

## 165 - HABITS OF PHYSICAL ACTIVITY IN THE PIONEERING GROUPS OF INTEGRATED TECHNICIAN EDUCATION OF CEFET-PARAÍBA

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### 1. INTRODUCTION

The reduction of the level of physical activity (AF) is establishing gradually while the societies are developing themselves industrially. We know that the technological progress favors the sedentarism basically for three phenomena: the reduction of the demand of physical work in the labor activities, the increase of the mechanized transport and the increment of offer of passive leisure. (TORRES and CASTARLENAS, 2004).

According to literature, some factors contribute significantly for the installation of a table of reduction of caloric expense between children and adolescents. Among them: the reduction of leisure spaces and increase of violence index; little use of locomotion; reduction of the numbers of weekly classes of Physical Education, with predominance of light activities (GUEDES and GUEDES, 1997; SARKIN et al, 1997); it is also evident, the substitution of leisure activities that demand greater caloric expense for passive leisure activities (BAR-OR et al, 1998; GAMBARDELLA and GATHEB, 1998).

The IBGE (1998), affirms that the industry of leisure, of the current era of technology, provides great variety of forms of passive leisure. The computer, present in 10% of Brazilian homes, together with the CD-ROOM and the Internet are examples of the responsible technological innovations for the reduction of the level of physical activity among young persons.

According to OMS (World Health Organization = WHO), the population in general should practise moderate AF 5 or more times a week in an average of 30 minutes daily. The vigorous activities, according to American College of Sports Medicine (ACSM), are those we practise in an intense form until sweating; the indication for those activities is that they are carried through in a medium frequency of three or more days a week, with duration of 20 to 45 minutes, in an intensity of 60 to 90 of maximum cardiac frequency (THOMAS, J. et al, 2007).

Based on what was said before, we can say that the AF lack is one of the main factors of risk to our health. This lack not only has affected the individual as well as, in certain direction, has converted into a social obligation. The sanitary expenses that are produced in a direct or indirect form because of the AF lack, reached the limits of their possibilities of financing, also exceeding those limits (WEINEK, 2001).

Then, from what we have approached previously, we bring as general objective for this work: to describe the characteristics of the practice of Physical Activity in leisure, of the three pioneering groups of Integrated Technician Education, in CEFET-PB.

Taking into consideration the studies carried through and the data with which these contribute on the practice of AF of students in Brazil, it was elected to carry through a descriptive research in the northeast of Brazil, as long as there is scarcity of works in this area in this Brazilian region, mainly when referring to students in the state of Paraíba. The choice of the pupils of Integrated Technician Education as study population was due to the great interest, for this study, to visualize the characteristics of the pupils of this new model of teaching, so that in the future these data can contribute with researches and/or projects of intervention.

### 2. METODOLOGY

This study is of descriptive type, for which it was used, as instrument of measure, an auto-managed questionnaire, valid and truthful in order to accomplish the proposed objective.

The research was carried through on a sample of 84 citizens, with average age of 16 years old, representative of the 120 pupils of the first years in Integrated Technician courses, pertaining to CEFET-PB, in the year 2006. It was applied the descriptive, inferential statistics and analysis of correspondence.

The results of this work form part of an ampler work that is "to know the behavior of the life styles of CEFET-PB ETIM (Integrated Technician Education) pupils, from the influence of the model of the EF in the perspective of the promotion of health. It was used, as source of data collection, a questionnaire composed of 33 questions, principally closed ones, on diverse variables related to the life style and to the practice of Physical Education in High School of these schools. In this specific work, questions related to the practice of AF in leisure had been used.

The field work was carried through in the first bimester of the year 2006. The questionnaires were anonymous and had been filled by the pupils, individually, within the learning schedule; the pupils who had participated in the research were in the classroom in the schedule of the application of the questionnaire.

### 3. ANALYSIS AND INTERPRETATION OF DATA

In relation to the characteristics of the practice of AF of CEFET-PB ETIM pupils, the most representative data are: 40.5% of the pupils affirm that they practise up to 3 h/day of passive activities in the period of leisure of the week; 23.8% affirm to do passive activities more than 5 until 7h/day in the period of leisure, in their weekends; 26.2% affirm to do vigorous AF from 1 to 2 and from 3 to 4 times a week; 23.8% affirm that when they do vigorous AF, they do in a time of about 60 minutes; 33.3% affirm to do moderate AF from 1 to 2 times a week; 31% affirm that when they do moderate AF, they do in a time of about 30 minutes (see Table 1).

Table 1 Characteristics of the practice of AF of CEFET-PB ETIM pupils

CHARACTERISTICS		FREQUENCY	PERCENTAGE	N (Total)
PASSIVE ACTIVITIES/ WEEK	Up to 3 h + from 3 to 5 h + 5 up to 7 h + 7 up to 9 h + 9 h	34 23 20 5 2	40,5 27,4 23,8 6 2,4	84
PASSIVE ACTIVITIES / WEEKEND	Up to 3 h + from 3 to 5 h + 5 up to 7 h + 7 up to 9 h + 9 h	4 26 20 14 20	4,8 31 23,8 16,7 23,8	84
WEEKLY FREQUENCY OF VIGOROUS AF	1 to 2 times a week 3 to 4 times a week 5 or more times week Weekend/holiday Does not do AF	14 16 20 18 16	26,2 26,2 13,1 15,5 19	84

TIME THAT REALIZE VIGOROUS AF	15 min. 30 min. 60 min. + 1 hour Does not do AF	14 16 20 18 16	16.7 19 23.8 22.7 21.4 19	84
WEEKLY FREQUENCY OF MODERATE AF	1 to 2 times a week 3 to 4 times a week 5 or more times a week Weekend/holiday Does not do	28 19 22 9 6	33,3 22,6 26,2 10,7 7,1	84
TIME THAT REALIZE MODERATE AF	15 min. 30 min. 60 min. + 1 hour Does not do AF	21 26 20 12 5	25 31 23,8 14,3 6	84

We must consider that this time (leisure) dedicated to the passive activities in a week and weekend is considered high, since it was not esteemed the period of sleep (average of 8h/day) and period they attend class in the school (average 6 h/day).

Different data indicate that the American adult spends an average of 3h/days and 25h/weekly watching TV, videos and cinema (SALIS; OWEN, 1999). Also, according to Nahas (2001), the contemporary society adopted a philosophy of life guided for the technology that prevents efforts and increases comfort.

Guedes et al (2001), in research with pupils of 15 to 18 years old in Londrina, Paraná, affirms that the boys remain significantly bigger time in front of the TV and video than the girls (4,04 to 3,25 h/day). With the advance of the age, the average diminishes in a significant way. The poorest adolescents present a bigger average dedicated to passive activities.

In research carried through at CEFET-PB with pupils of Modular Technical Education (GOMES, 2005), it was frequent the choice of passive leisure (to go to the cinema/theater/show) among the pupils with less than 20 years old.

In relation to the frequency of moderate activities practiced by those pupils in the period of leisure, it was more representative from 1 to 2 times a week, although had good representation the index of 5 or more times a week. Even being below the esteemed by the OMS (3 times or more a week), we must consider that those pupils, in their majority, also practise EF 3 times a week. The most representative time (average of 30 minutes) was greater than the esteemed one by the OMS.

In relation to the vigorous AF we had equality in the quantitative of 1 to 2 times a week and 5 times or more in a week, with an average time of 60 minutes; This fact can be explained by the practices of AF of some pupils in extracurricular schedule within CEFET-PB. This school has excellent physical structure, gives security to the practitioners and offers activities in the 3 turns for the ETIM pupils, which facilitates the access to the practice of AF in their free time, inside the proper school. In previous research (GOMES, 2005) it had already been perceived how the CEFET-PB pupils practise AF inside the proper institution in extracurricular schedules.

Rich environments in resources for the practice of AF as: squares, parks, gymnasia etc, can provide people a simpler and easier way to move themselves. On the contrary, the environments that can make it difficult or impose barriers to the practice of AF such as absence of structures, of local security among other inconvenients, reduce, in principle, the possibilities of people being active (SALLIS et al, 1997).

What is not guaranteed among those pupils is the access to good infrastructure for the practice of AF close to the residence places. Indeed, the city of João Person does not have an interesting amount of squares, and the few available ones are not in good conditions of functioning. We have found low accessibility of pupils who live in peripheral areas (case of the majority of the CEFET-PB ETIM pupils) the academies, clubs or sportive installations of a general form.

We will highlight, in the continuation, the inferences that had signification level among the carried through activities in the period of leisure and the familiar income of the CEFET-PB ETIM pupils. For the pupils who practise active activity in their period of leisure, the most representative data was of 66,7% for those who have average familiar income of 4 minimum wages. Among those who practise passive activities, the most representative data was of 46,29% for those who have average familiar income of 1 minimum wage. For those who practise passive and active activities, the most representative data was of 70% for those who have average familiar income of 1 minimum wage. And, finally, for those who practise active and passive activities, the most representative data was of 64,7% for those who have average familiar income of 1 minimum wage.

Table 2 Activities carried through in the period of leisure according to the familiar income of the CEFET-PB ETIM pupils

MONTHLY INCOME	ACTIVITIES CARRIED THROUGH IN THE PERIOD OF LEISURE				$\chi^2$
	ACTIVE	PASSIVE	PASSIVE/ ACTIVE	ACTIVE/ PASSIVE	
Average 1 minimum wage	-	46,29	70	64,7	$\chi^2 = 42.782;$ gl= 12; sig.asintótica= ,000 c= ,581
Average 2 minimum wages	33,3	16,66	10	17,6	
Average 3 minimum wages	-	14,82	10	-	
Average 4 minimum wages	66,7	1,85	-	-	
Average 5 minimum wages or more	-	20,37	10	17,6	

When carrying through statistics inferencial that relates the dimensions activities carried through in the period of leisure and the familiar income of the pupils, we prove that  $\chi^2$  is highly significant, that means that the pupils with bigger familiar income practise more active than passive activities, in their period of leisure.

The low socio-economics status frequently associates with the responsibility of the time dedicated to the factors as, for example: cares with the children, family, time dedicated to work, lack of transports, insecurity, inflexibility of work and question of the transitory home (SEEFELDT et al, 2002).

The information of research on the Brazilian standard of living, elaborated by IBGE (1999), shows that, in the distribution of people by the fifth of monthly per capita income, among people who practise AF weekly, 13.8% belong to the 1<sup>st</sup> fifth (lower income), 16.4% to 2<sup>nd</sup>, 16% to 3<sup>rd</sup>, 18.4% to 4<sup>th</sup> and 31.5% to 5<sup>th</sup> fifth (higher income). For those who practise that for thirty minutes or more, at least 3 times a week, the values had been: 4.8% (1<sup>st</sup> fifth), 7.4% (2<sup>nd</sup> fifth), 5.9% (3<sup>rd</sup> fifth), 7.6% (4<sup>th</sup> fifth) and 14.6% (5<sup>th</sup> fifth). In general,

we perceive that the practice of AF increases as the economic incomes raises.

Research carried through at CEFET-PB (GOMES, 2005), with pupils from Modular Technical Education, shows this same trend, that is, the pupils with higher familiar income were more active in the period of leisure.

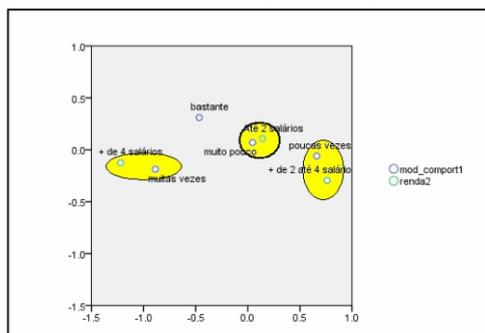
We will highlight, then, the inferences that had signification level between the practical weekly frequency of vigorous AF in the period of leisure and the familiar income of CEFET-PB ETIM pupils. For the pupils with familiar income up to 2 minimum wages, the most representative data was 43.64% of pupils who practise vigorous AF from 3 to 4 times a week. For the ones with familiar income of more than 2 up to 4 minimum wages, the most representative data was 57.13% of pupils who practice vigorous AF 5 or more times a week. For those who have income of more than 4 minimum wages, the most representative data was of 53,33% of pupils who practise vigorous AF from 3 to 4 times a week.

Table 3 Weekly frequency that practises Vigorous AF in the period of leisure according to the familiar income of the of the CEFET-PB ETIM pupils

MONTHLY INCOME	WEEKLY FREQUENCY OF VIGOROUS AF PRACTICES IN LEISURE TIME				$\chi^2$
	1 to 2 times a week	3 to 4 times a week	5 or more times a week	Holiday/weekend/ does not practise	
Up to 2 minimum wages	25,45	<b>43,64</b>	21,82	9,09	$\chi^2=14.458$ ; gl=6 ; sig.asintótica= ,02 c=
More than 2 up to 4 minimum wages	-	21,43	<b>57,13</b>	21,43	
More than 4 minimum wages	13,33	<b>53,33</b>	13,33	20	

When carrying through the inferential statistics that relates the dimensions weekly frequency where Vigorous AF is practiced in the period of leisure according to the familiar income of the pupils, we prove that  $\chi^2$  is significant, which means that the pupils who have a bigger weekly frequency of vigorous AF are the ones that have familiar income above 2 minimum wages.

This result lead us to deepen more in this direction, through a correspondence analysis (Graphic 1).



Graphic 1 Correspondence among the variables familiar income and change of behavior

Bastante = enough; + de 4 salários = more than 4 wages; Muitas vezes = many times; Até 2 salários = up to 2 wages; muito pouco = very few; poucas vezes = few times; + de 2 até 4 salários = more than 2 to 4 wages; Mod\_comport = behaviour; Renda = income

It is observed in a clear way that the pupils who have higher familiar income have correspondence with changing more their pro-active behavior (to be more active in their leisure time). In this case it had correspondence familiar income of more than 4 minimum wages with changing behavior many times, to be more active. And income of up to 2 minimum wages, with changing very little and from 2 to 4 wages with the indicator to change few times

The pupils with higher familiar income, perhaps have more access to information on the importance to change the life style (to increase level of daily AF), as cable TV, specialized magazines, Internet etc. This can favor positively to a change of behavior of those pupils. We must also consider the question of accessibility, as available time, resources, favorable environment etc.

Another evidence that can be highlighted is the one that relates to the idea that the social class mediated by work (income and instruction) affects the nature of leisure of the citizens and their practices of AF, being the costs an important factor that can explain the biggest participation of families of middle class in relation to lower classes in a great number of activities. This fact seems to be potentially decisive in the easiness of selection and accessibility to the practice of AF (SALLIS et al, 1996).

#### 4. CONCLUSION

As conclusion, it can be affirmed that the majority of pupils practise passive activities/week up to 3 hours/day and, on the weekend, more than 3 up to 5 hours/day. The majority of pupils do not practise, the weekly frequency of vigorous AF, nor moderate, according to indication of OMS. Practise vigorous AF from 1 to 4 times times a week, during an average time of 60 minutes; Practise moderate AF from 1 to 2 times a week, during an average time of 30 minutes. The bigger the family income, the bigger the change of pro-active behavior.

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#### **HABITS OF PHYSICAL ACTIVITY IN THE PIONEERING GROUPS OF INTEGRATED TECHNICIAN EDUCATION OF CEFET-PARAÍBA**

##### **ABSTRACT**

The objective of this work is to describe characteristics of the practice of Physical Activity(AF) at leisure, of the three pioneering groups of the first year of Integrated Technician Education, in CEFET-PB. It was used, as instrument of measure, auto-administrative questionnaire. It was applied the descriptive, inferential statistics and analysis of correspondence. The most relevant results show that the pupils practise vigorous and moderate AF, from 1 to 2 times a week. We conclude that students dedicate great part of their leisure time to passive activities. The bigger the familiar income, the bigger the change of pro-active behaviour.

Key-words: Integrated Technician Education, Physical activity, Leisure

#### **LES HABITUDES DE L'ACTIVITÉ PHYSIQUE DANS LES CLASSES PIONNIÈRES DE L'ENSEIGNEMENT TECHNIQUE DU CEFET DE PARAIBA**

##### **RESUMÉ**

Cette étude, du type descriptif, a par but de décrire les caractéristiques de la pratique de l'Activité Physique dans le temps de loisir, dans des classes pionnières de l'Enseignement Technique Intégré du CEFET Etat de Paraiba /Brésil.

Par moyen de la statistique inferentielle, nous avons obtenu des résultats qui montrent que les élèves pratiquent plus l'activité physique vigoureuse dans le loisir, entre une et deux fois par semaine. A partir de cette étude, nous pouvons affirmer que la plus grande partie du temps réservé au loisir, les élèves le dédient à des activités passives. La majorité ne pratique pas l'activité physique vigoureuse, pas même modérée, dans la fréquence exigée selon l'indication de l'Organisation Modiale de la Santé.

Mots-clés: Enseignement technique intégré, activité physique, loisir

#### **EL HÁBITO DE ACTIVIDAD FÍSICA EN LOS GRUPOS PIONEROS DE LA ENSEÑANZA TÉCNICA INTEGRADA DEL CEFET DE PARAÍBA**

##### **RESUMEN**

El objetivo de este trabajo es describir las características de la práctica de Actividad Física (AF) en el ocio, de los tres grupos pioneros del primer año, de la Enseñanza Técnica Integrada del CEFET de Paraíba, Brasil. Fue utilizado, como instrumento de medida, un cuestionario autoadministrado. La estadística utilizada fue la descriptiva, inferencial y análisis de correspondencia. Los resultados más relevantes muestran que los alumnos no siguen la orientación de la Organización Mundial de la Salud, y sólo practican AF vigorosa y moderada, de 1 a 2 veces en la semana. La renta tiene relación con el tipo de actividad practicada (,000). Concluyendo que los alumnos dedican gran parte del tiempo de ocio con las actividades pasivas. Cuanto mayor sea la renta familiar, mayor será el cambio del comportamiento para ser activo en el ocio.

Palabras claves: Enseñanza Técnica Integrada, Actividad Física, Ocio

#### **HÁBITOS DE ATIVIDADE FÍSICA NAS TURMAS PIONEIRAS DO ENSINO TÉCNICO INTEGRADO DO CEFET DA PARAÍBA**

##### **RESUMO**

Este estudo é de tipo descritivo, para o qual foi utilizado, como instrumento de medida, um questionário auto-administrado, válido e fiável para se cumprir o objetivo proposto, qual seja o de descrever as características da prática de Atividade Física no lazer, das três turmas pioneiras do primeiro ano do Ensino Técnico Integrado, no CEFET-PB. A pesquisa foi realizada sobre uma amostra de 84 sujeitos, com idade média de 16 anos, representativa dos 120 alunos iniciais dos cursos Técnicos Integrados, pertencentes ao CEFET-PB, no ano de 2006. Foi aplicada a estatística descritiva, inferencial e análise de correspondência. Os resultados mais relevantes mostram que os alunos realizam atividades passivas na semana, em sua maioria, até 3 horas/dia (42,05%). Durante final de semana mais de 3 até 5 horas/dia (31%). Praticam atividade física (AF) vigorosa no lazer, de 1 a 2 vezes por semana (26,2%) em um tempo médio de 60 minutos (23,8%). Praticam atividade física (AF) moderada no lazer, de 1 a 2 vezes na semana (33,3%) em um tempo médio de 30 minutos (31%). A renda tem relação com o tipo de atividade praticada no lazer (,000) e com a frequência semanal de AF vigorosa praticada no lazer (,02). Como conclusão, se pode afirmar que os alunos dedicam a maior parte do tempo do lazer a atividades passivas. Não praticam, em sua maioria, a frequência semanal de AF vigorosa, nem moderada, segundo a indicação da Organização Mundial da Saúde. Quanto maior a renda familiar, maior a mudança do comportamento pró-ativo.

Palavras-chave: Ensino Técnico Integrado, Atividade Física, Lazer.