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# Quality of Life in Elderly Population – A Survey

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**Abstract:** Elderly is defined as being 65 years of age or older. Falls are common in older individuals and result in loss of confidence and independence. The number of persons above the age of 60 years is fast growing, especially in India. India as the second most populous country in the world has 76.6 million people at or over the age of 60. The aim of study was to evaluate the quality of life in elderly individuals. In this study we have included 100 subjects aged 65 years and above. We assessed the quality of life in elderly individuals by using two scales Modified falls efficacy scale (MFES) and Activity specific Balance scale (ABC). In MFES scale, there were 14 self report questions scale of 0 to 10 and then we have to assess how confident they feel while doing activities without falling which measure confidence in one's ability to avoid falling during the performance of activities of daily living. **RESULT:** In this study 49 individuals were from rural background and 51 individuals were from urban background. We calculated the frequencies through which we observe that in case of ABC there was no significant difference in score of both urban and rural population. In conclusion both scales were able to measure differences in falls related quality of life. We used these scales on urban population as well as on rural population. In case of ABC scale both groups were completely confident but in urban population they found few difficulties in completing tasks, whereas in case of MFES scale the substantial difference between both the populations was observed.

**Keywords:** Ageing, Balance, Falls, Quality of Life

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## 1. Introduction

The term geriatrics comes from the Greek word *geron* meaning "old man", and *iatros* meaning "healer" [1]. Elderly can be classified into three groups:

- Young old: between 65 and 75 years of age
- Middle old: between 75 and 85 years of age.
- Old: older than 85 years [1]

The incidences of falls were found to be 14% in 10 states of India [2]. Some elderly persons develop symptoms or behavior in response to fall, regardless of physical trauma. They may express an enhanced or increased fear of falling that may result in deleterious emotional, psychological or social changes. While fear of falling is mentioned frequently as an adverse outcome of falling, little is known about it [3].

Quality of life (QOL) is a key concept in environmental, social, medical and psychological sciences, as well as in public policy and in the minds of the population at large; nevertheless, there is no consensus regarding the definition of QOL. The term "quality" refers to a set of attributes or

characteristics of a given object (in this case, life), and "life" is a wide category which would include all living beings but here we are referring to human aging [4].

Falls are common, disabling, and frequently fatal events affecting between 30% and 50% of older individuals annually [5]. The uniformity of these prevalence data is striking and suggests an enormous personal and public health burden. Indeed, unintentional injury, usually from falling, ranks as the sixth most common cause of death in the over 65 years age group in the US, while 10%–15% of falls result in serious injuries, of which up to 50% are fractures [6-8].

Falls in older persons are associated with fear of falling, lack of confidence, injuries, and hospitalizations and, in some case, death [9]. Although broadly implemented, falls prevention programs are a major burden to health care budgets worldwide. This is due to the complexity of the secondary prevention programs and limited adherence to them both community and institutional settings [9-10].

Falls in older people are a major concern in terms of disability, institutionalization, mortality and socioeconomic

burden [11]. Many falls are multifactorial in nature and linked to both patients specific and environmental risk factors [12]. Key intrinsic risk factors are age, sensory decline, reduced lower limb strength and comorbidity [13]. Cognitive impairment, even subtle deficits increases risk [14]. A single identifiable major factor accounts for up to 20% of falls [11].

Visual impairment is independent risk factors for falls and fractures. Multifactorial spectacles increase falls risk by distorting the lower visual field [15]. Adults who undertake regular outdoor activity can reduce their falls by using single lens distance glasses instead of multifocal when going outside or to an unfamiliar environment [16].

Five percent of falls result in a fracture; a further 5% to 10% result in a soft tissue injury serious enough to cause immobility or to require medical attention or hospitalization [17]. Falls related injuries are the sixth leading cause of death in people older than 65 (31.3 per 100000 deaths) [18]. Environment is important in falls. Approximately half of all falls occur in and around the individual's home. This consistent finding may be because older people spend more time at home, are less careful in their own environment or live in homes with hazardous features. More false occur during autumn and winter months, even in warmer climates, and most occur during daylight [19].

Reduced balance and morbidity function is common in advancing age [20, 21]. Poor balance and mobility compromise independence in activities of daily living and may lead to an increase in fall risk [22]. Falls may causes fragility fractures and hence give rise to reduced quality of life, increased disability and increased economic strain on the health care system [23-27].

Confidence is generally described as a state of being certain either that a hypothesis or prediction is correct or that a chosen course of action is the best or most effective. Self-confidence is having confidence in oneself. Arrogance or hubris in this comparison is having unmerited confidence believing something or someone is capable or correct when they are not. Overconfidence or presumptuousness is excessive belief in someone (or something) succeeding, without any regard for failure. Confidence can be a self-fulfilling prophecy as those without it may fail or not try because they lack it and those with it may succeed because they have it rather than because of an innate ability [28].

Low balance confidence (BC) and/or falls self-efficacy is a major health problem, which can lead to avoidance of activities, causing restriction of physical activities and participation in daily life [29-31]. This restriction can result in physical frailty, falls and loss of independence. Thus it is important to evaluate the effectiveness of strategies which address the BC of older adults. Self-efficacy refers to one's perception of capability within a certain domain [32]. Three similar self-report tools have been created to capture the notion of self-efficacy with respect to falling or losing one's balance. The 10-item Falls Efficacy Scale (FES) and the Modified FES were designed to capture an individual's ability to perform activities of daily living without falling [32-36]. As indicated by the name of the tool, the 16

Activities-specific Balance Confidence (ABC) Scale reports on the individual's perceived ability to perform activities without losing balance.

## 2. Materials and Methods

Study design: Survey Questionnaire

*Methods & Procedure*

In present study we have include 100 subjects aged 65 years and above. 49 individuals were from rural background and 51 subjects from urban background. We have accessed the quality of life in elderly individuals by using two scales. Activity specific balance confidence scale (ABC) and Modified falls efficacy scale (MFES).

The ABC scale is a 16 questionnaire scale, to rate confidence regarding their balance and ability to remain steady when performing various tasks. We have divided this scale into three parts, 0% means no confidence and 100% means completely confident and 50% means fairly confident or moderately confident. The questions were graded in difficulty from easiest to most difficult in terms balance and confidence.

Whereas, in MFES scale is 14 questionnaire scale which include both indoor and outdoor activities. Each question was scored on a 10 point visual analogue scale. This was also divided into three parts 10 means completely confident, 5 means fairly confident or moderately confidence and 0 means not confident at all. Higher score reflects more confidence, less fear of falling. Lower score shows less confidence and more fear of falling. By these two scales we measured the quality of life of an individuals and how independent they feel while doing activities.

## 3. Result

Total number of 100 individuals were included in the study from rural population as well as from urban population. 51 individuals from urban population and 49 individuals from rural background. We have calculated the frequencies. We used two scales ABC and MFES scale on both populations. In both the scales rural population have higher score. Higher score means they were more confident in terms of balance and stability. It may be due to they have more physical work throughout their life.



Figure 1. Activity Specific Balance Scale- Urban Population (ABC-Urban).

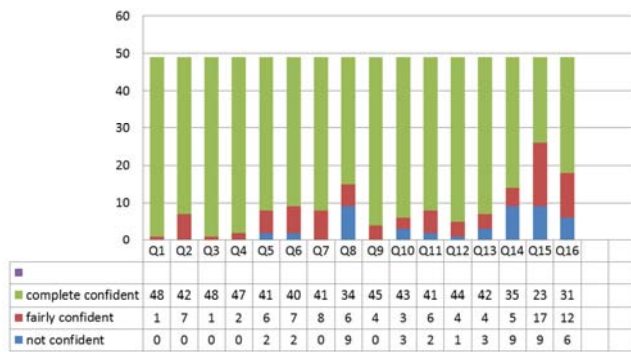


Figure 2. Activity Specific Balance Scale Rural Population (ABC-Rural).

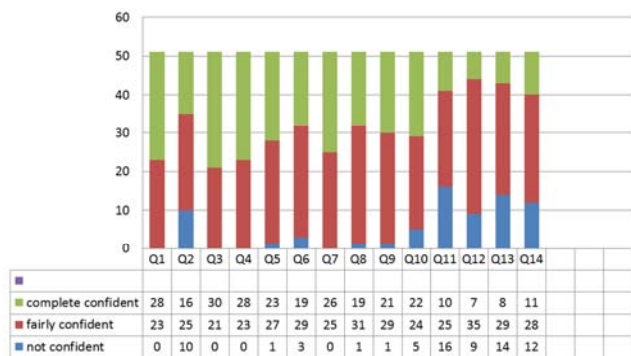


Figure 3. Modified Falls Efficacy Scale Urban Population (MFES Urban).

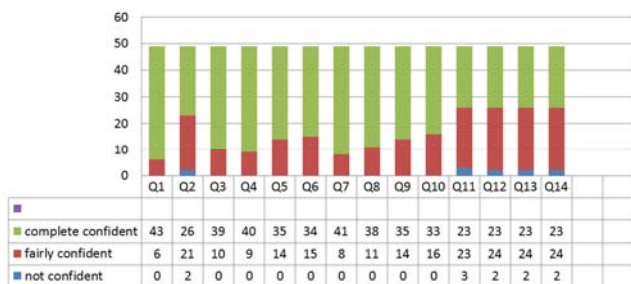


Figure 4. Modified Falls efficacy Scale rural Population (MFES Rural).

## 4. Discussion

We have assessed the modified versions of both the FES and ABC for use in terms of acceptability, reliability, validity, and feasibility.

The modified versions of both the FES and ABC demonstrated high levels of internal consistency and test-retest reliability. The ABC scored more highly on test-retest reliability. The cronbach a score of Modified falls efficacy scale (MFES) is 0.95 and for Activity specific balance confidence scale (ABC) is 0.96 [37].

The aim of present study was to evaluate the quality of life of elderly individual with help of these two scales. We have measured the quality of life of individuals in rural as well as in urban population. Both the scales were able to detect differences between faller and non faller cases. These differences showed that faller had a poor quality of life than non faller cases.

In figure 1 which described the Activity specific balance scale for urban population, there were 16 questions,

individual marked their confidence level. We have calculated the frequencies. We have divided questionnaire into three phases i.e completely confident, moderately or fairly confident and not at all confident. 100% means completely confident, 50% means fairly confident and 0% means not at all confident. In question no 1 individuals were completely confident. On the other hand individual having difficulty in question no 14,15 and 16 individuals rated fairly confident which may be due to poor balance, reduced mobility, reduced muscle strength, low nutrition level, low level of physical activity, environmental hazard in home and public areas. Similar observation has been made in other literature as well [38, 39].

In case of figure 2 which depicts the Activity specific balance scale for rural population. Majority of the rural population were completely confident. If we compare the figure 1 and figure 2 rural population scored higher than urban population.

In figure 3 it projects the Modified falls efficacy scale (MFES) for urban population. There were 14 questions. Each question scored on 10 point scale 10 means completely confident, 5 means moderately or fairly confident and 0 means not confident at all. The 50 % of individuals were highly confident whereas some individuals found difficulties in question number 11, 12, 13 and 14. These four questions were related with outdoor activities such as, using public transportation, crossing roads, light gardening and using front or rear steps. 50% individuals of urban population were fairly confident.

In figure 4 illustrate the Modified falls efficacy scale (MFES) for rural population. The maximum number of individuals were highly confident and 20 % of individuals were fairly confident. MFES score of rural population were better than that of urban population.

Thus, ABC and MFES were reliable and valid measures for the assessment of falls and balance related confidence and self efficacy in older faller. Improvement in confidence and erosion of fear of falling in such trials will not be measured using physical end points alone and recent review strongly recommends that the “perspective of older people” should be considered during the planning, evaluation and implementation of interventions directed at falls [40].

## 5. Conclusions

The aim of the present study was to assess the quality of life in elderly individual by using two scales Activities-specific Balance Confidence (ABC) Scale and Modified Falls Efficacy Scale (MFES). The present study showed that there was significant difference between rural and urban population in both scales. The MFES scale for rural population scored higher in terms of balance activities and confidence level whereas, ABC score for rural population had slightly higher than ABC score for urban population. In both the scale rural population marked higher confidence level than urban population. This might be due to rural population have more physical activity throughout their life

whereas, urban population have more sedentary life style. In conclusion rural population had better quality of life as comparative to urban population in regards.

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