A study to assess the effectiveness of STP on knowledge regarding prevention of osteoarthritis among young people residing in selected rural areas of Chaubepur, Kanpur,UP

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ABSTRACT

A study to assess the effectiveness of STP on knowledge regarding osteoarthritis among young adults residing in selected rural areas of Kanpur. The objective of the study was to assess the pretest knowledge regarding osteoarthritisamong young adults.To determine the effectiveness of STP on knowledge regarding prevention of osteoarthritis.To determine the association between pretest level of knowledge with their selected demographic variables.A pre experimental approach was used for the study of 30 samples. The subjects are chosen by non-probability convenient sampling technique. The study was conducted at selected rural areas of Kanpur. Knowledge Questionnaire was used to collect the data, the obtained data were analyzed and interpreted in terms of objectives of the study, descriptive and inferential statistics were used for data analysis: the level of significance was set at 0.05 levels.The study revealed that in the pre-test out of 30 young adults 22 had inadequate knowledge, 8 had moderate knowledge and no one had adequate knowledge and in post-test 22 had moderate knowledge and 8 had adequate knowledge and the obtained t test value was 20.37 proved that STP was effective to improve knowledge regarding prevention of osteoarthritis among the participants, hence hypotheses 1 was accepted. Then investigator assessed the association between pretest knowledge regarding prevention of osteoarthritis with selected demographic variables and found that, Gender, occupational status, previous knowledge regarding prevention of osteoarthritis, and family history of osteoarthritis of the had significant association with pretest knowledge level regarding prevention of osteoarthritis hence hypothesis (H2) was accepted. The study concluded that structured teaching program was effective to improve knowledge regarding prevention of osteoarthritis.

Need for the study

Osteoarthritis the leading cause of disability among adults, has no cure and is associated with significant comorbidities. Osteoarthritis affect more than 300 million people world wide, suffering from pain and disability. Around 23.46 million individual in India has osteo arthritis in 1990 and this increased to 62.35 million in 2019. Illness of osteoarthritis lead to pain, stiffness, functional limitations, reduced quality of life and sick. Recent studies review that knee osteoarthritis are occur due to obesity and knee injuries.Osteoarthritis prevention can encompass a wide range of activities that aim to reduce risk factors or preventing progression of disease or illness once a risk factor exists. Approximately 27% of adults age 26 or older have radiographic hand OA, and of adults age 45 or older, 19–28% have knee OA and 27% have hip OA. Racial/ethnic differences in the prevalence of OA have been noted. The burden and impact of osteoarthritis are increasing so adopting suitable control and preventive community measures to reduce modifiable risk factors such as obesity, injuries and occupational stress.

STATEMENT OF THE PROBLEM:

A study to assess the effectiveness of STP on knowledge regarding prevention of osteoarthritis among young people residing in selected rural areas of Kanpur.

OBJECTIVES:

1. To assess the level of knowledge regarding osteo arthritis among young people.
2. To determine the effectiveness of STP on knowledge regarding prevention of osteoarthritis among young people residing in rural areas of Kanpur.
3. To determined the association between pretest knowledge scores with their selected demographic variables.

Hypotheses

H1:-STP was effective to improve knowledge regarding prevention of osteoarthritis.

H2:- There was a significant association between pretest knowledge level with selected demographic variables.

Material and method:-

Research approach and design: - Quantitative approach with one group pretest post-test experimental design.

Setting of the study: - Selected Rural Areas of Kanpur.

Study population: - Young people.

Accessible population: - young people residing in selected rural areas of Kanpur

Sample size: - 30

Sampling technique: - Non probability convenient sampling technique.

Inclusive criteria:

- Young people residing in selected areas of Kanpur.
- Young people who are present during the time of data collection.
- Young people who are willing to participate in the study.

Exclusion criteria

- Young people who are not available at the time of data –collection
- Young people who are not willing to participate in the study.
- Young people who are already having knowledge regarding osteoarthritis.

Variable under the study:

A variable is any phenomenon of characteristic or attribute under study. Variable are the measurable characteristics of a concept and consist of a logical group of attributes.

Three types of variable are identified in this study. They are,

- Dependent variable

- Independent variable

- Attributed variable

Dependent variables:

The variable hypothesized to depend on or be caused by another variable (the independent variable) the outcome variable of interest. In this study knowledge of young people regarding prevention of osteoarthritis is considered as dependent variable.

Independent variable:

The variable hypostasized which is not depend on the another variable.

In this study structured teaching program was considered the independent variable.

Attributed Variables:

The variable that pre-existing characteristics of study participants, which the researcher simply observes or measures. These variables that greatly influence the results of the study.

In this study age, gender, religion, educational status, occupational status, family history of arthritis and previous knowledge regarding prevention of osteoarthritis were the attributed variables.

Description of Tools

The tool used for the data collection was organized into three sections:

Section -A Demographic Data:

The first part of the tool consists of five items for obtaining information about the selected background factors such as age, gender, religion, educational status, occupational status, family history of osteo arthritis and previous knowledge were the attributed variables.

Section –B Knowledge Questionnaire

Knowledge Questionnaire is used to collect the data before and after the session to assess the knowledge of prevention of osteoarthritis among young people

Knowledge Questionnaire consists of 30 questions

Based on the score the knowledge level categorized into

0-10 inadequate knowledge, 11-20 moderate knowledge and 21-30 adequate knowledge.

Data collection procedure: -

The data collection was scheduled from 15.10.2024 to 22.12.2024. Before the data collection the invigilator obtained the formal permission from pradhan of selected rural area then started assessing the knowledge regarding prevention of osteoarthritis among young adults. Researcher found 500young people and through convenient sampling technique the researcher selected 30 Young adults and then provided structured teaching program session soon after the pretest and then assessed the knowledge level of participant after completion of 15 daysand Giving thanks to the respondents and authority, the data collection procedure was finished.

Limitations of the study

The study is delimited to:

1.Selected areas of Kanpur.

2.young people living in Kanpur.

3.Young people who present during the time of data collection

4. young people who are willingly participated in study.

Analysis and interpretations

Section I:- Base line characteristics of participants.

Table 1: - Baseline characteristics of the participants

Sl.no	Demographic variables	frequency	percentage
1.	**Age in years** 21-26 year	11	36.7
	27-32 year	11	36.7
	33-38 years	08	26.7
2.	**Sex** Male	19	63.3
	Female	11	36.7
3.	**Religion**		

	Hindu	19	63.3
	Muslim	07	23.3
	Christian	04	13.3
	others	00	00
4.	**Educational status** No formal education	08	26.7
	Primary education	08	26.7
	Secondary education	06	20.0
	Graduation and above	08	26.7
5.	**Occupational status** Farmer	11	36.7
	Shop	05	16.7
	Private job	08	26.7
	Government job	06	20.0
6.	**Family history of osteo arthritis** Yes	17	56.7
	No	13	43.3
7.	**Previous knowledge regarding osteo arthritis** Yes	10	33.3
	No	20	66.7

Section II: - knowledge level of young adults related to prevention of osteoarthritis.

Table no 2: - Categorization of young people based on level of knowledge.

Knowledge level	Inadequate	Moderate	Adequate
Pretest	22	08	00

Post test	00	22	08

Section III: - Analyse the effectiveness of STP on knowledge regarding prevention of osteoarthritis

Paired t test used to find out the effectiveness of STP on knowledge regarding osteoarthritis.

The obtained value was 20.37 and the table value was. since the obtained value was greater than table value null hypothesis rejected, ie,Hence hypotheses 1 was accepted, STP was effective to improve knowledge regarding prevention of osteo arthritis.

Section IV:- Assess the association between Pretest knowledge score with selected demographic variables.

Table no: - 5 chi square showing association between pretest knowledge with selected demographic variables.

Sl.no	Demographic variables	Knowledge level			Table value	Obtained value	Inference
		Inadequate	Moderate	Adequate			
1.	**Age in years** 21-26 year	7	4	0	1.35	9.48	NS
	27-32 year	8	3	0			
	33-38 years	7	1	0			
2.	**Sex** Male	11	8	0	6.31	5.99	
	Female	11	0	0			S
3.	**Religion** Hindu	12	7	0			
	Muslim	7	0	0			
	Christian	3	1	0	3.55	12.59	NS
	others	0	0	0			
4.	**Educational**						

	status						
	No formal education	6	2	0	8.48	12.59	NS
	Primary education	8	0	0			
	Secondary education	5	1	0			
	Graduation and above	3	5	0			
5.	**Occupational status**						
	Farmer	11	0	0	16.15	12.59	S
	Shop	5	0	0			
	Private job	5	3	0			
	Government job	1	5	0			
6.	**Family history of osteo arthritis**						
	Yes	9	8	0	8.34	5.99	S
	No	13	0	0			
7.	**Previous knowledge regarding osteo arthritis**						
	Yes	2	8	0	21.81	5.99	S
	No	20	o	0			

2=5.99, 4= 9.48, 6=12.59.

The chi-square calculation explains that there was a significant association between pre test knowledge level and the sociodemographic variables such as Gender, occupational status, previous knowledge regarding prevention of osteoarthritis, and family history of osteoarthritis of the participants as the obtained value was greater than the table value at 0.05 level of significance.

Conclusion: -

The study revealed that in the pre-test the investigator analyzed that out of 30young adults 22 had inadequate knowledge, 8 had moderate knowledge and no one had adequate knowledge and in post test 22 had moderate knowledge and 8 had adequate knowledge and the obtained t test value was 20.37 proved that STP was effective to improve knowledge regarding prevention of osteoarthritis among the participants, hence hypotheses 1 was accepted ie Then investigator assessed the association between pretest knowledge regarding prevention of osteoarthritis with selected demographic variables and found that, Gender, occupational status, previous knowledge regarding prevention of osteoarthritis, and family history of osteoarthritis of the had significant association with pretest knowledge level regarding prevention of osteoarthritis hence hypothesis (H2) was accepted. The study concluded that structured teaching program was effective to improve knowledge regarding prevention of osteoarthritis.

Bibliography: -

1. A. singh, S Das. Burden of osteo arthritis in India and its states. 1990-2019: findings from the global burden of disease study 2019. Osteoarthritis and cartilage, volume 30, issue 8, august 2022, page 1070-1078.
2. S. Safiri, A.A. Kolahi, M. Cross, C. Hill, E. Smith, K. Carson-Chahhoud, et al.Prevalence, deaths, and disability-adjusted life years due to musculoskeletal disorders for 195 countries and territories 1990–2017 Arthritis Rheumatol, 73 (4) (2021), pp. 702-714
3. A.M. Briggs, M.J. Cross, D.G. Hoy, L. Sànchez-Riera, F.M. Blyth, A.D. Woolf, et al. Musculoskeletal health conditions represent a global threat to healthy aging: a report for the 2015 World Health Organization world report on ageing and healthAnnals of the rheumatic diseases, 79 (6) (2020), pp. 819-828

4. Collaborators; TGOHealth effects of overweight and obesity in 195 countries over 25 yearsN Engl J Med, 377 (1) (2017), pp. 13-27H. Long, X. Zeng, Q. Liu, H. Wang, T. Vos, Y. Hou, et al.Burden of osteoarthritis in China, 1990–2017: findings from the global burden of disease study 2017

5. The Lancet Rheumatology, 2 (3) (2020), pp. e164-e172S. Luhar, I.M. Timæus, R. Jones, S. Cunningham, S.A. Patel, S. Kinra, et al.Forecasting the prevalence of overweight and obesity in India to 2040PLoS One, 15 (2) (2020), Article e0229438