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Self-Reported Frailty in Hospitalized Patients

Mariana Conceição Rodrigues de Matos[1], Milena Pereira da Silva[1], Renata Ribeiro Durães[2], João Vitor Nunes Lopes[3]* and Gabrielle Ferreira Silva[4]

[1]*Student of the physiotherapy course at Faculdades Integradas FUNORTE, Montes Claros- MG, Brazil*

[2]*Professor of the physiotherapy course at Faculdades Integradas FUNORTE, Montes Claros- MG, Brazil*

[3]*Physiotherapist, Master and Professor at Faculdade Favenorte Porteirinha - FAVEPORT - MG, Brazil*

[4]*Psychologist, Specialist and Professor at Faculdade Favenorte Porteirinha - FAVEPORT - MG, Brazil*

***Corresponding author:** João Vitor Nunes Lopes, Physiotherapist, Master and Professor at Faculdade Favenorte Porteirinha - FAVEPORT - MG, Brazil

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SUMMARY

Introduction: Frailty can be defined as a decrease in functions, physical and physiological disabilities, causing physical and emotional dependence in the individual, which may progress to death, with the possibility of also being associated with hospitalizations, falls, and in some cases, a poor prognosis after some type of of surgery. In addition, frailty is conceptualized as an imbalance of systems causing a change in mood, cognition and functionality.

Goal: To investigate the self-reported fragility of hospitalized patients.

Methodology: This is a study with a quantitative approach, descriptive and cross-sectional. The research was conducted in the ward of a private hospital in the city of Montes Claros, MG, with a sample composed of 25 hospitalized patients. As instruments, the data collection form for sample characterization and the Edmonton scale that assessed frailty were used. The data were tabulated and typed in the Microsoft Office Excel 2016® program and the analysis will be performed through the Statistical Package for the Social Sciences software (SPSS) in version 25.

Results: Of the 25 study participants, 52% were male and 48% were female. The general age range was from 40 to 90 years old with an average of 62.44. When assessing the self-reported frailty index of the individuals approached, 50% reported their health status to be fair, 23.1% to be poor and 26.9% considered it excellent/very good. When frailty was verified, 30.8% presented mild frailty, 23.1% moderate frailty and 26.9% severe frailty.

Conclusion: Based on the results found, it can be concluded that most hospitalized patients have some type of frailty, the study has a predominance of mild frailty, but when compared between the average days of hospitalization and the levels of classification of frailty according to the Edmonton scale there was no significant association

Keywords: Fragility; Hospitalized; Physiotherapy

Introduction

It is noticeable to observe that patients who are in the hospital environment are more vulnerable to various complications, including motor deficit, respiratory weakness and low functionality [1]. Frailty can be defined as a decrease in functions, physical and physiological disabilities, causing physical and emotional dependence in the individual, which may progress to death, and may also be associated with hospitalizations, falls, and in some cases, a poor prognosis after some type of surgery [2]. One can also conceptualize fragility as an imbalance of systems making with which there is a change in mood, cognition and functionality. A negative response to minimal injuries may be related to frailty, causing decline that accumulates, thus causing undesirable actions to the body, which can be considered a syndrome, most of which are in the elderly [3]. As it is considered a syndrome, frailty requires that it be planned and elaborated a set of practices that have dynamic, continuous and integrated care. Interventions that prevent negative actions are essential to prevent the evolution of

chronic and degenerative diseases. Knowing the fragility of a patient helps to design a better treatment plan, preventing critical situations and thus reducing impacts on the health system [3]. The main marker of frailty is functional decline, and they have some instruments used to evaluate the patient.

There is no scale that is more appropriate to be applied, but it must present a good expected capacity and the professional agility during the service [4]. Studies show that it is possible to identify frailty in an elderly person through four components, which are defined as weight loss that is not intentional, extreme tiredness, in which the patient feels exhausted, the decrease or extinction of gait and muscle weakness. Pre-existing illnesses or chronic illnesses can be a very important factor for the diagnosis of frailty, which increases the chances of hospitalization where individuals lose their functional capacity and feel unable to return to how it was before, thus demonstrating to be more fragile [5]. Frailty is usually seen as a more common characteristic in the elderly, but it can reach any age and when hospitalized they can develop the frailty syndrome or just be diagnosed as frail due to their exposure to the hospital environment [6]. The study proposed to evaluate the level of frailty of hospitalized patients, with the aim of determining the relationship between the hospitalized patient and frailty, that is, the objective of the study was to verify the self-reported frailty among hospitalized patients.

Methodology

The present study was characterized as descriptive, prospective, cross-sectional and quantitative analysis. It was conducted at Hospital das Clinicas Doutor Mário Ribeiro da Silveira, in Montes Claros - Minas Gerais. The population consisted of 26 patients admitted to the medical clinic at the hospital. They are patients aged between 40 and 90 years of both sexes and hospitalization time equal to or greater than 48 hours, these being the inclusion criteria. Patients with changes in Vital Signs were excluded. As stated in the VI Brazilian Guidelines on Arterial Hypertension (2010), measurements are satisfactory when systolic blood pressure is below 130 mmHg and diastolic blood pressure is below 85 mmHg. The heart rate is evaluated by the radial pulse for a period of 60 seconds and its normality is shown in the range of 60-100 beats per minute, respiratory rate has semiological significance when greater than 24 breaths per minute. Normal SaO2 levels in a healthy adult are in the range of 94% to 100%; Being unconscious.

First, a search was carried out in the files and medical records where Patients were selected according to the established inclusion and exclusion criteria. The participants were attended individually, in the most humane way possible, informing and explaining to the participants about the nature of the study, the procedure to be performed, the risks and benefits, and solving all their doubts about the research. Then, the Free and Informed Consent Term (TCLE) was presented, where the participant signed, being necessary to make his position official and thus offer security to all involved. The research data collection was carried out through the application of the scale of Edmonton Frailty, in order to verify the level of frailty of each hospitalized patient. The scale is composed of nine domains: cognition performing the clock test, functional independence, general health, social support, medication use, nutrition, mood, continence, and functional performance. According to the responses, the final score aims to indicate whether there is a condition of frailty in five categories, namely, non- frail, vulnerable, mild frailty, moderate frailty or more severe frailty [7]. The scale has eleven items and each one has a score that will be added at the end and given the diagnosis of a possible frailty. The Clock Drawing Test – TDR, (two points), functional independence (need help for 8 activities of daily living, two points),), general health status (number of hospitalizations in the last year, two points) and description of health (two points), social support (you can count on someone to help you meet your needs, two points), use of medication (use of five or more prescription drugs, one point and forget to take medicine, one point), nutrition (recent weight loss, one point), mood (feels depressed frequently, one point), continence (loss of urine control, one point), and functional performance (timed "get up and go" test, two points). points).

Having scores that indicate the level of frailty: 0-4 does not present frailty, 5-6 apparently vulnerable, 7-8 mild frailty, 9-10 moderate frailty, above 11 severe frailty, with a maximum score of 17 [8]. The data were tabulated and entered into the Microsoft Office Excel Program2016® and the analyzes were carried out using the Statistical Package for the Social Sciences software® (SPSS) in version 25. The significance level established for all analyzes was5%. Categorical variables were described through their simple and relative frequencies. The normality of the data was verified through the test of Shapiro-Wilk. For analysis of comparison between the mean length of stay and classification of self-reported frailty, the test of Mann-Whitney. The study was approved by the Ethics and Research Committee of Associação Educativa do Brasil (SOEBRAS), with consolidated opinion number 5,606,506.

Results

Of the 25 study participants, 52% were male and 48% were female. feminine. The general age range was 40 to 90 years old with an average of 62.44. According to the marital status of the participants, most declared themselves to be single (47.8%). The average hospital stay was 7 days, and 44% of the sample reported having had a readmission in the last year. It was found that most participants (n=13; 50%) maintained a regular epidemiological profile. However, when separating by category, it was found that, in relative terms, there were (n=7 26.9%) with excellent/very good general health, and (n=6; 23.1%) considerably poor. Table 1.

When evaluating the self-reported frailty index of the approached individuals, 50% reported their health status to be fair, 23.1% to be poor and 26.9% considered excellent Very Good. When frailty was verified, 30.8% presented mild frailty, 23.1% moderate frailty and

26.9% severe frailty (Table 2). There was no significant difference between length of stay and levels of frailty classification according to the Edmonton scale (p=0.7) during correlation. The main complaints reported by the approached individuals were also analyzed. These being (lower limb pain, abdominal pain, dyspnea, low back pain and edema), abdominal pain being the most predominant (Table 3).

Table 1: Descriptive analysis of the studied sample.

Variables	No	%
Age (mean ± SD)	62.44 ± 15.58	
Sex		
Masculine	13	52
Feminine	12	48
Marital Status		
Married	5	21.7
single	11	47.8
stable union	1	4.3
widowed	6	26.1
Economic Situation		
Economically active	14	58.3
Retired	10	41.7
Number of hospitalizations per year a		
Hospitalization	9	36
two admissions	11	44
More than two admissions Current	5	20
hospitalization (Average ± SD) 7 ± 6.84		

Note: Source: Own authorship, 2022.

Table 2: Analysis of Edmonton scale variables and final classification regarding the level of self-reported frailty.

Variables	No	%
Knowledge		
No mistakes	5	20
Little mistakes	5	20
Other errors	15	60
General state of health		
Excellent/Very good	7	26.9
Regular	13	50
Bad	6	23.1
Functional Independence		
Score between 0-1	14	53.8
Score between 2-4	4	15.4
Score between 5-8	8	30.8
social support	19	73.1
Ever	19	73.1
Sometimes	6	23.1
Never	1	3.8
Medicines		
Uses five or more medications regularly	12	46.2
Forgets to take medications Nutrition	13	50
(Reporting weight loss) Mood (feeling sad)	14	53.8
(Depressed) Incontinence (reporting urinary	19	76
(leakage) Functional performance	11	42.3
Failed To Perform	7	26.9
It took between 0 - 10 sec It	2	7.7
took between 11 - 20 sec It	12	46.2
took more than 20 sec Final	4	15.4
Classification		
No frailty Apparently	2	7.7
vulnerable Mild frailty	3	11.5
moderate frailty	8	30.8
severe frailty	6	23.1
	7	26.9

Note: Source: Own authorship, 2022.

Table 3: Current complaint reported by the analyzed sample.

	No	%
Lower limb pain	1	10
Abdominal pain	5	50
dyspnoea	two	20
Backache	two	20
Edema	1	9.1

Note: Source: Own authorship, 2022

Discussion

In the present study, there was a predominance of males. Corroborating Faria's studyet al., carried out in a teaching hospital in the interior of Minas Gerais, it had a prevalence of 26.3% of frailty in the elderly, with a prevalence of males [9]. while for Oliveira et al., the prevalence of the sample was female and 46.5% of the total sample were considered fragile [10]. A study carried out at the University Hospital, from August 2010 to March 2011, through the application of questionnaires to patients discharged from the medical clinic, with consultation of the medical records and the responsible physicians, showed that of the sample composed of 48 patients, 72% were female, with ages ranging from 18 and 85 years old and with an average length of stay of 20.9 days. Rufino. GP, et al corroborating with the present research, in a study carried out in Medical and Surgical Clinics registered in the computerized system of five general hospitals of the Fundação Hospitalar do Estado de Minas Gerais (FHEMIG) network, which obtained the following analyzed variables: characteristics of the patient, hospitalization and evolution in the hospital, 51.8% were male and mean age of 54.4 years. The highest number of hospitalizations was related to the respiratory system by clinical diagnoses, and the digestive system by surgical diagnoses.

The medical clinic, the emergency sector and the general practitioner specialty received the highest number of admissions [11].

According to Borges, hospital readmissions are an important indicator of care quality as it reflects the impact of hospital care on the patient's condition after discharge. It is believed that the analysis of data from patients who are readmitted early, within 7 days, can lead to a more reliable inference about the quality of care provided by the institution than the later assessment, after 30 days. Clarke compared hospital readmission rates between 1 to 6 days and between 21 to 27 days, demonstrating that 31.5% of clinical and geriatric readmissions in the earlier period would be avoidable, compared to only 6.3% of readmissions late. However, most studies in the literature evaluated readmissions in 28 to 30 days, identifying rates ranging from 5 to 25%, totaling 9,175 patients, predominantly male [12]. In the analyzed sample, the frailty that prevailed was mild with 30.8%, In the study by Stortet al., carried out with elderly people hospitalized in a hospital ward and using the same Edmonton Frail Scale (EFS), reporting that 95.2% of the elderly were frail, with a prevalence of severe frailty [13]. While in Galdiano's study et al. which aimed to assess awake patients in an Intensive Care Unit ICU and who were able to respond to five simple commands, but used the clinical frailty scale, which has the same objective as the Edmonton frailty escalation; where the prevalence of self-reported frailty was null and the researchers reported that it may have been due to the small sample size [14]. A third study by Freire et al., who searched for some articles in order to better understand the prevalence of frailty in hospitalized elderly. 20 studies were selected where different variables were obtained for frailty, it was also observed that older age influences the occurrence of frailty [15].

Conclusion

From the results found, it can be concluded that most hospitalized patients have some type of frailty, the study has a predominance of mild frailty, a fact that can be justified by the limiting factor of the research, the sample size. And when correlated the length of stay and the frailty classification levels according to the Edmonton scale, there was no significant association. It is suggested that longitudinal studies be carried out with a more robust sample to confirm such trends.

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