Original Article

IMPACT ON QUALITY OF LIFE IN PATIENTS WITH KNEE OSTEAOARTHRITIS IN FAISALABAD

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ABSTRACT:

BACKGROUND: There are many researches present in Pakistan and other countries on quality of life inpatients of knee osteoarthritis.
AIMS & OBJECTIVES: To analyze the quality of life affected in patients due to knee osteoarthritis and to see the association between pain in walking and physical function variable by using Womack scale.
METHODOLOGY: Patients from 40 to 65 years were included in this study as per inclusion criteria. This is cross-sectional study. Simple convenient sampling technique is being used. Sample size is 138. Patients with grade 3 knee osteoarthritis were included, diagnosed as per criteria of Kellgren and Lawrence grading scale. Data collected by using Womack scale from Allied hospital, District headquarter hospital (DHQ), Madinah teaching hospital (MTH) and Physiotherapy clinics the University of Faisalabad.
RESULTS: The total Womack score of 138 patients was collected, 20 patients reported of having less than 35% affected quality of life and 80reported in between 35%-50%, 29 reported in between 50%-65% and 9 show severe and above 65% affected quality of life and cause difficulty in performing activities of daily living. Majority of patients have up to 50% affected quality of life. There is also a strong association between pain in walking and physical function variables of Womac scale.
CONCLUSION: Patients with grade 3 knee osteoarthritis have affected quality of life. Pain in walking and physical function is associated with each other, and alpha was less than 0.05 so it was concluded that physical function variables are significantly associated with pain during walking.
KEYWORDS: Knee, Osteoarthritis, Quality of life, Womac, Kellgren and Lawrence.

INTRODUCTION:

Osteoarthritis is a joint disease that degenerate cartilage and slowly affects soft tissues and bone, which can lead to synovit is with chronic inflammation, decrease in joint space, osteophyte, bone remodeling and it lead to severe irreversible destruction of joint. Knee osteoarthritis is health problem that occur due to age, defined by repetitive decrease of articular cartilage resulting from pain, impairment, and disability. World Health Organization characterizes the quality of life "QOL" as a individuals perception of his/her position in life with response to the path of life and esteem frameworks, in which a individual lives and his links, objectives, desires, guidelines and relations[1]. It is expressed that osteoarthritis is the most widely recognized sickness in our general public, with overall circulation. There is a proof that osteoarthritis

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injuriously affects physical well being, every day exercises, mental prosperity, business and monetary prosperity[2].

Knee osteoarthritis (OA) has a critical hurtful effect on well being related personal satisfaction. Restrictions in mobile, stair climbing, and hunching down are general patient grievances that truly meddle with exercises of everyday living and movement[3]. Patients with knee OA had fundamentally poorer quality of life contrasted and sound controls. WOMAC can be utilized as a touchy measure for inability of patients with knee osteoarthritis[4]. Osteoarthritis was related with significant hindrance, and importantly affected, wellbeing related personal satisfaction in the zones of ambulation, body care and development, enthusiastic exercises, rest and home administration, and work, especially in patients ages 41–60[5].

Mündermann assessed that more the speed of gait, more will be the Ground reaction force, and increase in overall joint forces and motion happening at knee level. Patients with osteoarthritis walks more slowly than the healthy peoples[6]. So, there is a need to conduct a research with this aim to check the quality of life in patients with Knee Osteoarthritis and to find out association between pain in walking and physical function variables of Womac scale.

MATERIALS AND METHODS:

Study Design:
This was Observational cross sectional study.

Sample Technique:
We used Simple Convenience Sampling technique.

Duration of Study:
The study duration was 3 Months.

Study Population:
All the patients with grade 3 knee osteoarthritis as per diagnosed criteria of Kellgren and Lawrence system for classification of osteoarthritis of knee.

Sample Size:
Sample size is 138 including males and females.

Inclusion Criteria:
- Patient with grade 3 knee osteoarthritis as per diagnosed criteria of Kellgren and Lawrence grading system[7].
- Patient from age 45 to 65 years.
- Both male and females.
- Willing to take part in study.

Exclusion Criteria:
- Patients who are not willing to participate.
- Patients with other comorbidities.
- Patients having traumatic knee injury, Total Knee replacement and ORIF.

Study Setting:
- Allied Hospital Faisalabad.
- Madina Teaching Hospital Faisalabad.
- DHQ Hospital Faisalabad.
- Physical therapy clinics The University of Faisalabad.

Data Collection Procedure:
Data was collected using a questionnaire based survey from willing patients. Patients were interviewed after the informed consent and questionnaire was filled by asking questions from Womac Scale.

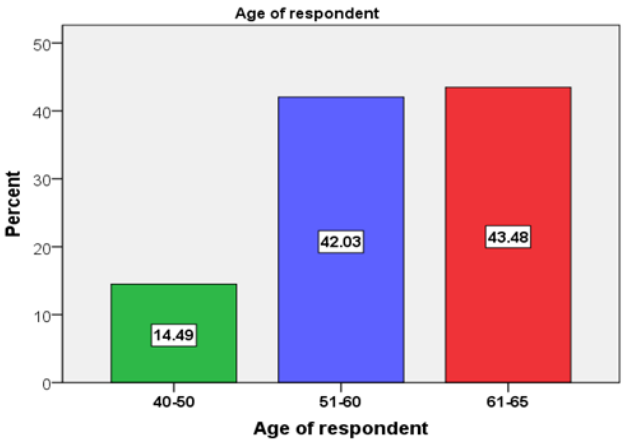
Data Collection Tools:
The data was collected through, WOMAC which include intensity grading of Pain, Stiffness and Physical functions in activity of daily living. The reliability for the three dimensions pain, stiffness, and physical function is 0.91, 0.81, and 0.84, respectively and its validity is 0.60 to 077 [8].

Data Analysis Procedure:
WOMAC scale was being used toassess the quality of life in Knee Osteoarthritis and result percentage is given in results. Data was analyzed by SPSS Version 23.

Statistical Test :
In data analysis frequencies of filled data of patients is given with Pie and bar chart and chi square test was applied on pain in walking and some other parameters of physical function.

RESULTS:

The data was encoded and entered into the SPSS (Statistical package for social sciences) software version 23 and is used for the analysis of data and presented with the help of charts & frequency tables.



The above mentioned table shows that 14.5% patients reported of having grade 3 knee OA b/w 40-50 years of age, 42% in 51-60, and 43.5% in 60-65 years of age.

Gender of respondent		Percent
	Male	60.1%
	Female	39.9%
	Total	100.0%

The above mentioned table shows that 60.1% are male reported in my study and there were 39.9% females who complaints of having grade 3 knee OA.

Effect on QOL		Frequency	Percent
	Below 35%	20	14.5%
	35%-50%	80	58.0%
	50%-65%	29	21.0%
	Above 65%	9	6.5%
	Total	138	100.0%

The above mentioned table and chart shows the total Womac score of all the patients data collected, where below 20 out of 138 patients reported of having less than 35% affected quality of life and 80 out of 138 patients reported in between 35%-50%, where as 29 patients in b/w 50%-65% and 9 patients show severe and above 65% effected QOL in performing ADL's.

Chi-Square test for association b/w Pain in walking and Physical Function

Physical functions	**Pain during walking**	
	Pearson Chi-Square value	P-value
Descending stairs	309.476	0.000
Ascending stairs	204.555	0.000
Walking on flat surface	223.203	0.000
Getting in/out of car	188.439	0.000
Going shopping	223.473	0.000
Getting in /out of bath	208.253	0.000
Getting on/off toilet	185.916	0.000

It is demonstrated by table that P-value of Chi-Square test of association between "pain during walking" and "physical functions" is less than 0.05 for all variables. This indicates that all variables of physical function namely descending stairs, ascending stairs, walking on flat surface, getting in or out of car, going shopping, getting in or out of bath and getting on/off toilet are significantly associated with pain during walking. So, we can say that physical functions (which is an important parameter of quality of life) are affected by pain that patient experience during walking.

DISCUSSION:

The present study is on impact on quality of life in patients with knee osteoarthritis and the results shows that majority of the patients with grade 3 knee osteoarthritis have up to 50% affected quality of life. Variables of physical function in Womac questionnaire namely descending stairs, ascending stairs, walking on flat surface, getting in or out of car, going shopping, getting in or out of bath and getting on/off toilet are significantly associated with pain in walking. Kawano et al., (2015) also found that the Individuals with osteoarthritis have a low perception of their quality of life in the domains of functional capacity, functional limitations and pain. In my research the frequency tables' shows the pain, stiffness and physical function of the patients and quality of life is affected in knee osteoarthritis and patients face many problems in performing

activities of daily living. Whereas another previous research shows that the greater the degree of osteoarthritis, the lower the perceived quality of life for individuals with this joint disease[1]. Chancon suggested that the perception of quality of life is negatively affected by increasing levels of joint pain, old age, and low socioeconomic status in patients with knee osteoarthritis[9].

Dominick evidence that OA has a detrimental effect on physical health, daily activities, psychological health, employment and economic well-being. This points to a considerable problem, for both individuals and society, and highlights the need to address it effectively[10].

There are many researches that support our studies results that knee osteoarthritis affect the patient quality of life and compromise their overall performance in activities of daily living and there is strong association between pain in walking with the physical function of patient.

CONCLUSION:

This study was conducted to check the affect of grade 3 knee osteoarthritis in Faisalabad population, overall affected quality of life results shows that 80 out of 138 of sample show 35%-50% affected quality of life which is 58% of the overall participants. Chi-square association is less than 0.05 so it is concluded that all variables of physical function namely descending stairs, ascending stairs, Walking on flat surface, getting in or out of car, going shopping, getting in or out of bath and getting on/off toilet are significantly associated with pain during walking.

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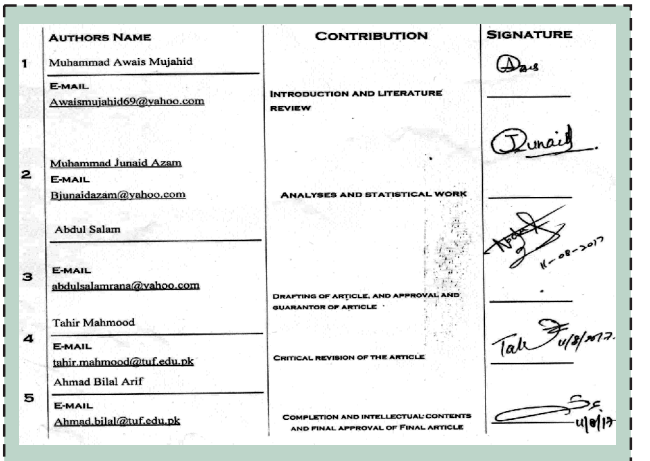

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