

EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING THE DIETARY PRACTICES AMONG OSTEOARTHRITIS PATIENTS IN SELECTED HOSPITAL, CHENNAI.

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KEYWORDS

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ABSTRACT:

Osteoarthritis (OA) is a chronic joint disorder characterized by degeneration of cartilage and underlying bone. The study aimed to assess the effectiveness of structured teaching programme on knowledge regarding the dietary practices among osteoarthritis patients in selected hospital, Chennai. The present study was adopted a pre-experimental design. The required sample size was determined to be 136 patients. Using a convenient sampling technique, the sample was selected from osteoarthritis patients who attending the OPD and who are admitted in ward at the selected hospital. The findings from this study indicate a significant improvement in knowledge regarding dietary practices among osteoarthritis patients following the structured teaching programme. The percentage of participants with adequate knowledge increased from 31.62% before the intervention to 50.74% after, while the proportion of those with mild knowledge dropped from 30.15% to 12.50%. This highlights the effectiveness of the intervention in enhancing participants' understanding of dietary practices. The significant increase in knowledge levels, as indicated by the post-test results, highlights the importance of educational interventions in empowering patients to manage their condition more effectively.

INTRODUCTION

Osteoarthritis (OA) is a chronic joint disorder characterized by degeneration of cartilage and underlying bone, primarily triggered by mechanical stress and influenced by genetic and environmental factors [1,2,3]. OA affects multiple joints, causing significant pain and disability, and has become a major burden on individuals and healthcare systems [4]. The prevalence of OA increases

with age, and with rising life expectancy, its impact is projected to grow globally [5]. Current treatment approaches mainly focus on symptom relief and improving joint function, though many patients do not experience complete resolution of symptoms [6].

Knee OA, in particular, impairs physical function and has been associated with psychological consequences such as anxiety and depression [7,8]. Research indicates that psychological factors, including mental health disorders, can exacerbate the symptoms of OA beyond what is visible on radiographic imaging [9]. Recent studies suggest that factors such as high levels of pain, poor mobility, and multiple OA-affected joints may be linked to depressive symptoms, though the precise relationship between OA and depression remains unclear [10,11].

In India, OA has emerged as a significant public health issue, with an estimated 62.35 million individuals affected as of 2019, a marked increase from previous decades [12]. Spronk et al. (2014) also conducted a systematic review on this relationship and communicated with the result of increased knowledge increasing healthier food choices.[13] This growing burden underscores the need for innovative healthcare strategies, including educational interventions.

Nutritional management has been shown to play a key role in mitigating OA symptoms by reducing inflammation and improving joint health. Therefore, this study aims to assess the Effectiveness of a Structured Teaching Programme on knowledge regarding dietary practices among osteoarthritis patients in a selected hospital in Chennai. Through targeted educational interventions, this program seeks to enhance patients' understanding of how proper nutrition can contribute to managing their condition more effectively.

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MATERIAL AND METHODS

The present study was adopted a pre-experimental design. The required sample size was determined to be 136 patients. Using a convenient sampling technique, the sample was selected from osteoarthritis patients who attending the OPD and who are admitted in ward at the selected hospital. The study focused exclusively on patients diagnosed with osteoarthritis. The study utilized the knowledge questionnaire on dietary practices to assess the effectiveness of structured teaching programme on knowledge regarding the dietary practices among osteoarthritis patients in selected hospital.

Data collection:

After obtaining written consent from the patients, a structured questionnaire was administered to assess their baseline knowledge regarding dietary practices. A structured teaching programme was then implemented over a one-week period, with participants divided into five batches to ensure effective learning. The teaching program focused on enhancing the patients' understanding of dietary practices that can aid in managing osteoarthritis. After one week, a post-test was conducted to evaluate the effectiveness of the intervention.

Data Analysis:

The data collected during the study was organized using an Excel spreadsheet, and further statistical analysis was performed using SPSS Version 26 software to determine the impact of the structured teaching programme on participants' knowledge levels.

RESULTS:

The study's demographic analysis revealed that the majority of participants were aged between 51-60 years (40.4%), followed by those aged 40-50 years (33.1%) and 61-70 years (26.5%). A higher proportion of participants were female (57.4%), suggesting a greater prevalence of osteoarthritis among women in this population. In terms of educational attainment, 36.8% of the participants had completed Secondary School, while 22.8% had attained a Graduate or higher level of education. Occupationally, the largest group comprised Homemakers (30.9%), followed by Employed individuals (29.4%) and those who were Retired (25.0%). The majority of participants were Married (62.5%). [Table: 1]

The table 2 and figure 1 showed the level of knowledge, the post-test results showed a significant improvement, with 50.74% of participants reaching the adequate knowledge level. The proportion of participants with moderate knowledge decreased slightly to 36.76%, and those with mild knowledge dropped to 12.50%.

The table 3 compares the pre- and post-test scores, showing an improvement in the mean knowledge score after the structured teaching program. The statistically significant p-value ($P < 0.05$) indicates that the intervention had a meaningful impact on participants' knowledge regarding dietary practices.

Table 1: Demographic variable of patients with osteoarthritis N=136

Demographic Variable	Category	Frequency (n)	Percentage (%)
Age	40-50 years	45	33.1%
	51-60 years	55	40.4%
	61-70 years	36	26.5%
Gender	Male	58	42.6%
	Female	78	57.4%
Education Level	No Formal Education	20	14.7%
	Primary School	35	25.7%
	Secondary School	50	36.8%
	Graduate and Above	31	22.8%
Occupation	Employed	40	29.4%
	Unemployed	20	14.7%
	Homemaker	42	30.9%
	Retired	34	25.0%
Marital Status	Married	85	62.5%
	Unmarried	10	7.4%
	Widowed/Divorced	41	30.1%
Duration of Osteoarthritis	<1 year	25	18.4%
	1-3 years	60	44.1%
	>3 years	51	37.5%

Table 2: Level of Knowledge regarding dietary practices N=136

Pre-test Knowledge Level	Pre-test Frequency	Pre-test Percentage	Post-test Knowledge Level	Post-test Frequency	Post-test Percentage
Adequate	43	31.62%	Adequate	69	50.74%
Moderate	52	38.24%	Moderate	50	36.76%
Mild	41	30.15%	Mild	17	12.50%

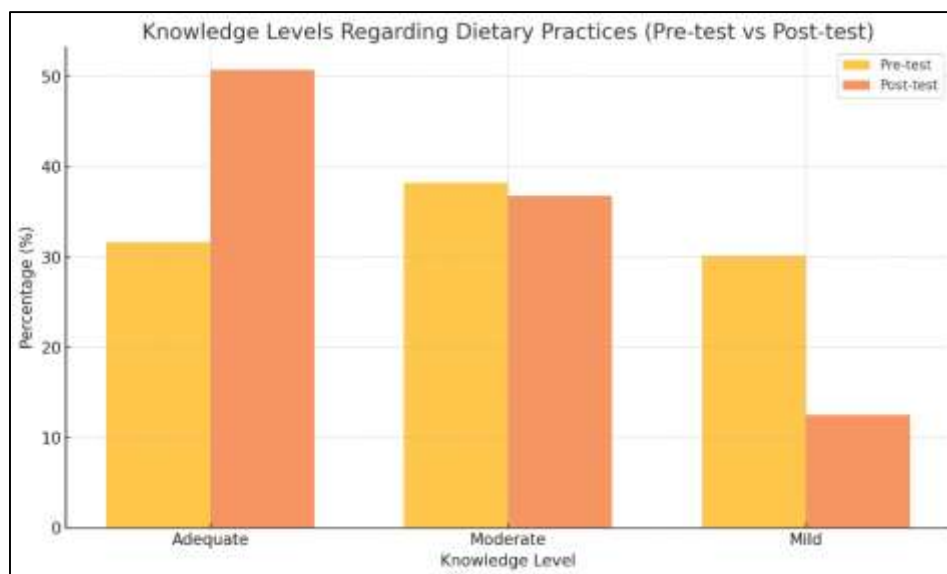
Tabel 3: Comparison of mean and standard deviation of knowledge regarding dietary practices.

N=136

Test	Mean	Standard Deviation (SD)	t-value	p-value
Pre-test	51.30	10.22	1.90	0.00*
Post-test	54.70	9.57		

P<0.05 Significant*

Figure: 1 Percentage of level of anxiety and depression among patient with osteoarthritis.



DISCUSSION

The findings from this study indicate a significant improvement in knowledge regarding dietary practices among osteoarthritis patients following the structured teaching programme. The percentage of participants with adequate knowledge increased from 31.62% in the pre-test to 50.74% in the post-test, while the proportion of those with mild knowledge decreased from 30.15% to 12.50%. This suggests that the intervention was effective in enhancing the participants' understanding of dietary practices. The comparison of mean scores in Table 3 further supports this improvement, with the mean post-test score (54.70) being higher than the pre-test score (51.30). The statistically significant p-value ($P < 0.05$) confirms that the increase in knowledge was not due to chance. These results align with existing evidence that educational interventions can improve patient knowledge, which is critical for managing chronic conditions like osteoarthritis. The structured teaching programme appears to have

positively influenced patients' knowledge, potentially leading to better dietary management of their condition.

Ali et al. find that education and social support are integral to the design of osteoarthritis management programs and conclude that structuring educational programs will improve patients' health outcomes.[14]

Similar study done by **Maimoona Ashfaq et al. (2021)** assessed the impact of a structured teaching program on arthritis knowledge. Using a quasi-experimental design, 100 participants were evaluated with pre- and post-intervention tests. Initially, none had adequate knowledge, 31% had moderate knowledge, and 69% had inadequate knowledge. Post-intervention, 94% had adequate knowledge and 6% had moderate knowledge. The mean score increased from 13.78 (pretest) to 26.22 (posttest), with a t-value of 32.365, significantly exceeding the critical value of 1.96. This indicates the teaching program was highly effective in improving arthritis knowledge, confirming the study hypothesis.[15]

The study done by Nishitha et al. (2024) supports the finding that prior to the intervention, the average knowledge score was 8.4 (SD ± 4.59). Post-intervention, the score increased to 21.8 (SD ± 4.86), with a paired t-value of 13.4, surpassing the critical value of 1.684 at a 0.05 significance level. Post-program, 86.6% of participants had adequate knowledge and 77.7% had a positive attitude towards dietary management. The findings indicate that the structured teaching program was effective in enhancing both knowledge and attitudes related to dietary management in patients undergoing hemodialysis.[16]

In addition, the results of this study reinforce the findings by Demilew et al. wherein significant changes were recorded in terms of dietary practices with nutrition education interventions. [17,18] Additionally, the results of the present study are consistent with the recommendations from the clinical practice guidelines that patient education should be an essential part of osteoarthritis management.

CONCLUSION

In conclusion, the study on structured teaching programme is an effective method for improving knowledge regarding dietary practices among osteoarthritis patients. The significant increase in knowledge levels, as indicated by the post-test results, highlights the importance of educational interventions in empowering patients to manage their condition more effectively. By enhancing their understanding of proper dietary practices, patients are better equipped to incorporate nutrition-based strategies into their daily routines, potentially improving their overall quality of life and managing

osteoarthritis symptoms more effectively. These findings underscore the need for integrating structured teaching programmes into routine care for osteoarthritis patients.⁹

CONFLITS OF INTEREST:

No conflicts of Interest.

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