

### 33 - SOCIAL PROFILE AND FUNCTIONAL FITNESS FOR ELDERLY RESIDENTS IN THE CITY OF TRIUNFO – PE

JOSÉ MORAIS SOUTO FILHO  
SESC, Triunfo, Pernambuco, Brazil  
jmfilho@sescpe.com.br

doi: 10.16887/85.a1.33

#### INTRODUCTION

Brazil has been suffering in recent decades a change in its age social structure. The Brazilian population is aging at an accelerated pace. According to the Law No. 8,842 in January 4th, the year 1994 is considered older for purposes of this law, people over sixty years old. According to the IBGE in 2002, Brazil had 16,022,231 people over sixty years old representing 9.3% of the population according to their projections and the elderly in 2020 will reach 25 million that will make up 11.4% of the population. In 2030 it is believed that 40% of Brazilians will have ages between 30 and 60 years old. According to Duarte (2006, p. 9) in 2050, the number of seniors in advanced old age (equal to or greater than 80 years) will surpass that of children under four years old. This phenomenon occurs because of the low birth rate due to the increasingly widespread number for the Brazilian population, economic factors and the higher educational levels of the population over the previous decade contraception. These facts associated with medical advances and technological development has provided an increase in life expectancy of the population. The significant fact increases in the number of elderly in the population makes it important to consider the phenomenon of aging from different perspectives (Farinatti, 2013 p. 127). Aging, natural process of human life brings with it numerous motor, metabolic and psychological changes, these changes directly affect the style and quality of life. For Alves (2009, p. 77) The limitations of motion due to the decreased range of motion, reduced flexibility, muscle strength, particularly of the lower limbs (main determinant of household accidents such as falls), the impairment of cardiorespiratory functions, loss of bone mineral density (osteoporosis triggering factor) lead a dependent on your daily routine and low quality of life due to reduced capacity and functional autonomy old age.

The effects of aging on physical fitness and functional capacity have been well described in the scientific literature (PARAHYBA et al, 2005; MCGUIRE et al, 2007) apud (MATSUDO, 2009).

Functional capacity is defined as the physical and mental ability of the individual to maintain their autonomy and independence in their activities of daily living. The reduction in functional capacity is common in the aging process, making life restricted and dependent elderly in relation to their daily actions, making limited their quality of life and participation in society. Thus we seek to trace the profile and functional capacity of older Triumph city – PE state.

The study was conducted at the Centre for Tourism and Leisure SESC in Triunfo city – PE state. The city is located in the hinterland of Pajeú to 410 km from the capital Recife city. The city has just over 15.280 thousands inhabitants according to the 2010 IBGE.

#### OBJECTIVE

- Draw the functional profile of the elderly in the city of Triunfo-PE city;
- Assess the functional capacity of the elderly aged over 60 years old;
- Identify the level of functional autonomy of elderly evaluated;
- Propose strategies for intervention program through physical activity.

#### METHODOLOGY

51 patients of both sexes, aged over 60 years old residing in the city of Triunfo. Where was evaluated.

The elderly participants are part of the 3rd age group at the Secretariat for Social Action of the City area.

The study was approved by the ethics committee of the National Department of SESC - Social Service of Commerce, and the data was collected in October 2013.

The secretary of social action as well as its director of social assistance were duly informed about the nature of this research, its objectives and procedures. Seniors who participated in the study signed a consent form agreeing to participate. Likewise all were informed of liberty to suspend their participation in the study at any time without prejudice.

Data were recorded on an evaluation sheet prepared by physical evaluation of the SESC Triunfo city department, stating the following: Social anamnesis, Hemodynamics at rest, body composition and functional tests.

The seniors had their functional capacity assessed through the battery of tests containing Fullerton: BMI, sitting and standing in 30 seconds, biceps Thread 30 seconds, touching hands behind his back, Sit and Reach, Time Up and Go, March stationary 2 minutes (MATSUDO, p. 300).

The classification indexes battery Fullerton let it a sort the functional capacity of the elderly in; poor, fair, average, good and excellent making it possible to identify the stage of functional independence that older people are through the identification of body composition, muscle strength tests relative and absolute, agility, dynamic balance, flexibility, heart and lung capacity and efficiency of gait.

Descriptive statistical analysis was performed using Excel software.

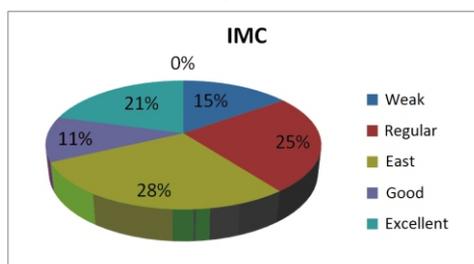
#### RESULTS AND DISCURTIONS

We evaluated 51 elderly people of Triumph city - PE state, being 16% male and 84% female. The age groups studied were of 60-84 years. Through social history was possible to identify the following data: Regarding education 14% of the individuals were named illiterate, 39% illiterate, 15% had incomplete primary school, 12% have completed primary school, 2% had completed secondary school, 12% have completed secondary education and 6% have a college education. The criterion source of income 88% say they are retired, 4% already have a pension as main income, 2% have social benefits such as family income and 6% have no income. When asked about the main expense of 78% said: health spending as major expenses and 22% identified food as a major expense. The share of elderly in the household economy performed as follows 47% two elderly evaluated are solely responsible for household expenses, 47% share responsibilities equally with another entity of the family and 6% do not participate in family expenses. On the issue of housing 90% own their own home followed by 6% who have rented housing and 4% live in assigned domicile. But the type of housing was 90% seniors who reside in homes and 10% residents in apartments. Still analyzing the social aspects 14% of the assessed elderly living alone, 49% live with a spouse, 29% live with children and 8% live with other relatives. In health issues 14% reported no health problem, 49% reported only one health problem and 37% reported being attacked by two or more health problems. When asked about alcohol consumption 10% consume

alcohol, and 90% are not consuming alcohol. With regard to smoking 4% presented themselves as smokers are 83% non-users of tobacco and 13% are former smokers. Analyzing the risk and incidence of falls 22% had experienced one or more Falls in the last two years and 78% did not fall in recent years. The low table 1 shows the sociodemographic characteristics of the sample respectively and separated by gender.

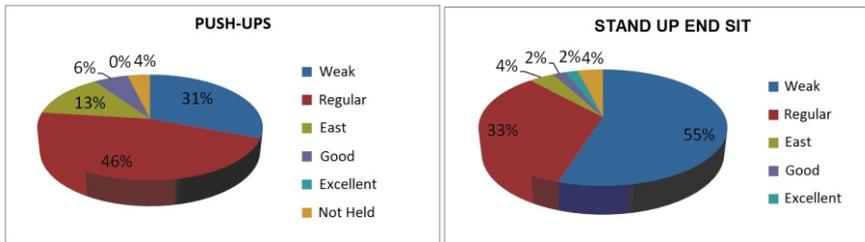
Variable	Men		Women		Total	
	n	%	n	%	n	%
<b>Age (years)</b>						
60-64	1	2,0	12	23,0	13	25,0
65-69	0	0,0	14	27,0	14	27,0
70-74	4	8,0	11	22,0	15	30,0
75-79	2	4,0	3	6,0	5	10,0
> 80	1	2,0	3	6,0	4	8,0
<b>Education</b>						
Not Literate	2	4,0	5	10,0	7	14,0
Literate	3	6,0	17	33,0	20	39,0
Fundamental Incomplete	1	2,0	7	15,0	8	15,0
Full fundamental	0	0,0	6	12,0	6	12,0
average Incomplete	0	0,0	1	2,0	1	2,0
Complete medium	2	4,0	4	8,0	6	12,0
Superior Incomplete	0	0,0	0	0,0	0	0,0
Complete Superior	0	0,0	3	6,0	3	6,0
Postgraduate	0	0,0	0	0,0	0	0,0
<b>Source of income</b>						
retired	8	16,0	37	74,0	45	88,0
pension	0	0,0	2	4,0	2	4,0
salary	0	0,0	0	0,0	0	0,0
benefit	0	0,0	1	2,0	1	2,0
other	0	0,0	0	0,0	0	0,0
It has not	0	0,0	3	6,0	3	6,0
<b>Principal Expense</b>						
health	6	12,0	34	66,0	40	78,0
Food	2	4,0	9	18,0	11	22,0
<b>Economic Participation in Family</b>						
solely responsible	4	8,0	20	39,0	24	47,0
most responsible	0	0,0	0	0,0	0	0,0
divide responsibilities	4	8,0	20	39,0	24	47,0
without participation	0	0,0	3	6,0	3	6,0
<b>House</b>						
own	6	12,0	40	78,0	46	90,0
rented	2	4,0	1	2,0	3	6,0
courtesy	0	0,0	2	4,0	2	4,0
<b>Type of Dwelling</b>						
house	6	12,0	40	78,0	46	90,0
Apartment	2	4,0	3	6,0	5	10,0
<b>Lives with whom?</b>						
alone	0	0,0	7	14,0	7	14,0
spouse	7	14,0	18	35,0	25	49,0
children	1	2,0	14	27,0	15	29,0
other Relatives	0	0,0	4	8,0	4	8,0
<b>Health problems</b>						
presents no	1	2,0	6	12,0	7	14,0
only one	4	8,0	21	41,0	25	49,0
More than one	3	6,0	16	31,0	19	37,0
<b>Alcoholism</b>						
Yup	0	0,0	5	10,0	5	10,0
do not	8	16,0	38	74,0	46	90,0
<b>Smoking</b>						
Yup	0	0,0	2	4,0	2	4,0
do not	6	12,0	36	70,0	42	82,0
Quit smoking	2	4,0	5	10,0	7	14,0
<b>Falls in recent years</b>						
Yup	0	0,0	11	22,0	11	22,0
do not	8	16,0	32	62,0	40	78,0

Following analyze the profile of the functional abilities of the elderly in the city area of Triunfo – PE State by Fullerton battery of test in which we obtained the following classifications: the contents of the IMC elderly subjects were divided into 15% poor, 25% fair, 28% average, 11% good, 21% excellent. In the graph below shows the BMI classification and their percentages.



Graph 1. Body Mass Index

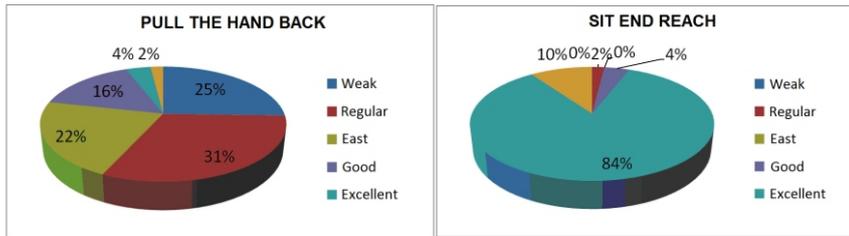
The assessment of levels of upper limb strength was performed using unilateral elbow flexion test in 30 seconds in which the following results were obtained: 31% were weak, 46% had regular level, medium level reached 13%, 6% demonstrated good level, no rated reached the excellent level and 4% could not perform the test. Have to assess the strength of the lower limbs to get up and sit in 30 seconds 55% of the individuals had a weak level of 33% followed by regular test was used, average 4% 2% had good level, 2% also showed the excellent level and 4% were unable to perform the test. You can view the graphs 1 and 2 levels of strength elderly subjects.



Graph 2. Levels Force Upper Limb.

Graph 3. Levels Lower Limb Force.

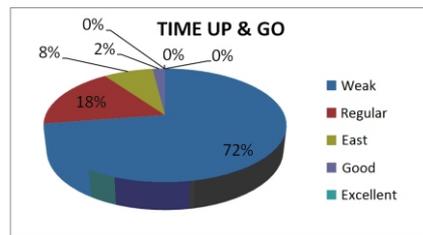
Subsequently we evaluated the levels of flexibility through playing the hand in the back and sit and reach test. In the first test the following results were obtained: 25% low level of flexibility followed by 31% in average level, intermediate level 22% 16% good index, excellent 4% and 2% could not perform the test. In the sit and reach test any appraised obtained the weak or average rates, however 2% had regular level, 4% achieved level 84% good to excellent level proved and 10% were unable to perform the test. The levels of flexibility are clearly explicit in Tables 4 and 5 below.



Graph 4. Flexibility Upper Limb.

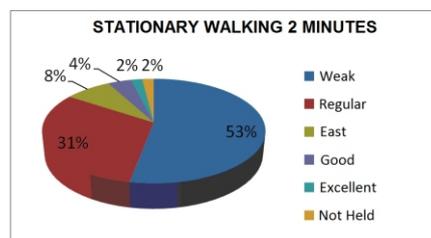
Graph 5. Flexibility Lower Limbs.

On the issue of agility and dynamic balance was used as evaluation criteria obtained in Time Up & Go test where the elderly had their times that classified them into 72% poor, 18% fair, 8% and 2% average good. In that test any appraised got excellent content. Following through Table 6 visualize the levels of agility and dynamic balance of the sample respectively.



Graph 6. Levels of Agility and Dynamic Balance.

To complete the functional assessment of stationary walking test in 2 minutes was performed to evaluate the cardiorespiratory capacity of the elderly in which they presented with 53% poor, 31% fair, 8% average, 4% good, 2% penalizing excellent and 2% was not able to perform the test. The framework of cardiorespiratory capacity of elderly people of Triumph city-PE state, is clearly shown in figure 7 below.



Graph 7. Classification of cardiorespiratory capacity.

**CONCLUSION**

The study revealed an elderly population with predominantly female majority in the age group 65-69 years old, with low education level with arising predominantly retirement income, the main expense is a result of health issues as well as half of the one being evaluated responsible for the domestic economy, half of the evaluated people have some health problem. The data reported above indicate the need for an intervention program on health through physical activity due to social characteristics indicated must have a character of total gratuity to facilitate the entry and stay of the elderly in the physical activity program.

Already about the functional capacity study showed fourth of the assessed is overweight and 46% with low levels of upper limb strength and 55% with low levels of lower limb affecting the physical autonomy of the elderly; 56% level of flexibility with upper limb below the recommended thus implying limitations of movement in their day to day. The levels of agility and dynamic balance 72% showed weak indices pointing high risk of falls, and cardiorespiratory capacity 53% have weak compromising the performance of daily living activities.

Thus point to the real need for a public policy of encouraging and monitoring of physical activities for the elderly public in the city area of Triunfo - PE in order to combat the deleterious effects of the aging process thus should improve the quality of life.

**REFERENCES:**

- ALVES M.V.P. Hidroginástica: Novas Abordagens. São Paulo: Atheneu, 2009.  
 DUARTE Y. A terceira Idade: Estudo sobre Envelhecimento. Vol. 18 Nº 38. SESC: São Paulo; SESC-GETI, 2007.  
 FARINATTI, Paulo de Tarso Veras. Envelhecimento, promoção da saúde e exercício: tópicos especiais em aspectos biológicos e psicossociais. 2. Ed. Barueri-SP: Manola, 2013.  
 FARINATTI, Paulo de Tarso Veras. Envelhecimento, promoção da saúde e exercício. Barueri-SP: Manola, 2008.  
 IBGE. População. Disponível em: <<http://www.ibge.gov.br>>. Acessado em 30 de Abr. 2010.  
 MATSUDO, Sandra Marcela Mahecha. AVALIAÇÃO DO IDOSO: Física e Funcional. 2ª edição. São Caetano do Sul: CELAFISCS, 2005.  
 MATSUDO, Sandra Marcela Machado. Envelhecimento & Saúde. Boletim Instituto de Saúde, São Paulo, n. 47, p. 76-78, 2009.

**SOCIAL PROFILE AND FUNCTIONAL FITNESS FOR ELDERLY RESIDENTS IN THE UNICIPALITY OF TRIUNFO – PE****ABSTRACT**

**INTRODUCTION:** The Brazilian population is aging at an accelerated pace. The significant increase in the number of elderly in the population makes it important to consider the phenomenon of aging from different perspectives. The natural aging process of human life brings with it numerous motor, metabolic and psychological changes, these changes directly affect the style and quality of life. **OBJECTIVE:** Draw the functional profile of the elderly in the city of Triunfo-PE; Assess the functional capacity of the elderly aged over 60 years; Identify the level of functional independence of the elderly; Propose strategies for intervention program through physical activity. **METHODOLOGY:** 51 patients of both sexes, aged over 60 years were evaluated. The seniors had their functional capacity assessed through the battery of tests containing Fullerton: BMI, sitting and standing in 30 seconds, biceps Thread 30 seconds, touching hands behind his back, Sit and Reach, Time Up and Go, march stationary 2 minutes. **RESULTS AND DISCUSSIONS:** The age groups studied were of 60-84 years old. Through history it was possible to identify the social issues of the elderly people. Following analyze the profile of the functional abilities of the elderly people through the battery of Fullerton where test were classified as; poor, fair, average, good and excellent agreement with the ratios obtained. **CONCLUSION:** The study revealed an elderly population with predominantly female majority in the age group 65-69 years old, with low education level. The data indicates the need for an intervention program on health issues through physical activity due to social characteristics indicated must have a character of gratuity in order to combat the deleterious effects of the aging process thus improving the quality of life.

**KEYWORDS :** functional capacity, Elderly, Evaluation.

**PROFIL DES MÉDIAS SOCIAUX ET D'ADAPTATION FONCTIONNEL POUR PERSONNES AGEES DANS LA MUNICIPALITE DE TRIUNFO – PE****RÉSUMÉ**

**INTRODUCTION:** La population brésilienne vieillit à un rythme accéléré. L'augmentation significative du nombre de personnes âgées dans la population, il est important de considérer le phénomène du vieillissement de différents points de vue. Le processus de vieillissement naturel de la vie humaine apporte avec elle de nombreux moteur, les changements métaboliques et psychologiques, ces changements affectent directement le style et la qualité de vie. **OBJECTIF:** Dessiner le profil fonctionnel des personnes âgées dans la ville de Triunfo-PE; Évaluer la capacité fonctionnelle des personnes âgées plus de 60 ans; Identifier le niveau d'indépendance fonctionnelle des personnes âgées; Proposer des stratégies de programme d'intervention par l'activité physique. **METHODOLOGIE:** 51 patients des deux sexes, âgés de plus de 60 ans ont été évaluées. Les personnes âgées ont vu leur capacité fonctionnelle évaluée par la batterie de tests contenant Fullerton: IMC, assis et debout en 30 secondes, biceps de filetage 30 secondes, toucher les mains derrière le dos, Sit and Reach, le temps jusqu'à and Go, Mars fixes 2 minutes. **RÉSULTATS ET DISCURSOES:** Les groupes d'âge étudiés étaient de 60-84 ans. À travers l'histoire il a été possible d'identifier les problèmes sociaux des personnes âgées. Après analyse du profil des capacités fonctionnelles des personnes âgées à travers la batterie de Fullerton où essai ont été classés comme pauvres, juste, moyenne, bonne et excellente accord avec les rapports obtenus. **CONCLUSION:** L'étude a révélé une population de personnes âgées à la majorité à prédominance féminine dans le groupe d'âge 65-69 ans, avec une faible niveau d'éducation. Les données indiquent la nécessité d'un programme d'intervention sur la santé par l'activité physique en raison de caractéristiques sociales indiqués doivent avoir un caractère de gratuité afin de lutter contre les effets néfastes du processus de vieillissement améliorant ainsi la qualité de vie.

**MOTS-CLÉS:** la capacité fonctionnelle, des personnes âgées, de l'évaluation.

**PERFIL SOCIAL Y ADECUACIÓN FUNCIONAL PARA RESIDENTES MAYORES EN EL MUNICIPIO DE TRIUNFO – PE****RESUMEN**

**INTRODUCCIÓN:** La población brasileña está envejeciendo a un ritmo acelerado. El aumento significativo en el número de ancianos en la población hace que sea importante tener en cuenta el fenómeno del envejecimiento desde diferentes perspectivas. El proceso de envejecimiento natural de la vida humana trae consigo numerosos motor, los cambios metabólicos y psicológicos, estos cambios afectan directamente el estilo y calidad de vida. **OBJETIVO:** Dibujar el perfil funcional de los ancianos en la ciudad de Triunfo-PE; Evaluar la capacidad funcional de los ancianos mayores de 60 años; Identificar el nivel de independencia funcional de los ancianos; Proponer estrategias para el programa de intervención a través de la actividad física. **METODOLOGÍA:** Se evaluaron 51 pacientes de ambos sexos, mayores de 60 años. Los adultos mayores tuvieron su capacidad funcional evaluada a través de la batería de pruebas que contienen Fullerton: IMC, sentado y de pie en 30 segundos, bíceps Tema 30 segundos, tocar las manos detrás de la espalda, Sit and Reach, Hora de levantarse y avanzar, marzo estacionarias 2 minutos. **RESULTADOS Y DISCURSOES:** Los grupos de edad estudiados fueron de 60 a 84 años. A través de la historia, fue posible identificar los problemas sociales de las personas mayores. Tras analizar el perfil de las capacidades funcionales de las personas mayores a través de la batería de Fullerton, donde la prueba se clasificó como mala, regular, buena y excelente acuerdo con los coeficientes obtenidos. **CONCLUSIÓN:** El estudio reveló una población de edad avanzada con mayoría predominantemente femenina en el grupo de edad 65-69 años, con bajo nivel de educación. Los datos indican la necesidad de un programa de intervención en salud a través de la actividad física debido a las características sociales indicados deben tener un carácter de gratuidad con el fin de combatir los efectos nocivos del proceso de envejecimiento mejorando así la calidad de vida.

**PALABRAS CLAVE:** capacidad funcional, de edad avanzada, de Evaluación.

**PERFIL SOCIAL E DA APTIDÃO FUNCIONAL DE IDOSOS RESIDENTES NO MUNICÍPIO DE TRIUNFO - PE****RESUMO**

**INTRODUÇÃO:** A população brasileira vem envelhecendo em ritmo acelerado. O aumento significativo da quantidade de idosos na população torna importante pensar o fenômeno do envelhecimento sob diversas perspectivas. O envelhecimento processo natural da vida do ser humano trás consigo inúmeras alterações motoras, metabólicas e psicológicas, estas alterações afetam diretamente o estilo e qualidade de vida. **OBJETIVO:** Traçar o perfil funcional dos idosos do Município de Triunfo-PE; Avaliar a capacidade funcional dos idosos com idade igual ou superior a 60 anos; Identificar o nível de autonomia funcional dos idosos; Propor estratégias para programa de intervenção através da atividade física. **METODOLOGIA:** Foram avaliados 51 idosos de ambos os sexos, com idade superior a 60 anos. Os idosos tiveram sua capacidade funcional avaliada através da bateria de testes de Fullerton contendo: IMC, Sentar e Levantar em 30 segundos, Rosca bíceps 30 segundos, Tocar as mãos nas costas, Sentar e Alcançar, Time Up e Go, Marcha estacionária de 2 minutos. **RESULTADOS E DISCURSOES:** As faixas etárias dos avaliados foram de 60 a 84 anos. Através da anamnese foi possível identificar as questões sociais dos idosos. Na sequência analisamos o perfil das capacidades funcionais dos idosos através da bateria de teste de Fullerton onde foram classificados em fraco, regular, médio, bom e excelente de acordo com os índices obtidos. **CONCLUSÃO:** O estudo revelou uma população de idosos predominantemente do sexo feminino com maioria na faixa etária de 65 a 69 anos com baixo grau de escolaridade. Os dados apontam a necessidade de um programa de intervenção na saúde por meio da atividade física que devido às características sociais apontadas devem ter um caráter de gratuidade com o intuito de combater os efeitos deletérios do processo de envelhecimento melhorando assim a qualidade de vida.

**PALAVRAS-CHAVE:** Capacidade funcional, Idosos, Avaliação.