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Original Research Article

Association of Fear Avoidance Belief with Quality Of Life in Elderly Population

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ABSTRACT

Objective: To study the association between fear avoidance belief and quality of life in elderly population.
Study Design: Community based Cross-Section Correlational study
Methodology: 65 subjects including both genders ≥ 60 years in age were recruited for the study. After briefing about the purpose of the study the subjects were made to fill the Fear Avoidance Belief Questionnaire (FABQ) and Quality of Life Questionnaire (WHOQOL-BREF). The obtained data was then analysed.
Results: The mean age of the study population was 71.13 ± 6.665. Karl Pearson's Correlation was used to find correlation between FABQ and WHOQOL-BREF. The results showed mild negative correlation of FABQ-PA with physical domain (p= -0.026), psychological domain (p= -0.327) and social relation domain (p= -0.344) while the FABQ-PA showed negligible positive correlation with environment domain (p= 0.036). FABQ-W showed mild negative correlation with physical domain (p= - 0.125), psychological domain (p= - 0.345) and social relation (p= - 0.366) and mild positive correlation with environment domain (p= 0.109).
Conclusion: The present study depicts that there is minor influence of fear avoidance beliefs on quality of life of the geriatric population.
Keywords: Elderly, Fear Avoidance, Quality of life

INTRODUCTION

Ageing is a universal process, generally defined as a process of deterioration in the functional capacity of an individual that results from structural changes in an individual with advancement of age.[1] United Nations have identified global warming, global terrorism and global ageing as the top three global economic issues of the 21st century.[2] The demographic transition has led to an increase in the average life expectancy of an individual yielded by decrease in both the fertility and mortality rates courtesy to available of better health care services. [3]

The Indian government *National Policy on Older Persons*, 1999 defines elderly or senior citizen as a person whose age is 60 years or above. [4] The total number of elderly is expected to rise to 1.2 billion by 2025. [5] The total population of elderly in India is expected to rise to more than 10 per cent by the year 2021 from 6.7 per cent in 1991. [4] With this enormous

increase in the share of elderly in the population, "geriatric care" has evolved as a challenge for the world. Increased elderly population has not only posed mounting pressure in the socio-economic front, this segment of population faces multiple medical and psychological problems. Thus, further increases the significance of the geriatric care. [4] The elderly with all their experience and wisdom are treasure for the nation. Thus, there is a need to pay greater attention to ageing related issues and to promote holistic policies and programmes for dealing with the ageing society. [4]

The increase in life span has brought about its share of physiological and psychological problems. A nationwide survey reported that 45 per cent of the elderly suffered from chronic illnesses. [6] Old age has been associated with chronic illnesses, high risk of nutritional deficiencies, functional decline and physical dependence. These problems are further compounded by impairment of sensory functions like vision and hearing. Locomotors related problems are one of the most prevalent symptom faced by the elderly. [7,8] One of the major problem being the falls in the elderly population, it is estimated that 1 in 3 persons older than 65 years has an episode of fall each year, out of which about 20 per cent to 30 per cent suffer moderate to severe injuries including fracture and head trauma leading to mortality, significant disability, decreased independence and hence, compromised quality of life. [9] The psychological impact of falls is equally disconcerting. The prevalence of post fall anxiety syndrome and function impairing fear of falling affects 73 per cent of individuals who had experienced fall last year. In turn, decrease in activity level due to impending fear of fall further leads to reduced mobility and independence in performing daily activities. [9]

Clinicians and researchers have recognised the role of psychological factors in the development of these chronic disabilities. Among these psychological factors are fear avoidance beliefs which are embodied in the fear avoidance model of the musculoskeletal system. [10] Elevated fear avoidance belief is maladaptive emotional response towards an excessive fear of pain that can eventually lead to avoidance behaviour. [11] Individuals with these avoidance beliefs are likely to have higher pain and disabilities scores. [12] Kinesophobia has been described as an excessive, irritational, and debilitating fear of physical movement and activity resulting from a feeling of vulnerability to painful injury or reinjures. [13] Fear avoidance initiates a vicious circle leading to disuse, disability and depression.

World Health Organisation defines quality of life as "individuals' perception of their position in life in the context of their culture and value system in which they live and in relation to their goals, expectations, standards and concerns". Thus, quality of life (QOL) is a broad concept that covers individual's physical health, psychological state, level of independence, social relationship, personal beliefs and their relationship to salient features of the environment. [14] Considering the vulnerability fear avoidance builds in an elderly, it might have its impact on the quality of life aspect of this population. Thus, the current study was designed to study the association between the fear avoidance belief and quality of life of the elderly population. [14]

MATERIALS AND METHODS

A total of 65 subjects including both gender were recruited from various areas in and around Dehradun. Individuals with ≥60 years in age and those who can provide adequate information were included in the

study while individuals who were not willing to participate, individuals who had musculoskeletal problems such as amputation, acute or terminal illness and any history of previous severe central nervous impairment were excluded from the study. All the individuals participating in the study were given a briefing regarding the purpose of the study and informed consent was taken prior to data collection. The subjects were then asked fill the FABQ and WHOQOL-BREF. The questionnaire was given to the subjects and they were explained the process regarding the procedure to fill the questionnaire. Any doubts regarding the items in the questionnaire were addressed. After completion of form the score was calculated. Subjects who failed to complete the questionnaire independently were assisted.

RESULTS

Data was analysed by using SPSS version 11.5 software. Pearson's correlation was used to find correlation between FABQ and WHOQOL-BREF. The statistical significance was set as 95% confidence interval with p value <0.05 was considered significant. The mean age of the study population was 71.13 ± 6.665.

Table 1: Descriptive Results

	Mean	Standard deviation (SD)
Age	71.1385	6.6658
Physical domain	22.7385	2.360
Psychological domain	19.8769	3.0542
Social relationship	10	1.414
Environment domain	25.923	2.53
Fabqpa	10.138	3.75
Fabqw	18.46	5.91

Table 2: Correlation between FABQ and WHOQOL-BREF domains

Correlation	p-Value
Fabqpa v/s physical domain	-0.026
Fabqpa v/s psychological domain	-0.327**
Fabqpa v/s social relation domain	-0.344**
Fabqpa v/s environment	0.036
Fabqw v/s physical domain	-0.125
Fabqw v/s psychological domain	-0.345**
Fabqw v/s social relation domain	-0.366**
Fabqw v/s environment	0.109
Fabqpa v/s fabqw	0.817

DISCUSSION

Avolio et al suggested the geriatric population suffers with both the intrinsic as well as extrinsic changes which lead to development of maladjustment in the society, further raising the psychosocial problems of the age group. [15] Events like falls in geriatric have been reported by many authors. [9,16,17] These events lead to budding of psychological problems where the elderly develops the fear from the fall. The Fear Avoidance Model of pain suggests that when pain is perceived as threatening the individual adopts safety seeking behaviours such as avoidance/escape. The fear motivates the individual to engage in defensive behaviours. [18] Delbaere et al suggested; fear avoidance activities may have negative effects on the physical abilities of elderly and may also be predictive for future falls. [19] So this study was aimed to assess the fear avoidance belief and to correlate the fear avoidance with the quality of life in the elderly.

Crombez et al suggested scores larger than the median of FABQ are considered elevated level of fear. He dichotomized the FABQ at the median into weak (scores 0-12) and strong (scores 13-24) fear avoidance beliefs. [18] The results of the present study showed higher FABQW (18.46 ± 5.91) than FABQ-PA (10.138 ± 3.75). The higher level of FABQ-W in the present study representing higher level of fear avoidance, could be due to the reason that FABQ-W includes all the occupational variables and individual adopts self-selected behaviour to reduce the potential detrimental effects. [20] Steven Z George concluded that elevated fear avoidance belief were associated with higher pain and lower function intake. [21]

The result of this study showed mean score of WHOQOL-BREF was 78.584 ± 6.731. Thus, most of the elderly were enjoying good quality of life. Similar results

were reported by Qadriet al [22] in a study where around 68.2 per cent of the elderly enjoyed at least good quality of life. The better quality of life even in this age group may be attributed to the fact that quality of life may be affected by many positive and negative life events which may be relate to the society, family or community where the individual lives in. [23]

In the present study the scores of FABQ-W (18.46 ± 5.91) was higher than the FABQ-PA (10.138±3.75), this can be attributed to the face that the study population for this study were elderly people who were least involved in the physical activity. We could also say that most of the individuals experienced the episode of fall during their activities which may be reason for development of fear while performing the work activities and hence greater avoidance. George et al concluded that elevated fear avoidance belief was associated with higher pain and lower functional intake ultimately leading to exaggerated maladaptive behaviour. [21]

Fear avoidance behaviour and fear of falling has been associated with negative consequences such as reduced activity of daily living. [24] The present study used WHOQOL-BREF to calculate the quality of life of the elderly population, the scale had four domains. Each domain of WHOQOL-BREF was correlated with the subscales of FABQ.

In a study by Crombez et al, a moderately significant relationship has been found between disability and fear avoidance. [25] Although the present study did not aim as quantifying the level of disability, it would be necessary to mention, increased disability does have a negative influence on the quality of life. Hicks et al [26] stated that fear and avoidance behaviour in work is a highly specific finding for disability. Also George et al [27] demonstrated that in patients with chronic back ache, the single predictor of disability was fear avoidance (Work).

The results of the present study showed that there is minor correlation between FABQ and domains of quality of life. Similar results were reported by Kovacs et al, in their study to assess the association beliefs with disability and quality of life in Spanish elderly concluded FABQs have a minor influence on physical quality of life but none on disability. [28]

FABQ-PA and FABQ-W showed minor negative correlation with the physical domain (p= -0.026 & -0.125), psychological domain (p= -0.327 & -0.345), social relation domain (p= -0.344 & -0.366), while both FABQ-PA and FABQ-W showed minor positive correlation with environment domain (0.036 & 0.109). Keeley et al suggested that social stresses and avoidance beliefs are important predictors of quality of life. [29]

Although Dukyoo Jung[24] suggested that fear of falling in old age has negative consequences such as reduced activity of daily living and could impact quality of life, Francisco M Kovacs et al suggested the FABQ explains less than 5 per cent of physical quality of life. And FABQ cannot predict the quality of life. And there is negligible influence of FABQ on quality of life. [30] Thus, on the basis of present study we could depict that fears avoidance has minor influence on the quality of life of the elderly.

CONCLUSION

The present study depicts that there is minor influence of fear avoidance beliefs on quality of life of the geriatric population. And the geriatric individuals have reported higher level of fear to work related activities as depicted by higher values of FABQ-W scores.

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