

99 - INDICATORS OF LEVELS OF PHYSICAL FITNESS IN ADOLESCENTS ATHLETES OF BADMINTON OF THE FEDERAL INSTITUTE OF ALAGOAS – IFAL

TÂMINEZ DE AZEVEDO FARIAS^{1,3}
ROGERIO JOSÉ FREIRE BARROS^{1,3}
GILLION PATRICO DE LIMA OLIVEIRA^{1,3}
NEWTON CÉSAR DE LIMA MENDES^{1,2,3}
CASSIO HARTMANN²

(1) DISCENTE FEDERAL UNIVERSITY OF ALAGOAS

(2) TEACHER OF THE FEDERAL INSTITUTE OF ALAGOAS - CAMPUS MACEIÓ/AL/ BRAZIL.

(3) SPECIALIZATION COURSE IN SPORTS TRAINING FOR CHILDREN AND YOUNG PEOPLE

taminez@hotmail.com

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Introduction

The Badminton had its origins around 1600 and derives from a game called Battledore and Shuttlecock, in which the objective was to hit with a racket in a shuttlecock as many times as possible without letting it fall. It is a racquet sport with a peteca that resembles volleyball and field tennis, however it contains rules that attribute singular characteristics such as the dimensions of the court (13.40m by 6.10m) and its forms of dispute: simple, double and mixed doubles. Its main objective consists in the action of placing the shuttle on the ground of the opponent's court, making it pass over the net and preventing the opponent from doing the same. Its occurrence occurs preferentially in sportive gyms where the absence of wind is a fundamental aspect for the official competitions, however this factor does not prevent its realization in an amateur way in courtyards, squares, schools among other open spaces with the presence of wind (FONSECA, 2005).

The game is extremely fast and very physically exhausting, occurring a multiplicity of actions in a short time. Today it is considered the fastest racket sport in the world, where the shuttle reaches a speed of 360 km/h (GONÇALVES, 2012). The athletes are forced to make constant decisions in a reduced time, making jumps, changes of directions, braking, with displacements by all the court (CHIMINAZZO, 2017). The motor skills required in these sports are the techniques of rebater, a feature not explored in Physical Education classes. The games also bring excellent strategies for perfecting the following physical abilities: motor coordination, agility, speed, resistance, reflex and visual discrimination, strength and notion temporal space (GUEDES, 2016)). Faced with so many physical abilities used in the various motor actions, to have a good physical aptitude, becomes of great relevance for its practice.

The evaluation of Physical Aptitude (ApF) in this context is considered a well developed area, mainly due to the fact of being based on physiological measures that have good to excellent accuracy and reliability. The process involves, most of the time, the interpretation of a score, which can be a raw score or a stepped score. The first one refers to the result obtained, in the same unit of measurement used as the second one (stepped), when the raw scores are transformed to another standard scale (HEYWARD, 2013; MCARDLE, KATCH, KATCH, 2016).

The goal is to obtain results that allow you to identify the strengths and weaknesses of your appraisers and propose realistic goals that can be worked out for them.

Therefore, the objective of this study was to conduct a survey of indicators of the level of physical fitness of the Badminton students/athletes of the Federal Institute of Alagoas - IFAL.

Methodology

The study is a descriptive research of the quantitative type with a census sample, being taken as a universe of study, Badminton students/athletes of the Federal Institute of Alagoas - IFAL, Campus Maceió, enrolled in 2017, in the age group of 16 to 17 years.

The sample consisted of a group of 10 IFAL students, enrolled in physical education classes of both sexes, aged 16 to 17 years, of whom 6 were males and 4 females. which characterizes a balance of the evaluated for both genders. For the evaluation of the physical fitness indicators, agility (square test), localized muscular endurance (abdominal test) and explosive strength tests were used (horizontal jump test) according to the standardizations suggested by the protocol of PROESP-BRASIL. The evaluations, measurements and tests were all carried out in the premises of the Federal Institute of Alagoas-IFAL/Campus Maceió.

Procedure

The procedure started by a request that authorized to use in the study, the dependencies of the IFAL, then the students that are within the inclusion criteria, were informed about the purpose of the study, the procedures of the research, besides the presentation of the free term consent that was signed by the students of greater age or by the parents/guardians if it were a minor.

All the tests have a good level of scientific authenticity and were applied by five properly trained Physical Education teachers, each of them being responsible for the collection of a measure and/or test, in order to avoid inter-rater variability and ensure data reliability

To assess agility, the student starts from the standing position, with an advanced foot forward immediately behind the starting line. At the evaluator's signal, you should move to the next cone in a diagonal direction. It then runs towards the cone to its left (or right) and then moves to the cone diagonally (crosses the square diagonally). Finally, it runs towards the last cone, which corresponds to the starting point. The student should touch with each of the cones that mark the course. The timer shall be triggered by the evaluator at the moment when the evaluator performs the first step by touching the inside of the square with his foot. Two attempts will be made, and the best execution time will be recorded (PROESP-BR, 2017).

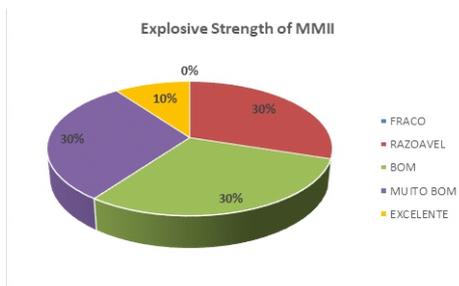
In the MMII explosive force test, the test is fixed to the ground, perpendicular to the line, with the zero point remaining

on the line. The student stands immediately behind the line, with the feet parallel, slightly apart, knees semi-flexed, trunk slightly projected forward. At the signal the student should jump as far as possible. Two attempts will be made, registering the best result (PROESP-BR, 2017).

Finally the localized muscular endurance test, where the student positions himself in the supine position with the knees flexed at 90 degrees and with the arms crossed over the thorax. The evaluator attaches the student's feet to the ground. At the signal the student initiates the movements of flexion of the trunk until touching with the elbows in the thighs, returning to the initial position (it is not necessary to touch with the head in the mat at each execution). The evaluator performs the counting out loud. The student should perform the largest number of complete repetitions in 1 minute (PROESP-BR, 2017).

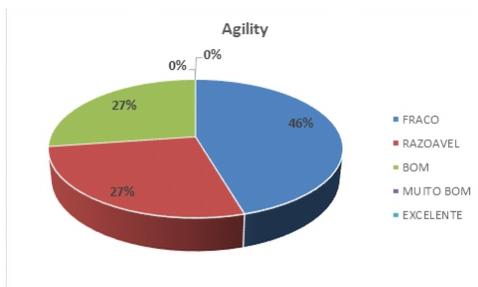
As a criterion for assessing the participants' physical fitness level, normative tables of PROESP-BRASIL were used according to age group and gender.

Results and discussion



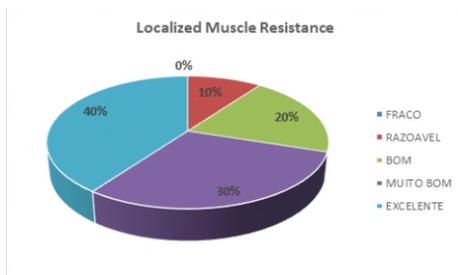
Graph 01: of the MMII Explosive Strength test

Regarding the level of physical fitness assessed by the MMII Explosive Strength test, great results were found, with 70% of those investigated with very acceptable results, 10% at EXCELLENTE level and 30% at VERY MUCH GOOD and GOOD. On the other hand, 30% was also found for the REASONABLE level and no result on the WEAK level. These results indicate that those evaluated in general have a level of strength of MMII well satisfactory for activity performed in badminton, since this variable of explosive force is a physical fitness of extreme importance in the effectiveness of the block movements within the motor actions during the game.



Graph 02: Agility test

The physical fitness level evaluated by the agility test was found in this physical ability a high percentage of the sample classified as FRACO with 46%, and REASONABLE 27%, totaling a percentage of 73% unsatisfactory. The rest of the sample, at most, reached the good level, being 27% for BOM. Did not exist in the sample in question, no results in VERY GOOD and EXCELLENT levels. Through these data, one can see a weakness in a physical fitness of extreme importance for Badminton, given the current reality that classifies it as a high-speed sport of game and motor actions, which requires better agility indexes in order to obtain better ones income. The athletes are forced to make constant decisions in a reduced time, making jumps, changes of directions, braking, with displacements throughout the block (Fernandes, 2008).



Regarding the level of physical fitness assessed by the RML abdominal test, the results are excellent, especially when we add the satisfactory percentages that reach 90%, 40% of the sample are at EXCELLENTE level, 30% at the VERY level BOM and 20% considered GOOD. Only 10% at the REASONABLE level was detected, and no result at the FRACO level existed in the sample in question. The data on the resistance are very optimistic since the game is extremely fast and very physically exhausting, occurring a multiplicity of actions in a short time, even being indicated more specific studies of this variable of physical fitness.

CONCLUSION

It can be concluded that the tests investigated were of great importance, since great results were detected in the physical fitness indicators (Strength and Resistance), except Agility that needs to improve. Data of great utility for teachers and athletes of Badminton of the IFAL, Campus Maceió, because with these indicators it becomes possible to prescribe specific

training so that each athlete can improve their individual physical capacities, according to the requirements of the modality.

The importance of these adolescents' need to improve their lifestyle with changes in habits that make them more active, intensifying the search for physical exercises, not only with a specific focus on student/athlete performance, but considering that this practice of Physical activity is highlighted as being a means of preventing illness and related to physical inactivity, taking into account what is advocated American College of Sports Medicine (ACSM, 2011), that individuals should have at least 150 minutes of moderate intensity exercise per week. It is necessary, therefore, that the amount of time devoted to the practice of physical activity be slightly increased so that, along with this, improvements in results related not only to performance, but also health in general.

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INDICATORS OF LEVELS OF PHYSICAL FITNESS IN ADOLESCENTS ATHLETES OF BADMINTON OF THE FEDERAL INSTITUTE OF ALAGOAS – IFAL

The objective of the study was to conduct a survey of indicators of the level of physical fitness of students/athletes of Badminton of the Federal Institute of Alagoas - IFAL. The sample used was a census composed of 10 students from IFAL, 6 males and 4 females, with a mean age of 16 to 17 years. For data collection, we used: agility (square test), localized muscular resistance (abdominal test) and explosive strength of MMII (horizontal jump test). The results were classified as: Excellent, Above Average, Mean, Below Average and Weak, according to the PROESP-BR evaluation protocol. With regard to the level of explosive strength of lower limbs, it was observed that the great minority presented unsatisfactory results. On the other hand, the agility test showed that there was a large number of the sample with values at the weak level, and in relation to the RML, there was a great disparity in the results, where the highest percentage of the sample were classified as half as weak and other half as very good.

Palabras Clave: Physical Fitness, School, Badminton.

INDICADORES DE NÍVEIS DE APTIDÃO FÍSICA EM ADOLESCENTES ATLETAS DE BADMINTON DO INSTITUTO FEDERAL DE ALAGOAS – IFAL

O objetivo do estudo foi realizar um levantamento de indicadores do nível de aptidão física dos alunos/atletas de Badminton do Instituto Federal de Alagoas – IFAL. A amostra utilizada foi censitária constituída por 10 alunos do IFAL, sendo 6 do sexo masculino e 4 do sexo feminino, com a média de idades compreendidas entre os 16 e 17 anos. Para coleta de dados, utilizou-se: de agilidade (teste do quadrado), de resistência muscular localizada (teste de abdominal) e o de força explosiva de MMII (teste de salto horizontal). Os resultados foram classificados em: Excelente, Acima da Média, na Média, Abaixo da Média e Fraco, segundo o protocolo de avaliação da PROESP-BR. No que se refere ao nível de força explosiva de membros inferiores, pôde-se observar que a minoria apresentou resultados insatisfatórios. Já o teste de agilidade, mostrou que há um grande número da amostra com valores no nível fraco e com relação ao teste de Resistência Muscular Localizado (RML) verificou-se um grande resultado apresentado como satisfatório totalizando 90%, divididos entre 40% excelente, 30% bom e 20% muito bom.

Palavras Chaves: Aptidão Física, Escolares, Badminton.

INDICADORES DE NIVELES DE APTITUD FÍSICA EN ADOLESCENTES ATLETAS DE BADMINTON DEL INSTITUTO FEDERAL DE ALAGOAS - IFAL

El objetivo del estudio fue realizar un levantamiento de indicadores del nivel de aptitud física de los alumnos/atletas de Badminton del Instituto Federal de Alagoas - IFAL. La muestra utilizada fue censitaria constituída por 10 alumnos del IFAL, siendo 6 del sexo masculino y 4 del sexo femenino, con la media de edades comprendidas entre los 16 y 17 años. Para la recolección de datos, se utilizó: de agilidad (prueba del cuadrado), de resistencia muscular localizada (prueba de abdominal) y el de fuerza explosiva de MMII (prueba de salto horizontal). Los resultados se clasificaron en: Excelente, por encima de la media, en la media, debajo de la media y débil, según el protocolo de evaluación de la PROESP-BR. En lo que se refiere al nivel de

fuerza explosiva de miembros inferiores, se pudo observar que la minoría presentó resultados insatisfactorios. En la prueba de agilidad, mostró que hay un gran número de la muestra con valores en el nivel débil y con relación a la prueba de Resistencia Muscular localizada (RML) se verificó un gran resultado presentado como satisfactorio totalizando el 90%, divididos entre 40% excelente, 30% bueno y 20% muy bueno.

Palabras Claves: Aptitud Física, Escuelas, Badminton.

INDICATEURS DE NIVEAU DE CONDITION PHYSIQUE CHEZ LES ADOLESCENTS ATHLÈTES DE BADMINTON DE L'INSTITUT FÉDÉRAL D'ALAGOAS - IFAL

L'objectif de l'étude était d'effectuer une enquête sur les indicateurs de la condition physique des étudiants/athlètes de badminton de l'Institut fédéral d'Alagoas - IFAL. La muestra utilisé recensement fue se compose de 10 élèves del IFAL, siendo del 6 mâles et 4 femenino del sexe, con la media edades comprendidas Entre los 16 y 17 years. Pour la collecte des données, nous avons utilisé: l'agilité (test carré), la résistance musculaire localisée (test abdominal) et la force explosive du MMII (test de saut horizontal). Les résultats ont été classés comme suit: Excellent, supérieur à la moyenne, moyen, inférieur à la moyenne et faible, selon le protocole d'évaluation du PROESP-BR. En ce qui concerne le niveau de résistance à l'explosion des membres inférieurs, il a été observé que la minorité présentait des résultats insatisfaisants. En la prueba de l'agilité, montrent que le foin número un gran de la muestra con valores en el faible niveau y con relación la prueba de la résistance musculaire situé (RML) a vérifier les résultats un gran présenté avec comme satisfactorio totale el 90% répartis entre 40 % excellent, 30% bon et 20% très bon.

Mots clés: forme physique, écoles, badminton.

Rua NaborAlbuquerque, 512, Gruta de Lourdes, Maceió –AL.

Tel. (82) 988038139

e-mail: taminez@hotmail.com