

Timed up and go test and self-perceived health in elderly: population-based study

Teste TUG e saúde autopercebida em idosos: estudo de base populacional

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Abstract – Due to the aging process, chronic diseases arise with increased use of medications and there is a need to evaluate the elderly to prevent functional dependence and falls. The aim of this study was to compare gender, sociodemographic characteristics, fall occurrences, self-reported diseases, quantity of drugs with timed up and go test (TUG) and TUG-cognitive, and to associate these factors with the self-perception of health of the elderly in the community. Were selected 513 elderly people, with 384 that completed the TUG test to evaluate the functional capacity. There was difference between the female and male, in the variables: age-group 70 to 79 years ($p=0.036$) \geq 80 years ($p=0.013$); per capita income in the female \leq 1 minimum wage ($p=0.005$) and >2 ($p=0.013$), falls ($p=0.001$), systemic hypertension ($p<0.001$), arthritis or rheumatism ($p=0.033$), depression ($p=0.048$), osteoporosis ($p<0.001$), medications 3 to 4 ($p=0.008$), self-perceived health ($p=0.030$) and in the TUG ($p<0.001$) and TUG-cognitive ($p=0.002$). The prevalence by Poisson regression Robust (RP_a), the variables associated with health self-perceived: heart disease ($p=0,047$), stroke ($p<0,001$), osteoporosis ($p=0,013$) and TUG motor ($p=0,028$). Women had more health problems, weakness and poor physical performance, indicating the need for special attention as the aging aspects. So, TUG test can be useful tool for risk evaluate of falls in the elderly living in the community.

Key words: Accidental falls; Aging; Chronic diseases; Frail elderly; Physical fitness.

Resumo – Devido ao processo envelhecimento, surgem as doenças crônicas com aumento de uso de medicamentos e existe necessidade de avaliar os idosos para prevenir dependência funcional e quedas. O objetivo deste estudo foi comparar as pessoas idosas por gênero, variáveis socioeconômicas, ocorrências de quedas, doenças autorrelatadas, quantidade de medicamentos, saúde autopercebida e teste Timed Up and Go (TUG). Foram selecionadas 513 pessoas idosas, com 384 que completaram o teste TUG para avaliar a capacidade funcional. Existia diferença entre gênero feminino e o masculino, nas variáveis: grupo etário de 70 a 79 anos ($p=0,036$) \geq 80 anos ($p=0,013$); renda per capita no salário mínimo \leq 1 feminino ($p=0,005$) e > 2 ($p=0,013$), quedas ($p=0,001$), hipertensão sistêmica ($p<0,001$), artrite ou reumatismo ($p=0,048$), osteoporose ($p<0,001$), medicamentos de 3 a 4 ($p=0,008$), autopercepção de saúde ($p=0,030$) e no TUG ($p<0,001$) e TUG-cognitivo ($p=0,002$). A prevalência por regressão de Poisson robusta (RP_a), as variáveis associadas à saúde autopercebida: doença cardíaca ($p=0,047$), acidente vascular cerebral ($p=0,001$), osteoporose ($p=0,013$) e motor TUG ($p=0,028$). As mulheres tiveram mais problemas de saúde, fraqueza e desempenho físico fraco, indicando a necessidade de atenção especial aos aspectos do envelhecimento. Assim, o teste TUG pode ser uma ferramenta útil para avaliar o risco de quedas nos idosos que vivem na comunidade.

Palavras-chave: Acidentes por quedas; Aptidão física; Doenças crônicas; Envelhecimento; Idoso frágil.

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INTRODUCTION

With advancing age, the number of chronic diseases increases¹ and consequently thus more use of medications in elderly population². Thus, elderly people self-report illness a there is high percentage of poor and very poor health³. This population also presents functional losses that diminish or preclude the performance of daily activities³. Therefore is essential to evaluate the functional capacity of elderly⁴, people, aiming to improve the quality of life and prevent possible diseases and falls⁵.

The Timed Up and Go (TUG) test has been used for this evaluation⁶, it provides information on the functional capacity of the older adults. In addition to evaluating the mobility, the balance, transferring the position from sitting to standing, stability in walking, and gait speed or with higher risk of falls elderly people, as this involves posture, agility, and dynamic balance^{6,7}. The TUG value up to 10 seconds is considered normal, from 10.01 to 20 seconds with compromised performance and over 20.01 seconds with higher risk of falls elderly⁷. In the study by Bohannon et al⁷, the TUG test measurement was stratified into three age groups as follows: 60-69 years with normative values of 8.1 (7.1-9.0) seconds, 70-79 years, with values of 9.2 (9.8-10.0) seconds, and 80-89 years with 11.3 (10.2-12.7) seconds. The TUG cognitive⁸ that evaluates verbal fluency and verifies the cognitive capacity combined with the motor demand related to the performance of elderly people.

However, only the TUG test as a single tool should not be considered to evaluate the elderly at high risk of falls⁹ and it is necessary to know the health self-perception¹⁰ and the diseases self-reported by the elderly¹¹. In addition, it is described a higher life expectancy for women¹² and these will more often to the health service¹³. As for men, they have higher rates of physical performance capacity and less frequent the health service¹³. Moreover, it is not known how this health by of both genders, the functional capacity of mobility and balance and its impacts on self-perceived health of the elderly of this community. Still, this is the first population-based study with sample selection by probabilistic distribution and by draw of households maps provided by IBGE¹⁴. So, through information gathered will allows public policy subsidies for aging.

The chronic disease may correlate with functional disability in the elderly institutionalized¹⁵ or of the community⁴. However, it is not known that functional disability with samples in the general population of elderly living in this community associates poor reports of self-perceived health. In this way, knowing this health profile could propose preventive measures that delay the appearance of risk factors (e.g. falls) that lead to the reduction of the autonomy of the older adults. So, the study did a TUG test^{6,7} and not only self-report by questionnaires to know the state of functionality of the elderly³.

The aims of this study were to compare gender, sociodemographic characteristics, fall occurrences, self-reported diseases, quantity of drugs with timed up and go tests (TUG) and TUG-cognitive, and to associate these factors with the self-perception of health of the elderly in the community.

METHODOLOGICAL PROCEDURES

Study design and population

This was a cross-sectional, population-based study carried out with elderly patients 65 years of age or over, of both sexes, living in the urban area. In maps provided by IBGE¹⁴, the court and streets whose homes were visited were identified, counted and drawn, with additional and proportional number selection of court. Thus, we identified 15 census tracts with density of elderly people representative of the population of Cuiabá city, counted and drawn the court and streets whose homes were visited by the interviewers.

The study was approved No. 632/09 (Resolution 466/12 of the National Health Council) by the Research Ethics Committee of the Júlio Muller University Hospital of the Federal University of Mato Grosso (UFMT). The sample size (n) was first determined through the method of simple random sampling.

Inclusion and exclusion

Were included all elderly people who had signed the Informed Consent Form and who achieved a score in the Mini Mental State Examination (MMSE)¹⁶ equal or above of 19 points. Were excluded: the wheelchairs or bedridden, presented serious stroke sequelae, had Parkinson's disease in advanced stages, were suffering any terminal illness, or who had cancer in general, except for skin cancer, who did not perform the TUG or TUG-cognitive.

Dependent and independent variables

In this study two dependent variables were considered: gender (male and female) and self-perception of health: (bad and very bad) and (very good/good and regular). The independent variables were: age (in years); age group (in years) categorized in years in (60 to 69 years and 80 years or +); resides alone (not yes); schooling (illiterate, 1 to 4 years and 5 years or +); income (≤ 1 SM, $1 < x \leq 2$ SM and did not respond); occurrence of falls (no, yes); cardiopathies (no, yes); systemic hypertension (SH) (not, yes); stroke (no, yes); diabetes mellitus (no, yes); tumor-cancer (not, yes); arthritis, rheumatism (no, yes); lung disease (no, yes); depression (no, yes); osteoporosis (not yes); quantity of drugs (5 or more, 3 to 4, 1 to 2 and none); TUG and TUG-cognitive (in seconds) categorized (≤ 10 seconds and >10 seconds).

Data collection

All the elderly was recruited from census tracts where of the households were drawn according to IBGE¹⁴ census tract maps. The first stage being the home visits to apply the interview forms related to the sociodemographic¹⁴, economic, reported diseases, and lifestyle characteristics, performed on all days of the week by trained interviewers. The second stage was performed on Saturdays with the physical tests. The interviews with a very broad formulary were carried out at the home of the elderly. The tests were performed on another day in order not to tire the elderly. It was still necessary

to take the materials to the data collection site.

Was used to evaluate the economic conditions of the older adults based on monthly per capita income. To evaluate education, the number of complete years of study was considered and classified according to the criteria of the Brazilian Association of Research Companies (ABEP) as: illiterate, adult literacy, elementary, scientific, higher, postgraduate. Regarding comorbidities, the existence of self-reported illnesses¹⁰ in the previous year were inquired about, including: SH, diabetes mellitus (DM), heart disease, stroke, tumor, cancer, arthritis, rheumatism, lung disease, depression, and osteoporosis.

Physical evaluation

The TUG test was used: a tape measure straight line for 3 meters marked on the ground, a chair approximately 46 cm in height, with arms at 65 cm in height and a stopwatch. The elderly was instructed to use normal footwear, walking cane or another accessory. In TUG motor, could not to talk in the test and TUG cognitive should to talk during the test the names of animals⁸, after the verbal command “go”, and the time was measured in seconds⁷. The cut-off point for TUG-motor and TUG-cognitive was value up to 10 seconds is considered normal, from 10.01 to 20 seconds with compromised performance and over 20.01 seconds with higher risk of falls elderly⁷.

Statistical analysis

The internal consistency of the data was tested with Cronbach's alpha coefficient and was found to be adequate ($\alpha > 0.60$)¹⁷. For the comparison of data of the continuous variables by gender the unpaired Student's t-test was used, and the z-test for normal distribution and in the categorical variables the crude prevalence ratio (RP) with its confidence interval (95% CI) and the chi-squared test (X^2) of Pearson. Associations were made between the outcome (self-perception of health) and the independent variables. Then, the variables that showed association with values of $p < 0.20$ (chi-squared test) were selected to compose the multiple Poisson regression model (RP_a)¹⁸. In the final model, only those with p-value < 0.05 remained. Note that in all associations the reference category was first in all variables considered.

RESULTS

Study participants were 384 elderly people aged 65 years or older, with 244 being female mean age was 72.41 ± 6.30 years and 140 elderly males with 72.06 ± 5.34 years. Shows that there were statistically significant differences, between the female and male groups of older adults in relation to the variables occurrences of falls ($p = 0.001$), systemic hypertension ($p < 0.001$), arthritis and rheumatism ($p = 0.033$), depression ($p = 0.048$), osteoporosis ($p < 0.001$), the amount of medication, in the 5 or more medications ($p = 0.001$) and 3 to 4 medications ($p = 0.008$) and categories, and self-perceived poor and very poor health ($p = 0.030$), (table 1).

Table 1. Comparison between gender by socioeconomic characteristics, occurrence of falls, self-reported diseases, quantity of drugs and self-perception health of the elderly in the community.

Variables	Category	Gender		p value
		Female n=244 (63.54)	Male n=140 (36.46)	
Age	Mean ± SD	72.41±6.30	72.06±5.34	0.563*
Age group (in years)	60 to 69 years	96 (39.34)	51 (36.43)	0.570*
	70 to 79 years	109 (44.67)	78 (55.71)	0.036**
	80 years and +	39 (15.98)	11(7.86)	0.013**
Lives alone	No	204 (83.61)	120 (85.71)	-
	Yes	40 (16.39)	20 (14.29)	0.578*
Education	Illiterate	58 (23.77)	33 (23.57)	0.965*
	1 to 4 years	114 (46.72)	60 (42.86)	0.463*
	5 years or +	72 (29.51)	47 (33.57)	0.411*
Per capita income	≤ 1 Minimum wage	154 (63.11)	68 (48.57)	0.005**
	1 < x ≤ 2 Minimum wage	44 (18.03)	30 (21.42)	0.425*
	> 2 Minimum wage	38 (15.57)	37 (26.43)	0.013**
	Did not respond	08 (3.28)	05 (3.57)	0.880*
Occurrences of falls	No	196(80.33)	129 (92.14)	-
	Yes	48(19.67)	11 (7.86)	0.001
Heart disease	No	201 (82.38)	115 (82.14)	-
	Yes	43 (17.62)	25 (17.86)	0.954
Systemic hypertension	No	58 (23.77)	59 (42.14)	-
	Yes	186 (76.23)	81 (57.86)	<0.001
Stroke	No	236 (96.72)	131 (93.57)	-
	Yes	08 (3.28)	09 (6.43)	0.183
Diabetes mellitus	No	193 (79.10)	109 (77.86)	-
	Yes	51 (20.90)	31 (22.14)	0.776
Tumor, cancer	No	237 (97.13)	135 (96.43)	-
	Yes	7 (2.87)	05 (3.57)	0.711
Arthritis, rheumatism	No	143 (58.61)	97 (69.29)	-
	Yes	101 (41.39)	43 (30.71)	0.033
Lung disease	No	225 (92.21)	129 (92.14)	-
	Yes	19 (7.79)	11 (7.86)	0.980
Depression	No	190 (77.87)	120 (85.71)	-
	Yes	54 (22.13)	20 (14.29)	0.048
Osteoporosis	No	133 (54.51)	126 (90.00)	-
	Yes	111 (45.49)	14 (10.00)	<0.001
Quantity of drugs	5 or more	32 (13.11)	14 (10.00)	0.001
	3 to 4	90 (36.89)	34 (24.29)	0.008
	1 to 2	99 (40.57)	60 (42.86)	0.663
	None	23 (9.43)	32 (22.86)	0.350
Self-perceived health	Very good	16 (6.58)	17 (12.14)	0.079
	Good	86 (35.24)	58 (41.43)	0.231
	Regular	118 (48.36)	59 (42.14)	0.237
	Poor or very poor	24 (9.84)	06 (4.29)	0.030

SD: Standard deviation. Numbers in parentheses to the right are the percentages. * *p*-values considering the unpaired t-test of Student's *t* distribution. **: *p*-values considering the two-proportion z-test for normal distribution.

Table 2: the comparisons between the female and male groups of elderly people, for the TUG and TUG-cognitive variables, both being statistically significant (*p*<0.001 and *p*=0.002). The TUG and the TUG-cognitive

were also compared by gender, categorized in three categories showed statistically significant differences. In comparing the values of normal TUG versus with higher risk of falls performance of the elderly⁷, there was statistically significant differences ($p < 0.001$). The TUG-cognitive only presented statistical significance for the time 10 seconds or less category and for the more than 20 seconds category.

Table 2. Comparison between gender by timed up and go tests (TUG) and TUG-cognitive, of the elderly in the community.

Variables	Category	Gender		p-value
		Female <i>n</i> =244 (63.54)	Male <i>n</i> =140(36.46)	
TUG motor	Mean ± SD	12.91±5.51	10.53±3.91	<0.001*
TUG-cognitive	Mean ± SD	18.05±7.79	15.58±6.99	0.002*
	≤10 seconds	65 (26.64)	75 (53.57)	<0.001**
TUG motor	10,01 to 20 seconds	161 (65.98)	62 (44.29)	<0.001**
	>20 seconds	18 (7.38)	3 (2.14)	0.035 FE
TUG motor	≤10 seconds	65 (26.64)	75 (53.57)	-
	>10 seconds	179 (73.36)	65 (46.43)	<0.001**
	≤10 seconds	20 (8.20)	24 (17.14)	0.014**
TUG-cognitive	10,01 to 20 seconds.	150 (61.47)	96 (68.57)	0.157**
	>20 seconds	74 (30.33)	20 (14.29)	<0.001**

TUG: Timed up and go test. SD: Standard deviation. Values in parentheses to the right are the percentages. * p -values considering the t-test of Student's t distribution. ** p -values considering the two-proportion z-test for normal distribution. FE: Fisher's exact test.

The female, has had 0.25 more prevalence ratio of times ($p=0.026$) in self-perceived health as poor or very poor. Elderly people with had heart disease (0.29 more times and $p=0.025$), with hypertension (0.24 more times and $p=0.044$) in stroke (0.81 more times and $p=0.001$), rheumatoid arthritis (0.31 times more and $p=0.005$), with depression (0.27 more times and $p=0.035$), osteoporosis (0.36 more time and $p=0.001$), of prevalence ratio in self-perceived health as poor or very poor. As the number of users' medications 3-4 types (0.75 more times and $p=0.001$) of prevalence ratio in self-perceived health as poor or very poor. Elderly who made the TUG test >10 seconds (0.39 times more $p=0.001$) of prevalence ratio in self-perceived health as poor or very poor (table 3).

In the multiple regression model only stroke variables, heart disease, osteoporosis and TUG test showed statistical significance. Note that gender variable although not statistically significant in multiple model remained the same as an adjustment variable (table 4).

DISCUSSION

In the self-reported health, elderly women obtained 25% more complaints as bad or very poor when compared to elderly men. In self-reported diseases, this percentage reduced to 11% in elderly women. The main self-reported

Table 3. Association between the self-perception of health (bad and very bad or very good/good and regular) and sociodemographic factors, occurrences of falls, self-reported diseases, quantity of drugs and time up and go (TUG) test, of the elderly in the community.

Variables	Category	Self-perceived health				PR _c	CI 95%	p-value
		Bad and very bad		very good/good and regular				
		n	%	n	%			
Gender	Male	65	46,43	75	53,57	1,00	-	-
	Female	142	58,20	102	41,80	1,25	[1,02 ; 1,54]	0,026
Age group	60 to 69 years	83	56,46	64	43,53	1,00	-	-
	70 to 79 years	99	52,94	88	47,06	0,94	[0,77 ; 1,14]	0,521
	80 years or+	25	50,00	25	50,00	0,89	[0,65 ; 1,21]	0,428
Live alone	No	178	54,94	146	45,06	1,00	-	-
	Yes	29	48,33	31	51,67	0,88	[0,67 ; 1,16]	0,346
Education	5 years or+	59	49,58	60	50,42	1,00	-	-
	1 to 4 years	95	54,60	79	45,40	1,10	[0,88 ; 1,38]	0,398
	Illiterate	53	58,24	38	41,76	1,18	[0,91 ; 1,51]	0,212
Per capita income	> 2 MW	35	46,67	40	53,33	1,00	-	-
	1 < x ≤ 2 MW	36	48,65	38	51,35	1,04	[0,74 ; 1,46]	0,809
	≤ 1 MW	131	59,00	91	41,00	1,26	[0,97 ; 1,85]	0,063
	No answer	5	38,46	8	61,54	0,82	[0,40 ; 1,71]	0,583
Occurrences of falls	No	174	53,54	151	46,46	1,00	-	-
	Yes	33	55,93	26	44,07	1,04	[0,82 ; 1,34]	0,734
Heart disease	No	162	51,27	154	48,73	1,00	-	-
	Yes	45	66,18	23	33,82	1,29	[1,06 ; 1,58]	0,025
Systemic hypertension	No	54	46,15	63	53,85	1,00	-	-
	Yes	153	57,30	114	42,70	1,24	[1,01 ; 1,55]	0,044
Stroke	No	191	52,04	176	47,96	1,00	-	-
	Yes	16	94,12	1	5,88	1,81	[1,55 ; 2,11]	0,001
Diabetes mellitus	No	161	53,31	141	46,69	1,00	-	-
	Yes	46	56,10	36	43,90	1,05	[0,85 ; 1,31]	0,654
Tumor, câncer	No	199	53,49	173	46,51	1,00	-	-
	Yes	8	66,67	4	33,33	1,25	[0,83 ; 1,88]	0,368
Arthritis, rheumatism	No	116	48,33	124	51,67	1,00	-	-
	Yes	91	63,19	53	36,81	1,31	[1,09 ; 1,59]	0,005
Lung disease	No	188	53,11	166	46,89	1,00	-	-
	Yes	19	63,33	11	36,67	1,19	[0,89 ; 1,59]	0,281
Depression	No	159	51,29	151	48,71	1,00	-	-
	Yes	48	64,86	26	35,14	1,27	[1,04 ; 1,54]	0,035
Osteoporosis	No	125	48,26	134	51,74	1,00	-	-
	Yes	82	65,60	43	34,40	1,36	[1,14 ; 1,63]	0,001
Quantity of drugs	None	20	36,36	35	63,64	1,00	-	-
	1 to 2	80	50,31	79	49,69	1,38	[0,94 ; 2,03]	0,074
	3 to 4	79	63,71	45	36,29	1,75	[1,20 ; 2,55]	0,001
	5 or more	28	60,87	18	39,13	1,67	[1,10 ; 2,55]	0,014
TUG motor	≤10 seconds	60	43,17	79	56,83	1,00	-	-
	>10 seconds	147	60,00	98	40,00	1,39	[1,12 ; 1,73]	0,001

Education: according to Brazilian Association of Research Companies-ABEP (2009). MW: Minimum wage. PR_c: crude prevalence ratio in the Bivariate analysis. CI: 95% confidence interval. p: significance level (p<0.05) considering the of chi-square.

Table 4. Prevalence ratio adjusted by robust Poisson regression (RPa), the variables associated with health self-perceived (bad and very bad) and (very good/good and regular), in the elderly in the community.

Variables	Category	PR _a	95% CI	p-value Valor <i>p</i>
Gender	Male	1,00		
	Female	1,11	0,88-1,39	0,375
Heart disease	No	1,00		
	Yes	1,22	1,01-1,49	0,047
Stroke	No	1,00		
	Yes	1,76	1,45-2,13	<0,001
Osteoporosis	No	1,00		
	Yes	1,28	1,05-1,55	0,013
TUG motor	≤10 seconds	1,00		
	>10 seconds	1,28	1,03-1,59	0,028

PR_a: prevalence ratio adjusted in the Poisson regression model with selection backward method. Significant at 5% level ($p < 0.05$). CI-confidence interval in 95%. The variable gender although not significant remained in the model as an adjustment variable.

diseases after multivariate analysis related to self-perception for both genders were found: cardiac disease, stroke, osteoporosis and TUG test over 10 seconds. More women were found, thus had feminization of old age, and with lower income living in the city different from the results of the State of Mato Grosso, higher survival of women, and belonging to classes C and D.

Were found higher prevalence in females characterized greater feminization in this study living in the city and is considered to be generally due to a greater survival of women¹², contradicting the state's Mato Grosso according with demographic data¹⁴. The women had lower per capita incomes with a higher percentage in classes C or D. This result is in agreement with other studies with older adults in other states of Brazil²⁰. It was observed that the older adults with low socioeconomic status were more vulnerable to the limitations of aging and that the women generally had lower income per capita²¹.

The occurrence of falls was higher in the female group compared to the male group, with a statistically significant difference. This result agrees with several studies showing a higher prevalence of falls in females^{5,22}. According women suffer more falls due to being more fragile, because they have a maturity process which starts earlier than that of men²³.

In this study, the comparison between the female and male groups of older adults indicated that the most prominent diseases were systemic hypertension (SH), arthritis and rheumatism, depression, and osteoporosis, with a prevalence of females in all the disease categories. Change in the cardiovascular system may lead to SH, also having deleterious effects on the cognition, and the various disorders of senility gradually causing a reduction in the range of movements, affect balance and cause falls²⁴. Osteoporosis is among the musculoskeletal diseases²⁵ and may be explained by endocrine changes in older women²⁶.

The data obtained in the study showed differences in the amount

of medications used by the male and female groups, with women being more prevalent in the 3 to 4 medications with significance statistical. The higher number of medications used by women is due to them reporting more chronic conditions². This also confirms the findings of the present study in which the elderly women self-perceived a higher percentage of poor and very poor health (9.84%) compared to the men, this difference being statistically significant.

In this study, the mean scores of the TUG and TUG-cognitive of the elderly female group were higher than those of the male group, with these differences being statistically significant. According to this difference is due to the fact that in the aging process sarcopenia may affect the musculoskeletal system and its functional capacity performance and interfere with hormonal, nutritional, metabolic and immunological factors²³. There are differences in the physical composition of men and women throughout the life cycle, resulting in different physical performance due to body composition²⁰, thus justifying the lower female performance, corroborating with present study²⁶. According to Bohannon et al⁷, older adults may have difficulty performing dual tasks with advancing age and this decline was associated with Parkinson's disease²⁷.

Although the health status of the older adults in this study was self-reported, studies have shown that perceived morbidity coincides older people who reported having chronic diseases²⁸ who considering the effect of ethnicity²⁹ and racial difference in falls³⁰. In this study, among all the variables analyzed in the anamnesis, five variables summarized the self-perception of health in the elderly. So, these questions should be explored due to lack of time for evaluation and the large number of elderly patients in clinics. It still suggests proposing public the exercises to improve the functionality, which prevents the early functional dependence in the elderly⁴. In cross-study there is a limitation to elucidate causality, therefore, new studies are needed to test these hypotheses.

CONCLUSION

This study concludes that self-related heart disease, stroke and osteoporosis associated with self-perception by the elderly, and the stroke showed higher risk for poor or very poor health of the elderly people. In the measurement of TUG test greater than 10 seconds was correlated with worse self-perceived health by the older adults. Thus, the TUG test can be useful tool for risk evaluate of falls in the elderly people. Thus, the study observed that the good health self-perception depends on the mobility and balance measured by the TUG and still on the health status reported by previous diseases in these elderly people. Therefore, it is proposed interventions and actions of health professionals in the promotion of health and prevention of falls the elderly women who self reported more diseases and obtained worse performance of mobility and functional capacity living in the community.

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