22 - LEVEL OF PHYSICAL CONDITIONING IN STUDENTS OF AVERAGE EDUCATION TECHNICIAN OF THE IFMS/TRÊS LAGOAS AND ITS RELATION WITH THE SUBJECT HEALTH

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INTRODUCTION

In the search of efforts in such a way to promote the physical activity in the pertaining to school environment how much it are of the school and in the qualification for the work, the present work was carried through. The commitment in carrying through interventions in the area of the promotion of the health by means of the education is, among others reasons, in the benefits of the physical activity.

Evidences convincing epidemiologists and laboratory show that the regular exercise protects against the development and the progression of many chronic illnesses and that it is an important component of a style of healthful life. (KENNEY, W.L. et al., 2000, p. 3-4)

The qualification for the work is in the learning of contents that in such a way make possible independence to the students in the requirement of programs of Labor Gymnastics (students as potential vacant occupants in the work market) how much in the practical one of regular physical exercises as prevention of injuries.

In what it says respect to the prevention of injuries and practical the regular one of physical exercises, the concept of physical conditioning is of basic importance in an education process learning that searchs an intervention in the promotion of the health. In accordance with the American College of Sports Medicine (ACSM, 2003, p. 8):

[...] the related physical conditioning to the health mentions the capacity to it that its heart, its vain sanguineous ones, its lungs and its muscles have to resist the daily and 0ccasional tasks, as well as unexpected the physical challenges, with a minimum of fatigue and discomfort. In other words, it is the ownership of the reserves of energy necessary to make everything what it is desired - and still more!

Therefore, we have the following definitions according to ACSM (2003, p. 9):

Aerobic capacity - the capacity of the body to catch and to use the oxygen to produce energy.

Muscular capacity - the force and the resistance of its muscles.

Flexibility - the capacity to bend the joints and the muscles by means of a series of movements.

Corporal composition - the relation enters the greasy amount of fabric and of another fabric in its body.

One of the direction of the work was in calling the attention the students of Average Educacion Technician on the association of the excess of corporal adiposity with high levels of fats in the blood, what it encloses one of the elements of the physical conditioning. According to McArdle, Katch and Katch (1998, p. 624) this association is similar to the one of adults:

The similarity of what it occurs with adults, association between corporal adiposity and serum levels of lipids if become readily apparent in the classified individuals as obese; the children fattest in general possess the levels highest of cholesterol and triglycerides.

One jointly knows that high levels of lipids in the blood with the obesity (> 20% of corporal fat) and familiar description are factors of risk for coronary cardiac illness (McARDLE, KATCH and KATCH, 1998). E the occurrence of such factors seems to be linked the origin of cardiopathy in infancy:

Because of the prevalence of coronary factors of risk between daily pay-adolescents and adolescents, beyond the comments of autopsy of young adults e children, it seems probable that the cardiopathy has its origins in infancy. (McARDLE, KATCH and KATCH, 1998, p. 624).

McArdle, Katch and Katch (1998, p. 624) present other data that justify the importance of the verification of the corporal composition in children and adolescents. The authors tell that in one he shows of 62 children and obese adolescents between 10 and 15 years, to only one possessed an only factor of risk, “in the remain of the group, 14% had two factors of risk, 30% had three, 29% had four, 18% had five and the others five children (8%) had six factors of risk for cardiopathy”.

Guedes and Guedes (1998) call attention the risks to the health presented for children and adolescents with overweight and obesity. They tell that the excesses of corporal fat in the young increase the risks of the adults to acquire overweight or the obesity, as well as the biggest incidence of metabolic and functional riots, and also the inadequate behavior and habits to the diet and the physical activity.

In accordance with Börjeson (apud GUEDES and GUEDES, 1998, p, 236) “how much lesser the age where the manifest and how much bigger obesity if its intensity, more raised to the probability of that the child if becomes an adult obese”. In the same way, Gilliam and MacConnie (apud GUEDES, 1999, p, 10), tell that many symptoms related to the degenerative illnesses present in not inferior latent state the 20-25 years. Thus, to invest information pertaining to school how much to the adoption of life habits it can inhibit in the future the appearance of these illnesses in children who present or not symptoms associates to the degenerative illnesses.

Objective

It was intended to reach in the process of teach-learning beyond modifications in the behavior of the students the search of the autonomy front to the subject health. The work walked in the direction to increase the information level on the subject and in this direction to contribute so that the students perceived throughout the schooling the relevance of the maintenance and preservation of the health in its lives.

Of this form, the election, organization and development of the work had searched to not only propitiate to the students situations that become them active adolescents by means of the experience, but, over all, they lead that to prefer them a style of healthful life.

Methodology and Results

The students had been evaluated in the component four of the physical conditioning: aerobic capacity (test of 9

minutes), muscular capacity (flexions and test abdominal of arms in 1 minute), flexibility (test to seat and to reach) and evaluation of the corporal composition (method of the cutaneous fold).

Previously the accomplishment of the tests, the students had lived deeply lessons with the content related to the physical conditioning: concept, as to evaluate, which attitude to take, as to reevaluate. The content was presented using the conceptual map as resource, that is, diagrams that indicate relations between concepts that can be interpreted as hierarchic diagrams that they look to reflect the conceptual organization of one disciplines or part of it. (MOREIRA, 2006)

After the quarrel and reflection on the content had been carried through the following procedures: test of abdominal, test to seat and to reach, test of 9 (nine) minutes and evaluation of the corporal composition.

For the test of abdominal in one minute it was used to following tables:

Table 1: Classification of the results of the test of abdominal for men

CLASSIFICATION FOR MEN (number of repetitions per minute)				
Age	Excellent	Above	Average	Below Average
15 – 19	48	42 a 47	38 a 41	33 a 37
20 – 29	43	37 a 42	33 a 36	29 a 32
30 – 39	36	31 a 35	27 a 30	22 a 26
40 – 49	31	26 a 30	22 a 25	17 a 21
50 – 59	26	22 a 25	18 a 21	13 a 17
60 – 69	23	17 a 22	12 a 16	07 a 11

Source: Pollock, M. L.; Wilmore J. H., 1993

Table 2: Classification of the results of the test of abdominal for woman

CLASSIFICATION FOR WOMAN (number of repetitions per minute)				
Age	Excellent	Above	Average	Below Average
15 – 19	42	36 a 41	32 a 35	27 a 31
20 – 29	36	31 a 35	25 a 30	21 a 24
30 – 39	29	24 a 28	20 a 23	15 a 19
40 – 49	25	20 a 24	15 a 19	07 a 14
50 – 59	19	12 a 18	05 a 11	03 a 04
60 – 69	16	12 a 15	04 a 11	02 a 03

Source: Pollock, M. L.; Wilmore J. H., 1993

Table 3 – Average of the results of the test de abdominal

Sex	N°	Result	Classification
Masculine	21	29	Below Average
Feminine	6	18	Below Average

Source: The author

The students had presented the result below of the average for the test of abdominal, thus low indices in this test will be able to contribute for the development of muscular pain in the lumbar region, that is, "she gives credit that small force/abdominal resistance contributes for muscular pain in the lumbar region". (KENNEY, W.L. et al., 2000, p. 73)

Table 4 – Average of the results of the test the sit and reach

Sex	N°	Result	Classification
Masculine	26	36	Above average
Feminine	16	39	Excellent

Source: The author

The students had presented the result above average and excellent for the test to seat and to reach, thus the maintenance of these indices will be able to contribute for prevention of the development of lumbar muscular pain:

The flexion of the trunk or test to seat and to reach generally is used in tests of aptitude guided by health to evaluate lumbar flexibility and of the hip. Little lumbar flexion and of the hip can, together with little force/abdominal resistance or other etiologic factors, to contribute for the development of lumbar muscular pain. This, hypothesis, however, not yet were proven scientifically. (KENNEY, W.L. et al., 2000, p. 57)

Table 5 – Classification of the results for the test the sit and reach masculine

Sit and e Reach - Masculine – with bank (in Centimeters)					
Age	15 – 19	20 - 29	30 - 39	40 - 49	50 – 59
Excellent	> 39	> 40	> 38	> 35	> 35
Above average	34 – 38	34 - 39	33 - 37	29 - 34	28 – 34
Average	29 – 33	30 - 33	28 - 32	24 - 28	24 – 27
Below Average	24 – 28	25 - 29	23 - 27	18 - 23	16 – 23
Bad	< 23	< 24	< 22	< 17	< 15

Source: Canadian Standardized. Teste of Fitness (CSTF)

Table 6 – Classification of the results for the test the sit and reach feminine

Sit and e Reach - Feminine – with bank (in Centimeters)					
Age	15 – 19	20 - 29	30 - 39	40 - 49	50 – 59
Excellent	> 43	> 41	> 41	> 38	> 39
Above average	38 – 42	37 - 40	36 - 40	34 - 37	33 – 38
Average	34 – 37	33 - 36	32 - 35	30 - 33	30 – 32
Below Average	29 – 33	28 - 32	27 - 31	25 - 29	25 – 29
Bad	< 28	< 27	< 26	< 24	< 24

Source: Canadian Standardized. Teste of Fitness (CSTF)

Table 7 – Average of the results of the test for 9 minutes

Sex	N°	Result	Classification
Masculine	30	1268	Below average
Feminine	14	1080	Below average

Source: The author

Tabela 8 – Classification of the results of the test for 9 minutes in meters

Age	Masculine	Feminine
7	1100 – 1400	1000 – 1300
8	1100 – 1400	1000 – 1300
9	1200 – 1500	1100 – 1400
10	1300 – 1600	1200 – 1550
11	1300 – 1750	1200 – 1600
12	1400 – 1800	1200 – 1600
13	1450 – 2000	1300 – 1600
14	1550 – 2000	1300 – 1600
15	1600 – 2000	1300 – 1750
16	1750 – 2000	1400 – 1800
17	1750 – 2000	1450 – 1800

Source: Adaptado de AAHPER, 1980 apud PROESP-BR.

Therefore, the cardiorespiratory capacity is one of the important components of the physical conditioning and can be defined as:

[...] the capacity to carry through dynamic exercise of moderate intensity the high one, with great muscular group, for long periods. The accomplishment of such exercise depends on the functional state of the systems respiratory, cardiovascular and musculoskeletal. Cardiorespiratory capacity becomes related with health because (a) low levels of physical aptitude the increase has been associates notable of the risk of premature death for some cause, mainly cardiovascular illnesses, and (b) higher physical aptitude associates it one practical one of habitual physical activity that, in turn, directly is associated with many benefits for the health. (KENNEY, W.L. et al., 2000, p. 57)

Of this form, the low levels in the test of 9 minutes supply an attention signal to the students, since they are indications of possible cardiovascular illnesses.

Table 9 – Avarage of the results the percentage of fat

Sex	N°	Result	Classification
Masculine	36	27	High
Feminine	15	32	High

Source: The author

Table 10 – Classification of results of the percentage of fat for Children the adolescents aged 7 to 17 years.

Sex	Excessively Low	Low	Adequate	Moderately High	High	Excessively High
Man	até 6,0%	6,01%-10%	10,01%-20%	20,01% a 25%	25,01%a 31%	> 31,01%
Woman	até 12%	12,01%-15%	15,01%-25%	25% a 30%	30,01% a 36%	> 36,01%

Source: Deurenberg, PP. Pieters, J.J. L. e Hautuast, J.G.L., 1990

The corporal composition, according to KENNEY et al. (2000), it is an important component of the evaluation of global the physical aptitude, and the fat excess is harmful for the health. Therefore, in accordance with Guedes and Guedes (1998), KENNEY et al. (2000) and McArdle, Katch and Katch (1998), become necessary to intervine in the habit of the people to prevent the excess of fat, since this is a harmful factor to the health, and nothing more coherent and important of what the application of such measures in children.

After the experiences the students had carried through a conceptual evaluation on the worked subject. They had answered questions related to the components of the physical conditioning - aerobic capacity, muscular capacity, flexibility and corporal composition -, as well as the attitudes to be taken to revert the current picture of the physical conditioning. The questions had been composed for opened and closed questions; they contemplated the abilities to identify, to relate, to compare and to analyze.

The majority of the students (eighty percent) had demonstrated understanding of the content, being capable to identify the elements that compose the conditioning related to the health, to relate the tests (and the evaluation of the corporal composition) with the elements of the physical conditioning, to compare the results gotten with classification tables and to analyze as the results can influence in the decision taking, in what it says practical respect to current of physical activity and the consequence for its lives.

Finally, it was suggestible to the students practical of exercises located, of flexibility and aerobic organisms with the objective to modify the current picture. The students had lived deeply and received orientation on the exercises; the program of training with indication of volume, intensity, duration and frequency; as well as orientation for the change of the program (periodization), the control of the cardiac frequency during the aerobic exercises and of the use of bottles pets for the located exercises.

Considerations

The data of the research had shown that the students present inadequate indices of corporal fat, what accuses high

levels of sanguineous lipids. It is known that these levels are factors of risk for coronary cardiac illness and seems to be linked the origin of cardiopathy in infancy and adolescence. (MCARDLE, KATCH AND KATCH, 1998)

Of similar form the work searched to relate the lessons with the works of Guedes and Guedes (1998), that they call attention the risks to the health presented for children and adolescents with overweight and obesity. In these works the authors tell that the excesses of corporal fat in the young increase the risks of the adults to acquire overweight or the obesity, as well as the biggest incidence of metabolic and functional riots, and also the inadequate behavior and habits to the diet and the physical activity.

In proximity with the Nahas and Corbin (1992), the work was directed to call the attention the students on the importance of the physical activity, that is, to provide a formation so that the physical activities can be incorporated as habits of the population in general in the pertaining to school context.

Thus, the understanding of the subject how much to the adoption of healthful habits of life it can inhibit in the future the instauration of hypokinetic illnesses in these students who had presented symptoms associates to the degenerative illnesses.

In this direction understanding of the subject for the students was observed. In the tests and evaluations it was evidenced necessity of intervention in the practical one of corporal activities, since much of the students had presented resulted of the percentage of fat above of the desirable one for its age bands, as well as inadequate levels in the carried through physical tests (except for the test seating and reaching). However, in the final evaluations the majority of the students had been capable to understand the content, being capable to identify the elements that compose the conditioning related to the health, to relate the tests (and the evaluation of the corporal composition) with the elements of the physical conditioning, to compare the results gotten with classification tables and to analyze as the results can influence in the decision taking, in what it says practical respect to current of physical activity and the consequence for its lives.

Of this form, the work searched to increase the information level on the subject health and to contribute so that the students perceived the relevance of the maintenance and preservation of the health in its lives.

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LEVEL OF PHYSICAL CONDITIONING IN STUDENTS OF AVERAGE EDUCATION TECHNICIAN OF THE IFMS/TRÊS LAGOAS AND ITS RELATION WITH THE SUBJECT HEALTH

ABSTRACT:

The present work had as objective to carry through interventions in the area of the promotion of the health by means of the education for a physically active life, next to the students of Average Ensino Technician of the Federal Institute of Education, Science and Technology of the Campus Três Lagoas (IFMS/Três Lagoas). Strategies had been used so that the young developed the habit to practise physical activities. The subject allowed a reflection in the measure where the students had been able to perceive that inadequate levels of the aerobic capacity, muscular force, flexibility and corporal fat would take the inadequate levels of related physical conditioning to the health. The students had been evaluated in the component fours of the physical conditioning. After the evaluation the students had been guided the accomplishment of located physical exercises, walked or race and allonge. The majority of the students demonstrated a significant learning on the subject.

WORDS KEY: physical conditioning, aerobic capacity, muscular force, flexibility and corporal fat.

NIVEAU DE CONDITIONNEMENT PHYSIQUE DANS DES ÉTUDIANTS DE L'ENSEIGNEMENT MOYEN TECHNIQUE DE IFMS/TRÊS LAGOAS ET SA RELATION AVEC LE SUJET SALUE

RÉSUMÉ :

Présent travail a eu comme objectif réaliser des interventions dans le secteur de la promotion de la santé au moyen de l'éducation pour une vie physiquement active, près des étudiants de Ensino Moyen Technique de l'Institut Fédéral d'Éducation, de Science et de Technologie du Terrain Três Lagoas (IFMS/Três Lagoas). Ont été utilisées des stratégies pour que les jeunes développent l'habitude de pratiquer des activités physiques. Le sujet a permis une réflexion dans la mesure où les étudiants ont pu percevoir que des niveaux inadéquats de la capacité aérobie, de la force musculaire, de la flexibilité et de la graisse corporelle prendraient à des niveaux inadéquats de conditionnement physique rapporté à la santé. Les étudiants ont été évalués dans les quatros composante du conditionnement physique. Après l'évaluation les étudiants ont été guidés la réalisation d'exercices physiques localisés, la randonnée ou la course et l'allonge. À la majorité des étudiants il a démontré un apprentissage significatif sur le sujet.

MOTS CLÉS: conditionnement physique, capacité aérobie, force musculaire, flexibilité et graisse corporelle.

EL NIVEL DE APTITUD PARA ESTUDIANTES DE SECUNDARIA DE IFMS/TRÊS LAGOAS Y SU RELACIÓN CON EL TEMA DE SALUD

RESUMEN:

Este estudio tuvo como objetivo intervenir en el ámbito de la promoción de la salud a través de la educación para una vida físicamente activa, junto con los estudiantes de secundaria en el Instituto Federal de Educación Técnica, Ciencia y Tecnología Campus Três Lagoas (IFMS/Três Lagoas). Las estrategias se utilizan para que los jóvenes desarrollen el hábito de practicar actividades físicas. El tema permite una reflexión sobre el grado en que los estudiantes se dan cuenta de que los niveles inadecuados de la capacidad aeróbica, fuerza muscular, la flexibilidad y la grasa corporal podría llevar a niveles inadecuados de salud relacionados con el fitness. Los estudiantes fueron evaluados en cuatro componentes de la aptitud. Después de evaluar a los estudiantes se les pidió que localiza los ejercicios físicos, caminar o trotar y estirar. La mayoría de los estudiantes mostraron un aprendizaje significativo sobre el tema.

PALABRAS CLAVE: física, capacidad aeróbica, fuerza muscular, la flexibilidad y la grasa corporal.

NÍVEL DE CONDICIONAMENTO FÍSICO EM ESTUDANTES DO ENSINO MÉDIO TÉCNICO DO IFMS/TRÊS LAGOAS E A SUA RELAÇÃO COM O TEMA SAÚDE

RESUMO:

O presente trabalho teve como objetivo realizar intervenções na área da promoção da saúde por meio da educação para uma vida fisicamente ativa, junto aos estudantes do Ensino Médio Técnico do Instituto Federal de Educação, Ciência e Tecnologia do Campus Três Lagoas (IFMS/Três Lagoas). Foram utilizadas estratégias para que os jovens desenvolvessem o hábito de praticarem atividades físicas. O tema permitiu uma reflexão na medida em que os estudantes puderam perceber que níveis inadequados da capacidade aeróbia, força muscular, flexibilidade e gordura corporal levariam a níveis inadequados de condicionamento físico relacionado à saúde. Os estudantes foram avaliados nos quatros componentes do condicionamento físico. Após a avaliação os estudantes foram orientados a realização de exercícios físicos localizados, caminhada ou corrida e alongamento. A maioria dos estudantes demonstrou uma aprendizagem significativa sobre o tema.

PALAVRAS-CHAVES: condicionamento físico, capacidade aeróbia, força muscular, flexibilidade e gordura corporal.