International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2018): 7.426

Study of Fragility Syndrome in Elderly from an University Open to Third Age

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Abstract: ***Becoming senior can succeed in a healthy way or not. With aging, the fragility syndrome (FS) can occur, which represents a biological affect characterized by a decrease in the homeostatic reserve and loss of the body's capacity to resist stressors. It is observed that the practice of physical exerciseseems to have a beneficial relationship with better maintenance or promotion of the quality of life of the elderly. There are current systematic reviews that report the lack of scientific evidence from studies of physical interventions in the reversal of fragility. The objective was to investigate the existence of fragility in the elderly. This is an exploratory, quantitative and cross-sectional field survey. Fried criteria were used to evaluate the fragility. The balance was evaluated by Timed up and go (TUG). The results obtained characterize 53.1% of the sample as fragile, of these 88.3% female. The most prevalent weakness criterion was the reduction of walking activity. There was a direct correlation between the TUG increase and the level of frailty. It demonstrated a profile of risk, as in females, young adults, with comorbidities and TUG reduction universally. FS has a broad spectrum of presentation, being an important determinant of public health, by the national and world increase of the elderly population.***

Keywords: Fragile elderly, Postural equilibrium, Physical activity

1. Introduction

Aging can be understood as a dynamic and growing process, in which there are morphological, functional, biochemical and psychological changes, with a progressive reduction in man's ability to adapt to the environment, as well as a higher prevalence of pathological processes that demonstrate greater disability with diseases. numerous losses, including functional independence [1]. Thus, population aging poses a challenge to public health due to the increased incidence of chronic noncommunicable diseases and other clinical conditions that can lead to negative outcomes for the elderly [2].

One of the complications that comes with aging is the frailty syndrome (FS), which represents a biological disorder characterized by a decrease in homeostatic reserve and a loss of the body's ability to resist the weather. And while frailty is not synonymous with aging and not unique to the elderly population, frailty increases with age. Other factors were also correlated with FS, such as female gender, low education, continuous use of medication, falls and the presence of chronic disease [1]. Soon this syndrome becomes an important public health problem, as it is a risk factor for falls, disability, hospitalization and death [3].

The most commonly used criteria for characterizing the elderly as fragile involve unintentional weight loss, report of exhaustion, low level of physical activity, decreased gait speed and decreased handgrip strength (FPP), which, individually or together, generate some degree minimal frailty in the elderly [4].

FS compromises functionality on several levels. For example, the individual's balance is decreased compared to healthy individuals of the same age [5]. A recent study of 125 elderly subjects showed no significant difference between pre-frail and frail balance, but observed significant difference for gait speed between frailty groups [6].

Studies also report that the practice of physical activity prevents and reverses frailty [7], since it improves the functional reserve of the elderly and their physical abilities.

The practice of physical exercise seems to have a beneficial relationship with better maintenance or promotion of the elderly's people quality of life [8]. In this sense, it would be hypothetical to say that active elderly would be less fragile and have better balance, but there is a lack of studies comparing the presence of frailty among groups of elderly community practitioners of physical activity and non-practitioners, hindering the achievement of accurate results.

Almost all related articles mention only the prevalence of frailty in community-dwelling elderly, but without assessing the relationship with physical activity [9]. Giné-Garrigaet al [10] published a meta-analysis on the topic and found that part of the physical intervention studies are not effective in the aspect of frailty or conclude that the benefits of interventions are limited to functional activities, or that the studies do not show data on physical activity. post-intervention frailty. There are also physical intervention studies for the reversal of frailty and functionality but which are not related to reversal of frailty [11].

The importance of this research was based on the need for knowledge about the determinants that lead to the condition of fragility, which in turn impairs the quality of life, health, integrity and well-being of this population. Knowledge about these factors can be beneficial both in improving the

health conditions of the elderly and in reducing public health spending.

Thus, this study aims to verify if there is indeed a difference in frailty between elderly practitioners of physical exercises and non-practitioners.

2. Literature Survey

2.1 Elderly

Aging is marked by physiological changes that inevitably affect all body parts and systems, making old age a period with particular characteristics, based on the individual effects of aging [12]. It is a dynamic and gradual process. , which promotes morphological, functional, biochemical and psychological modifications with advancing age. These modifications eventually bring complications to the older population as they lead to a progressive loss of adaptability. Due to this, some psychological manifestations are also revealed, such as loss of self-esteem and depression [13].

Health status and functional capacity vary widely, considering that elderly people with the same chronological age manifest different biological ages. Individuals with poorer general health than others of the same chronological age are said to be fragile [14].

According to Veras [15], population aging is a universal phenomenon and will give Brazil, in 2025, the sixth position as the oldest country in the world, reaching about 32 million elderly, considering people aged or over 60 (sixty) years.

2.2 Fragility

The biological changes that occur during aging make the elderly vulnerable. This situation refers to both the individual's physiological capacity and social exposure, with advanced age related to high medical costs, family conflicts and abandonment [16].

FS is a geriatric syndrome in which the elderly, facing different stressors, have difficulty recovering their homeostasis. This loss of resistance results in biological and psychosocial defectors [17].

It is a consensus for health professionals the relevance of FS and its various negative impacts on the lives of the elderly and all around them, thus emphasizing the importance of understanding the subject and seeking possible positive and relevant interventions on the quality of care and life of the frail [18].

This syndrome is supported by a tripod: neuroendocrine, immunological and sarcopenia changes. There is a decline in energy reserves, loss of vigor and decreased resistance to stressors, making the elderly more susceptible to falls, hospitalization, loss of functionality, onset of comorbidities, disabilities and death [4]. There are more than 20 instruments to assess frailty [19], the most commonly used was proposed by Fried et al [4], who consider the elderly to be fragile, who present 3 or more of the following variables: unintentional loss of weight, exhaustion, decreased handgrip strength (PFP), low level of physical activity and slow walking. The identification of the frail and pre-frail elderly allows the proposition of interventions to prevent the occurrence of negative outcomes [20]. However, frailty in the elderly is still poorly investigated in Brazil [19].

Studies conducted outside Brazil show a prevalence of frailty between 7 and 42% [9]. In Brazil, studies conducted by the FIBRA network (network for the study of frailty in the elderly in Brazil) have shown a prevalence of between 7 and 10% of frailty among community-dwelling elderly people in some southern, southeastern and northeastern cities [21]. No information was found on the prevalence of frailty in the state of Goiás.

2.3 Physical Exercise

Physical exercise is defined as the regular and intentional practice of activities whose purpose is body movement, muscle stimulation and directed energy expenditure. It is known as a pillar of human health, promoting well-being and quality of life, and is currently practiced at some level by all people at some stage of life, regardless of age, gender or any other social determinant [22].

The benefits of physical exercise extend from body-to-body level to psychosocial aspects, aiding cognitive tasks such as memory, self-esteem, dietary control, regulating sleep cycles, and being able to assist with certain disorders such as depression and anxiety. Moreover, its ability to improve the motor functions of the practicing individual is undisputed, and is therefore an important instrument for physical strengthening [23].

According to Macedo's [24] review of frailty, physical deficit is unrelated to this syndrome; the FS can be defined as a result of interaction between resources and loss of capabilities that make individuals more vulnerable to environmental challenges. Also in this review, Macedo reports that there are studies showing that physical exercises are beneficial for the frail elderly. This is explained by the markedly installed sarcopenia in the frail elderly. Therefore, exercise seems to prevent or reverse sarcopenia as well as fragility [7].

2.4 Equilibrium

The postural maintenance of the body with minimal oscillation, is the static balance. While the dynamic balance, the body is developing its driving activities in motion [25].

Dynamic balance has been commonly verified in clinical practice through the "Time up and go test". It consists in asking the elderly to sit in a chair with arms and, after receiving some command from the applicator, such as "already, start, get up", the elderly walks to a pre-established marking, turns and returns to the position of start. This test is timed from the applicator's command and finalized after the elderly sit back in the chair. Time totaled in less than 10 seconds suggests a free and totally independent individual. Time between 10 and 19 seconds suggests free individual, with reasonable independence for gait and functional

activities. Time longer than 20 seconds suggests a dependent subject with impairment of daily life [26].

A static balance marker is the one-foot support, where the subject is asked to stand upright with his gaze fixed in front of him, bending one knee while the opposite lower limb tries to maintain body balance. This test is done with both members, eyes open and closed, timed from the beginning of the single leg support. The longer the individual stays in position, the higher their balance indicator [27].

One of the consequences of balance changes is decreased ability to perform basic activities of daily living (ADLs). There are several factors that can contribute to the loss of balance such as low visual acuity, degeneration of the vestibular system, proprioception alterations and skeletal muscle deficits [25].

The aging of the elderly compromises the ability of the central nervous system to process vestibular, proprioception and visual signals that are responsible for maintaining body balance and diminishes the changes that occur in adaptive reflexes. Dizziness giddiness (presbyterigem) and imbalance in the elderly are due to these degenerative processes [28].

Loss of balance, therefore, is one of the factors that most limit the life of the geriatric population. In 80% of cases the cause is nonspecific, but is secondary to the impairment of the balance system in general. The most dangerous consequences of imbalance and dislocation are falls, followed by fractures, leaving the elderly bedridden for days or months and accounting for 70% of accidental deaths in people over 75 years. [28]. Therefore, ADLs such as walking, sitting, standing up, or simply standing from a sitting position require afferent, proprioception, vestibular, and visual system impulses, as well as lower muscle strength for good functional fitness. of the elderly [25].

2.5 Correlation between physical exercise and frailty

Physical exercise can be an effective strategy to prevent and treat frailty, as its practice can combat up to four of FRIED's five criteria: muscle weakness, low physical activity, slow walking speed, and exhaustion [29]. However systematic reviews published in recent years [10, 30, 31, 32, 33, 34]point out that part of the physical intervention studies are not effective on frailty or do not conclude that the benefits of interventions are limited to functional activities such as sitting and standing and balance rather than frailty [10, 32]. According to literature reports, there is a lack of consistency in the studies, possibly due to non-standardization of intervention protocols and / or definition of frailty [35] with important evidence for a lack of effectiveness of physical intervention on frailty [36].

2.6 Problem Definition

How prevalent is the FS in elders of the regular communities and how it is influenced by physical activity? Can the FS be efficiently measured using scales and tests?

3. Methodology

3.1 Type of study

This is an exploratory, quantitative and cross-sectional, field research, carried out at the institution UniEvangélica University Center located in Anápolis-GO with the elderly population participating in the Open University to the Third Age program (UniATI), who participate in various activities, such as health workshops and water aerobics, among others.

3.2 Population and sample

This program is supported by UniEvangélica de Anápolis and is a project aimed at the inclusion of older people in teaching programs, also encouraging them to participate in physical activities and social programs, and is directly linked to the institution and its employees. In all, two hundred and ten (210) seniors are enrolled at UniATI.

A suitable sample was obtained where all the elderly participants of the UniATI project were verbally invited by one of the persons responsible for the research. Having an interest in participation, he was officially included as a collaborator in the work.

To calculate the sample size, the equation suggested by Agranonik and Hirakata (2011) was considered, in which:
N: sample size;
p: expected ratio;
Z: normal distribution value for a given confidence level (in this case 95% was chosen, therefore Z = 1.96);
N: population size (210 elderly);
ε: confidence interval size (95%);

Therefore, it reached 136 elderly people.

3.3 Collection of data

The data collection was made by the researchers through the enrollment evaluation, which aimed to collect personal data, besides containing the Mini Mental State Examination (MMSE) (Annex B) that served as a cognitive function screening. The evaluation was individualized, so that the subject's privacy was preserved.

Prior to the beginning of the study, the researcher was duly trained by the advisor to handle the devices and techniques applied in the research.

Friedet al (2001) protocol was used to trace the frailty profile of the elderly, which assessed unintentional loss of body weight, exhaustion (assessed by self-reported fatigue), decline in handgrip strength (PFP), low level of physical activity and slow walking. The elderly who met 3 (three) or more of these variables were classified as fragile, the elderly with one or two of these characteristics pre-fragile, and those who did not meet any of the criteria not fragile.

To assess unintentional weight loss, the elderly person was asked the following question: “In the last year, did you lose more than 4.5 kg unintentionally (ie without diet or

exercise)? If the answer was yes, then the elderly met the fragility criterion for this item.

The criterion exhaustion criterion proposed by FRIED et al. (2001) was assessed through the depression scale of the Centre for Epidemiological Studies (CES-D), by items 7 (seven) ("I felt that I had to make an effort to do usual tasks ") and 20 (twenty) (" I couldn't carry my things "). The CES-D consists of 20 scalar items on mood, somatic symptoms, interactions with others, and motor functioning. The answers are in Likert scale (never or rarely = 0, sometimes = 1, often = 2, always = 3); and the final score ranges from 0 (zero) to 60 (sixty) points. The elderly who obtained score 2 or 3 in either of the two questions met the fragility criterion for this item.

- Hand grip strength (FPP) was assessed using the JAMAR type dynamometer, a standard instrument for measuring hand grip strength in both clinical and research practice, which was the mean after 3 (three) measurements of the dominant hand of each hand.
- Slow walking was calculated by walking time (in seconds), spent walking a distance of 4.6 meters. The elderly walked a total distance of 8.6 meters, the initial 2 (two) meters and the final 2 (two) meters were disregarded to calculate the time spent walking, since the literature recommends disregarding the acceleration and deceleration period for the calculation. Three (3) measurements were performed without seconds, and the value of the three (3) was considered as average. The cutoff points proposed by FRIED et al (2001) were adopted:

• Men:
Height <173 cm - Time> 7 seconds;
Height> 173 cm - Time> 6 seconds

• Women:
Height <159 cm - Time> 7 seconds;
Height> 159 cm - Time> 6 seconds

The level of physical activity was verified through the MINESSOTA questionnaire [37]. The cutoff points for the level of physical activity established for the population itself being considered inactive were the elderly below the 1st quintilemen 1527, 80 Kcal / week and women 1122.40 kcal / week.

We also determined the weight, height and body mass index (BMI) of the elderly, as well as blood pressure with sphygmanometer and stethoscope. The elderly were also asked about the presence of comorbidity, already diagnosed and / or being treated, being considered positive with self-report.

For dynamic equilibrium analysis, the Timed up and Go protocols (TUG) (Annex C) were used, while to evaluate the static equilibrium, the one-foot bilateral support test was used. The TUG test evaluates the dynamic balance at which the individual has to perform a certain task. The execution time is timed and the shorter the time, the better the performance [38].

According to Abreu et al (2008), the one-foot support test evaluates the static balance, where the individual remains on one of the limbs with his eyes closed and the period in which he remains in this position is timed. The shorter the time, the greater the balance deficit diagnosed.

3.4 Statistical Analysis

The data collected was plotted on spreadsheets and was distributed in 3 groups (fragile, pre-fragile and non-fragile). Frequency, measures of central tendency (mean) and dispersion (range of variation, standard deviation and confidence interval) were determined to perform an analysis using descriptive statistics.

Data were expressed as absolute and relative frequency and percentage. To verify the association between categorical variables, Pierson's chi-square or Likelihood-Ratio correction was used. The value considered for p was less than 0.05 ($p < 0.05$). Data was analyzed in the Statistical Package Socio Size. (SPSS) sample power was calculated using the collected node and an alpha of 0.05, corresponding to a sampling power of 89%.

3.5 Ethics

This study is in accordance with Resolution 466/12 of the National Health Council and is part of a larger project with the elderly of UNIATI, called "FALLS, BALANCE AND POSITION IN ELDERLY", which was approved by the Ethics and Research Committee of UniEvangélica under number 1,583,515.

Firstly, UNIATI management was asked to authorize this research on its premises and with local activity goers. Each participant was informed about what the research was about and that at no time had his or her identity mentioned, as well as permitting to in the research at any time he / she wanted. Those who agreed to participate signed the informed consent form. The participant had no expense or remuneration to participate in the research, and can give up at any time, just having to inform the researcher in charge.

This research presented as risk to its population the possibility of exposure of the frail elderly, health condition or fear of damage at the time of participation. For this, the study participants were not identified, and confidentiality was maintained as to the name of the research subject. To minimize the risk of embarrassment, the evaluation of the elderly was individual, in a reserved place. Regarding the risk of falls at the time of the evaluation, a researcher was by his side, and could provide support.

The information collected was the exclusive access of the researchers involved and used only for scientific research purposes, for subsequent publication of a scientific article. The information obtained will be kept in the hands of the researcher responsible for 5 (five years) and after this period will be incinerated.

Those involved had the benefit of being able to help with health issues relevant to their own well-being and that of

other caregivers, as well as guidance on activities that improve their quality of life and physical and mental health.

4. Results

In this study 162 elderly participated in this study, and 88.3% (n = 143) were female.

The most prevalent age group (61.1%) observed was between 60 and 69 years old, characterizing the population as mostly young elderly. The most prevalent BMI index (48.1%) observed was between 25 and 29.9, characterizing the sample as mostly overweight.

As for frailty, it was observed that 53.1% (n = 86) of the elderly were pre-fragile and 33.3% (n = 54) fragile. The age range of the individuals and the BMI values found are shown in table 1.

Chart 1: Distributionofeldersby age and BMI

Idade	n (%)
60-69 anos	99 (61,1%)
70-79 anos	54 (33,3%)
Acima de 80 anos	9 (5,6%)
Total	**162 (100%)**
BMI	**n (%)**
<18,5	2 (1,2%)
18,5-24,9	47(29%)
25-29,9	78(48,1%)
30-34,9	24(14,8%)
35-39,9	8(4,9%)
>/=40	3(1,9%)
Total	**162 (100%)**

Subtitles: BMI= bodymass index, N=sample, Fr= relative frequence

Regarding gender, in the female group there were 36% of frail elderly, 51% of pre-frail and 12% non-frail elderly. In the male group, there were 11% of frail elderly, 63% of pre-frail elderly and 26% non-frail. Likelihood Ratio and Pearson ChiSquare tests demonstrated significance of the relationship between female gender and frailty syndrome. Table 2 describes each of the five criteria proposed by Fried et al (2001). The most pertinent items were decreased walking speed, followed by exhaustion. All frail elderly and 87% of the pre-frail elderly had reduced walking speed.

Chart 2: Comparison of criteria between and UniAti regarding the degree (or intensity) of frailty in 2018

		Fragile n (%)	Pre-fragile n (%)
Gaitspeed	Reduced	54 (100%)	75 (87%)
	Normal	0 (0%)	11 (13%)
Decreased handgrip strength	Reduced	31 (57%)	7 (8%)
	Normal	24 (43%)	79 (92%)
Physicalactivity	Reduced	15 (28%)	23 (27%)
	Normal	39 (72%)	63 (73%)
Weightloss	Yes	18 (33%)	10 (12%)
	No	36 (67%)	76 (88%)
Exhaustion	Yes	44 (81%)	21 (24%)
	No	10 (19%)	65 (76%)
Total		54 (100%)	86 (100%)

Subtitle:, N=sample %.

Comparing the age group and BMI of the elderly by frailty group, there was a predominance in all groups from 60 to 69 years old, .ie., young and overweight elderly (Chart 3).

Chart 3: Distribution of elderly participants in UNIATI by age group and body mass index (BMI) according to the degree of fragility in 2018

Age	Fragile n (%)	Pre-fragile n (%)	No-fragile n (%)
60-69 years	35 (65%)	46 (54%)	18 (82%)
70-79 years	19 (35%)	32 (37%)	3 (14%)
Abone ofyears 80 anos	0 (0%)	8 (9%)	1 (4%)
Total	**n=54**	**n=86**	**n=22**
BMI			
<18,5	0 (0%)	2 (2%)	0 (0%)
18,5-24,9	15 (28%)	23 (27%)	9 (41%)
25-29,9	24 (44%)	44 (51%)	10 (46%)
30-34,9	8 (15%)	14 (16%)	2 (9%)
35-39,9	5 (9%)	2 (3%)	1 (4%)
>/=40	5 (4%)	1 (1%)	0 (0%)
Total	**n=54**	**n=86**	**n=22**

Legenda: BMI= BODY MASS INDEX, N= Sample %.

It is quantitilely indeterminate in the older than 80 year age groupto find frail elderly because they would not be physically fit to start the program and would not have better physical fitness than the general population at this age.

Among the self-reported comorbidities of the elderly, Systemic Arterial Hypertension (SAH) was the most prevalent (61.7%, n = 100), followed by unspecified Heart Disease (CD) (24.7%, n = 40), Depression (PD) or psychiatric disorder with 19.1% (n = 31) elderly and Diabetes Mellitus (DM) with 17.3% (n = 28).

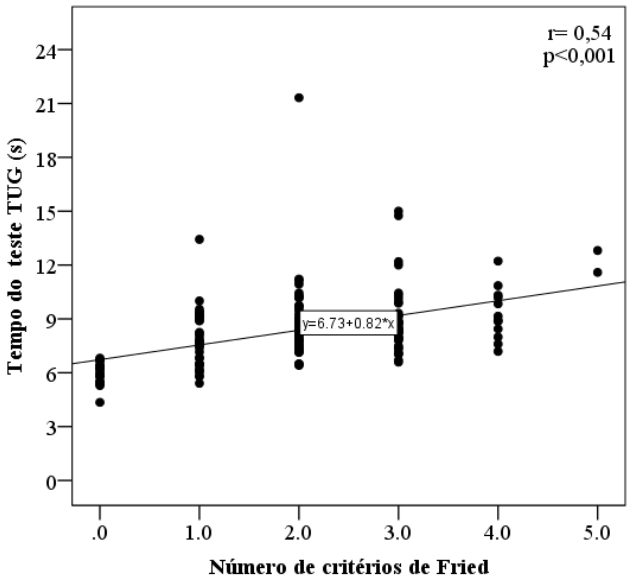
The distribution of comorbidities by degree of frailty can be seen in table 4. In the sample, 51% of the elderly had two comorbidities, 15% had 3 comorbidities and only 1% had four or more. SAH wasthemostprevalent in allfrailtygroups.

Table 4: Frequency of the chiefcomorbidities at the level for thefrail aged by UNIATI in 2018

	Frágil n (%)	Pré-frágil n (%)	Não frágil n (%)
SAH	37 (68,5%)	53 (62%)	10 (45%)
DC	16 (30%)	21 (24%)	3 (14%)
DM	13 (24%)	11 (13%)	4 (18%)
DP	17 (32%)	11 (13%)	3 (14%)

Legend: SAH = Systemic Arterial Hypertension, DC = Heart Disease, DM = Diabetes Mellitus, DP= Depression, n= Sample %

Another result was related to the Time up and Go (TUG) equilibrium test and its distribution by fragility. It can be observed that all frail elderly had longer TUG time, ie decreased balance. The Spearman correlation showed a moderate interconnection between increased TUG (loss of balance) and fragility (r = 0.54). The proposed formula makes it possible to roughly predict TUG as a function of frailty level and vice versa (p <0.001). Figure 1 shows the increasing relationship between an individual's frailty level and their functional decrease in equilibrium, which is lower in proportion to their frailty score.



Obs: criteria by Fried X time tug

5. Discussion

In this study there was a higher predominance of women, with the majority of the elderly aged 60 to 69 years, being considered young elderly. Other studies on frailty also observed this predominance, as in Lenardt et al (2013) [39] who observed among the elderly evaluated as pre-frail, a prevalence of women between 60 and 69 years. Bez and Neri (2014) [21] also observed among the elderly of Campinas a predominance of women with an average age of 72 years.

The initial data collected show that more than one third of the elderly were fragile, a much higher prevalence than other Brazilian studies with community-dwelling elderly. Studies conducted by the FIBRA network (network for the study of frailty in Brazilian elderly) have shown a prevalence of between 7 and 10% of frailty among community-dwelling elderly in some cities in the south, southeast and northeast [5, 29]. There is not much information about the prevalence of frailty in the state of Goiás, suggesting that further research in this field and improved population assessment.

Among Frieds criteria, reduced walking speed was the highest in all frail elderly, followed by exhaustion. Bez and Neri (2014) [40], who evaluated 689 community elderly from the FIBRA Network in Campinas-SP, also observed all frail elderly and most pre-frail elderly have reduced walking speeds.

In the study by Lenardt et al (2016) [41] it was shown that muscle weakness can arise even before other manifestations of frailty syndrome and other functional disabilities. The same study showed an association of decreased PPF with reduced gait speed, possibly due to the natural sarcopenia of aging. In the present study, almost 40% of frail and pre-frail elderly individuals have reduced Palmar Grip Strength (PPF), indirectly correlating the common association of these criteria and the evolution of DES.
Another criterion observed among the elderly at UNIATI was exhaustion, the second highest score. The tiredness in daily activities illustrates a decrease in the functional capacity of the elderly, may be physiological or not, making this result limited by their subjectivity, as in the study by Jardim et al (2012) [42], although this aspect did not score so significantly. Nevertheless, it should be critically evaluated, as it can predict the presence of comorbidities and relates to family structure (individual income, housing, family support), adding important individual factors to make up FS.

Among self-reported comorbidities, there was no direct relationship with FS, however, increase the vulnerability of the elderly to adverse events and limiting them to activities of daily living, also evidenced by Santos et al (2015) [43]. Some study participants have more than two comorbidities, making them more dependent on drugs, consequently more susceptible to their side effects and, ultimately, more exposed to health risk episodes.

In this study, there was a loss of balance in the elderly, with a TUG time greater than 10 seconds, for both the frail and non-frail elderly. In contrast, all non-frail elderly have normal TUG. There was a relationship between SF and balance reduction.

Lustosa et al (2013) [44] found a poor performance on TUG by the frail and pre-frail elderly and demonstrated a weak correlation between TUG and frailty. Greene et al evaluated frailty in the elderly and found an accuracy of 71.8% of TUG alone in identifying the frail elderly. These studies were conducted with community elderly, but did not analyze a sample with physical exercise.

The maintenance of body balance is known to depend on a complex and coordinated interrelation of the vestibular, visual and somatosensory receptors systems, which keep the center of mass on the support base. Despite being physical exercise participants, most of the elderly in this study were overweight, with comorbidities, and could explain the loss of balance.

6. Conclusion

FS has a broad spectrum of presentation, and may vary depending on individual factors, biological aspects, lifestyle and presence of comorbidities, being an important determinant of public health, due to the national and global increase of the elderly population. The observed prevalence of frail elderly in the community was high, similar to other states in the country. Balance was a factor strongly associated with the degree of frailty, being an absolute criterion in the sample of frail elderly, and should therefore be the factor taken into consideration in the evaluation of health of the elderly.

The risks posed by these assessments should be considered for the health assessment of the elderly population, representing the greatest challenge in the care and well-being of the human race, and an approach aimed at improving the specific conditions most affected by FS can become a key strategy. in public health.

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