107 - FUNCTIONAL EVALUATION OF ELDERLY: ANALYSIS OF THE PHYSICAL CAPACITY OF FLEXIBILITY

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doi:10.16887/87.a1.107

INTRODUCTION

Human aging is a process of changes in various systems of the body. Degenerative wear and tear are perceptible, irreversible and progressive when the individual reaches this stage of life. Such wear decreases and limits functional capacity, resulting in a progressive decrease in health condition and increased dependence on daily activities. Among the daily necessities is the body mobility, which depends directly on various physical capacities, among them, flexibility. This physiological capacity provides the motor quality of amplitude, as much for thearticulations as the muscular "elasticity".

The functional performance offlexibilityhas a directinfluenceonbodymobility. The ligaments, muscles, tendonsandconnectivetissues (Pavel andAvoy, apud Farinatti, 2008) are involved in thisprocess. Accordingto ACSM, functionalflexibility ability is related to the ability to maintain autonomy in daily activities. According to Suzuki apudFarinatti (2008), diminished levels of amplitude activities, even in Daily Life Activities / ADLs, cause performance difficulties, reducing fundamental motor patterns such as gait. This means that with the aging process, there is a restriction in the range of joint motion and muscle elasticity, progressively threatening the individual's functional independence.

In the elderly, besides the age, the environment and the daily activities themselves, are limiting factors, which point to inability of amplitude (Johnson and Smith, 1970). This disability is accelerated from an average of 30 to 40 years of age (Sugahara et al., 1981), being this one of the five indicators of fragility (Pereira and Araújo 1997).

The lifeexpectancyofhumansisnowincreasing.Amongotherfactors, thelifestyleoutcomehasbeenpointed out as anaspectassociatedwiththeagingprocess. Adopting a healthylifestyleofan individual can minimize ordelaythedeleterious effects of aging. The practice of physical activity as one of the components of a healthy lifestyle contributes to maintaining flexibility as well as improving quality of life. It is revealed in several studies related to activity in general and systematized walking programs that such practices generate positive results on risk factors related to mortality and improvement of the functional capacity of flexibility (Caromano et al. (2006), Caromano et al. (2007), Landi et al. (2008).

Carvalho et al. (2008), indicates that regular training of flexibility, contributes to maintenance of functionality and prevention of falls and fractures. Complementing, they mention Rebelatto et al. (2006) that the training of multi-components of long duration of flexibility and strength in elderly women contribute to the limitation of natural losses of aging. The reviews by Baker et al. (2007), on simultaneous training of strength, aerobic resistance and balance training, would provide efficacy in the prevention of falls in the elderly. Suzuki Studies. (1983) cite that the application of guided exercises that stimulate the musculoskeletal nervous system, above usual, with overload at adequate and specific levels, promotes higher quality in the joint and muscular amplitude levels, consequently preventing osteomioarticular lesions. Considering the above, the paper presents and discusses the results of the evaluation of the flexibility of the lower and upper limbs of a group of elderly participants in the activities of SESC Rondônia. The following specific objectives were determined: a) Report on the level of flexibility of the elderly; B) Make a comparison by gender; C) Compare the results by age group; And d) Compare levels of flexibility between lower limbs and upper limbs.

METHODOLOGY

To reach the proposed objectives, a documentary-descriptive-quantitative study was carried out. Data from the Social Service of Commerce / SESC,AssistanceProgram, collected by the Social Work with Seniors/TSI and Sports Physical Development/DEF, from the SESC/Rondônia/Brasil Regional Department, were used. The data collected are part of a broad work involving the physical-functional evaluation of the elderly, carried out since 2012, in 4 municipalities of the state of Rondônia, under the responsibility of a team of the institution, composed of social workers, Physical Education professionals and Trainees. The data analyzed here were collected in 2015, with 10 elderly individuals between 60 and 79 years of age, of both sexes, in themunicipalityof Vilhena/RO. The teamfollowedtheprotocolused in the SESC/TSI-DEF programproposal.

For theassessmentofflexibility, the Fullerton physical fitness testwasused, followingtheRickiliorientation; Jones (year?). Thisisoneofthespecifictests for theelderlypopulation.

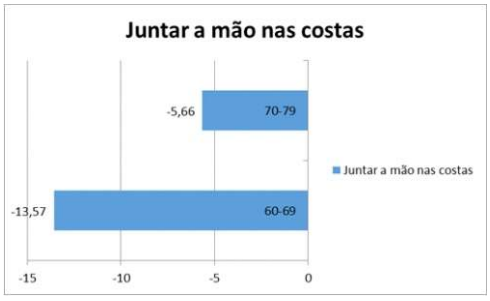
For theanalysisofthe data, the item BatteryFlexibilityof Fullerton apud Rickiliwas taken into account; Jones (1991), which identifies the score by age group for the elderly, whether for men or women.

For statistical analysis of the data, the participants were organized into two groups: from 60 to 69 years; And from 70 to 79 years. Descriptive statistics were used, through the identification of the means, of the F-Test for analysis of variances; And Test T for equivalence of the means of both groups.

RESULTS AND DISCUSSIONS

Regarding the flexibility of the upper limbs, it was observed that both groups are in the category "Very Poor"; (Table 1) presenting those with 60 to 69 years greater disability in this category of analysis (Figure 1).

Figure 1: Graphical representation of the results of the flexibility test of the upper limbs.



Although the best results were from the 70-79 group (Figure 1), the tests point to a non-significant difference.

Table 1: Individual and average classification of upper limb test.

IDADE	Juntar a mão nas costas	
	Pontuação	Classificação
64	-3	MF
60	-29	MF
63	-15	MF
61	-17	MF
69	0	
66	-18	MF
68	-13	MF
Média	-13,5714	
IDADE	Juntar a mão nas costas	
	Pontuação	Classificação
70	-6	MF
72	-25	MF
77	14	MB
Média	-5,66667	

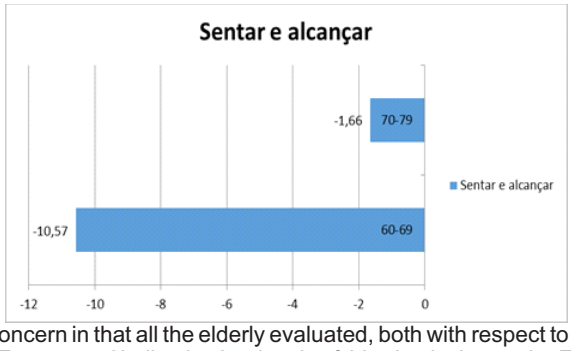
In the lower limbs flexion test, the age range of 60-69 was classified as "Very Poor" and those of 70-79 at the "Regular" level (Table 2).

Table 2: Individual and average classification of upper limb test.

IDADE	Sentar e alcançar	
	Pontuação	Classificação
64	0	MF
60	-20	MF
63	-2	MF
61	-32	MF
69	-15	MF
66	-2	MF
68	-3	MF
Media	-10,5714286	
IDADE	Sentar e alcançar	
	Pontuação	Classificação
70	6	MB
72	-12	MF
77	1	R
Media	-1,66666667	

Although the best results were observed in the 70-79 age groups (Figure 2), there was no significant difference between the groups.

Figure 2: Graphical representation of the results of the flexibility test of the lower limbs.



The results found are of concern in that all the elderly evaluated, both with respect to flexibility of the lower limbs and of the upper limbs, are in the category Very Franco, and indicating low levels of this physical capacity. Those of more advanced age, who are in the age group of 70 to 79 years presented better levels of flexibility than the group between 60 and 69 years. It is known that as thechronological age increases, thereis a simultaneousdecrease in joint and muscular amplitude levels.

In additionto age, otherfactorssuch as lifestyle, genetics, andenvironmentalconditions may influence the results of functional capacity, including flexibility. This may be a justification for the older group presenting better levels of flexibility.

In general, the findings point to significant limitations in joint mobility and muscle elongation in the elderly, as well as greater difficulty in performing daily activities as well as greater vulnerability to the occurrence of injuries.

CONCLUSION

The levels of flexibility of the elderly, both of the lower and upper limbs are in theclassification "VeryPoor", signalingdeficits in thisindicatoroffunctionalcapacity.

The results point to the need to offer programs that meet the specificity of flexibility given its importance in maintaining the health of the elderly.

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FUNCTIONAL EVALUATION OF ELDERLY: ANALYSIS OF THE PHYSICAL CAPACITY OF FLEXIBILITY

Abstratct

Human aging is a natural process of changes in various systems of the body. Such alterations, among other aspects, are results of degenerative wear that diminish and limit functional capacity. Flexibility, directly related to body mobility, is one of these aspects of functional capacity. The life expectancy of humans is now increasing. Studies indicate that lifestyle is an important aspect associated with the aging process, and thus longevity. Adopting a healthy lifestyle of an individual can minimize or delay the deleterious effects of aging. The practice of physical activity as one of the components of a healthy lifestyle contributes to maintaining flexibility as well as improving quality of life. The purpose of this study was to present and discuss the results of the evaluation of the flexibility of the lower and upper limbs of a group of elderly participants in SESC/Rondônia activities. A Documentary-descriptive-quantitative study was carried out from data collected by theAssistanceProgram- TSI SESC/Rondônia. Data were collected in 2015, with 10 elderly individuals between 60 and 79 years of age, of both sexes, from the municipality of Vilhena/RO. The team followed the protocol used in the Leisure Program Sports Physical Development/DEF andSESC / TSI program proposal. For the assessment of flexibility, the Fullerton physical fitness test was used. The same theoretical reference was used to classify the results. For statistical analysis, the participants were organized in groups: from 60 to 69 years; And from 70 to 79 years. The following statistical tests were performed: F test for variance analysis; And T test for equivalence of the means of both groups. The findings indicated that the levels of flexibility of the elderly, both lower and upper limbs are in the "Very Poor" classification, indicating a deficit in this indicator of functional capacity.

Keywords: Aging. Flexibility. FunctionalCapacity.

EVALUATION FONCTIONNELLE DES PERSONNES AGEES : ANALYSE DE LA CAPACITE PHYSIQUE DE FLEXIBILITE

Résumé

Le vieillissement humain est un processus naturel d'altérations dans des multiples systèmes de l'organisme. Ces altérations, parmi d'autres aspects, sont le résultat des dégâts dégénératifs qui anéantissent et limitent la capacité fonctionnelle. La flexibilité, directement liée à la mobilité corporelle, c'est un de ces aspects de la capacité fonctionnelle. Actuellement on voit augmenter l'expectative de vie des êtres vivants. Des études montrent que le style de vie est un important aspect associé au progrès de vieillissement, et, alors, de longévité. L'adoption d'un style de vie plus sain par un individu peut anéantir ou retarder les effets délétères du vieillissement. . Pratiquer une activité physique comme une des parties d'un mode de vie sain donne sa contribution pour l'entretien de la flexibilité, en étant utile aussi un facteur pour l'amélioration de la qualité de vie. L'étude a eu comme objectif présenter et mettre en discussion les résultats de l'évaluation de la flexibilité des membres inférieurs d'un groupe de personnes âgées participants des activités du SESC/Rondônia. Une étude du genre documenté-descriptif-quantitatif a été fait prenant comme plateau des donnés recueillis par le Groupe de Travail programme d'aide /TSIet Développement du sport physique/DEF du SESC/Rondônia. Les donnés ont été collectés en 2015, venant d'un groupe composé para 10 personnes âgées qui avaient entre 60 et 79 ans, de les deux gendre, et qui habitaient la municipalité de Vilhena, dans l'état de Rondônia. Le personnel a suivi le protocole utilisé dans la proposition du programme SESC/DEF SESC/TSI. Pour l'évaluation de la flexibilité, le test d'évaluation physique de Fulleron a été employé. La même référence théorique a été employée dans la classification des résultats. Pour l'enquête statistique, les participants ont été organisés en groupes : entre 60 à 69 ans ; et entre 70 à 79 ans. Les tests statistiques suivants ont été réalisés : teste F pour l'analyse de l'écart ; et le teste T pour l'équivalence des medias entre les deux groupes. Les découvertes indiquent que les niveaux de flexibilité autant dans le groupe avec de membres supérieurs, comme dans le groupe avec des membres inférieurs se trouvent dans la classification « Très Faible », signalant un déficit dans cet indicateur de la capacité fonctionnelle.

Mots-clés : Vieillissement. Flexibilité. Capacité Fonctionnelle.

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Le vieillissement humain est un processus naturel d'altérations dans des multiples systèmes de l'organisme. Cettes altérations, parmi d'autres aspects, sont le résultat des dégâts dégénératifs qui anéantissent et limitent la capacité fonctionnelle. La flexibilité, directement liée à la mobilité corporelle, c'est un de ces aspects de la capacité fonctionnelle. Actuellement on voit augmenter l'expectative de vie des êtres vivants. Des études montrent que le style de vie est un important aspect associé au progrès de vieillissement, et, alors, de longévité. L'adoption d'un style de vie plus sain par un individu peut anéantir ou retarder les effets délétères du vieillissement. . Pratiquer une activité physique comme une des parties d'un mode de vie sain donne sa contribution pour l'entretien de la flexibilité, en étant utile aussi un facteur pour l'amélioration de la qualité de vie. L'étude a eu comme objectif présenter et mettre en discussion les résultats de l'évaluation de la flexibilité des membres inférieurs d'un groupe de personnes âgées participants des activités du SESC/Rondônia. Une étude du genre documenté-descriptif-quantitatif a été fait prenant comme plateau des donnés recueillis par le Groupe d'assistence TSI du SESC/Rondônia. Les donnés ont été collectés en 2015, venant d'un groupe composé para 10 personnes âgées qui avaient entre 60 et 79 ans, de les deux gendre, et qui habitaient la municipalité de Vilhena, dans l'état de Rondônia. Le personnel a suivi le protocole utilisé dans la proposition des programmes SESC/TSI et le Programa Lazer Desenvolvimento Físico esportivo /DEF . Pour l'évaluation de la flexibilité, le test d'évaluation physique de Fulleron a été employé. La même référence théorique a été employée dans la classification des résultats. Pour l'enquête statistique, les participants ont été organisés en groupes : entre 60 à 69 ans ; et entre 70 à 79 ans. Les tests statistiques suivants ont été réalisés : teste F pour l'analyse de l'écart ; et le teste T pour l'équivalence des medias entre les deux groupes. Les découvertes indiquent que les niveaux de flexibilité

autant dans le groupe avec de membres supérieurs, comme dans le groupe avec des membres inférieurs se trouvent dans la classification « Très Faible », signalant un déficit dans cet indicateur de la capacité fonctionnelle.

Mots-clés : Vieillissement. Flexibilité. Capacité Fonctionnelle.

AVALIAÇÃO FUNCIONAL DE IDOSOS: ANÁLISE DA CAPACIDADE FÍSICA DE FLEXIBILIDADE

Resumo

O envelhecimento humano é um processo natural de alterações em vários sistemas do organismo. Tais alterações, entre outros aspectos, são resultados de desgastes degenerativos que diminuem e limitam a capacidade funcional. A flexibilidade, diretamente relacionada à mobilidade corporal, é um destes aspectos da capacidade funcional. Atualmente se vê aumentada a expectativa de vida dos seres humanos. Estudos indicam que estilo de vida é um importante aspecto associado ao processo de envelhecimento, e, portanto, da longevidade. A adoção de um o estilo de vida saudável de um indivíduo pode minimizar ou tardar os efeitos deletérios do envelhecimento. A prática de atividade física como um dos componentes do estilo de vida saudável, contribui para a manutenção da flexibilidade assim como melhoria da qualidade vida. O estudo teve como objetivo apresentar e discutir os resultados da avaliação da flexibilidade dos membros inferiores e superiores de um grupo de idosos participantes das atividades do SESC/Rondônia. Realizou-se um estudo do tipo Documental-descritivo-quantitativo a partir de dados coletados pelo Programa Assistência TSI do SESC/Rondônia. Os dados foram coletados em 2015, com 10 idosos entre 60 e 79 anos, de ambos os sexos, do município de Vilhena/RO. A equipe seguiu o protocolo utilizado na proposta doPrograma Lazer Desenvolvimento Físico Esportivo/DEF e TSI. Para a avaliação da flexibilidade foi utilizado o teste de aptidão física de Fullerton. A mesma referência teórica foi empregada para a classificação dos resultados. Para análise estatística, os participantes foram organizados em grupos: de 60 a 69 anos; e de 70 a 79 anos. Foram realizados os seguintes testes estatísticos: teste F para análise de variânças; e teste T para equivalência das médias de ambos os grupos. Os achados indicaram que os níveis de flexibilidade dos idosos, tanto dos membros inferiores quanto superiores se encontram na classificação “Muito Fraca”, sinalizando déficit neste indicador da capacidade funcional.

Palavras-chave: Envelhecimento. Flexibilidade. Capacidade Funcional.