECHNIQUE ON KNOWLEDGE AND PRACTICE OF SEDENTARY WORKERS REGARDING PREVENTION OF BACKPAIN IN SELECTED INSTITUTES OF SURAT.

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ABSTRACT **Background Of The Study:** Looking at today's lifestyle, the job situations and behaviors pertaining to one own's health there is a decline in level of physical activity, making it a sedentary lifestyle. A sedentary lifestyle and lack of physical activity can contribute to or be a risk factor for backache. Back pain is a very common complaint nowadays. The Acharya Technique is simple, natural movements and cannot harm or worsen any one's health, easy to implement and an acceptable stretching exercise to tackle back pain

Objectives of the study were to assess the knowledge regarding prevention of backpain among the sedentary workers before and after teaching Acharya technique, assess the performance of after teaching Acharya technique, compare the pretest and post-test scores of knowledge and practice of sedentary workers, correlate the posttest knowledge and mean practice score regarding prevention of backpain among the sedentary workers after teaching Acharya technique, associate knowledge and practice on the effect of teaching Acharya Technique for prevention of back pain with selected sociodemographic variables.

Research Methodology A quantitative research approach with a pre-experimental design with time series observation was used and population were the sedentary workers working at selected institutes of Surat sample size was of 60 sedentary workers. Tool used was structured knowledge questionnaire, teaching plan and observational checklist.

Result of the study On comparing the mean pertest and posttest knowledge score of subjects the t value computed was 23.624 which was significantly high at p=0.05 level of significance, thus it proved teaching program was effective in delivering knowledge. The mean practice scores increased from observation 1(20.45) to observation 3(23.63). A moderately positive correlation was found with posttest knowledge and the mean performance score. Age, gender, occupation, educational qualification and BMI were having significant association at p= 0.05 level significance with posttest knowledge score. There was no significant association of age, gender, number of working hours a day and BMI with the mean practice scores. Type of family was found to be significantly associated with the mean practice score.

Conclusion: From the study results it was concluded that the teaching program on Acharya Technique for prevention of backpain was effective in increasing the knowledge and improving the practices. This exercise can be practiced in day to day life to avoid back pain and "can feel fresh like a flower."

KEYWORDS : Backpain, Acharya Technique for Prevention of Backpain, knowledge, Practice, Sedentary Workers

INTRODUCTION
Background Of The Study
"Pain is inevitable, but suffering is optional." – Haruki Murakami.

Comfort or being comfortable is a sense of physical or psychological ease and often characterized by a lack of hardship. Persons who are lacking in comfort are uncomfortable or experiencing discomfort. It may be accompanied with pain. A degree of psychological comfort can be achieved by recreating experiences that are associated with pleasant memories, such as engaging in familiar activities, maintaining the presence of familiar objects and consumption of comfort foods. Whereas the physical comfort is a particular concern in health care, as providing comfort (painless) to the sick and injured is one goal of health care and can facilitate recovery. Persons who are surrounded with things that provide physiological comfort may be described as being "in their comfort zone" i.e. carrying out physical activities without any pain.[1]

Pain is unpleasant sensory, emotional and subjective experience which may be a result of actual or potential damage of the tissue. The episode of backpain may be acute, sub-acute or chronic and can be characterized as a dull ache, shooting or burning sensation. The Acharya Technique is simple, natural movements and cannot harm or worsen any one's health, easy to implement and an acceptable stretching exercise to tackle back pain.

Statement Of The Problem
"A Study to assess the effect of teaching Acharya Technique on knowledge and practice of sedentary workers regarding prevention of backpain in selected institutes of Surat."

Objectives Of The Study
1. To assess the knowledge regarding prevention of backpain among the sedentary workers before and after teaching Acharya technique.
2. To assess the performance of Acharya Technique after teaching Acharya technique.
3. To compare the pretest and post-test scores of knowledge and practice of sedentary workers.
4. To correlate the posttest knowledge and mean practice score regarding prevention of backpain among the sedentary workers after

teaching Acharya technique.
5. To associate knowledge and practice on the effect of teaching Acharya Technique for prevention of back pain with selected sociodemographic variables.

HYPOTHESIS
H_1: The mean post-test knowledge score of the sedentary workers regarding Acharya Technique for prevention of back pain who have undergone teaching program will be significantly higher than mean pre-test knowledge scores at 0.05 level of significance.

H_2: The mean post-test practice score of the sedentary workers regarding Acharya Technique for prevention of back pain who have undergone teaching program will have significant increase from observation 1,2,3 scores at 0.05 level of significance.

H_3: There will be significant correlation between post-test knowledge scores and the mean practice score of the subjects regarding Acharya Technique for prevention of back pain at 0.05 level of significance.

H_4: There will be significant relationship between selected sociodemographic variables post-test knowledge scores of sedentary workers regarding Acharya Technique for prevention of back pain at 0.05 level of significance.

H_5: There will be significant relationship between selected sociodemographic variables and mean practice scores of sedentary workers regarding Acharya Technique for prevention of back pain at 0.05 level of significance.

Research Methodology
• **Research Approach:** Quantitative approach
• **Research Design:** pre-experimental one group pre-test post-test design with time series for observation of practice
• **Variables:**
• **Dependent:** knowledge and practice of sedentary workers
• **Independent:** teaching Acharya Technique
• **Setting Of The Study:** Chotubhai Gopalbhai Patel Institute of Technology and Mauni International school.

• **Population:** The population of the study were the sedentary workers working at selected institutes of Surat.

•**Samples:** The participants of the study were the sedentary workers who met the inclusion criteria.

• **Sample size:** 60

• **Sampling technique:** Convenience sampling

• **Tool And Technique:** The data collection tool consisted of structured knowledge questionnaire and observational checklist of the procedure of Acharya Technique and teaching plan on Acharya technique.

• **Technique.** Self-report for knowledge questionnaire and observation for observational checklist was used.

Criteria For Sample Selection
• Inclusion Criteria
• Sedentary workers having prolonged duty hours in sitting/ standing position with a limited physical activity.
• Sedentary workers willing to participate in the study.
• Sedentary workers aged from 20 to 60 years

• Exclusion Criteria
• Sedentary workers working at managerial levels.
• Sedentary workers with spinal or other related surgery and orthopedic deformity.
• Sedentary workers who were pregnant
• Sedentary workers absent at time of data collection.

Validity And Reliability Of The Tool
The validity of the tool was established by 5 experts in field of medical surgical nursing and 2 experts of community health nursing. The reliability of structured knowledge questionnaire was done using split half method and the obtained value was high then required value so the tool was found statistically reliable. Observational checklist was done using Cohen's kappa. The obtained value was in range of normal value hence the observational checklist was found statistically reliable.

Data Gathering Process
The main study data gathering was conducted from 12-4-2019 to 1-5-2019. The study comprised of two settings. The first setting was Chotubhai Gopalbhai Patel Institute of Technology and the second setting was Mauni International School. There were 10 subjects from Chotubhai Gopalbhai Patel Institute of Technology (CGPIT), they were studied as group I and 50 subjects from The Mauni International School. The subjects of this second setting were divided and studied as group II (17 subjects), group III (17 subjects) and group IV (16 subjects).

Prior to the conduction of the study official permission was obtained from both of the institutions. On the day of study, the researcher approached the Director and the Principal of the institution and explained the study and procedure of data collection. The researcher introduced herself to the subjects and explained the purpose of study to them. Then after she took consent from the subjects under the study. And the data gathering process began.

For collecting data from the subjects, a pre-test was administered to the subject using the tool under the study consisting of structured knowledge and the teaching program of Acharya Technique for prevention of back pain. The procedure of Acharya Technique was demonstrated by the researcher on a subject by giving instructions to the subject and it was done on the same day as of pre-test. The subjects were instructed to perform these exercises twice a day for following seven days and were provided a diary to note the details.

The subject was then observed for practice of Acharya technique and it was marked as observation 1. After observation, researcher reinforced the subject for practice of Acharya technique.

A post-test was administered using the same tool on 8th day after the pre-test. And the subject was observed for practice of Acharya Technique and it was marked as observation 2. The researcher checked the diary of the subject and instructed to continue the same for next 7 following days. On 15th day after post-test of the subject was again observed for practice of Acharya Technique and marked as observation 3. The researcher checked their diary and collected them back. Researcher asked verbal feedback from the subjects and their response was positive regarding practice of Acharya Technique. The researcher also checked back pain of the subjects as mentioned in the structured knowledge questionnaire.

ANALYSIS AND INTERPRETATION OF DATA
Table 1 Classification Of Overall Knowledge Gain Of Sedentary Workers (N=60)

Area	Maximum score	Obtained pretest score		Obtained posttest score		Knowledge gain %
		F	%	F	%	
Anatomy and physiology of the vertebral column	360	115	32 (average)	328	91 (Very good)	59
Importance of normal posture	480	258	54 (Good)	396	83 (Very good)	29
Problem of not maintaining normal posture and signs and symptoms	480	235	49 (average)	400	83 (Very good)	34
Self-management and medical surgical management	480	240	50 (average)	434	90 (Very good)	40

Table 2 The Overall Practice Score Of The Subjects In Observation 1, Observation 2 And Observation 3. (n=60)

Step	O1		O2		O3		O1-O2	O2-O3	O1-O3
	F	%	F	%	F	%			
	1225	82	1405	94	1418	95	12	1	13

Table 3 Significance Of Mean Difference Of Pretest And PostTest Knowledge Score Of Sedentary Workers. (n=60)

Knowledge scores	Mean	SD	SE	t-value		significance
				Tabulated value	Calculated value	S
Pretest	14.13	4.23	0.3286	2.00	23.624	
Posttest	26.28	2.25				
Difference	12.15	1.98				

Df=59, 0.05 significance

Table 4 Comparison Of Performance In Observation 1, Observation 2 And Observation 3 (n=60)

Observation	Mean	SD	t value O1 and O2	t value O1 and O3	t value O2 and O3
1	20.45	2.38	8.095 S	8.824 S	0.79 NS
2	23.41	1.54			
3	23.63	1.44			

NS= not significant, S= Significant

Table 5 Correlation Of The Posttest Knowledge And Mean Scores Of Performances Of Acharya Technique Of The Sedentary Workers.

$\sum(x-\bar{x}) \cdot (y-\bar{y})$	$\sum(x-\bar{x})^2$	$\sum(y-\bar{y})^2$	$\sum(x-\bar{x})^2 \cdot \sum(y-\bar{y})^2$	R
18.833	81.444	300.183	24448.104252	0.12044

Table 6 Association Of Effect Of Teaching Acharya Technique With Selected Socio-demographic Variable. (n=60)

Socio-demographic Variables	Posttest knowledge score		Total	Chi Square test
	Good	Very good		

Age				χ²=12.89
20 to 30	3	22	25	Df=3
30 to 40	13	13	26	(S)
40 to 50	4	1	5	
50 and above	2	2	4	
Gender				χ²=25.311
Male	18	6	24	Df=1
Female	4	32	36	(S)
Education qualification				χ²= 7.8093
Higher				Df=2
Secondary	-	-	-	(S)
Diploma	2	12	14	
Degree	13	23	36	
Postgraduate	7	3	10	
Occupation				χ²= 10.725
Teaching	12	26	38	Df=2
Office work	7	1	8	(S)
Computer operator	3	11	14	
Number of working hours a day				χ²=1.3534 Df=2 (NS)
<5 hours	-	-	-	
5 to 6 hours	2	1	3	
7 to 8 hours	12	24	36	
>8 hours	8	13	21	
BMI				χ²=11.6579
Underweight	1	4	5	Df=3
Normal weight	10	28	38	(S)
Overweight	10	3	13	
Obese	1	3	4	

Table 7 Association Of Effect Of Teaching Acharya Technique With Selected Sociodemographic Variable And Mean Practice Score. (n=60)

Sociodemographic Variables	Posttest knowledge score		Total	Chi Square test
	Very Good	Excellent		
Age				χ²=1.26
20 to 30	3	22	25	Df=3
30 to 40	2	24	26	(NS)
40 to 50	1	4	5	
50 and above	0	4	4	
Gender				χ²=0.277
Male	3	21	24	Df=1
Female	3	33	36	(NS)
Type of family				χ²= 19.89
Joint	0	17	17	Df=2
Nuclear	4	37	41	(S)
Extended	2	0	2	
Occupation				χ²= 3.1077
Teaching	3	35	38	Df=2
Office work	0	8	8	(NS)
Computer operator	3	11	14	
Number of working hours a day				χ²=1.578 Df=2 (NS)
<5 hours	-	-	-	
5 to 6 hours	0	3	3	
7 to 8 hours	5	31	36	
>8 hours	1	20	21	
BMI				χ²=1.4304
Underweight	0	5	5	Df=3
Normal weight	4	34	38	(NS)
Over weight	2	11	13	
Obese	0	4	4	

DISCUSSION

The study result showed a significant increase in knowledge of subjects in posttest; thus, the teaching program was effective in delivering knowledge. The t value knowledge scores of pretest and posttest was 23.624 which showed significant increase in knowledge at p= 0.05 after the teaching program of Acharya Technique for prevention of back pain. Hence the teaching program was effective in delivering knowledge.

The study result was supported by study on Effectiveness of video assisted teaching program on knowledge and practice regarding range of motion exercises among restricted mobile patients in orthopedic wards at SC hospital.[3]

The performance score also gradually increased from observation 1 to observation 3. There was a moderately positive correlation seen in knowledge and mean practice scores of the subject. There was association found between posttest knowledge and socio demographic variables like age, gender, education. There was no statistical association found between practice score of subjects and selected sociodemographic variable like age, gender, occupation, number of working hours a day and BMI. However, type of family was found significantly associated.

CONCLUSION

In conclusion, this study shows that there was gain in knowledge regarding Acharya Technique for prevention of back pain and also the performance of Acharya Technique improved. It is recommended that new dimensions of study be discovered with other samples, also backpain level be studied before and after intervention of Acharya technique. The Acharya Technique can be practiced by any age group with backpain and get relieved or with no back pain to prevent it.

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