Prevalence of Musculoskeletal Disorders and its Influence on Quality of Life in Elderly Females

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Abstract

The study focuses on understanding the Quality of life amongst the elderly female population. The parameters are studied are musculoskeletal disorders (conditions) and its impact on quality of life. The study included willing participants of age 65 and above. Elderly female people unwilling to participant or unable to give interview for various reasons were excluded from the study. The study focused on tertiary hospitals of Miraj, and total 100 subjects were interviewed while OPD visits. The musculoskeletal disorders were evaluated by using Nordic score while Quality of life was assessed by SF-36 questionnaire. The mean value of Nordic questionnaire shows that low back region is more affected as compare to other site of body. Similarly the mean values from SF-36 scores indicates that physical functioning as well as Energy/Fatigue and Bodily pain were more affected in elderly female population. The overall observation of study indicates that increasing age results in poor quality of life. Nordic Questionnaire and SF-36 scores are negatively correlated with respect to the under study population.

Keywords: - *SF-36Questinnaire, Nordic Questionnaire, Elderly female population.*

Introduction

Elderly is defined as being 65 years of age or older. The onset of health problems of elderly may occur in early 50s or may be only in 40s. in the 20th century the elderly population has represented the fastest growing segment of total world population. These demographic changes were high- flying in developed countries. In United Kingdom the population of people over 65 years has increased from 5% to 16% in this period. (1)

Population projections suggest that this trend will be continuing in 21st century and elderly will represent 10.8 percent of total world population by 2025. In India over 82 million now, it will cross 177 million by 2025 and 324 million by 2050 which shows almost a two-fold increase in the proportion of elderly people.this s contrast tp America where currently 13% of elderly population of elderly population will approach 22% by 2030. The startling fact is that the aged population in India is currently the second largest in the world.(1)

In females following the menopause the average women may lose more than 20% of her bone mass by the age of 70 years.50% of post menopausal women are seriously at risk of developing clinically significant osteoporosis. It is not only the bone mineral content but also collagen that is lost. There is a greater prevalence of osteoporosis amongst slender woman and they are at greater risk for fracture.(2)

The WHO definition of Quality of life has a broad meaning it includes physical health, mental health, level of independence, social relationship, personal beliefs and their relationship to salient features in the environment. The elderly people work for certain age limit as per their job, after which they suffer from economic insecurity, loss of power leading to low quality of life.(3)

Research has revealed the occurrence of falls is higher among older woman, older aged widowed individuals with low education and those who use many

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medications. It is necessary to know the impact problem on the functional ability, in the social life and in the well being of the elderly. Quality of life for an older person has become increasingly important an outcome in public health research.[3]

There are researches are done in which prevalence rates of musculoskeletal pain were higher for women than for men in the Dutch general population aged 25 to 64 years on the basis of 2 population-based surveys. For musculoskeletal pain in any location, 39% of men and 45% of women reported chronic complaints.[3]

The goal of the present study is to test the hypothesis that elderly females who develop an musculoskeletal disorder have a significant change in subsequent Quality of life. The nature of musculoskeletal illness, whether it is chronic or acute, and the influence of any co-morbidities are taken into account.

There is strong need to conduct the study to know about musculoskeletal symptoms that affect the Quality of life of elderly female population. The various structured Physiotherapy interventions like pain relief, specific muscle strengthening , aerobic exercises, stretching techniques , group therapy , balance training and cognitive therapy can be introduced to improve the quality of life as a target for the next years[3]

Material and Method

This is prevalence; a community based cross-sectional study of the elderly female population of tertiary care hospitals in Miraj.

Inclusion Criteria:-

· Population of elderly females of age 65 years and above.

· Elderly females who visits tertiary care hospitals.

· Those who are willing to participate in the study.

Exclusion criteria:-

· Those who were unwilling to participate

· Who refuse to give written consent.

· Who were unable to give interview due to various morbidity conditions.

After getting ethical approval from Institutional Research Committee and Institutional Ethical Committee of College of Physiotherapy, Wanless Hospital, the study was conducted in tertiary care hospitals in Miraj. The whole population was screened for an elderly female population with age 65 years and above. Data collection was done by the direct interview method and total 100 subjects were collected from tertiary care hospitals of Miraj.after taking verbal as well as written consent, clearing the doubts and explaining the benefits of the study to the subject, the subject was personally interviewed on the basis of SF-36 and Nordic Questionnaire. Questions of SF-36 and Nordic Questionnaire were asked in subjects native language i.e-Marathi/Hindi/English.

SF-36:-

• An important instrument for measuring health-related quality of life. Comprises of 8 domains that further included 36 questions.

• The 8 domains are :-

1. physical functioning (PF)

2. Role limitations due to physical problems (RP)

3. Bodily pain (BP)

4. General health (GH)

5. Vitality or energy/ fatigue (VT)

6. Social Functioning (SF)

7. Role-emotional (RE)

8. Mental health/ emotional well being (MH).

· Scores range from 0 – 100

Lower scores = more disability, higher scores = less disability.

· The validity and reliability of health related Quality of Life is 76% and 0.80 respectively.[4]

Nordic Questionnair:-

• The questionnaire consists of structured

or multiple choice variants and can be used as self-administered questionnaire or in interviews.

- The questionnaire was constructed in which the human body (viewed from back) is divided into 9 anatomical regions.

- Completion is aided by a body map to indicate nine symptoms sites being the neck, shoulder, elbows, wrists/hands, upper back, low back, hips/thighs, knees, and ankle/feet.

- Respondents were asked if they had any musculoskeletal trouble in the last 12 months and have been prevented from normal activities during last 12 months.

The validity and reliability of Nordic Questionnaire is 92% and 0.90 respectively. [5]

Findings

Nordic questionnaire-

From study it shows that the mean value of Nordic questionnaire shows that out of 9 sites low back region is more affected as compare to other site of body.

The second site which is more affected as compare to other region is knee joint.

SF-36 questionnaire-

The mean values from SF-36 scores indicate that physical functioning as well as Energy/Fatigue and bodily pain were more affected in elderly female population.

Discussion

This study has shown that the most common MSD was low back pain. The impact of low back pain includes reduction or loss of physical function, energy/fatigue, decrease leisure activity and low quality of life. Osteoarthritis of the weight bearing joints was the second most common MSD in this study. Finding has corroborated the reports that osteoarthritis is common in geriatric patients. Although osteoarthritis increases with age, aging is associated with the reduction or cessation of the production of glucosamine, chondroitin and other molecules essential for the formation of proteoglycans (part of connective tissue matrix) and nourishment of the synovial fluid which interact with collagen fibers to allow resilient compression and reexpansion within the cartilage. The cartilage is hardened, destroyed and forms bone spurs. The end of the bones rubs together with its associated inflammatory reactions. This results in bone deformity and subsequent disability which affects the activities of daily living. Pain at individual joints and overall number of sites of joint pain were associated with poor QoL, this suggests that interventions to reduce the frequency and intensity of pain may be effective in improving QoL at the population level.[6]

Onset of an MSK disorder reduces QoL. The bodily pain dimension is most affected. People with MSK diseases than in the general population, typically in physical dimensions of SF-36, with greater decrease with the coexistence of more than one MSK disease. SF-36 physical dimension scores were slightly lower than ours. This may well reflect the prevalent cases— that is, established diseases in which the disease impact is more severe than in incident cases—that is, with recent onset or occurrence. [7]

The worst quality of life patterns were found for LBP and knee pain. Physical dimensions of the SF-36 were more strongly affected by pain than the psychological dimensions. [8]

Pain in the knee can actually be referred from the hip. Knee pain was of borderline significance in cross-sectional analyses but became significant over time. Diagnosed OA of the back was also an independent correlate of poor QoL (both in cross-sectional and longitudinal analyses). Promotive health services for the elderly at the tertiary care levels. This will help to delay disability associated with MSDs and ensure optimal quality of life of the elder citizens. [9]

Future longitudinal studies are warranted to characterize the psychosocial and physical risk factors for developing chronic/recurrent MSK pain in elderly female of different ethnicities so that appropriate treatment/education can be provided to mitigate their modifiable risk factors. Studies should also be conducted to determine the optimal interventions for treating MSK pain in elderly female given the complex physical challenges that they face. [10]

Conclusion

This study highlights the burden of musculoskeletal problems and quality of life among elderly female population of tertiary care hospitals of Miraj. It is concluded that there is strong negative correlation exists between independent (Nordic scores) and dependent variable (SF-36 Scores).

This study concludes that the musculoskeletal disorders in elderly female population are highest in low back area as compare to the other sites of body. High score of low back region indicated that age related degenerative changes affect the lower spine more as compare to other body site. The second most affected area of body is the knee.

According to Health related Quality of Life SF-36 questionnaire in elderly female population, the results of domains revealed that physical functioning as well as Energy/Fatigue and Bodily pain were more affected as compare to other domains.

Conflict of Interest: There is no conflict of interest for this study.

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Ehical Clearence: Ethical clearance obtained from the ethical committee of College of Physiotherapy, Wanless Hospital, Miraj

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