Determination of the functional disability in osteoarthritic individual

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ABSTRACT:
The aim of the study is to determine the factors associated with functional disability and to explore it in osteoarthritic individual. The study includes men and women above 40 years of age from Kingdom of Saudi Arabia and Pakistan. The survey was conducted to collect the data with the help of a questionnaire in which arthritis impact measurement scale (AIMS2-SF) was used for the analysis. The study is to improve the functional ability of patients suffering from osteoarthritis.

Keywords:
Osteoarthritis, Functional disability, Arthritis impact measurement scale (AIMS2-SF)

Introduction:
Osteoarthritis is the most common musculoskeletal disorder, making it an important cause of pain and functional disability¹. It is a degenerative joint disease characterized by a progressive degeneration of joint’s cartilage and osteoarthritis, which cause functional disability. It is a disease of cartilage, which becomes eroded & progressively thinned as the disease proceeds. The prevalence of arthritis increases considerably with age, and has a marked increase after the age of 50². The pattern of development of joint disease in osteoarthritis is additive. The disease moves slowly from joint to joint and also progresses very slowly (in most cases) within individual joints. Its greatest impact is on weight bearing joints such as the hips and knees. Involvements of these joints are the commonest cause of disability in an elderly patient. Tibiofemoral joint osteoarthritis (OA) is one of the most common and disabling medical condition worldwide³-⁹. It is responsible for more chronic disability than any other medical condition and is one of the most frequent medical problems¹⁰-¹¹-¹². Disability and functional limitations in people with knee osteoarthritis & one of the most notable factors is decreased quadriceps femoris muscle strength (Force-generating capacity). Disability can be identified accurately through responses to a wide variety of questions about the ability to perform activities ranging from basic self-care to household activities and more strenuous tasks. Increasingly, functional status has also been characterized through the use of measures of physical performance. These are objective tests of subject’s performance of standardized tasks, evaluated according to predetermined criteria that may include counting repetitions or timing the activity¹³. Disability has a substantial impact on the quality of life of patients and affects daily living¹⁴. Arthritis Impact Measurement scales has good psychometric properties and the advantage of including measures of satisfaction with health and patients priorities for improvement. The full-length versions are quite time consuming to complete. The short-form (AIMS2-SF) that has similar psychometric properties to the full-length versions, may be more appropriate for postal surveys, studies where patients are required to complete several questionnaires, and in clinical practice. There are 9 scales in Arthritis Impact Measurement Scales mobility, e.g. physical activity (walking, bending, lifting), dexterity, household activity (managing money and medications, housekeeping), social activities, activities of daily living, pain, depression, and anxiety. AIMS2 includes arm function, social support, and work.

Material & Method:
This study was used to measure the functional disability in osteoarthritis. A simple random sampling technique. (Arthritis Impact Measurement Scales 2 (AIMS2-SF)
has been used in this study to collect the data regarding variables. The sample consists of 100 respondent, of the age above 40 years (male & female both). The Questionnaire was filled by the patients from Kingdom of Saudia Arabia and Pakistan.

**Result:**
Overall 100 patients of the age above 40 years were investigated and the result is analyzed below. Ninety percent of the individual, responded positively to the questionnaire stated below.

a) How often were you physically able to drive a car or use public transportation?

![Graph No: 1](image1)

b) How often were you in bed or chair for most of the day?

![Graph No: 2](image2)

c) Did you have trouble doing vigorous activities such as running lifting heavy objects or participating in strenuous sports?

![Graph No: 3](image3)

d) Did you have trouble either walking or several blocks or climbing a few steps of stairs?

![Graph No: 4](image4)

e) Were you unable to walk unless assisted by another person or by a cane crutches or walker?

![Graph No: 5](image5)

**Discussion:**
Osteoarthritis characterized by the progressive degeneration of articular cartilage and underlying (subchondral) bone, results in chronic pain and impaired functional ability of the hands, feet, hips, knees, and spine. Depression, pain intensity, educational level, BMI and social contacts are the
most important factors associated with disability of the lower limb in patients suffering from osteoarthritis of the knee or hip. A study among patients with arthritis revealed a linear relationship between depression severity and functional disability. Though the causality of the relationship remains unclear; it seems to be bidirectional, besides its relation to disability. Simple interventions, providing some kind of social support, for instance monthly telephone calls, have shown to improve patients'. The intervention for osteoarthritis patients, involving for instance the spouse, have shown to achieve better results. Increased body weight is one of the major risk factors for developing Osteoarthritis, and for aggravation of joint damage and related symptoms. Therefore it seems quite plausible that the BMI is associated with functional impairment. Radiological severity of Osteoarthritis has shown to be correlated with the BMI, especially in women. Prevalence of Osteoarthritis increases with age. Osteoarthritis is a degenerative disease, and severity of pain and functional disability increase. Present findings support and is in line with previous results where age was reported as a predictor for increased disability in Osteoarthritis.

Conclusion:
The survey revealed that most of the people are suffering from functional disabilities, and therefore suffer from depression. They should be encouraged to improve the functional ability from osteoarthritis.

REFERENCES:


