



A study to assess the quality of life among the women with osteoarthritis

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Article History:

Received on: 10.03.2019

Revised on: 15.06.2019

Accepted on: 19.06.2019

Keywords:

quality of life,
women,
osteoarthritis

ABSTRACT

Osteoarthritis (OA) is the most habitual type of arthritis in both developing and developed countries. It is a long-term, dynamic musculoskeletal disorder characterized by abrupt loss of cartilage in joints which results in bones rubbing together and make stiffness, impaired movement and pain. Osteoarthritis primarily affects the elderly population. It's a significant cause of disability in elderly peoples worldwide. So the present study is done to assess the quality of life among the women with osteoarthritis, residing at Thirumazhisai. A descriptive research design was done in an urban area of Thirumazhisai. 100 women with osteoarthritis are included in our study. Purposive sampling techniques method was used in selecting the samples. Modified Knee Injury and Osteoarthritis Outcome Score(KOOS) checklist were used to collect data on quality of life among the women with osteoarthritis. The woman aged above 40 years has the percentage of mild pain (26%), moderate pain (72%), and severe pain (2%). In conclusion, women aged above 40 years were found to be experiencing moderate osteoarthritis pain and quality of life of women aged above 40 years experiencing a reasonable quality of life.



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ISSN: 0975-7538

DOI: <https://doi.org/10.26452/ijrps.v10i4.1534>

Production and Hosted by

IJRPS | <https://ijrps.com>

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INTRODUCTION

Osteoarthritis (OA) is the most habitual type of arthritis in both developing and developed countries. It is a long-term, dynamic musculoskeletal disorder characterized by abrupt loss of cartilage in joints which result in bones rubbing together and make stiffness, impaired movement and pain. The disease most usually affects the joints in the hands, hips, knees, spine and feet. The disease is associ-

ated with non-modifiable and modifiable risk factors such as lack of exercise, genetic predisposition, obesity, bone density, trauma, occupational injury and gender (Lawrence *et al.*, 2008).

Osteoarthritis primarily affects the elderly population. It's a significant cause of disability in elderly adults worldwide. According to the World Health Organization (WHO), 18.0% of women and 9.6% of men aged over 60 years have symptomatic osteoarthritis worldwide. 80% of those with osteoarthritis have restrictions in movement, and 25% cannot perform their major daily activities of life (Nguyen *et al.*, 2011).

Osteoarthritis can be classified into two groups primary and secondary. Primary osteoarthritis is a long-term degenerative disease and related to aging. The water content of the cartilages lessens on increasing age, thus making them more susceptible to degradation. While secondary arthritis usually affects the joints prior in life due to specific causes such as an injury during a job requiring frequent squatting or kneeling for a long duration, diabetes

and obesity (Cross *et al.*, 2014).

Osteoarthritis is the second most habitual rheumatologic problem, and it is the most prevalent joint disease with a prevalence of 22% to 39% in India. OA is more frequent in women than in men. Nearly, 45% of women over the age of 65 years have symptoms while 70% of those extending 65 years show radiological evidence of OA (Felson *et al.*, 2000).

The prevalence of OA is rising due to population ageing and an increase in related factors such as sedentary lifestyle, obesity. The physical disability arising from loss of functional capacity and pain reduces the quality of life and increases the risk of further morbidity. As highly effective medicinal management is not available, emphasis should be given to the preventive aspect of lifestyle measures in the form of a healthy diet and exercise (Felson *et al.*, 2000).

Osteoarthritis is a long-term degenerative disorder of multifactorial etiology characterized by the depletion of articular cartilage hypertrophy at the bone of the margins, subchondral sclerosis, and range of biochemical & morphological alterations at the joint capsule & synovial membrane. Persistent changes in the late stage of OA include ulceration, softening, and focal disintegration at the articular cartilage (Waldron, 1991).

Osteoarthritis is a slowly continuing inflammatory disorder of the diarthroidal joints. Prevalence of the knee osteoarthritis is reported to increase in females during premenopausal age and remains high throughout menopause (Kaur and Sharma, 2015). The reason for this is revealed in many studies that loss of estrogen at the time of menopause multiplicates women's risk of getting osteoarthritis (Waldron, 1991).

MATERIALS AND METHODS

A sample of 100 women aged above 40 years. Samples are selected purposive sampling techniques. The descriptive study was conducted during a one-week period. Data collection was conducted in Thirumizhisai, after getting permission from the head of the Thirumizhisai.

Tool for data collection

Modified Knee Injury and Osteoarthritis Outcome Score (KOOS) checklist were used to collect data on quality of life among the women with osteoarthritis. A demographic variable consists of age, religion, type of family, education, occupation, socioeconomic status, marital status, Any other health information. The study investigators explained to the women's about the study's objectives, and requirement of consent to participate in the study.

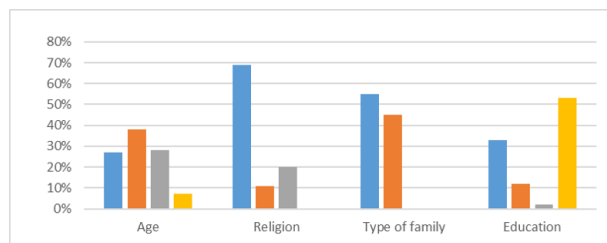


Figure 1: Shows the demographic variables among quality of life among the women with osteoarthritis

The investigators then provided instructions for filling the questionnaire, and then guided the women (Kaur and Sharma, 2015). Understanding of each question was checked by asking the women to repeat the meaning. During the filling of questionnaires, the investigators helped the women throughout and helped to simplify the purpose of each question, clarifying doubts and checking for completeness of filling up the questionnaire. Chi-square test was used to test the association between categorical variables. $P < 0.05$ was taken as statistically significant.

Tool reliability

The test-retest reliability measured using a two-way random-effects model of interclass correlation coefficient with 95% confidence interval (95% CI). An ICC equal or more than 0.70 is considered acceptable for test-retest reliability

Ethical consideration

The ethics committee has approved the project of the institution. Informed consent was obtained from participants before initiating the study.

RESULTS AND DISCUSSION

Out of 100 samples 27(27%) samples were come under type age group of 40-49 years ,38(38%) were under the age group of 50-59 years ,28(28%)samples were under the age group of 60-69years.7(7%)samples were under the age group of 70-79years Figure 1. Regarding occupation out of 100 samples 45(45%) samples were housewives, 14(14%) samples were employees, 15(15%) samples were self-employees, 26(26%)samples were daily wagers. Regarding Socioeconomic status out of 100 samples, 13(13%)samples were upper class, 64(64%) were middle class, 23(23%)samples were lower level. Regarding marital status, out of 100 samples, 82(82%) samples were married, 20(20%) samples were unmarried. Regarding health information out of 100 samples, 31(31%) samples have diabetes mellitus, 2(2%) samples

Table 1: Frequency and distribution of the variable demographic quality of life among the women with osteoarthritis

S.No	Demographic Variables	Frequency	Percentage
1. Age in years			
	a)40-49	27	27%
	b)50-59	38	38%
	c)60-69	28	28%
	d)70-79	7	7%
2. Religion			
	a)Hindu	69	69%
	b)Christian	20	20%
	c) Muslim	11	11%
3. Type of Family			
	a)Nuclear	55	55%
	b)Joint	45	45%
4. Educational Qualification			
	a)primary school	33	33%
	b)higher school	12	12%
	c)degree	2	2%
	d)none	53	53%
5. Occupation			
	a)housewife	45	45%
	b)employees	14	14%
	c) self-employed	15	15%
	d)cooli	26	26%
6. Socio-Economic Status			
	a)upper class	13	13%
	b)middle class	64	64%
	c)lower class	23	23%
7. Marital Status			
	a) married	82	82%
	b) unmarried	20	20%
8. Health Problems			
	a) diabetes milletus	31	31%
	b) renal diseases	2	2%
	c) cardiac diseases	6	6%
	d) none	61	61%

Table 2: Frequency and percentage distribution of the quality of life among the women with osteoarthritis

	Frequency	Percentage
Mild	26	26%
Moderate	72	72%
Severe	2	2%

Table 3: Graphical presentation of the mean score and standard deviation score of women aged above 40 years for mild, moderate and severe

	Mean Deviation	Standard Deviation
Mild	7.42	12.98
Moderate	35.31	18.05
Severe	1.42	10.00

have renal disease, 6(6%) samples have cardiac disease, 61(61%) samples have no health problems Table 1.

There was an association between a demographic variable with knee joint osteoarthritis among the women aged above 40 years. There was statistically significant found in any other health problems on clients to assess the quality of life among the women with osteoarthritis. Quality of being among the women with osteoarthritis aged above 40 years has the percentage of mild (26%), moderate (72%), and severe (2) Table 2.

Table 3 shows the mean score for women aged above 40 years for mild (7.42), moderate (35.31) and severe (1.42) and standard deviation score for mild (12.98), moderate (18.05) and severe (10.00).

The present study assesses the relationship between the quality of life among women with osteoarthritis aged above 40 years. The result indicates that approximately women aged above 40 years have a percentage of mild (26%), moderate (72%), and severe (2). Which is similar to findings reported by study conducted by (Salve et al., 2010) from Delhi which showed that out of 123 women with osteoarthritis only 53 (43%) were currently on treatment, out of which 40 (78.4%) are receiving treatment from government facility whereas remaining participants were seeking treatment from private practitioners, chemist and traditional healers. More than half of women (57%) who were suffering from osteoarthritis did not seek any treatment (Salve et al., 2010).

In another study conducted by (Narasimha et al., 2016). We also found there was a significant association between prevalence of knee osteoarthritis and BMI of study participants (p=0.04) and also there was a significant association between osteoarthritis

and activities of daily living (Chi-38.7, df- 1, p<0.001) (Narasimha et al., 2016).

(Pal et al., 2016) conducted a similar study. The prevalence of OA is accessible for the USA and European populations, but there are scarce studies done in other regions. In 1990, it was the 10th leading cause of nonfatal diseases contributed 2.8% years of disability. The estimated prevalence of symptomatic OA is 18% in females and 9.6% in men. In the global burden of diseases, in 2000, it was the 4th leading cause of years lived with disability (YLD) leads to 3% YLD (Pal et al., 2016).

CONCLUSION

The study urban had a higher prevalence (21.5%) of knee osteoarthritis as compared to rural women (17.5%); the difference was not significant. Our findings support the previous studies done in UT. A significant difference between the prevalence of KOA in rural (32.6%) and urban (60.3%) areas. The low prevalence among rural area could be due to more physical work, higher tolerance, less obesity, diet and lifestyle. Knee OA was significantly more common in the country compared to urban and sub-urban populations in Athens, Greece

ACKNOWLEDGEMENT

The authors are thankful to Prof. Dr.S.Kalabarathi, principal of Saveetha College of Nursing, SIMATS. The authors also wish cordial thanks to Dr.G.Bhuvaneshwari, asso. Professor, Dr Tamilselvi assistant professor of saveetha college of nursing, SIMATS, for their encouragement, valuable suggestions, support and advice given throughout the study.

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