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"Effectiveness of Video assisted Teaching Programme on management of pain and Self Help Techniques on Osteoarthritis Among the Elderly people residing in selected area of the loni bk."

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Abstract: Introduction: Osteoarthritis (OA) is the most common chronic joint condition affecting the elderly population According to the World Health Organization (2023), over 528 million people are living with Osteoarthritis globally, with its incidence increasing with age. In India, studies indicate that nearly 22–39% of elderly individuals suffer from Osteoarthritis. **Objectives:** 1. To evaluate the effectiveness of video assisted teaching programme on knowledge regarding management of pain and Self Help Techniques of Osteoarthritis Among the Elderly people. 2. To assess the knowledge regarding management of pain and Self Help Techniques of Osteoarthritis Among the Elderly people. 3. To find out the association between pre test score of knowledge regarding management of pain and Self Help Techniques of Osteoarthritis Among the Elderly people and selected demographic variables.

Material and Methods: A quantitative, evaluative research design was adopted with a one-group pre-test post-test approach to evaluate the effectiveness of a VATP on knowledge regarding pain management and self-help techniques among elderly individuals with osteoarthritis. The study was conducted among 60 elderly participants aged 60 years and above in a selected rural area of Maharashtra. Purposive sampling technique was used for participant selection. A structured knowledge questionnaire was used for data collection. The VATP included simplified audiovisual educational content covering various aspects of OA, such as causes, symptoms, joint care, exercises, lifestyle changes, and pain relief measures. Data was analyzed using descriptive statistics (frequency, percentage, mean, standard deviation) and inferential statistics (paired t-test to assess effectiveness and chi-square test to determine association with demographic variables).

Results: The findings revealed a significant improvement in knowledge after the intervention. The mean pre-test knowledge score was 12.03 (SD ± 3.00264), which increased to 13.68 (SD ± 2.24357) in the post-test. The paired t-test value was 6.203 ($p < 0.05$), indicating a statistically significant difference in knowledge levels. The analysis also showed a significant association between pre-test knowledge scores and selected demographic variables such as age, gender, educational background, and marital status ($p < 0.05$), while access to healthcare services was not significantly associated ($p > 0.05$).

Key words: Osteoarthritis, Elderly Population, Video-Assisted Teaching Programme (VATP), Pain Management, Self-Help Techniques, Knowledge Improvement, Rural Health, Nursing Intervention

I.Introduction

"Take care of your body. It's the only place you have to live"

-Jim Rohn

Osteoarthritis is one of the most prevalent musculoskeletal disorders affecting the elderly population worldwide. It is a degenerative joint disease characterized by cartilage breakdown, joint pain, stiffness, and functional limitations, most commonly in the knees, hips, and hands. According to the World Health Organization (2023), over 528 million people are living with Osteoarthritis globally, with its incidence increasing with age. In India, studies indicate that nearly 22–39% of elderly individuals suffer from Osteoarthritis, particularly in rural and semi-urban areas. As life expectancy increases, Osteoarthritis has become a significant cause of disability, affecting the independence and quality of life among the elderly. Therefore, effective, accessible, and self-manageable interventions are crucial to address this growing public health concern[1].

Pain management is central to Osteoarthritis treatment. Pharmacological treatments like NSAIDs offer symptomatic relief but come with side effects, especially in older adults. Therefore, non-pharmacological strategies, including physical exercises, hot and cold therapy, joint protection techniques, and relaxation methods, are increasingly being promoted as effective and sustainable alternatives. Self-help techniques empower elderly individuals to take an active role in their own care, thereby improving mobility and mental well-being while reducing dependency. According to the American College of Rheumatology (2022), patient education, when combined with physical activity, significantly improves outcomes in Osteoarthritis management. Despite this, many elderly individuals remain unaware or untrained in using these methods, underlining the importance of structured educational programs[2].

Health education delivered through video-assisted teaching programs has shown promising outcomes in improving knowledge, attitudes, and practices among patients with chronic conditions. Videos are an effective educational medium due to their ability to visually demonstrate techniques, simplify complex information, and engage learners, especially those with low literacy levels. Studies have found that video-based interventions enhance comprehension and retention more than conventional teaching methods[3]. For elderly individuals who may have cognitive decline or hearing issues, video-based content with subtitles and repeated playback options increases accessibility and learning effectiveness[4]. Incorporating Video-assisted teaching programs into Osteoarthritis self-care education can thus bridge knowledge gaps and promote better health behavior. Although numerous studies have established the benefits of self-help techniques and video education individually, limited research exists on the combined effectiveness of video-assisted teaching programs specifically for Osteoarthritis pain management among elderly populations in Indian community settings. Rural and semi-urban elderly often lack access to formal physiotherapy and structured pain education. Hence, this study aims to evaluate the effectiveness of a video-assisted teaching program in empowering elderly individuals with Osteoarthritis to manage their pain and daily activities through self-help strategies. The findings may contribute to developing community-level interventions and serve as a model for scalable, low-cost education strategies in geriatric care[5]. The study will also help identify barriers, preferences, and the feasibility of using video tools in elderly health education.

In India, osteoarthritis is emerging as one of the leading causes of disability among the elderly, particularly affecting women and people in rural and low-income urban communities. A study conducted by the Indian Council of Medical Research (ICMR) indicates that nearly 45% of people above 60 years suffer from Osteoarthritis, with knee Osteoarthritis being the most prevalent[6]. Despite its high burden, Osteoarthritis is often underdiagnosed and undertreated due to poor health-seeking behavior, lack of awareness, and limited access to specialized care in many regions. Traditional beliefs and stigma related to aging often lead to passive acceptance of joint pain as a "normal" part of growing old. Furthermore, limited literacy and the absence of culturally appropriate health education materials hinder effective disease self-management. Video-assisted teaching

programs can fill this critical gap by delivering standardized, visually engaging, and easy-to-understand content in regional languages, making them highly suitable for elderly populations across India[7]

I.1 Statement of problem: "Effectiveness of Video assisted Teaching Programme on management of pain and Self Help Techniques on Osteoarthritis Among the Elderly people residing in selected area of the loni bk."

I.2 **Objectives of the study:**

1. To evaluate the effectiveness of video assisted teaching programme on knowledge regarding management of pain and Self Help Techniques of Osteoarthritis Among the Elderly people.

2. To assess the knowledge regarding management of pain and Self Help Techniques of Osteoarthritis Among the Elderly people.

3. To find out the association between pre test score of knowledge regarding management of pain and Self Help Techniques of Osteoarthritis Among the Elderly people and selected demographic variables.

H0- there will be no significant difference on the knowledge regarding pain management and self help technique among the elderly people

HI- there will be significant difference on knowledge after the video assisted teaching and self help technique on management of pain among the elderly people.

II. Materials and Methods

Research Design: The research design selected for the present study was qusi-experimental with one group pre-test and post-test design. A pre-test was conducted among elderly people using semi structured questionnaire on management of pain and self-help techniques on osteoarthritis.

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Setting of the study: This study was conducted at janseva foundation loni bk

Sample: The sample size of the present study was 60 elderly people who full filled the inclusion criteria.

Sampling technique: probability simple random sampling technique was used for the study.

Tools of data collection: The tool consisted of 02 section.

Section A: -Socio demographic variables.

Information on socio demographic variables of the subjects containing 5 items, which included age, gender, educational background, marital status,etc.

Section B: - Knowledge questionnaire:

In this study, knowledge questionnaire consisted of 20 items related to meaning, awareness, causes, preventive measures, management of pain and self-help techniques on osteoarthritis.

Reliability

The reliability of the knowledge tool was determined by Test-retest method, the tool was administered to 6 elderly people. Reliability of the knowledge tool was found to be r=0.95.

Pilot Study

The pilot study was conducted in at elderly people of selected rural area, from 21/04/25 to 25 04/25 , to assess the practicability of the study and to decide a plan for statistical analysis.

Data collection procedure

Data collection tool are the procedures or instruments used by the investigator to observe or measure the key variables in the research problem. The subjects were selected by the probability simple random sampling technique. The main study was conducted on 60 Elderly people of selected urban area of the Loni BK., from 01/01/2025 to 22/01/2025 to assess the effect of Video assisted teaching programme on management of pain and self-help techniques on osteoarthritis among the elderly people. Prior permission was obtained from Medical Officer of primary health centre in selected area to conduct study.

Ethical consideration: Ethical permission was obtained from ethical committee of Smt. SEVP CON, with vide letter no: . Written informed consent was obtained from the study participents.

Results

Organization of findings

The analysis of the data is organized and presented under following sections;

Section-I: Description of socio-demographic variables of participants

Section-II: Description of knowledge scores of participants

A. Distribution of knowledge scores during pre-test and post-test.

B. Comparison between pre-test and post-test knowledge scores.

Section-III: Effectiveness of video assisted teaching programme

Section-IV: Association between pre-test knowledge scores with selected demographic variables.

Section I: Description of socio-demographic variables of participants

The study comprised 60 participants whose socio-demographic characteristics were analyzed. The majority of respondents, 22 (36.66%), were aged between 60–65 years, followed by 13 (21.66%) each in the 66–70 and 71–75 age groups, and 12 (20%) were 76 years or older. Regarding gender, 35 (58.33%) were male and 25 (41.66%) were female. In terms of education, over half of the participants, 32 (53.33%), were illiterate, 19 (31.66%) had primary education, and 9 (15%) had secondary education, with none having higher education. The marital status data showed that 47 (78.33%) were married and 13 (21.66%) were widowed, with no participants being single or divorced. Concerning access to healthcare services, 41 (68.33%) reported regular access, 9 (15%) had occasional access, 3 (5%) had rare access, and 7 (11.66%) reported no access at all

Section II: Description of knowledge scores of participants

The distribution of knowledge scores during the pre-test and post-test phases revealed a notable improvement in respondents' understanding of pain management and self-help techniques. In the pre-test, the mean knowledge score was 12.03, with a median of 13, mode of 14, and a standard deviation of 3.00264. Following the intervention, the post-test scores increased, with a mean of 13.68, median of 14, mode of 15, and a reduced standard deviation of 2.24357, indicating an overall enhancement in knowledge and a more consistent performance among participants. Regarding the level of knowledge, during the pre-test, the majority of respondents (39 or 65%) had average knowledge, while 11 (18.33%) had poor knowledge, and only 10 (16.66%) had good knowledge. After the post-test, none of the respondents remained in the poor knowledge category; instead, 33 (55%) demonstrated average knowledge, and a significant 27 (45%) attained good knowledge, reflecting the effectiveness of the intervention in improving knowledge related to pain management and self-help techniques

Section III: Effectiveness of video assisted teaching programme

The pre-test mean score of 12.03 (SD = 3.00264). The calculated paired 't' value was 6.2030, which exceeds the table value of 2.00 at a 0.05 significance level, indicating a statistically significant difference between the two scores. This confirms the positive impact of the video-assisted teaching program on improving knowledge

among the elderly participants. As a result, the null hypothesis (H_{01}), which stated that there would be no significant difference between pre-test and post-test knowledge scores, was rejected, and the research hypothesis (H_1) was accepted, affirming that the improvement in knowledge was not due to chance but due to the effectiveness of the intervention.

Section-IV: Association between pre-test knowledge scores with selected demographic variables.

To determine the association between the level of knowledge and selected socio-demographic variables among elderly individuals regarding pain management and self-help techniques, a Chi-square test was conducted. The null hypothesis (H_{02}) stated that there would be no significant association between pre-test knowledge scores and demographic variables, while the alternative hypothesis (H_2) proposed a significant association. The results indicated that the Chi-square values were statistically significant at the 0.05 level for the variables of age (χ^2 = 25.89), gender (χ^2 = 17.54), educational background (χ^2 = 27.32), and marital status (χ^2 = 21.06), demonstrating a meaningful association between these factors and the respondents' knowledge levels. However, the association with access to healthcare services (χ^2 = 7.06) was not statistically significant. These findings lead to the partial acceptance of the alternative hypothesis, suggesting that while age, gender, education, and marital status significantly influence knowledge levels, access to healthcare services does not.

Discussion

The present study, titled *"A Study to Assess the Effectiveness of Video-Assisted Teaching Program on Management of Pain and Self-Help Techniques in Osteoarthritis among Elderly People in Loni BK,"* aimed to evaluate the impact of a structured, culturally appropriate educational intervention on improving knowledge in a rural elderly population. The socio-demographic data revealed that most participants were aged 60–65 years, with a notable proportion being male, and more than half were illiterate, underscoring the need for simplified, visual teaching methods. The majority were married and had regular access to healthcare services, indicating potential support systems for applying self-care practices. Pre-test scores indicated moderate knowledge with gaps in specific areas like exercise and diet, and the post-test results showed a statistically significant improvement (mean increase from 12.03 to 13.68; t = 6.2030), affirming the effectiveness of the video-assisted program. The intervention was particularly effective due to its visual format, practical demonstrations, and locally relevant content, making it suitable for a low-literacy audience. Chi-square analysis showed significant associations between knowledge gain and variables such as age, gender, education, and marital status, but not with access to healthcare, suggesting that personal demographics influence educational outcomes. Thus, both null hypotheses (H_{01} and H_{02}) were rejected, supporting the alternative hypotheses that the video-assisted program significantly improved knowledge and that demographic factors play a role in knowledge acquisition. Participant feedback further validated the approach, with many requesting similar future sessions and pictorial handouts for home use, highlighting the potential for sustainable community-based health education interventions.

CONCLUSION: The study concludes that the video-assisted teaching programme is an effective educational tool in improving knowledge regarding pain management and self-help techniques among elderly individuals with osteoarthritis. It demonstrates that tailored visual education can bridge knowledge gaps, promote self-care, and potentially reduce dependency and healthcare burden in the elderly population. Implementing such interventions on a wider scale, particularly in underserved rural areas, can lead to better health outcomes and improved quality of life.

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