

A STUDY TO ASSESS THE LEVEL OF PAIN AND ITS IMPACT IN QUALITY OF LIFE AMONG PATIENT WITH OSTEOARTHRITIS IN SELECTED HOSPITAL, CHENNAI.

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ABSTRACT

Introduction: Osteoarthritis represents a significant cause of chronic pain and disability, substantially impacting the quality of life of affected individuals. **Aim of the study:** The study aimed to assess the effectiveness of structured teaching programme on knowledge regarding the dietary practices among osteoarthritis patients in selected hospital, Chennai. **Methodology:** This descriptive study aimed to assess pain levels and quality of life among 120 osteoarthritis patients in a selected hospital in Chennai. Participants were selected using a convenient sampling technique from the OPD and wards. Inclusion criteria included patients aged 35 years and above, diagnosed with osteoarthritis, and who provided informed consent. Exclusion criteria were patients with severe comorbid conditions affecting pain perception or quality of life, and those undergoing surgical treatment for osteoarthritis. **Results:** The study revealed that 41.7% of osteoarthritis patients experienced moderate pain, 33.3% reported mild pain, and 25% had severe pain. Regarding quality of life, 41.7% of patients rated it as fair, 33.3% considered it good, and 25% reported a poor quality of life. The correlation analysis showed a moderate negative relationship between pain levels and quality of life, with a correlation coefficient of -0.65. **Conclusion:** the study highlights the significant impact of pain on the quality of life among osteoarthritis patients. A moderate negative correlation was found between pain levels and quality of life, indicating that higher pain levels are associated with a decrease in quality of life.

INTRODUCTION

Osteoarthritis (OA) represents a significant cause of chronic pain and disability, substantially impacting the quality of life of affected individuals. Research indicates that pain is the primary symptom of osteoarthritis, which is commonly experienced intermittently or continuously. This persistent pain is a critical determinant of functional limitations, significantly affecting overall quality of life (Shalhoub et al., 2022; , (Chappell et al., 2011). The degree of pain correlates with emotional and social well-being, where elevated pain levels are linked to increased stress, anxiety, and depression among OA patients (Khairina et al., 2018; , Ubaidi et al., 2023). Moreover, effective pain management is central to osteoarthritis treatment strategies, as evidence suggests that pain relief can lead to notable improvements in life quality (Chappell et al., 2011).

Factors influencing the severity of pain in osteoarthritis are multifaceted. The physical impairment associated with joint dysfunction due to cartilage degradation impedes daily activities such as walking and climbing stairs (Sananta et al., 2023; , Ubaidi et al., 2023). Additionally, variables such as the patient's body

weight, mental health status, and physical activity levels are significant contributors to both pain and quality of life (Sananta et al., 2022; , (Sananta et al., 2022). Increased physical activity has been correlated with reduced pain levels and enhanced physical function in OA patients, providing a pathway to improve health-related quality of life (Sananta et al., 2022).

Furthermore, the quality of sleep in osteoarthritis patients has been shown to have a bidirectional relationship with pain levels; poor sleep quality exacerbates pain, while increased pain can hinder effective sleep (Saleem et al., 2024; . This complementary relationship illustrates the need for holistic approaches in managing osteoarthritis, where therapeutic strategies not only address pain but also consider sleep hygiene and physical activity as part of comprehensive treatment plans (Saleem et al., 2024; , Degerstedt et al., 2020).

Vitamin D levels have also been examined concerning pain severity and functional outcomes, as deficiencies are frequently noted in osteoarthritis populations. Studies suggest that lower vitamin D levels are associated with increased pain and negatively impact functional status and quality of life among these patients (Namutebi et al., 2021; , Yassin et al., 2015). Some evidence

indicates that vitamin D supplementation may alleviate pain; however, there is conflicting evidence regarding its direct effects on pain relief, indicating a need for further investigation in the context of osteoarthritis (Yetişir & ÖZTÜRK, 2024; , Glover et al., 2015).

The interplay between pain and quality of life in osteoarthritis patients is complex and involves various biological, psychological, and social factors. Effective pain management strategies, incorporation of physical activities, and addressing co-morbid conditions such as sleep disturbances and vitamin D deficiency are essential for improving outcomes and overall quality of life for individuals suffering from this degenerative joint disease. The study aimed to assess the level of pain and its impact in quality of life among patient with osteoarthritis in selected hospital, Chennai.

MATERIAL AND METHODS

The present study adopted a descriptive research design to assess the level of pain and its impact on the quality of life among osteoarthritis patients in a selected hospital in Chennai. A total of 120 patients were selected using a convenient sampling technique, with participants drawn from both the OPD and the wards of the hospital. The study focused exclusively on patients diagnosed with osteoarthritis. The inclusion criteria for the study were: patients aged 35 years and above, and those diagnosed with osteoarthritis who provided written informed consent to participate. The exclusion criteria included patients with severe chronic illnesses or comorbid conditions that could affect pain perception or quality of life, and those undergoing surgical treatment for osteoarthritis during the study period.

Data Collection Procedure:

After obtaining written informed consent from the participants, data was collected using the following tools:

Numerical Rating Scale (NRS) for Pain: This scale was used to assess the level of pain experienced by the osteoarthritis patients. It ranges from 0 (no pain) to 10 (worst possible pain), helping to categorize pain severity in each participant.

Qualeffo41 Questionnaire (Quality of Life Questionnaire of the European Foundation for Osteoporosis): This tool was used to assess the impact of osteoarthritis on the patients' quality of life. The Qualeffo41 is a validated questionnaire specifically designed to evaluate health-related quality of life in patients with osteoarthritis. It consists of 41 items across different domains, including pain, physical function, emotional well-being, and social

functioning. This instrument captures the effect of osteoarthritis on daily activities, physical mobility, and overall health.

Data was collected at baseline, where participants' pain levels and quality of life were assessed using the NRS and Qualeffo41. The study was descriptive in nature, focusing on understanding the current status of pain and quality of life among the participants without any intervention.

Data Analysis:

The collected data was organized in an Excel spreadsheet, and statistical analysis was performed using SPSS Version 26 software. Descriptive statistics (mean, standard deviation, frequencies, and percentages) were used to assess the pain levels and quality of life among the participants. Additionally, correlations were calculated to examine the relationship between the severity of pain and its impact on the overall quality of life in osteoarthritis patients.

RESULTS:

The study involved 120 osteoarthritis patients from a hospital in Chennai. The majority were aged between 46-55 years (29.2%) and 50% were 56 years or older. Females made up 58.3% of the sample. Most participants had secondary or higher secondary education (54.2%) and half were employed. A significant proportion were married (83.3%), and 41.7% had been diagnosed with osteoarthritis for 1-5 years. These demographic factors provide context for assessing the study's impact on pain and quality of life. [Table: 1]

The study revealed that 41.7% of the osteoarthritis patients experienced moderate pain, while 33.3% reported mild pain, and 25% had severe pain. Regarding quality of life, 41.7% of patients rated their quality of life as fair, 33.3% considered it good, and 25% reported a poor quality of life. These findings highlight the varying pain levels and quality of life among the participants, providing insight into the challenges faced by osteoarthritis patients. [Table 2]

The correlation analysis revealed a moderate negative relationship between pain levels and quality of life, with a correlation coefficient of -0.65. This suggests that as pain levels increase among osteoarthritis patients, their quality of life tends to decrease. The result highlights the significant impact that pain has on the overall well-being of patients, underscoring the need for effective pain management strategies to improve their quality of life. [Table 3]

Table 1: Demographic variable of patient with osteoarthritis.

Demographic Variable	N=120	
	Frequency	Percentage
Age Group		
35-45 years	25	20.8%
46-55 years	35	29.2%
56+ years	60	50%
Gender		
Male	50	41.7%
Female	70	58.3%
Educational Level		
Illiterate	10	8.3%
Primary School	20	16.7%
Secondary School	30	25%
Higher Secondary	35	29.2%
Graduate/Postgraduate	25	20.8%

Occupation		
Employed	60	50%
Unemployed	40	33.3%
Retired	20	16.7%
Marital Status		
Married	100	83.3%
Single	15	12.5%
Widowed	5	4.2%
Duration of Osteoarthritis Diagnosis		
Less than 1 year	25	20.8%
1-5 years	50	41.7%
6-10 years	30	25%
More than 10 years	15	12.5%

Table 2: Level of Pain and Quality of Life among patient with osteoarthritis.

Variable	Category	Frequency	Percentage
Level of Pain	Mild	40	33.3%
	Moderate	50	41.7%
	Severe	30	25.0%
Quality of Life	Poor	30	25.0%
	Fair	50	41.7%
	Good	40	33.3%

Figure 1: Level of Pain and Quality of Life among patient with osteoarthritis.

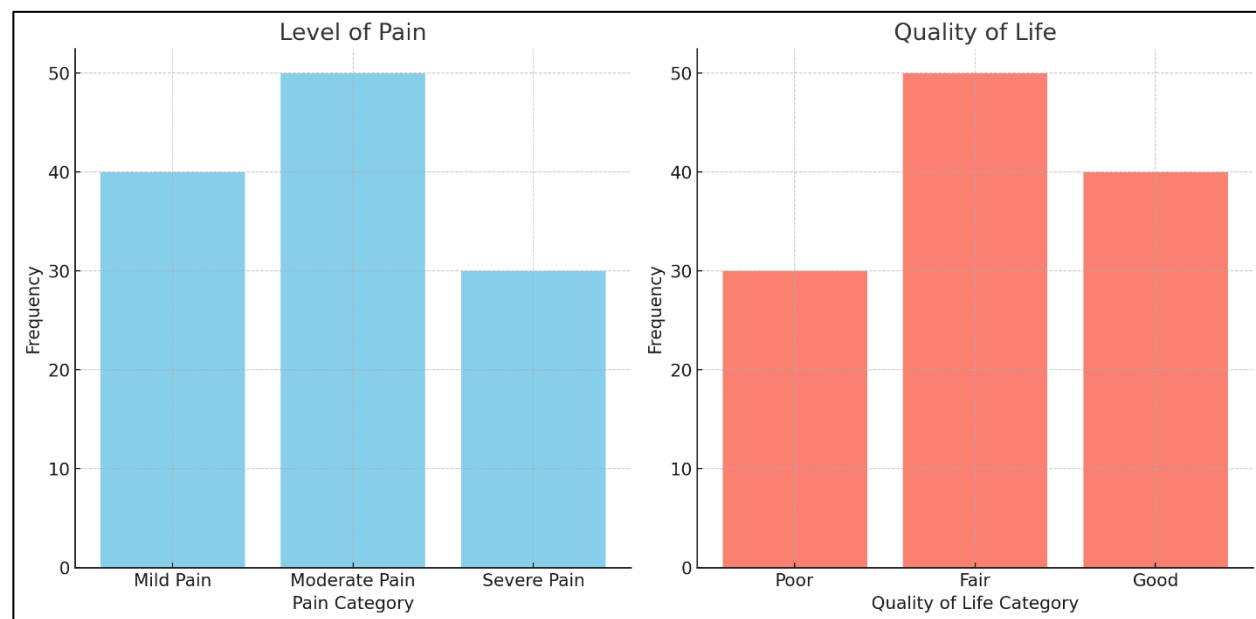


Table 3: Correlation of Pain Levels and Quality of Life

Variable	Pain Level	Quality of Life
Pain Level	1.00	-0.65**
Quality of Life	-0.65**	1.00

P<0.05 Significant*

DISCUSSION

The findings from the study indicating that 41.7% of osteoarthritis patients experienced moderate pain, while 33.3% reported mild pain, and 25% had severe pain, are consistent with a growing body of literature demonstrating the prevalent burden of pain experienced by individuals with osteoarthritis (OA). The reported correlation coefficient of -0.65 signifies a moderate negative relationship between pain levels and quality of life, underscoring the detrimental influence that pain has on the overall well-being of these patients. Previous studies confirm that pain is not only a predominant symptom in OA but also a significant factor contributing to decreased health-related quality of life (HRQoL) Sananta et al. (2022), Shalhoub et al., (2022).

The classification of pain severity reflects varying degrees of functional and physical limitations experienced by patients. Those categorized with moderate to severe pain are likely to face significant difficulties in daily activities, which can lead to a cascading effect on their emotional and psychological health (Rachmat et al., 2021). Research supports the notion that patients with knee OA who report higher pain levels also tend to experience increased rates of anxiety and depression, subsequently impairing their quality of life (Lee et al., 2020; , Arslan et al., 2021). Therefore, addressing pain management is paramount. Effective interventions targeting pain may improve patients' functional status and perceived quality of life significantly, with studies showing that relief from pain commonly results in improved emotional and social well-being (Horváth et al., 2011; , Jaiswal et al., 2021).

Furthermore, the study's finding that 41.7% of participants rated their quality of life as fair and only 25% reported a poor quality of life highlights the subjective burden experienced among this cohort. This scenario aligns with findings from various studies that indicate a substantial proportion of OA patients perceive their quality of life negatively due to persistent pain and physical disability (Muftić et al., 2024; , Çakar et al., 2018). Moreover, the relationship found in this study reinforces existing evidence pointing to a direct connection between symptom severity—particularly pain—and various aspects of quality of life, including physical, emotional, and social functions (Kumar et al., 2023).

The implications of these results advocate for a multifaceted approach to management that goes beyond traditional pain relief. Implementing comprehensive strategies, including physical therapy, lifestyle modifications, and psychological support, could enhance outcomes for patients with osteoarthritis (Evaniew & Evaniew, 2017; , Fukumitsu et al., 2017). Recent studies suggest that improving physical function through rehabilitation and exercise not only alleviates pain but also fosters a more favorable perception of quality of life (Dehkordi et al., 2021).

In conclusion, the significant impact of pain on quality of life among osteoarthritis patients underscores the urgency of effective pain management strategies. Collectively, these findings expose a critical need for healthcare providers to prioritize individualized pain management approaches to mitigate the adverse effects of osteoarthritis and improve patients' overall quality of life.

CONCLUSION

In conclusion, the study highlights the significant impact of pain on the quality of life among osteoarthritis patients. A moderate

negative correlation was found between pain levels and quality of life, indicating that higher pain levels are associated with a decrease in quality of life. The findings emphasize the need for targeted interventions focused on pain management to improve the well-being of osteoarthritis patients. Further research and effective clinical strategies are essential to enhance patient outcomes by addressing both pain and its broader effects on daily living and overall health.

CONFLITS OF INTEREST:

No conflicts of Interest.

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