



Socio-Demographic and Risk Factors Associated with Knee Osteoarthritis

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ABSTRACT

Knee Osteoarthritis (KOA) is a degenerative joint disease and a major public health problem all over the world. The present study is focused to evaluate the Socio-demographic and Risk factors associated with radiographic evidence of KOA subjects who were attended to Government Ayurveda Hospitals in Jaffna District from January 2013 to August 2014. There were 177 (70.8%) female and 73 (29.2%) male with a mean age of 57.02 (SD±8.78) years and highly significant association between age and gender ($P < 0.05$) and BMI and gender ($P < 0.05$) of KOA subjects. The findings of this study had indicated that risk factors as age, gender, family history, menopause and BMI were similar to the findings of KOA studies of other research studies.

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Introduction

Knee Osteoarthritis (KOA) is a degenerative joint disease and a major public health problem all over the world, especially in the elderly [1], [2]. Relatively the prevalence of KOA is higher in Asians than in Western populations [3]. Recent study mentioned that KOA is likely to become the fourth most common cause of disability in women and the eighth most common cause in men [4].

KOA is more environmental disease that results from manmade problems than just a genetic one [5]. KOA is associated with a range of intrinsic, behavioural and environmental risk factors and determinants. Risk factors and determinants may have a synergistic or cumulative effect and the systematic factors include a person's age, gender, and inherited susceptibility to KOA – among other factors- that all, or in part, make cartilage and sub-chondral bone more vulnerable to daily injuries and less capable of repair [6]. Therefore, identifying risk factors for KOA become important component of this study. The present study was focused to evaluate the Socio demographic and Risk factors associated with radiographic evidence of KOA subjects.

Methodology

Study Design

It was an observational study, as a part of PhD Research.

Study Area

This study was conducted in selected Government Ayurveda Hospitals in Jaffna District, Sri Lanka.

Jaffna District is divided into four major divisions. They are *Valikamam*, *Thenmaradchchi*, *Vadamaradchchi*, and *Island*. For the administrative purposes, these major zones are further divided in to 15 Divisional Secretariats (DS) divisions namely, Jaffna (1 DS division), *Nallur* (1 DS division), *Valikamam* (5DS divisions), *Thenmaradchchi* (1DS division), *Vadamaradchchi* (3 DS divisions), *Islands* (4 DS divisions). At present, fifty three (53) Ayurvedic Institutions are functioning under the 13 DS divisions except *Vadamaradchchi East* and *Delft DS* divisions. 60% of

Ayurveda Hospitals in 13 DS divisions were covered for this research study.

The thirty two hospitals were sampled from thirteen DS divisions. Suitable KOA subjects were selected in twenty five (78.12%) out of thirty two Ayurveda Hospitals.

Study Unit

The study unit consists the subjects with KOA, who attended Out Patients Department (OPD) of twenty five Ayurveda Hospitals in Jaffna District.

Study Duration

This study was carried out from January 2013 to August 2014 (20 months).

Study Population

Inclusion Criteria: Subjects of either gender ≥ 40 years age; Pain visual analogue score (VAS) ≥ 4 cms in one or both knees while performing a weight bearing activity (e.g. walking, standing, climbing staircase); Diagnosis of KOA based on history, clinical examination findings and classical radiological findings, and fulfilling the American College of Rheumatology (ACR) classification criteria [7] except that the lower age limit was reduced to 40 years; and Radiographic evidence of OA was based on the ranking score of the Kellgren-Lawrence radiographic system [8].

Exclusion Criteria: Subjects who have non-degenerative joint diseases or other joint diseases such as rheumatoid arthritis, psoriatic arthritis, gonococcal arthritis and haemarthrosis; Subjects with severe disabling arthritis and / or the patient are bedridden; Those that had history of intra-articular knee injection within the month preceding the study; Those with evidence of severe unstable renal, hepatic, diabetic, haemopoietic, cancer, hypertensive, cardiac disorder and mentally affected as revealed by history and / or investigation.

Ethical Approval

Prior to the commencement of study, certificate of ethical clearance for the clinical trial was obtained from the Ethical Review Committee of the Faculty of Medicine, University of