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ORIGINAL ARTICLE

Assessment of Quality of life among patients with hip osteoarthritis

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ABSTRACT

Aim: To assess quality of life in patients with hip osteoarthritis.
Method: A hospital based cross sectional study was carried out involving hip osteoarthritic patients at District headquarter hospital Gujranwala. From May 2022 to Sep 2022.A total of 196 participants were included in the study. Data were collected from the patients who met the inclusion/exclusion criteria and were entered and analyzed in (SPSS) software version 24.36-Item (SF-36) was used to collect data from participants.
Results: The results of the study showed that overall poor quality of life with mean scores physical functioning mean and standard deviationwas 31.13±9.73, role limitations due to physical health mean and standard deviation was 29.33±8.98, role limitations due to emotional problems mean and standard deviation was 22.60±9.31, energy/fatigue mean and standard deviation was 39.51±14.55, general health mean and standard deviation was 17.47±7.35. The goal of the study was to discover the effect of osteoarthritis on standard of living as well as their relationship with eight subscales of sf-36 as many people are not aware about their developed disease and my study will provide information regarding this disease in future.
Conclusion: According to the findings of the study, Quality of life is significantly poor in hip osteoarthritis patients. Physical functioning, Role limitations due to physical health, General healthwere the most affected SF-36 subgroups.
Keywords: Quality of life, Hip osteoarthritis, SF-36 Survey, Health related quality of life, rotational acetabular osteotomy

INTRODUCTION

An overall state of well-being of quality of life that includes both objective and subjective descriptions of one's physical, material, social, and emotional well-being as well as the degree of one's own personal growth and productive activity, all of which are weighed according to one's own set of values[1]. Articular cartilage and associated elements are gradually damaged by osteoarthritis, a degenerative joint condition. After the knee, the hip is the joint that is most frequently afflicted, and around 11% (2.46 million) of persons in England have hip problems[2].

A complex material, normal cartilage is generally composed of a solid matrix containing water and predominantly composed of collagen and proteoglycan. Its composition is not constant. Osteoarthritis arises when the cartilage's normal structure and homeostasis are compromised. The complex interaction of biochemical and biomechanical factors that contribute to osteoarthritis occur concurrently and maintain deteriorative change.it has been established how osteoarthritis' increasing pathologic alteration affects periarticular tissues as well as articular cartilage. despite the fact that mechanical and biochemical alterations do occur, their exact roles in the etiopathogenesis of osteoarthritis are not fully understood. numerous etiologies with similar paths of physical and chemical disturbance are probably present[3].

In the baseline survey, radiographic hip OA was present in 18.4% of males and 14.4% of women, respectively. In the fourth survey, the prevalence was 16% and 10.7%. The frequency of radiographic hip OA among patients aged 40 to 69 years decreased considerably between the fourth survey and the baseline survey. however, radiographic hip OA was considerably less common among senior men aged 70 to 79 years during the baseline survey than it was during the fourth survey. According to the findings of the logistic regression analysis, there was a substantial decrease in prevalence of radiographic hip OA between the fourth survey and the baseline survey (odds ratio: 0.55, 95% confidence range)[4].

Because of its high occurrence and the frequent disability that comes with disease in important joints like the knee and hip, oa causes more difficulty walking and climbing stairs than any other ailment[5]. The three main signs and symptoms of OA are pain, stiffness, and limited mobility. Other symptoms include crepitus, joint subluxation, joint deformity brought on by bone remodelling, severe osteophytosis, or joint edoema. these symptoms often begin in one or more joints in a middle-aged or elderly person[6].

OA requires large healthcare resources and incurs significant societal costs because to its progressive and chronic nature, and these demands are only anticipated to increase as the population ages. the most popular conservative treatment for oa is pharmacologic therapy (nsaids, cyclooxygenase inhibitors). oa requires large healthcare resources and incurs significant societal costs because to its progressive and chronic nature, and these demands are only anticipated to increase as the population ages. The most popular conservative treatment for oa is pharmacologic therapy (nsaids, cyclooxygenase inhibitors)[7].

Exercise's cost-benefit analysis treatment in patients with hip osteoarthritis in primary care. The most common kind of joint disease, (OA), is especially painful and dysfunctional in the hip and knee joints. After the age of 55, hip OA affects women more often than it does men. The most typical symptoms of hip OA are hip pain and disability, for instance because of diminished lower limb muscle strength[8].

The goal of the study will be to discover the effect of osteoarthritis on standard of living as well as their relationship with eight subscales of sf-36 such as physical health restrictions, limits due to emotional issues, and limitations due to physical functioning energy/fatigue concerns emotional problems social interaction, overall health, and discomfort. many people are not aware about their developed disease and my study will provide information regarding this disease in future.

METHODOLOGY

A cross-sectional research conducted at hospitals involving hip osteoarthritic patients. The research had 196 people in all. The data were collected from DHQ Hospital (Gujranwala), THQ Hospital (Wazirabad) Sikandar Medical complex (Gujranwala), orthopedic and physical therapy clinic (Wazirabad) Med care (Gujranwala) Al-Raai Hospital (Gujranwala). This study was completed within 4 months (May-September 2022). Non probability convenient sampling technique has been used for the study. Both males and females patients with diagnosed hip osteoarthritis age

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between 45 years to 80 years were included. Data were collected from patients of hip osteoarthritis. Questionnaire was filled by patients after asking 36 questions related to their quality of life after hip osteoarthritis by using the 36-Item short form survey instrument (SF-36) such as physical functioning, limitations because of physical health, limitations because of emotional problems Energy/fatigue Emotional issues Social functioning General health in physical functioning following question were asked. How would you rank your overall health now compared to one year ago? Include intense activities like jogging, carrying big things, and engaging in rigorous sports. Mild exercises include pulling a vacuum, moving a table, bowling, or playing golf. carrying or lifting groceries ascending a number of flights of steps. stair ascending up one level. Stooping, knelt, or bent over. more than a mile of walking a number of blocks jogging a block. jogging a block, taking a shower or getting dressed. Health-related issues reduce the time you spend working or engaging in other activities. achieved less than you had hoped. had restrictions on the kind of employment or other activities they could conduct and had trouble doing them (for example, it took extra effort), emotional well-being issues, reduce the time you spend working or engaging in other activities. achieved less than you had hoped. performed work and other tasks less attentively than usual. Social activities: Your regular social interactions with family, friends, neighbours, or groups were hampered by emotional issues. I'm hurt, How much pain have you experienced physically during the last four weeks? How much did pain interfere with your regular work—including both housekeeping and job outside the home during last four weeks? In addition, overall health. My health is quite good. All these questions were asked from each participants in our study.

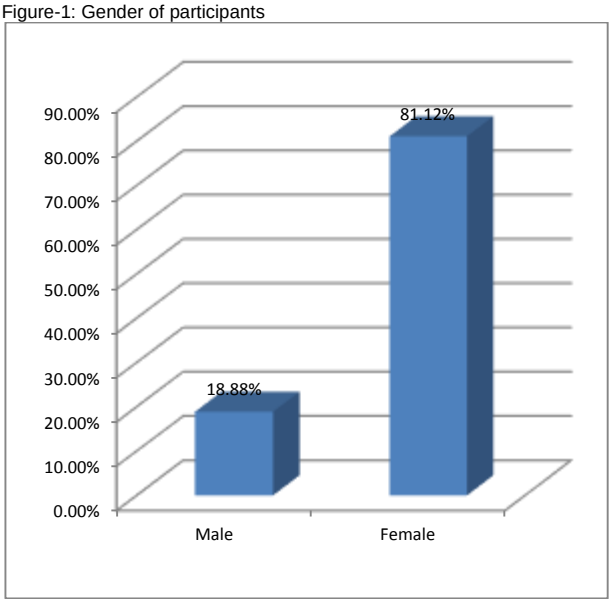
RESULTS

Out of 196 patients there were 37(18.9%) males and 159(81.1%) females.

Table1: Frequency of demographic data &frequency of the domains of s-f36

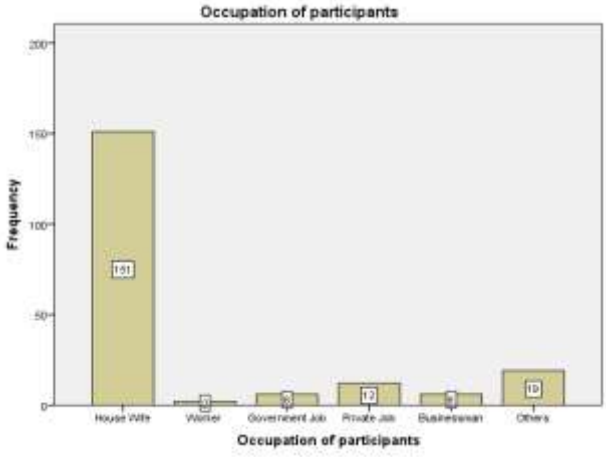
Demographics		**n(%)**
Age of participants in years	45-60	68(34.7)
	61-70	75(38.3)
	71-80	53(27)
Occupation of participants	House Wife	151(77)
	Worker	2(1)
	Government Job	6(3.1)
	Private Job	12(6.1)
	Businessman	6(3.1)
	Others	19(9.7)
SF-36 DOMAINS		
Domains		
Physical Functioning Score in %	< 20=(Very poor)	19(9.7)
	21-40(poor)	152(77.6)
	41-60(good)	25(12.8)
Role limitations due to physical health in %	< 20=(Very poor)	19(9.7)
	21-40(poor)	152(77.6)
	41-60(good)	25(12.8)
Role limitations due to emotional problems in %	< 20=(Very poor)	83(42.3)
	21-40(poor)	110(56.1)
	"41-60(good)"	3(1.5)
Energy/Fatigue in %	< 20=(Very poor)	4(2.0)
	21-40(poor)	86(43.9)
	41-60(good)"	93(47.4)
	61-80 (very good)	10(5.1)
	81-100 (excellent)	3(1.5)
Emotional well-being in %	< 20=(Very poor)	23(11.7)
	21-40(poor)	74(37.8)
	"41-60(good)"	93(47.4)
	61-80 (very good)	6(3.1)
Social functioning in %	< 20=(Very poor)	139(70.9)
	21-40(poor)	45(23.0)
	"41-60(good)"	12(6.1)
Pain in %	< 20=(Very poor)	23(11.7)
	21-40(poor)	141(71.9)
	"41-60(good)"	32(16.3)
General health in %	< 20=(Very poor)	128(65.3)
	21-40(poor)	68(34.7)
Total		196(100)

Figure-1: Gender of participants



Occupation wise there were House Wife 151(77%), followed by Private Job 12(6.1%)and others 19(9.7%)

Figure-2: Occupation of participants



Out of 196 participants aged group between 45 to 60 years were 68(34.7%), 61 to 70 years were 75(38.3%) and 71 to 80 years were 53(27%)In the domain Physical Functioning 19(9.7%) were (Very poor) while 152(77.6%) were (poor) and 25(12.8%) were (good).in role restrictions brought on by physical health 19(9.7%) were (Very poor) while 152(77.6%) were (poor).In Role restrictions brought on by emotional issues 83(42.3%) were (Very poor) while 110(56.1%) were (poor) and 3(1.5%) were (good). in Energy/Fatigue 4(2%) were (Very poor) while 86(43.9%) were (poor) other than this 93(47.4%) were (good) and 10(5.1%) were (very good) while 3(1.5%) were (excellent). In Emotional well-being 23(11.7%) were (Very poor) while 74(37.8%) were (poor) and 93(47.4%) were (good) besides this 6(3.1%) were (very good). In Social functioning 139(70.9%) were (Very poor) while 45(23.0%) were (poor) and 12(6.1%) were (good). in Pain 23(11.7%) were (Very poor) 141(71.9%) were (poor) while 32(16.3%) (Good). in General health in which 128(65.3%) were (Very poor) while 68(34.7%) were (poor)

In this table Mean and Standard Deviation of the domains of SF-36physical functioning mean and standard deviation was 31.13±9.73, role limitations due to physical health mean and

standard deviation was 29.33±8.98, role limitations due to emotional problems mean and standard deviation was 22.60±9.31, energy/fatigue mean and standard deviation was 39.51±14.55, emotional well-being mean and standard deviation was 37.75±14.28, social functioning mean and standard deviation was 18.09±9.86, mean and standard deviation of pain was 28.59±10.35, general health mean and standard deviation was 17.47±7.35

Table 2: Mean and Standard Deviation of SF-36

Domains	Test Value = 40					
	Mean	S.D	t-Score	P-Value	95% Confidence Interval of the Difference	
					Lower	Upper
Physical Functioning	31.13	9.73	-12.767	.000	-10.2431	-7.5018
Role limitations due to physical health	29.33	8.98	-16.641	.000	-11.9384	-9.4085
Role limitations due to emotional problems	22.60	9.31	-26.168	.000	-18.7092	-16.0867
Energy/Fatigue	39.51	14.55	-.471	.638	-2.5400	1.5604
Emotional well-being	37.75	14.28	-2.206	.029	-4.2614	-.2386
Social functioning	18.09	9.86	-31.114	.000	-23.3022	-20.5243
Pain	28.59	10.35	-15.439	.000	-12.8712	-9.9553
General health	17.47	7.35	-42.901	.000	-23.5610	-21.4900

DISCUSSION

Osteoarthritis (OA) is a long-term disease marked by varying degrees of local inflammation, crepitus, effusions, and joint stiffness, discomfort, and mobility restrictions. Although the illness predominantly affects the articular cartilage, other structures and tissues that are also affected include the ligaments, capsule, synovial membrane, and periarticular muscles[9]. The slow degeneration of joint cartilage is the root cause of osteoarthritis, a degenerative joint condition. The knees, hips, spine, and hands are the most often impacted joints, while it may affect practically all joints. Osteoarthritis of the hip and knee has a significant negative influence on the population[10].

Before, it was assumed that OA was just a "wear and tear" condition. The loss of the articular cartilage in the joint and the subsequent inflammation were believed to be caused by chronic loading and poor biomechanics on the joint. As a result, there was stiffness, edema, and decreased mobility. It is now understood that OA is a much more complicated process made up of metabolic and inflammatory components. Articular cartilage, which suffers substantial degradation throughout the course of OA, is what makes the illness most apparent. The smooth cartilage found inside intervertebral discs and at the ends of long bones is known as articular cartilage. It can transport large loads while offering a low friction surface for articulation. even if the cartilage's collagen's half-life[11].

In this study, 36-Item Short Form Survey (SF-36) was collected from Hip osteoarthritis patients, A total of 196 patients participated in this study. The data was collected from the following hospitals of district Gujranwala District headquarter hospital (Gujranwala) Tehsil headquarter hospital Wazirabad Sikandar medical complex (Gujranwala) Orthopedic and physical therapy clinic (Wazirabad) Med care hospital(Gujranwala). To assess the quality of life for individuals with hip osteoarthritis, data were thoroughly evaluated. From those 196 patients there were 37(18.9%) males and 159(81.1%) females. Out of 196 participants aged group between 45 to 60 years were 68(34.7%),61 to 70 years were 75(38.3%) and 71to 80 years were 53(27%).besides this occupation wise there were House Wife 151(77%),followed by Private Job 12(6.1%)and others 19(9.7%)36-Item Short form Survey (SF-36) was used in the study. With eight subscales of SF-36 such as physical functioning, limitations because of physical health, limitations because of emotional problems Energy/fatigue Emotional issues Social functioning General health and Pain Many people are not aware about their developed disease and my study will provide information regarding this disease in future.in the physical functioning.

According to the study, those with doctor-diagnosed arthritis had significantly worse HRQOL than those without arthritis in each Sf-36 questionnaire dimension. In our study, we found that arthritis reduces quality of life since it impairs daily routines and imposes several limits on an individual's way of life. Another earlier study had found that those with arthritis had lower HRQOL than those without the condition12[12].

In this study, out of all subgroups of SF-36 that is The most severely impacted areas of this illness were physical functioning, role restriction owing to physical health, role limitation due to emotional issues, and energy and exhaustion (arthritis). According to a previous study, all of the SF-36 domains had significantly degraded. Role limitation, Role emotional, vitality and social functioning were the most affected SF-36 subgroups. In comparison to men, females experienced decreased SF-36 ratings. Individuals with low socioeconomic position and low levels of education showed significantly lower SF-36 scores[13].

This study, included patients 385 were observed for a mental health assessment. For this purpose a question related to emotional problems was added which shown the mean 10.64 for the results. This shows that, mental problems are also basic and related cause of the disease with low income affecting the physical health. In other study, it revealed that the mental wellbeing component was more influenced than the physical well-being component, with the emotional issues being the foremost influenced (22.7%). The physical component had a positive relationship with income. While the mental component had a negative association with disease length. The physical component had a positive link with disease duration[14].

Twelve prevalent musculoskeletal illnesses were evaluated in a research with 3664 individuals. According to the findings, those with musculoskeletal issues (n=1776) had a lower quality of life than people without any musculoskeletal conditions (n=1888; results). For every SF-36 dimension, lower scores were discovered. Again across all SF-36 questionnaire categories, the lowest scores were observed for fibromyalgia, osteoporosis of the hip, osteoporosis, and rheumatoid arthritis. Additionally, on the EQ-5D dimensions, subjects with musculoskeletal diseases reported higher health issues than subjects without musculoskeletal diseases[15].

CONCLUSION

According to the findings of the study, Quality of life is significantly poor in hip osteoarthritis patients. Physical functioning, Role limitations due to physical health, role limitations due to emotional problems, Pain and General health were the most affected SF-36 subgroups.

Conflict of interest: Nil

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