51 - THE PHYSICAL ACTIVITY AND THE QUALITY OF LIFE OF SENIOR BELONGING TO TWO GROUPS OF ACQUAITANCE IN BELO HORIZONTE

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1. Introduction

The issue of old age is not a question only for the people that already are elderly, but also for the youth that will be the future elderly and concerns to all the society. The phenomenon of getting old is at the same time ancient to humanity, but new to the society. Nonetheless, while the general conditions of life and the advance of science have contributed to control and treat many of the diseases responsible for mortality, the population, from developed countries and third world countries, has increase, in recent years, the life expectancy (MATSUDO, MATSUDO E NETO, 2000).

According to Ferreira (2005), since the mid of the XX century the elderly population has been growing in the developed and third world countries. In Brazil, according to demographic projections, is estimated a growth of 16 times the number of elderly in the period from 1950 to 2020.

With all this growth in the population, it is necessary to meditate about the quality of life, health and the functional capacity of the elderly, determinant factors in the analyses of the effects of the passage of time.

The components of physical aptitude related to health are: flexibility, muscular strength and cardio-respiratory capacity (MATSUDO, 2001 *apud* PASSOS, 2002) Therefore, the analyses of the DDAs would be a way to identify the quality of life of a subject trough the evaluation of the degree of autonomy and independence that the elderly perform his day - to - day functions, that made him independent within the social-economic and cultural context (GUIDI e MOREIRA, 1996 *apud* RABELO, 2002).

Kuwano e Silveira (2002) postulate that the growing increase in the elderly population in the world caught our attention because of varying aspects like health, education and exercise. One of these aspects is the change in the behavior related to the practice of systematized physical activities. Today, in the XXI century the elderly practice more and more exercises in gyms, clubs, and associations or even individually in streets and parks.

Our aim with this study is to find and verify indexes of quality of life in the elderly that practices physical activity, trough the use of a specific questionnaire.

2. Methods

2.1 Characterization of the sample

Participated in this study 36 volunteers seniors of two gymnastics groups, being 18 residents of the neighborhood Dom Bosco, area of Betim, that had entered in the gymnastics class there for more than six months, and other group of acquaintance of the Lagoa do Nado, area of Pampulha in the same capital, also practitioners of gymnastics for more than six months.

2.2 Instruments

Was applied a questionnaire " INSTRUMENT OF EVALUATION OF QUALITY OF LIFE (WHOQOL - BREF) 1998 " in (ENCLOSURE 1), that contains 26 questions that are contained in four domains, according to Fleck et al. (2000).

1 - Physical (pain and discomfort; energy and fatigue; sleep and rest);

2 - Psychological (positive feelings; think, learn, memory and concentration; self-esteem; bodily image and appearance. Negative feelings);

3 - Social relations (personal relations; social support; sexual activity).

4 - Environmental (physical security and protection; home environment; financial resources; health and social care; availability and quality; opportunity to acquire new information and skills; participation in, and opportunities to entertain / leisure; physical environment: Pollution / noise / traffic / climate; Transportation)

2.3 Procedures

In a first moment, it was made a contact with the group to explain the objectives of the research and to ask authorization for the accomplishment of the same. Later, the volunteers fill out a term of free and illustrious consent in (enclosure 2). Last, the volunteers filled out the questionnaire “INSTRUMENT OF EVALUATION OF QUALITY OF LIFE (WHOQOL - BREF, 1998), for the collection of data ".

2.4 Treatment of the data

All the treatment and analyses of the data were made trough the statistical program “*Statistical Package for social sciences - SPSS for Windows 11.0.”*Ultilizying the t test for dependent samples, the mean, standard deviation, the maximum and minimum of time to the execution of the pre and posttest.

For all the tests, we adopted the significance level $p \leq 0.05$. The variable analyzed was the time. For the age of the participants, we calculated the arithmetic mean and standard deviation.

2.5 Ethical care

Before they commence the participation in this research, the volunteers received information related to the objectives and the methodological process of the project, they gave consent in writing and they were aware that at any moment could stop participating in the research. All the precautions were taken with the purpose of preserve the privacy and confidentiality of the volunteers.

3 - PRESENTATION AND DISCUSSION OF THE RESULTS

The results considered, firstly, the analysis of the general profile of the groups (age, marital status, education, profession, family income, home type, level of physical activity, visits to the doctor, bearers of diseases), where we verified that the groups presented a very similar profile in homogeneity terms. Soon after, referring data were presented to the applied questionnaire.

The participants' characterization was made through analysis of the registration record that each one answered before beginning the activities proposed in each one of the groups. The analysis of the data consisted of a descriptive statistics, composed by average, standard deviation, medium, variation coefficient, minimum and maximum. For the calculation of the scores of the dimensions, we used the program Microsoft Excel 2003 executing the following procedure suggested by Fleck et al. (2000):

Physical Domain = mean (q3, q4, q15, q16, q17, q18) *4
Psychological domain = mean (q5, q6, q7, q11, q19, q26)*4
Social relations domain = mean (q20, q21, q22)*4
Environmental domain = mean (q8, q9, q12, q13, q14, q23, q24, q25)*4

Later to this procedure, the scores were transformed in a scale of 0-100 so that they could be compared with the score of the original instrument (whoqol_100). Below are the formulas for this conversion.

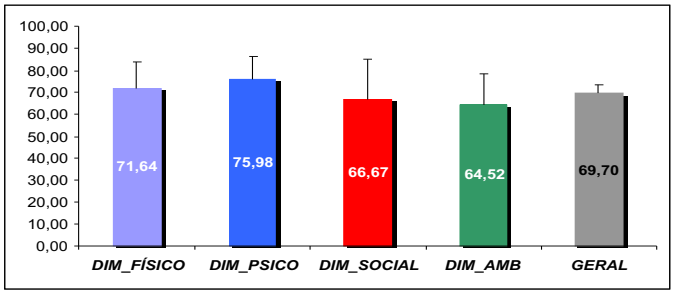
Total score _ Physical domain = (mean physical domain - 4)* (100/16).
Total score _ Psychological domain = (mean psychological domain - 4)* (100/16).
Total score _ Social relations domain = (mean social relations domain - 4)* (100/16).
Total score _ Environmental domain = (mean environmental domain- 4)* (100/16).

In the search to understand the importance of the quality of life measured scientifically through a validated questionnaire of the world health organization, the results are presented (table 1) to evaluate and to understand the relationships of the four mentioned domains (physical, psychological, environmental, and of the social relationships) and its interference in the quality of life, in this case, of a group of 18 people that answered to the questionnaire " WHOQOL BREF ".

Table 1: descriptive analyses of the instrument

	GERAL	*DIM_FÍSICO*	*DIM_PSICO*	*DIM_SOCIAL*	*DIM_AMB*
MD	*69,70*	*71,64*	*75,98*	*66,67*	*64,52*
DP	*3,32*	*12,59*	*10,57*	*18,40*	*13,89*
Med.	*73,21*	*71,43*	*79,17*	*75,00*	*62,50*
CV	*4,76*	*17,58*	*13,92*	*27,60*	*21,52*
Min.	*52*	*50,00*	*63*	*25*	*41*
Máx.	*84*	*89,29*	*96*	*83*	*91*

In a general analyses the domains of the instrument had a 69, 70 mean, as showed in table 1 and graph 1 below:



Graph 1: Analyses of the scores of the instrument

The physical domain is directly related to the capacity of accomplishment of the day-to-day life activities and the work, locomotion and mobility (FLECK et al. 2000). The result of the score found for this domain was 71, 64 with a standard deviation of 12, 59. According to Cozzani (2000), programs of physical activity with the objective, among other things, of improving the balance and opportunities to improve the mobility are essential alternatives for the maintenance of the independence and of the quality of the seniors' life (COZZANI 2000).

According to Fleck (2000), the psychological domain is related to personal fulfillment. The result of the score found for this domain was 75, 98, with a standard deviation of 10.57. According to Stella (2002), physical activity, when regular and well planned, contributes to the minimization of the psychic pain of the repress elderly, and offer opportunities of psychosocial involvement, elevation of the self-esteem, implementation of the cognitive functions, with the exit of the depressive picture and smaller relapse rates. Rauchbach (2001) advocate that the physical activity contributes to the liberations of tensions and states of insecurity through the acquisition of new values.

The social relations domain embraces the satisfaction of the subject with the relations among them and friends, relatives and others (FLECK et al. 2000). The result of the score found to this domain was 66, 67, with a standard deviation of 18, 40. According to Amorim and Dantas (2002), the physical activity when practiced regularly, has a social value extremely elevated, since it can accomplish the maximization of the social contact of the participants, yielding a feeling of integration and higher acquaintance. The elderly when is accepted by the group that they belong, reduce psychological problems, as to lower self esteem and anxiety, as well as typical problems of the most advanced age group.

According to Fleck et al. (2000), the “environmental” domain embraces the issues of the physical environment and of home, as well as opportunities of recreation and leisure, physical security and protection, financial resources, health and social care, transportation and opportunities in the acquisition of new information and skills. The result of the score found for this domain was 64, 52, with a standard deviation of 13, 89. According to Kuwani e Silveira (2002), the independence and the abilities of life permit a greater freedom to perform tasks of work and leisure that become meaningful to the person. The difficulty to perform tasks of personal care and the dependence from others to complete them may have a fundamental importance in the psychological, social and financial well-being.

4 - FINAL CONSIDERATIONS

The results found related to the quality of life may have suffered influence of the regular practice of the physical activity, because all the voluntary seniors already practiced exercises for more than six months.

When we compared the scores of the domains of the questionnaire (physical, psychological, social relations and environment) with the one that the revised literature says regarding to the regular physical activity and the quality of life, we can understand that a more active lifestyle associated to programs of physical activity and exercises can minimize and delay the harmful effects of aging.

However, the study needs a more significant sample to give a larger reliability to this and other researches concerning

the life quality. Physical education professionals should explore more the theme in the search of results that corroborate the influence of the physical activity in the elderly.

This way, we suggested that the efforts for the improvement of the quality of life and of the global public health should be addressed in search of the obtaining of a larger number of people that are more active for more time. The physical activity is an important element for the independence and the autonomy of the senior public in general, being this the number one recommendation from the World health organization.

Key-words: Senior, Quality of life, Coexistence Groups

REFERÊNCES

AMERICAN COLLEGE OF SPORTS MEDICINE. **Manual do ACSM para teste de esforço e prescrição do exercício**. 5 ed. Rio de Janeiro: Revinter, 2000.

ACSM; **Diretrizes do ACSM para os testes de esforço e sua prescrição**. 6 ed. Rio de Janeiro: Guanabara Koogan S.A., 2003, 136, 139 e 140 P.

ANDREOTTI, R.A.; OKUMA, S.S. Validação de uma bateria de testes de atividades da vida diária para idosos fisicamente independentes. **Revista Paulista de Educação Física**, 1999.

BARBOSA, R. M. **Educação Física gerontológica: saúde e qualidade de vida na terceira idade.** 1 ed. Manaus: Sprint, 2000.

COZZANI, Márcia. Mobilidade de indivíduos idosos: Impacto da institucionalização. Uma revisão de literatura. **Revista da SOBAMA**, v. 5, n. 1, p. 25-30, Dez/2000.

EVANS, JG. **Prevention of age-associated loss of autonomy: epidemiological approaches.** J. Chron. Dis. 37(5): 353, 1984 *apud* PAPALÉO NETO, M. **Gerontologia: a velhice e o envelhecimento em visão globalizada**. São Paulo: Atheneu, 1996.

FARO JR., M. F; LOURENÇO, A.; BARROS NETTO, T. **Alterações fisiológicas e atividade física na terceira idade. Envelhecimento e funções fisiológicas.** Medicina Desportiva, 1996 *apud* RABELO, H. **Os efeitos do treinamento contra resistência no desempenho nas atividades da vida diária em mulheres idosas**. Brasília. Universidade Católica de Brasília 2002.

FERREIRA, M; MATSUDO, S; MATSUDO, V; BRAGGION, G. Efeitos de um programa de orientação de atividade física e nutricional sobre o nível de atividade física de mulheres fisicamente ativas de 50 a 72 anos de idade. **Revista Brasileira de Medicina do esporte**, v. 11, n. 3, p. 172 - 176, maio/junho, 2005.

FLECK, S; KRAEMER, W. ***Fundamentos do Treinamento de Força Muscular***. 2 ed. Porto Alegre: Artmed, 1999.

GEIS, Pilar Pont. **Atividade física e saúde na terceira idade teoria e prática**. 5. ed. Porto Alegre: Artmed, 2003. Trad. Magda Schwatzhaupt Chaves.

GUCCIONE, Andrew A.. **Fisioterapia geriátrica**. 2. ed. Rio de Janeiro: Guanabara Koogan, 2002.

GUIDI, M.L.; MOREIRA, M.R. **Rejuvenescer a velhice: novas dimensões da vida**. 2ed. Brasileira: Universidade de Brasília, 1996 *apud* RABELO, H. **Os efeitos do treinamento contra resistência no desempenho nas atividades da vida diária em mulheres idosas**. Brasília. Universidade Católica de Brasília. 2002.

HOLLAND, G.J.; TANAKA, K.; SHIGEMATSU, R. NAKAGAICHI, M. **Flexibility and Physical Functions of Older Adults: A Review.** Journal of Aging and Physical Activity. 2002, 10, 169-206 *apud* RABELO, H. **Os efeitos do treinamento contra resistência no desempenho nas atividades da vida diária em mulheres idosas**. Brasília. Universidade Católica de Brasília. 2002.

HURLEY, B. HAGBERG, J. **Optimizing health in older persons: aerobic or strength**?. Exer Sport Sci Reviews**.** 1998; 26: 61-90.

MATSUDO, S. M. M. **Envelhecimento e Atividade Física**. Londrina: Midiograf, 2001 *apud* PASSOS, B. **Os efeitos da hidroginástica na flexibilidade e nas atividades da vida diária em idosos**. Brasília. Universidade Católica de Brasília. 2002.

MAZZEO, S. R., CAVANAGH, P.; EVANS, J. W.; FIATAMENDES, R. A M.; HAGBERG, J.; McAULEY, E.; STARTZELL, J. **Exercício e Atividade Física para Idosos. Revista Brasileira de Atividade Física e Saúde.** V. 4 (1), 20-28, 1998 *apud* PEREIRA, S. A. M.; DANTAS, E. H. M. **A redução da Flexibilidade na Motricidade do Cotidiano: A influência da idade cronológica, do sexo e da atividade física**. Revista Mineira de Educação Física, 6(2): 34-45, 1998.

McARDLE, W. D.; KATCH, F.I; KATCH, V.L. **Fisiologia do exercício*:*** energia,nutrição e desempenho humano.4 ed. Rio de Janeiro: Guanabara Koogan,1998.

OKUMA, S.S. **O idoso e a atividade física - fundamentos e pesquisa**. Campinas. São Paulo: Papirus, 1998.

PAIN, B. M.; MATSUDO, S.; ANDRADE, E.; BRAGGION, G.; MATSUDO, V. **Efeito de um programa de atividade física na aptidão física e na autopercepção da aptidão em mulheres acima de 50 anos**. São Caetano do sul, 2000 *apud* PASSOS, B. **Os efeitos da hidroginástica na flexibilidade e nas atividades da vida diária em idosos**. Brasília. Universidade Católica de Brasília. 2002.

PAPALÉO NETO, M. **Gerontologia: a velhice e o envelhecimento em visão globalizada**. São Paulo: Atheneu, 1996.

PASSOS, B. **Os efeitos da hidroginástica na flexibilidade e nas atividades da vida diária em idosos**. Brasília. Universidade Católica de Brasília. 2002.

PICKLES, Barrie**.** ***Fisioterapia na Terceira Idade***. 2 ed. São Paulo: Santos, 2000.

POLLOCK, M.L.; EVANS, W. **Resistence training for health and disease:** Introduction. Department of Medicine and Exercises and Science, University of Florida, Gainesville, FL; and Donald W. Reynolds Department of Geriatrics, University of Arkansas for Medical Sciences, Little Rock, AR 72114. February, 1998.

POWERS, S.K.; HOWLEY, J. **Fisiologia do exercício: teoria e aplicação do condicionamento e o desempenho**. 2 ed. São Paulo: Manole,1997.

RABELO, H. **Os efeitos do treinamento contra resistência no desempenho nas atividades da vida diária em mulheres idosas**. Brasília. Universidade Católica de Brasília. 2002

RASO, V. Exercícios com pesos para pessoas idosas: a experiência do Celafiscs. **Revista Brasileira de Ciência e Movimento** V. 8, (2), 42-49, 2000 *apud* PASSOS, B. **Os efeitos da hidroginástica na flexibilidade e nas atividades da vida diária em idosos**. Brasília. Universidade Católica de Brasília. 2002.

SAFONS, M. **Algumas considerações sobre o envelhecimento e atividade física**, Brasília, Universidade de Brasília, 2000.

SANTARÉM, J.M. **Exercícios com peso e saúde cardiovascular**, 2000. Disponível em: www.saudetotal.com.br acesso em 15 de outubro de 2007.
SANTOS, B. Importância da aderência à pratica de atividades físicas regular para o idoso. **Revista Virtual Efartigo**, Natal, v.2, n.5,jul.2004.
SPIRDUSO, W. **Physical Dimensions of Aging**. Champagne, Human Kinetics, 1995 *apud* SANTOS, B. **Importância da aderência a pratica de atividades físicas regular para o idoso**. Revista Virtual Efartigo, Natal, v.2, n.5, jul.2004.

THE PHYSICAL ACTIVITY AND THE QUALITY OF LIFE OF SENIOR BELONGING TO TWO GROUPS OF ACQUAITANCE IN BELO HORIZONTE

ABSTRACT

In this work, we analyzed aspects related to the quality of life and the components of physical aptitude that intervene with the health of the elderly. Three tests of functional capacity of the battery of tests from Andreotti e Okuma (1999) were made and the questionnaire WHOQOL bref was given to evaluate the quality of life in four domains: physical, psychological, social and environmental relations. 36 people, all female and physically independent, composed the sample. The subjects belonged to two groups of acquaintance , one in the metropolitan region of Belo Horizonte's capital and the other called “active life“, a social program from the town hall of Belo Horizonte. The results found reveal that significant improvement happened in the execution of the day-to-day activities (DDAs) after the regular practice of regular physical activity for a period of 4 months, leading to a better quality of life to the participants. Therefore, we concluded that physical activity is fundamental to the elderly keep its physical independence and a better quality of life.

KEY-WORDS: Senior, Quality of life, Coexistence Groups

L'ACTIVITÉ PHYSIQUE ET LA QUALITÉ DE VIE D'AÎNÉ QUI APPARTIENT À DEUX GROUPES D'ACQUAITANCE DANS LA VILLE BELO HORIZONTE.

RESUME

Dans ce travail, nous avons analysé aspects en rapport avec la qualité de vie et les composants d'aptitude physique qui intervient avec la santé des personnes âgées. Trois épreuves de capacité utilitaire de la pile d'épreuves d'Andreotti e Okuma (1999) a été fait et le questionnaire que le bref WHOQOL a été donné pour évaluer la qualité de vie dans quatre domaines: les relations physiques, psychologiques, sociales et de l'environnement. les 36 gens, toute la femme et physiquement indépendant, composé l'échantillon. Les sujets ont appartenu à deux groupes de coexistence, un dans la région métropolitaine du capital de Belo Horizonte et l'autre vie " active appelée ", un programme social de l'hôtel de ville de Belo Horizonte. Les résultats trouvés révèlent cette amélioration considérable s'est passée dans l'exécution des activités quotidiennes (DDAs) après l'entraînement régulier d'activité physique régulière pour une période de 4 mois, mener à une meilleure qualité de vie aux participants. Par conséquent, nous avons conclu cette activité physique est fondamental à la nourriture assez âgée son indépendance physique et une meilleure qualité de vie.

MOTS CLEFS: Ainé, qualité de vie, groupes de coexistence.

LA ACTIVIDAD FÍSICA Y LA CALIDAD DE VIDA DE MAYOR PERTENENCIA A DOS GRUPO DE COEXISTENCIA EM BELO HORIZONTE

RESUMEN

En este trabajo, nosotros analizamos aspectos relacionados a la calidad de vida y los componentes de aptitud física que interviene con la salud del anciano. Tres pruebas de capacidad funcional de la batería de pruebas de Andreotti e Okuma (1999) se hizo y la encuesta que el bref de WHOQOL fue dado para evaluar la calidad de vida en cuatro dominios: relaciones físicas, psicológicas, sociales y medioambientales. 36 personas, toda la hembra y físicamente independiente, compuesto la muestra. Los asuntos pertenecieron a dos grupos de coexistencia, uno en la región metropolitana de la capital de Belo Horizonte y el otro llamó "vida activa", un programa social del vestíbulo del pueblo de Belo Horizonte. Los resultados encontrados revelan esa mejora significante pasó en la ejecución de las actividades diarias (DDAs) después de la práctica regular de actividad física regular para un periodo de 4 meses, llevando a una calidad mejor de vida a los participantes. Por consiguiente, nosotros concluimos esa actividad física es fundamental al anciano guarde su independencia física y una calidad mejor de vida.

PALABRAS LLAVE: Anciano, calidad de vida, grupos de coexistencia.

A ATIVIDADE FÍSICA E A QUALIDADE DE VIDA DE IDOSOS PERTENCENTES A DOIS GRUPOS DE CONVIVÊNCIA DE BELO HORIZONTE

RESUMO

Foram analisados neste trabalho aspectos relacionados a qualidade de vida e aos componentes da aptidão física que têm interveniência com a saúde do idoso. Foram feitos trres testes de capacidade funcional da Bateria de testes de Andreotti e Okuma (1999) e foi aplicado um questionário WHOQOL bref que avalia a qualidade de vida em 4 domínios: físico, psicológico, das relações sociais e ambientais. A amostra foi composta por 36 pessoas, todas do sexo feminino e fisicamente independentes. As participantes pertenciam a dois grupos de convivência, um da região metropolitana da Capital Mineira e outro do “Vida Ativa”, um Programa Social da Prefeitura de Belo horizonte. Os resultados encontrados mostraram que houve melhoras siginificativas na execução das Atividades da Vida Diária (AVD's) após a pratica regular de atividade física regular por um período de quatro meses, com isso constatou-se melhoria na qualidade de vida dos participantes. Daí conclui-se que a atividade física é fundamental para o idoso manter sua independência física e uma melhor qualidade de vida.

PALAVRAS-CHAVE: Idosos, Qualidade de Vida, Grupos de Convivência.