

155 - PHYSICAL FITNESS OF PHYSICAL EDUCATION STUDENTS OF AN UNIVERSITY OF RIO DE JANEIRO

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INTRODUCTION

The concept of physical fitness was defined as a set of attributes that people have or achieve and is related to the ability to perform physical activity, represented by elements related to the activities and health (ACSM, 2007).

It appears that more than 60% of the adult population worldwide has insufficient levels of physical activity and health promotion that is evidenced in the society in all its sectors. Physical activity helps to improve body composition, increased bone density, strength, flexibility, and decreases lipid levels, being one of the main ways to improve the functional capacity of all ages, including older people (ZAMAI et al, 2009).

Important changes are generated in cardiovascular and neuromuscular systems with aerobic training, increasing the supply and use of oxygen contribute to an improvement in muscle metabolism (ROCCO, 2008).

The aerobic training influences the heart rate during exercise and at rest. It is common to note bradycardia in trained individuals compared to sedentary during rest. You can assign this adaptation decreased intrinsic HR (without the self-modulation of SN) (KATONA et al., 1982 apud ROCCO, 2008) and decreased vagal tone to the heart. In an exercise of the same intensity, HR (heart rate) is lower in trained individuals. This decrease can be attributed to changes in stroke volume or in autonomic modulation of heart (CLAUSEN, 1977 apud ROCCO, 2008).

According to Dana (1999), cited by Rocco (2008), the volume of blood ejected by the heart with each beat, or stroke volume (SV), is one of the main factors that determine the functional aerobic capacity, the main limiting factor cited in the maximum oxygen consumption (VO₂max).

The maximum oxygen consumption (VO₂máx.) is represented by the highest oxygen uptake achieved by an individual. It is a measurement of the maximum amount of energy that aerobic metabolism can produce in a given unit of time (DENADAI, 2000 apud ZAMA et al, 2010).

It is relevant the classification of people in sedentary or active, since physical inactivity is acknowledged as an important risk factor for developing chronic diseases. It can be considered a sedentary lifestyle as the absence or significant reduction of physical activity, this concept is not necessarily associated with the lack of sports activity, but the habit of regular physical activity (CONTE et al, 2008).

Physical fitness is dependent on factors such as motor coordination, muscle strength, agility, balance, flexibility and aerobic capacity. To identify the status of specific components and overall physical fitness is necessary to evaluate physical fitness. Existing normative population values can contribute decisively in appropriate prescription of activities (BENEDETTI et al, 2007).

Examine aspects of health related physical fitness of young people may have an important contribution in promoting health. There is also the need for parameter references in relation to Brazilian schoolchildren, because there is no equivalence between the normative data of students from developed countries to developing countries. In short, differences in cultural, social and economic studies justify the practice of regional, rather than to use international data already obtained (LUGUETTI, RE and BOHM, 2010).

There is a considerable decline in participation in physical activity with increasing age, especially from adolescence to the adult (MALINA, 2001 apud CORSEUIL, 2010).

The physical activity of university students may be compromised by numerous factors like: studies routine, hours involved with extensions projects, university obligated research everything at the same time of the classes. A prática de atividades físicas de estudantes universitários pode ser comprometida por uma série de fatores como: rotina de estudos, horas dedicadas a projetos de extensão, pesquisa imposta pela universidade paralelo aos horários de aula.

Few studies had analysed the physical activity in the academic context. Although, Mielke et al (2010) research, sign that physical education students had done more physical exercises than students of other graduations. Poucas pesquisas tem analisado no contexto acadêmico, a atividade física, porém, estudo realizado por aponta para maiores níveis de atividade física em estudantes universitários do curso de Educação Física em comparação com universitários de outros cursos.

The teachers formation is understood as a continuum process that begins at the graduation and goes through out all professional life (VIEIRA, VIEIRA e FERNANDES, 2006).

A formação de professores é entendida como um processo contínuo iniciado na graduação e que segue por toda a sua vida profissional (VIEIRA, VIEIRA e FERNANDES, 2006).

Its necessary not only knows the theories but, know how use them. The theoretic concepts Will be also influenced by the práxis. The theoretic/ pratic relations are necessary to develop and search of improvement of teach/learn process (BARCELLOS, 2008).

The aim of the study was to identify the physical activity level of Physical Education undergraduate students and the readiness to practice these activities. It also was considered the morfofuncional conditions of the students of a Private University at Barra da Tijuca, Rio de Janeiro.

METHODOLOGY

This study is a descriptive one with quantitative and qualitative characteristics (THOMAS NELSON, 2007).

The survey sample consisted of 38 undergraduated students of physical education from a Private University at Rio de Janeiro. The age of the group was between 19 and 45 years. Men with mean age of 26,11 + 6,40 years and women of 25,20 +

4,60 years.

This study meets the Standards for the Conduct of Human Research, Resolution 196/96 of the National Health Council, 10/10/1996.

The procedure of data collection was an application of International Physical Activity Questionnaire (IPAQ). The IPAQ questionnaire is an instrument developed jointly by the World Health Organization (WHO), the Center for Disease Control and Prevention (CDC) and the Karolinska Institute (Sweden), validated in 12 countries and 14 research centers, to subjective assessment of physical activity level, defining the subject as very active, active, insufficiently active or sedentary, by questions about the amount of time an individual spends performing various activities during a week (BENEDETTI et al., 2007).

Before the test all students answered the Physical Activity Readiness Questionnaire (PAR-Q) (CSEP, 2002).

The VO₂ max test used was the Astrand sub-maximal (cicloergometer) protocol. It was used a Monark® cicloergometer.

DATA ANALYSIS AND DISCUSSION

All male students had negative PAR-Q. Only 1 woman had a positive PAR-Q (number 4).

The men level of Physical Activity (IPAQ) were: 86% perceived himself as actives (very active and active) and 90% of the women had the same perception (Figure 1)

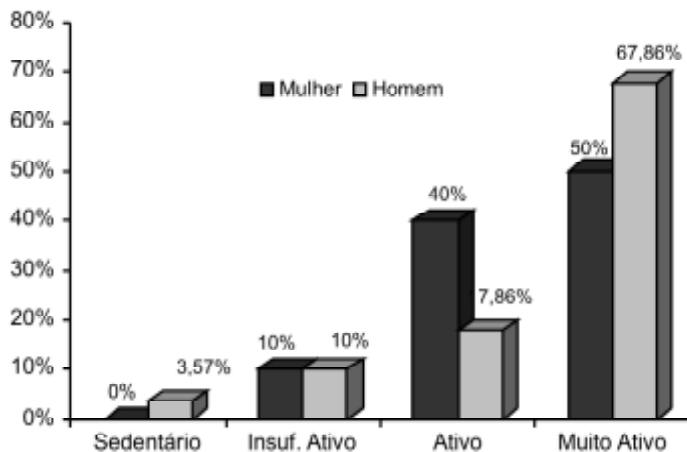


Figure 1: IPAQ results for both sex .

The average height of men was 1.77 + 0.07 meters for women and 1.61 + 0.05 meters. The total body mass (MCT) of the men was 76.87 + 8.73 kilograms and 56.24 + 7.95 kilograms for women.

The mean BMI of men was 24.66 + 2.48 kg/m² for women and 21.55 + 2.68 kg/m², when stratified by obesity category is subdivided into 61% normal, 36% overweight and 4% were obese, for males. The female was divided into 70% normal, 20% and 10% overweight malnutrition.

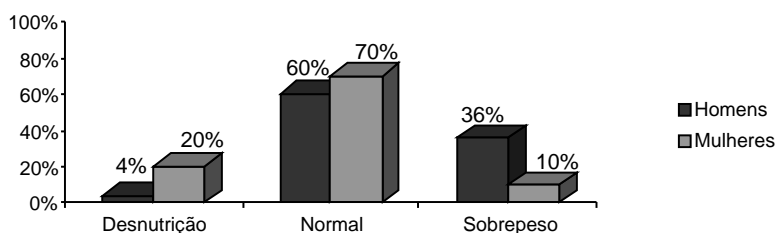


Figure 2: Percentage of BMI by sex

The average values for BP and HR rest of the men were, respectively, 112/75 + 10 / 8 and 65.50 + 10.49 bpm and women 111/79 + 6 / 4 and 67.10 + 9 bpm. (Figures 3 and 4)

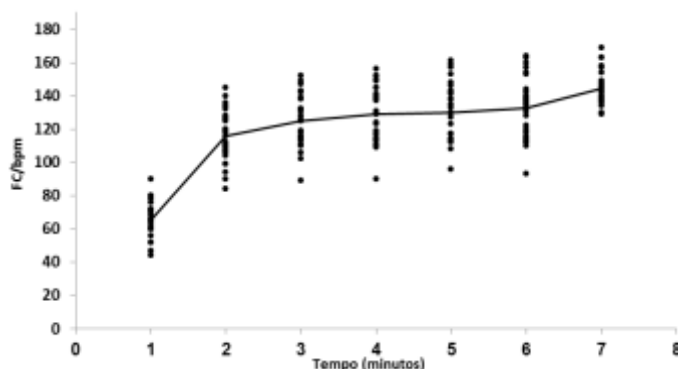


Figure 3: Regarding the heart rate of men.

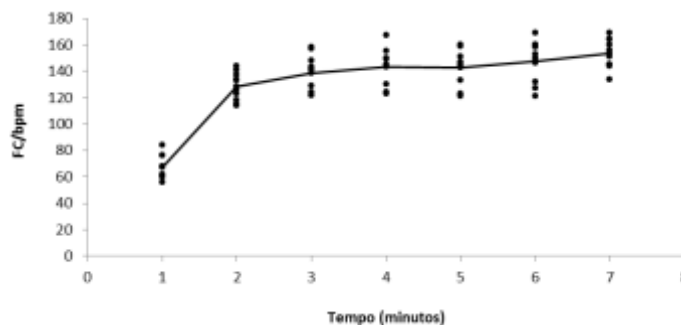


Figure 4: Relating to the Heart Rate of women.

The average value of VO₂max found for men was 38.72 + 13.07. Rated as fair value for the mean age (26.11 + 6.40). For women 34.52 + 8.43, being rated as fair to their average age (25.20 + 4.96). (FREITAS, 2004)

CONCLUSIONS AND RECOMMENDATIONS

We can see through our research, that most are evaluated with a good level of fitness, taking into account the results obtained from tests performed. However, the cardiovascular component resulted in a classification only reasonable for both men and women, when performed through the test of Submaximal VO₂.

The responses to the IPAQ questionnaire, was ranked as the most active individuals.

We recommend for future studies, tests like these only for students who are entering the Physical Education course. Because this way we can make a comparison of how the student enters, moves through college and as it comes out.

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PHYSICAL FITNESS OF PHYSICAL EDUCATION STUDENTS OF AN UNIVERSITY OF RIO DE JANEIRO ABSTRACT

The association of physical fitness health related as a concept and an operational tool to measure a set of the physiological, psychological and physical that each individual has in his life story in a given moment, whose levels are closely linked to a reduced risk of developing hypokinetic nature. The present study aims to assess the fitness level undergraduate students in physical education from higher education institution Estacio de Sa University campus Akxe, located in Barra da Tijuca in the city of Rio de Janeiro. We evaluated 38 individuals, 10 women and 28 men with a mean age of 25 for women and 26 for men

of the 3rd to 8th period. Evaluations were performed functional with submaximal test. The values of submaximal Vo₂ was as mean as much for women as for men classified as a fair result. We conclude through our research that most are rated with a good level of fitness, taking into account the results obtained through tests.

KEY-WORD: Physical Fitness. Physical Education Students. Evaluation.

CONDITION PHYSIQUE DE LES ETUDANTS D'ÉDUCATION PHYSIQUE DE LA UNIVERSIT'E DE RIO DE JANEIRO

RÉSUMÉ

L'association de la condition physique est à la fois un concept et un outil opérationnel pour mesurer un ensemble de l'état physiologique, psychologique et physique que chaque individu a dans son histoire de vie dans un temps donné, dont les niveaux sont étroitement liées à un risque réduit de développer des maladies hypokinétique dans la nature. La présente étude vise à évaluer le niveau de condition physique des étudiants de premier cycle Institution d'éducation physique de l'Éducation de l'Université supérieur Estacio de Sa /Akxe campus bar, situé à Barra da Tijuca dans la ville de Rio de Janeiro. Nous avons évalué 38 sujets, 10 femmes et 28 hommes avec un âge moyen de 25 à 26 ans pour les femmes et les hommes de la période de 3e à 8e. Des évaluations fonctionnelles ont été effectués avec le test sous-maximal. La valeur de la VO₂ submáxio ont duré en moyenne pour les femmes et les hommes classés comme résultat équitable, selon le nomogramme d'Astrand et rimes, 1954 cité en Hespanha (2004). Conclu grâce à nos recherches, que la plupart sont évaluées avec un bon niveau de condition physique, en tenant compte des résultats obtenus à partir de tests effectués.

MOTS-CLÉS: Condition physique. Les étudiants en Éducation Physique. D'évaluation.

APTITUDE FISICA DE ESTUDIANTES DE EDUCACION FISICA DE UNIVERSIDAD EN RIO DE JANEIRO

RESUMEN

La asociación de la salud relacionados con el fitness es un concepto y un instrumento operativo para medir un conjunto de factores fisiológicos, psicológicos y físicos que cada individuo tiene en la historia de su vida en un momento dado, cuyos niveles están estrechamente relacionados con un menor riesgo de desarrollar enfermedades hipocinético en la naturaleza. El presente estudio tiene como objetivo evaluar el nivel de aptitud física en los estudiantes de pregrado de la Institución de Educación Física de Educación Superior de la Universidad Estacio de Sa /Akxe del campus bar, ubicado en Barra da Tijuca, en la ciudad de Río de Janeiro. Se evaluaron 38 pacientes, 10 mujeres y 28 hombres con una edad media de 25 a 26 años para las mujeres y los hombres de la época tercero-octava. Las evaluaciones funcionales se realizaron con la prueba submáxima. El valor de VO₂ submáxio duró en promedio para hombres y mujeres calificados como resultado justo, de acuerdo con el nomograma de Astrand y rimas, 1954 citado en Hespanha (2004). Concluyó a través de nuestra investigación, la mayoría que se evalúan con un buen nivel de condición física, teniendo en cuenta los resultados obtenidos de las pruebas realizadas.

PALABRAS CLAVE: De aptitud física. Estudiantes de Educación Física. La evaluación.

APTIDÃO FÍSICA DOS ESTUDANTES DE EDUCAÇÃO FÍSICA DE UMA UNIVERSIDADE DO RIO DE JANEIRO

RESUMO

A associação da aptidão física ligada à saúde é ao mesmo tempo um conceito e um instrumento operacional de medida de um conjunto de atributos fisiológicos, psicológicos e físicos que cada indivíduo possui em sua história de vida em um determinado momento, cujos níveis estão intimamente ligados a um reduzido risco do desenvolvimento de doenças de natureza hipocinética. O presente estudo busca avaliar o nível de aptidão física em estudantes universitários do curso de Educação Física da Instituição de Ensino Superior Universidade Estácio de Sá campus Barra-Akxe, localizado no bairro da Barra da Tijuca no Município do Rio de Janeiro. Foram avaliados 38 indivíduos, 10 mulheres e 28 homens com média de idade de 25 para as mulheres e 26 anos para homens, do 3º ao 8º período. Foram realizadas avaliações funcionais com teste submáximo. O valor do Vo₂ submáxio teve como média tanto para mulheres quanto para homens resultado classificado como razoável, segundo o Nomograma de Astrand e Rhyning, 1954 apud Hespanha (2004). Concluimos através de nossa pesquisa, que a maioria dos avaliados encontram-se com um bom nível de aptidão física, levando em consideração os resultados obtidos através dos testes realizados.

PALAVRAS-CHAVE: Aptidão Física, Alunos de Educação Física, Avaliação.