TO ASSESS THE FUNCTIONAL ABILITY OF WOMEN WITH SYMPTOMATIC KNEE OSTEOARTHRITIS IN A SELECTED COMMUNITY IN KANYAKUMARI DISTRICT

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ABSTRACT

Osteoarthritis (OA) is the most common type of arthritis that affects the elderly. It is the fourth leading cause of persons living with disability. Ageing population brings new challenges to the health care system with geriatric population suffering from uncontrolled, improperly treated chronic diseases, and disabilities. The problem under the study was to assess the functional ability of women with symptomatic knee osteoarthritis from a selected community area in Kanyakumari district of Tamilnadu. The objectives of the study were to assess the functional ability of women with symptomatic knee osteoarthritis, and to find out the association of functional ability and selected demographic variables. A descriptive research design was adopted for this study. The population selected for the study comprised of women with symptomatic knee osteoarthritis from a selected community area in Kanyakumari district. 60 women were selected by non probability purposive sampling technique. The Western Ontario McMaster Universities Osteoarthritis Index [WOMAC] was used and data was collected by interview method. Frequency, percentage, chi square test were used to analyse the study. The result of the study revealed that a majority 45 [75 %] of the women suffered with moderate functional disability, 13.3% of women had severe functional disability and 11.7 % of women had extreme functional disability. The findings revealed that statistically significant association was found between duration of knee pain and functional ability of the subjects at p=0.01. No association was found between functional ability and other demographic variables.

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INTRODUCTION

Osteoarthritis (OA) is a major cause of disability worldwide. It is a major cause of disability in older adults. According to WHO 9.6% of men and 18.0% of women aged over 60 years has symptomatic OA worldwide. The prevalence of symptomatic knee OA is estimated at 12% of the US adults, older than 65 years of age. The prevalence of OA in India is 22% – 39%. It is reported more among women than men (Arthritis Foundation of India). Nearly 45% of women with age over 65 years have symptoms, while radiological evidence is found in 70% of those over 65 years. Data from the Framingham, a population based study of OA reported 1.7 times higher incidence of OA of the knee in women than in Men (95% CI: 1.5 TO 2.7); similarly women were estimated to have a life-time increased risk of symptomatic knee OA of 46.8%. The incidence of OA is rising due to ageing population, obesity, sedentary life style and uneven distribution of load stress across the articulating surface in the joint. It is more prevalent among those engaged in agriculture, manual labour (men) and house hold work (women). The reason for these differences is not completely clear, but an increase in OA observed in women at the time of menopause leads to the possibility that hormonal issues may play a role in the development of OA. 80% of those with OA have limitation in movement and 25% cannot perform their major daily activities of life.

The leading reason for disability in general population is OA. Data from the Center for disease control (CDC) show that approximately 1 in 3 adults (37.6%) with arthritis reported limitation in their physical activities. A national health survey in France found that individuals with knee OA compared to the non- knee OA individuals had an almost doubled higher limitation in walking and carrying objects. Disability or functional impairment refers to a person's inability to perform basic tasks like getting out of bed, taking bath, using the toilet, dressing, preparing meals and eating without assistance. Knee OA patients' physical impairments such as knee pain, loss of knee motion, and decreased quadriceps strength have been associated with knee OA and are believed to contribute to disability and progression of the disease (G. Filzgerrald et al, 2004). Knee OA also affects an individual's physical functioning. Knee OA is progressive and has a capacity to produce pain, inflammation and joint destruction with consequent limitations in the range of movement and loss of ability to walk. Results also found that knee OA mainly affected walking (22%), carrying objects (18.6%) and dressing (12.8%).

The purpose of this study was to evaluate the functional ability of women with symptomatic knee osteoarthritis. Studying functional ability is required to support a patient's independence and it is increasingly reckoned as a key to evaluate the health status of the elderly.

PROBLEM STATEMENT

A descriptive study to assess the functional ability of women with symptomatic knee osteoarthritis in a selected community area in Kanyakumari District

OBJECTIVES

- To assess the functional ability of women with symptomatic knee osteoarthritis.
- To find out the association of functional ability of women with symptomatic Knee Osteoarthritis and selected demographic variables.

METERIALS AND METHOD

Research approach: Quantitative research approach was adopted.

Research design: Descriptive research design was adopted for this study

Setting of the study: The study was conducted in a selected community area

Population: Women who were living in the selected community area with symptomatic Knee Osteoarthritis

Sample size: Total sample size for this study was 60 women with symptomatic knee OA.

Sampling technique: Subjects of the sample were selected by non probability purposive sampling technique.

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria:

Women with symptomatic OA

- Age above 60 years.
- Knee pain in unilateral or bilateral
- Willing to participate in the study
- Available during data collection period

Exclusion criteria:

- Unresolved neurological disorder
- History of major knee trauma
- underwent hip or knee replacement

DEVELOPMENT OF TOOL

Section A: It includes demographic data of the geriatrics such as age, gender, education, occupation, religion and marital status.

Section B: It includes clinical data such as BMI, duration of knee pain, which knee is affected, and history of doing exercise.

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Section C: Consists of WOMAC Osteoarthritis Index to assess the functional ability of arthritis. WOMAC is widely used in the evaluation of knee including knee pain, stiffness, and physical functioning of the joint. The WOMAC is among the most widely used standardised assessment questionnaire in arthritis research. The WOMAC measures five items for pain (score range from 0 - 20), two items for stiffness (0 - 8) and 17 items for functional ability (0 – 68). The questions were scored on a scale of 0-4 which corresponds to none (0), mild (1), moderate (2), severe (3), and extreme (4). The sum of the score for all three sub scales gives a total WOMAC score.

ANALYSIS

Table 1:

Frequency and percentage distribution of the sample with demographic characteristics

(N=60)

Characteristics		frequency	Percentage (%)
Age in year	61 - 65	21	35.0
	66 – 70	26	43.3
	71 – 75	13	21.7
	76 – 80	–	–
Education	Illiterate	14	23.3
	Primary school	16	26.7
	Higher secondary	23	38.3
	Graduate	7	11.7

Occupation	Sedentary	33	55.0
	Moderately sedentary	20	33.3
	Heavy worker	13	21.7
Religion	Christian	34	56.7
	Hindu	17	28.3
	Muslim	9	15.0
	others	–	–
Marital status	Married	42	70.0
	Unmarried	3	5.0
	Widow/widower	15	25.0
	Separated	–	–

Table 2:
Frequency and percentage of sample with clinical data

(N=60)

Characteristics		**frequency**	**Percentage (%)**
BMI	Normal	6	10.0
	Over weight	30	50.0
	Obese class I	24	40.0
	Obese class II	–	–
Duration of knee pain	Less than 3 years	9	15.0
	3 – 6 years	17	35.0
	7 – 10 years	27	45.0
	More than 10 years	7	5.0
Affected knee	Unilateral	14	23.3
	Bilateral	46	76.7
H/O doing Exercise	Yes	13	21.7
	No	47	78.3
If yes, type of exercise	Walking	13	100.0
	Cycling	–	–
	Jogging	–	–
	Others	–	–

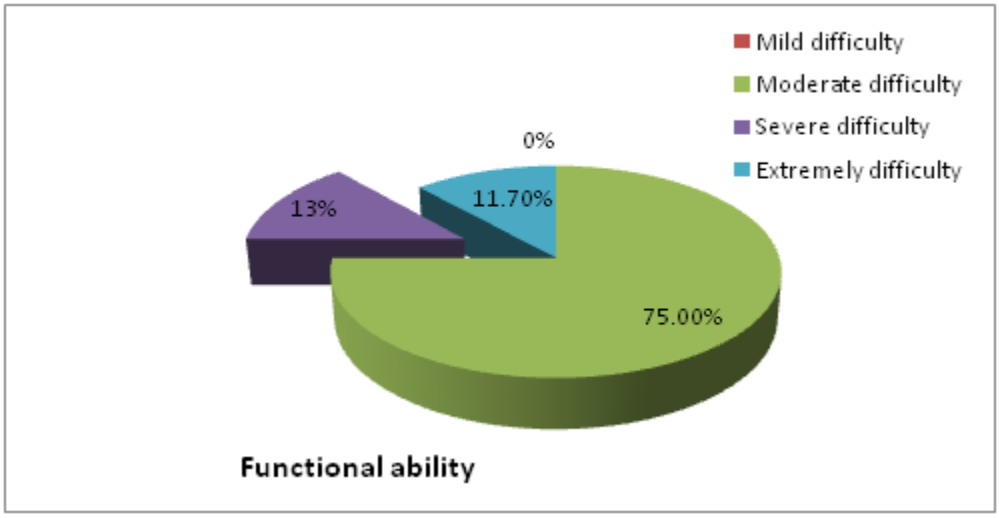

Figure 1: Functional ability of samples in percentage

Table 3:
Association between functional ability and selected demographic and clinical data

(N=60)

Sample characteristics	Chi value	df	P (P=>0.01)
Age	5.876	9	21.67
BMI	1.950	9	21.67
Marital status	6.112	9	21.67
Education	3.874	9	21.67
Occupation	7.000	9	16.81
Duration of knee pain	60.975	9	21.67
Affected knee	1.227	3	11.34
History of doing exercise	2.140	3	11.34

Table no 3 reveals that there was a significant association between functional ability and duration of knee pain. There was no association between other demographic and clinical data

DISCUSSION

The present study results indicated that majority of the women between the age group of 66 to 70 years, which was around 55% of the women, were sedentary workers and they had knee pain for 7 to 10 years. WOMAC OA index was used to assess the functional ability of women and majority of the women were found to have moderate difficulty. It is affecting their activities of daily living. A similar study was conducted by Chai Nien Foo et al. to determine the baseline level of knee pain and functional disability among knee OA patient. A total of 300 patients aged 35 to 75 years diagnosed with OA were recruited. The study findings showed that majority of the participants had moderate level of knee pain and functional disability in daily living.

This finding was also supported by another study which was conducted by M.S Radha and M.R Gangadhar at Mysore. The finding showed that based on WOMAC score, out of 150 knee OA patients, the mean average of 91 patients was found with moderate pain and stiffness in physical functioning.

CONCLUTION

Knee OA is one of the most common diseases which cause a major burden of physical disability. It is incurable with currently available therapeutic measures. The only way for reduction of burden of the disorder is prevention. There is a need to take necessary steps to increase awareness about the prevention of risk factors. Proper positioning of the knee joint, regular treatment and daily exercise could help patients to manage the pain, maintain mobility and physical functioning.

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