



“A Study To Explore The Lifestyle Factors Associated With Knee Osteoarthritis Among Rural Elder Women”

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ABSTRACT

Background: The meaning of health has evolved over time. Early definitions of health focused on the theme of the body's ability to function; health was seen as a state of normal function that could be disrupted from time to time by disease.¹ Actually, “arthritis” is not a single disease; it is an informal way of referring to joint pain or joint disease. It is a degenerative, "wear-and-tear" type of arthritis that occurs most often in people 50 years of age and older². Arthritis affects the functioning ability of a person and associated with many life style factors.

Aim: To explore the functional ability and factors associated with knee osteoarthritis among rural elder women.

Materials and methods: The samples were selected by complete Convenient sampling Technique method. The sample consisted 160 elder women from Keludi village, Bagalkot with 80 in case group (with knee osteoarthritis) and 80 in control group. Cases were screened using ACR criteria of knee osteoarthritis. Controls were selected with reference to age of cases. Both the groups were matched with reference to age prior to pretest by using paired t test. Data collection was done using Structured questionnaire to assess baseline profile and HAQ-DI was used to assess functional ability. Binary logistic regression analysis was used to determine the association between knee osteoarthritis and functional ability. **Findings of the study:** In case group 43.8% elder women were in age group 50-60 years. 45% faced much difficulty to dress and undress themselves, 38.8% had much difficulty to get in and get out of bed by their own and 45% were unable to stand up from chair. A significant association was found between among knee osteoarthritis among elder women and their functional ability; walking ($P < 0.0215$), stand up and get in bed ($P < 0.0261$) and grip ($P < 0.002$).

Key words: Knee osteoarthritis, Elder women, Functional ability, Rural and Physical activity.

Introduction :

A healthful lifestyle provides the means to lead a full life with meaning and purpose. Actually, "arthritis" is not a single disease; it is an informal way of referring to joint pain or joint disease. There are more than 100 types of arthritis and related conditions. People of all ages, sex and races can and do have arthritis, and it is the leading cause of disability in America. More than 50 million adults and 300,000 children have some type of arthritis. It is most common among women and occurs more frequently as people get older. Symptoms may come and go. They can be mild, moderate or severe. They may stay about the same for years but can progress or get worse over time. Severe arthritis can result in chronic pain, inability to do daily activities and make it difficult to walk or climb stairs. Arthritis can cause permanent joint changes.³ Knee arthritis can make it hard to do many everyday activities, such as walking or climbing stairs. It is a major cause of lost work time and a serious disability for many people. The most common types of arthritis are osteoarthritis and rheumatoid arthritis, but there are more than 100 different forms. While arthritis is mainly an adult disease, some forms affect children. Although there is no cure for arthritis, ⁴It is a degenerative, "wear-and-tear" type of arthritis that occurs most often in people 50 years of age and older, although it may occur in younger people, too. In osteoarthritis, the cartilage in the knee joint gradually wears away. As the cartilage wears away, it becomes frayed and rough, and the protective space between the bones decreases. This can result in bone rubbing on bone, and produce painful bone spurs. Osteoarthritis usually develops slowly and the pain it causes worsens over time. ⁵ One study found that only 15% of patients with radiographic findings of knee OA were symptomatic. Not factoring in age, the incidence of symptomatic knee osteoarthritis is roughly 240 cases per 1,00,000 people per year. Osteoarthritis (OA) is a highly prevalent Rheumatic Musculoskeletal Disorder, that affected 303 million people globally in 2017.⁶

Materials and Methods :

It was a cross sectional study with case control research design. Participants were 160 elder women selected from Keludi village, Bagalkot by Convenient sample technique Among 160 elder women, 80 women with knee osteoarthritis were enrolled as cases and the remaining 80 elder women without knee osteoarthritis were enrolled as controls. The data were collected by using HAQ-DI health assessment scale.

Results:

Table no. 1 :Distribution of cases and controls according to their functional ability data.

Sr No .	HAQ-DI Variable s	Character	Category	Case Group		Control Group	
				F	%	F	%
1	Dressing	shampoo	Without any difficulty	1	1.25	2	2.50
			With some difficulty	10	12.50	42	52.50
			With much difficulty	33	41.25	27	33.75
			Unable to do	36	45.00	9	11.25
		Dressing	Without any difficulty	6	7.50	0	0.00
			With some difficulty	20	25.00	58	72.50
			With much difficulty	36	45.00	20	25.00
			Unable to do	18	22.50	2	2.50
2	Arising	Stand up	Without any difficulty	0	0.00	0	0.00
			With some difficulty	8	10.00	20	25
			With much difficulty	36	45.00	15	18.75

		Get in	Unable to do	36	45.00	45	56.25
			Without any difficulty	7	8.75	1	1.25
			With some difficulty	25	31.25	49	61.25
			With much difficulty	31	38.75	30	37.50
			Unable to do	17	21.25	0	0.00
3	Eating	Cut vegetable s	Without any difficulty	0	0.00	1	1.25
			With some difficulty	5	6.25	50	62.50
			With much difficulty	37	46.25	29	36.25
			Unable to do	38	47.50	0	0.00
		Lift full	Without any difficulty	11	13.75	16	20.00
			With some difficulty	27	32.92	27	33.75
			With much difficulty	35	43.75	35	43.75
			Unable to do	7	8.75	2	2.50
		Open new	Without any difficulty	19	23.75	1	1.25
			With some difficulty	7	8.75	60	75.00
			With much difficulty	12	15.00	19	23.75
			Unable to do	42	52.50	0	0.00
4	walking	Walk out	Without any difficulty	1	1.25	3	3.75
			With some difficulty	6	7.50	63	78.75
			With much difficulty	37	46.25	13	16.25
			Unable to do	36	45.00	1	1.25
		Climb	Without any difficulty	2	2.50	2	2.50
			With some difficulty	6	7.50	64	80.00
			With much difficulty	33	41.25	14	17.50
			Unable to do	39	48.75	0	0.00
		Get on and off	Without any difficulty	5	6.25	0	0.00
			With some difficulty	6	7.50	1	1.25
			With much difficulty	32	40.00	49	61.25
			Unable to do	37	46.25	30	37.50
5	Hygieni c	Wash	Without any difficulty	0	0.00	2	2.50
			With some difficulty	6	7.50	61	76.25
			With much difficulty	31	38.75	17	21.25
			Unable to do	43	53.75	0	0.00
		Cut nails	Without any difficulty	1	1.25	1	1.25
			With some difficulty	9	11.25	62	77.50
			With much difficulty	30	37.50	17	21.25
			Unable to do	40	50.00	0	0.00
6	Reach	Lift	Without any difficulty	5	6.25	0	0.00
			With some difficulty	6	7.50	61	76.25
			With much difficulty	30	37.50	18	22.50
			Unable to do	39	48.75	1	1.25
		Bend down	Without any difficulty	4	5.00	2	2.50
			With some difficulty	5	6.25	55	68.75
			With much difficulty	33	41.25	23	28.75
			Unable to do	38	47.50	0	0.00
7	Activitie s	Do chores	Without any difficulty	2	2.50	1	1.25
			With some difficulty	6	7.50	56	70.00
			With much difficulty	33	41.25	23	28.75
			Unable to do	39	48.75	0	0.00
		Get in	Without any difficulty	5	6.25	1	1.25
			With some difficulty	6	7.50	62	77.50
			With much difficulty	32	40.00	17	21.25
			Unable to do	37	46.25	0	0.00
		Run errands	Without any difficulty	4	5.00	1	1.25
			With some difficulty	5	6.25	56	70.00

			With much difficulty	38	47.50	23	28.75
			Unable to do	33	41.25	0	0.00
8	Grip	Open	Without any difficulty	7	8.75	27	33.75
			With some difficulty	5	6.25	36	45.00
			With much difficulty	34	42.50	17	21.25
			Unable to do	34	42.50	0	0.00
		Open previously	Without any difficulty	4	5.00	1	1.25
			With some difficulty	8	10.00	57	71.25
			With much difficulty	35	43.75	22	27.50
			Unable to do	33	41.25	0	0.00
		Turn faucets	Without any difficulty	0	0.00	53	66.25
			With some difficulty	35	43.75	16	20.00
			With much difficulty	26	32.50	11	13.75
			Unable to do	19	23.75	0	0.00

The above table reveals that In case, group 1.3% women had no difficulty in applying shampoo and majority, 45% were unable to apply shampoo themselves. While in control group 2.5% had difficulty and 52.8% did not have difficulty. In case, group 7.5% had difficulty to dress and undress themselves and 45% faced much difficulty to dress and undress themselves. While in control group, majority 72.5% had some difficulty.

In case group, 1.3% women had no difficulty to stand up from chair and 45% were unable to stand up from chair. While in control group, 2.5% had some difficulty and 56.3% were unable to stand up from chair. In case group 8.8% women had no difficulty to get in and get out of bed by their own and 38.8% had much difficulty to get in and get out of bed by their own. While in control group, 1.3, % faced no difficulty and 61.3% faced some difficulty.

In case group, 6.3% had some difficulty to cut vegetables and majorities 47.5% were able to cut vegetables. While in control group, 1.3% had no difficulty and 62.5% had some difficulty to cut vegetables. In case group, 5% had no difficulty to lift full cup and 43.8% had much difficulty lift full cup. While in control group, 2.5% were unable to lift full cup and majority 42.8% faced much difficulty. In case group, 8.8% faces some difficulty to open milk packet and majority 52.5% were unable to open. While in control group, least 1.3% was able to open without difficulty and majority 75% faced some difficulty.

In case group, 1.3% did not have difficulty to walks out side and majority 46.3% had much difficulty. While in control group, 1.3% were unable to walk outside and majority 78.8% faces some difficulty. In control group 7.5% faced some difficulty to climb up steps and majority 38.8% were unable to climb up steps. While in control group, 2.5% faced no difficulty and majority 80% faced some difficulty.

In case group, 6.3% had no difficulty to get on/off the toilet and 46.3% were unable to get on/off the toilet. While in control group, 1.3% faced some difficulty and 61.3% faced much difficulty to get on/off the toilet. In case group least, 7.5% had some difficulty in bathing and 53.8% were unable to bath by their own. While in control group 2.5% had no difficulty in bathing and 76.3% had some difficulty. In case group, 1.3% had no difficulty to cut nails by their own and 50% were unable to cut their nails. While in control group 1.3% had no difficulty and 77.5% faced some difficulty.

In case group, 6.3% lift and get down a 2-3 kg object above your head without any difficulty and majority 48.8% unable to lift and get down object. While in control group, 1.3% unable to lift and get down object and majority 76.3% faced some difficulty. In case group 5.00% had no difficulty pick up clothes and majority 47.5% were unable pick up clothes. While in control group, 2.5% had no difficulty and majority 80% faced some difficulty.

In case group, 2.5% women had difficulty to conduct chores and 48.8% was unable to conduct chores. While in control group, 1.3% women had no difficulty conduct chores and majority 70% faced some difficulty. In case group, 6.3% had no difficulty to get in and out of a car. Majority women 56.3% were unable to get in and out of a car. While in control group, 1.3% faced no difficulty and majority 77.5% had some difficulty. In case group, 5% had no difficulty to run errands and shops and majority 47.5% faced much difficulty to run errands and shops. While in control group, 1.3% had no difficulty and 70% faced some difficulty run errands and shops.

In case group, 6.3% women had no difficulty to open or close the doors by handling the handle and majority, 42.5% were unable to open or close the doors. While in control group, 21.3% had much difficulty to open or close the doors and 45% didn't have difficulty. In case group, 5% had no difficulty to get open the previously opened jars and 43.8% had much difficulty to get open the previously opened jars. While in control group, 1.3% had no difficulty and majority 71.3% faced some difficulty. In case group, 23.8% were not able to turn the faucets on/off and majority 43.8% faces some difficulty to turn the faucets on/off. While in control group, least 13.8% faced much difficulty and majority 63.3% had no difficulty to turn the faucets on/off.

TABLE 2 : ASSOCIATION BETWEEN OSTEORTHritis AND SOCIALDEMOGRAPHIC FACTORS.

SL N O	VARIABLES	SE	df	P valve	Ex p (B)	95%CI		Sig
						Lowe r	Uppe r	
1	Age	0.22	1	0.084	1.039	0.995	1.084	NS
2	Educational Status	0.145	1	0.052	0.754	0.567	1.002	NS
3	Occupational Status	0.151	1	0.473	0.997	0.667	1.207	NS
4	Family History	0.347	1	0.028	2.143	1.086	4.228	S
5	Income	000	1	0.236	1.00	1.000	1.000	NS
6	Religion	0.217	1	0.488	1.162	0.760	1.779	NS
7	Marital Status	0.158	1	0.037	1.391	1.020	1.896	S
8	High heel Footwear	0.342	1	0.947	0.978	0.500	1.910	NS
9	Kneeinjury	0.351	1	0.001	4.108	2.066	8.170	S

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