

Quality of Life among Older Adults with Osteoarthritis

Thesis

**Submitted in Partial Fulfillment for the Master Degree
in Nursing Science
(Community Health Nursing)**

By

Abeer Tawfiek Mohamed
(B.Sc. Nursing. Cairo University)

Under Supervision of

Dr. Seham Guirguis Ragheb

Assist. Prof. of Community Health Nursing
Faculty of Nursing – Ain Shams University

Dr. Ferial Fouad Melika

Lecturer of Community Health Nursing
Faculty of Nursing – Ain Shams University

**Faculty of Nursing
Ain Shams University
2016**

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سُبْحَانَكَ لَا عِلْمَ لَنَا
إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ
الْعَلِيمُ الْعَظِيمُ

صدق الله العظيم

سورة البقرة الآية: ٣٢

Acknowledgments

*First and foremost, I feel always indebted to **ALLAH**, the most kind and the most merciful.*

*I am deeply grateful to **Dr. Seham Guirguis Raghav** Assist. Professor of Community Health Nursing Department, Faculty of Nursing, Ain Shams University, I am indebted to her constructive criticism, expertise, continuous unlimited help and for giving me the privilege to work under her supervision. I appreciate her active participation in providing me with a lot of knowledge.*

*My grateful recognition is to **Dr. Ferial Fouad Melika**, Lecture of Community Health Nursing, Faculty of Nursing, Ain Shams University, for his meticulous supervision, tireless efforts, fruitful guidance, valuable support and instructions throughout this work, all are deeply and heartily appreciated.*

My deep gratitude and thankfulness to my husband for his understanding, and my mother for her love and care.

Last but not least, I would like also to express my gratitude and appreciation to all those who helped me directly or indirectly in putting this piece of work together and making it look the way it is now.



Abeer Tawfiek

Contents

<i>Subject</i>	<i>Page No.</i>
List of Abbreviations	i
List of Tables	ii
List of Figures	iv
Abstract	v
Introduction	1
Aim of the Study	5
Review of Literature	
Part I: Osteoarthritis over view	
Epidemiology of Osteoarthritis.	
Definition of Osteoarthritis	
Predisposing Factors of Osteoarthritis	
Age and Osteoarthritis	
Classification of osteoarthritis	
Management of Osteoarthritis for older adult	
Part II: Quality of Life for Older Adult with Osteoarthritis	
Defintion of Quality of Life	
Typs of Quality of Life	
PartIII: Role of Community Health Nurse	
Subjects and Methods	54
Results	62
Discussion	80
Conclusion	93
Recommendations	97
Summary	98
References	107
Arabic Summary	—

List of Abbreviations

<i>Abbr.</i>	<i>Full-term</i>	.
--------------	------------------	---

ADLs	: Activities of daily living	
BMD	: Bone mineral density	
CHN	: Community Health Nurse	
EMR	: Eastern Mediterranean region	
IADLs	: Instrumental activities of daily living	
NHANES	: National Health and Nutrition Examination Survey	
OA	: Osteoarthritis	
QOL	: Quality of life	
ROM	: Range of motion Exercises	
SM	: Self-management	

List of Tables

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
------------------	--------------	-----------------

Tables in Review:

Table (1):	Classification of osteoarthritis.....	15
Table (2):	Maximum score for each domain of QOL.....	57

Tables in Results:

Table (1):	Distribution of the older adult with osteoarthritis according to socio-demographic characteristics.....	63
Table (2):	Distribution of the older adult with osteoarthritis according to their health profile (n=100).....	65
Table (3):	Distribution of older adult according to osteoarthritis reported clinical manifestation and joints' pain (n=100).....	66
Table (4):	Distribution of the older adult with osteoarthritis according to its consequences no =(100)	68
Table (5):	Distribution of the older adults with osteoarthritis regarding the effect of the osteoarthritis on the activities of daily living (n=100)	69
Table (6):	Distribution of the older adults with osteoarthritis according to medical Management and its types (n=100)	70
Table (7):	Distribution of the older adults with osteoarthritis according to non pharmacological measure to relief pain n= (100).....	71

List of Tables (Cont.)

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
Table (8):	Means and standard deviations of the six domains of quality of life among the study sample (n=100)	72
Table (9):	Distribution of the study sample according to the total score level of physical, psychological, social, level of dependence, environmental and spiritual domains of their QOL n= 100.....	73
Table (10):	Distribution of the study sample according to arthritis impact measurement subscale (n= 100).....	74
Table (11):	Distribution of the older adults with osteoarthritis according to total score level of environmental safety checklist of geriatric home subscale (n= 100)	75
Table (12):	Relation between quality of life of older adults and their socio-demographic characteristics (n=100).....	76
Table (13):	The correlation between total quality of life and the compliance of older adult with osteoarthritis to physical exercises, treatment, and regular follow up:	78
Table (14):	The correlation between the number of affected joints and duration of the disease among the older adult with osteoarthritis and the total quality of life score level	79

List of Figures

<i>Figure No.</i>	<i>Title</i>	<i>Page No.</i>
-------------------	--------------	-----------------

Figures in Review

Figure (1):	Effect of osteoarthritis on joints	17
Figure (2):	Different between normal and arthritic joints...	21
Figure (3):	Quality of Life Model.....	26

Figures in Results

Figure (1):	Distribution of the older adults regarding the gender (n=100).....	64
Figure (2):	Distribution of the study sample according to their age (n=100).....	64
Figure (3):	The effect of osteoarthritis in the quality of life for older adult	74

Abstract

Osteoarthritis is one of the most prevalent and disabling chronic conditions with multiple effects on older adults' life. **Aim of this study** was to evaluate the quality of life among older adult with osteoarthritis. **Sample** under study was consisted of 100 male and female older adults. A descriptive design was utilized in this study. **Setting:** the study was conducted at four geriatric home. **Data collection** Four tools were used to collect pertinent data. **I**-structured interviewing questionnaire –**II**-quality of life scale.**III**-Environmental home Safety assessment scale. **IIII**- Arthritis impact measurement scale. **Results**, revealed that mean age was 72.4 ± 11.8 , secondary education and university education were prevalent among the study sample, Females were affected by osteoarthritis more than males. The majority of the study sample had moderate level in physical and psychological aspect of the Quality of Life, Statistical significant correlations were detected between level of education, monthly income, age, compliance of medications and duration of disease. **Recommendations:** the necessity of data-base filling in every geriatric home that includes. Clients and medical data for each elderly client. The educational programs should be Implemented for the elderly clients to increase their awareness regarding the disease.

-
- **Key –Words:** Osteoarthritis, Quality of Life, Older adult, Geriatric homes
 - **Master Degree** Ain Shames University,2016
-

Introduction

Quality of life (QOL) is very important issue, nowadays is defined as encompassing major areas of functioning in the physical, psychological and social realms. It is acceptable state of physical, mental, social and emotional health as determined by the individual. Quality of life (QOL) for adults is greatly influenced by their life style, culture, education, family strength and integration into community (*Miller, 2013 and Skevington et al., 2012*).

Osteoarthritis (OA) in older adults is the first common type of arthritis it is common chronic degenerative joint disease also known as non inflammatory joint disease, which affects the hands, spine, and weight –bearing joint such as hips, knees and ankles, Osteoarthritis is an inevitable part of aging; it affects weight bearing joints "hip, knee, spine, hand and feet (*Mauk, 2012 and Miller, 2013*).

Osteoarthritis in older adult is becoming increasingly apparent that the subchondral bone, periosteum, peri articular ligaments, periarticular muscle, synovium, and joint capsule are all richly innervated and are the likely source of nociception in osteoarthritis. In addition, it is apparent that local tissue alterations in the bone and meniscus and alignment of the lower extremity are important in terms of disease genesis (*Hunter, 2009*).

A group of older adults with osteoarthritis show fast progression of the disease process leading to disability and ultimately joint replacement. Apart from symptom relief, no treatments have been identified that could eradicate the disease process. Therefore, there has been increasing attention devoted to the understanding of the mechanisms that are driving the disease process. The biology of the cartilage-subchondral bone unit has been highlighted as a key in osteoarthritis, and pathways that involve both cartilage and bone formation and turnover have become prime targets for modulation, and thus therapeutic intervention (*Luyten et al., 2009*).

New diagnostic recommendations for older adults with knee osteoarthritis, have been published, one on risk factors female sex, aging, overweight, joint injury, mal alignment, joint laxity, occupational and recreational use, family history, and Heberden's nodes (bone overgrowth at the distal finger joints), and one on clinical diagnosis that focused on 3 symptoms: pain on use, short-lived morning stiffness, and functional limitation, and 3 signs: crepitus, restricted movement, and bony enlargement. The third recommendation called for plain radiography of the knees, with a weight bearing, semi-flexed view, plus a lateral and skyline view (*Zhang et al., 2009*).

Social binge is affected by osteoarthritis. Older adults with osteoarthritis frequently experience decreased community involvement. Economic impact, Inadequate Access to care,

financial burdens due to health care costs and income loss resulting from work limitations and missed work. There has been an increasing interest in quality of life assessment in Clinical research and practice *Snyder et al., (2012)* discussed that Psychological impact, Stress, depression, anger, and anxiety often. Accompany osteoarthritis Older adult may have difficulty coping with pain and Disability, which can lead to feelings of helplessness, lack of self-control and Changes in self-esteem and self-image. Pain can be affected by the individual's Mental state, including depression, anxiety, and even hypersensitivity at the Affected sites due to inflammation and tissue injury.

Community health nurse have very important role to improve the QOL for older adult provides information valuable and also gives indications to measure the impact of outcomes of health care and changes on the lifestyle of Patient with arthritis, apply measures for pain relief and preventing further loss of function of the affected joints, Participate in planning and carrying out the therapeutic regimen, maintain a positive self image and Perform self-care to the maximum amount possible (*Hisashige, 2012*).

Significance of the study:

Osteoarthritis (OA) meaning of the bone inflammation, by the age of 65, more than 80% of the population have radiographic changes consistent with osteoarthritis in at least

one site (hands, feet, spine, knees, or hips), 40% complain of arthritic symptoms, and 10% report limitation in activity due to arthritis. Women, after the premenopausal period, are more likely to develop osteoarthritis of the knees, hips, and hands than are men (*Issa and Sharma, 2006*).

Murphy and colleagues in (2008), estimated the lifetime risk of developing symptomatic knee OA to be about 45%, rising to 66% in obese persons. During a 1-year study period, 25% of people aged over 55 years old had a persistent episode of knee pain, of whom about one in six consult their general practitioner about it. In this sample, symptomatic knee OA defined as pain on most days and radiographic features consistent with OA occurred in approximately 12% of those aged over 55 years.

The world is rapidly ageing, which represents both challenges and opportunities, in the year 2000 the number of the world's older adults population of 60 years of age and over was 605 million represented 11%, which will be double to 2 billion in 2050 (*WHO, 2012*). In the eastern Mediterranean region (EMR) the older adult population was constituted 26.8 million, represented 5.8% and it is projected to represent 15% by the year 2050. while, in Egypt this age group represented 6.3 % of the total population, it will reach 11.5% in 2025 and 20.8% in 2050 (*WHO, 2006*).

Aim of the Study

Aim of the study was to evaluate the quality of life among older adult with osteoarthritis through the following:

- Assessing physical aspect of older adult related to quality of life.
- Identifying psychological aspect of older adult toward quality of life.
- Recognizing social aspect of older adult according to quality of life.
- Determining safety environment for older adult.

Research questions

- Is there relation between older adult's characteristics and their (QOL)?
- Is there relation between health status and their quality of life (QOL)?
- What are the factors affecting pain intensity?

Part I: Osteoarthritis Overview

Epidemiologic principles can be used to describe the distribution of OA in the population and to examine risk factors for its occurrence and progression. For the purpose of epidemiologic investigation, OA can be defined pathologically, radio graphically, or clinically. Radiographic OA has long been considered the reference standard, and multiple ways to define radiographic disease have been devised, sclerosis, cysts *Abraham et al., (2014)*.

The world is rapidly ageing, which represents both challenges and opportunities, in the year 2000 the number of the world's older adults population of 60 years of age and over was 605 million represented 11%, which will be double to 2 billion in 2050 (*WHO, 2012*). In the eastern Mediterranean region (EMR) the older adult population was constituted 26.8 million, represented 5.8% and it is projected to represent 15% by the year 2050. while, in Egypt this age group represented 6.3 % of the total population, it will reach 11.5% in 2025 and 20.8% in 2050 (*WHO, 2006*).

Definition:- Osteoarthritis (OA) is the most common joint disorder in the United States. Symptomatic knee OA occurs in 10% men and 13% in women aged 60 years or older. The number of people affected with symptomatic OA