161 - INFLUENCE OF ANXIETY IN RELATION OF PHYSYICAL ACTIVITY LEVEL AND FOOD CONSUMPTION IN PHYSICAL EDUCATION STUDENTS FROM FEDERAL UNIVERSITY OF PARANA

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INTRODUCTION

Technology revolution contributed to the society development and modernization of men. Their responsibility increased and, also elevated their work hours. Decreased the time to physical activity practice, that could be defined like any body movement produced by skeletical muscle and to result in an energy loss above the rest levels. (CASPERSEN, 1985).

Many studies prove a direct relationship between physical activity practice and better people quality of life. In accordance Gill and Feinsten (1994), quality of life refers to an individual perception relative of health conditions and many others general aspects of personal life.

"Even so, the relationship of cause-effect have not been established, the regular practice of physical activity is associated with reductions on anxiety" (WEINBERG e GOULD, 2001). Samulski, 2002 cites a decrease of actual state of anxiety and reduction of emotional imbalance as psychological benefits of physical activity.

Another consequence, that is so much related, proceeding of anxiety is the relationship with feeding. Many people affirm when find themselves in these state tend to eat food in more quantities, or either, they experiment a compulsive desire of food

The body was constructed to be active. Our ancestral have been actives for necessity. During the society development, the technology have extinct us from hard physical works. But, it's not decrease the necessity to regular exercise, to prevent from low movements diseases, derivate from physical inactivity. It will preserve our general state of physical and mental health (NAHAS, 1989).

Niemam (1999) relates trough physical exercise it could reduce some depression state, tension, anxiety, and have great psychic health.

In agreement with Weinberg and Gould (2001), physical activities effects on anxiety and depression can be classified as acute and chronic.

Acute effects are immediate and temporary in relation of a bout of exercise. Chronic effects are prolonged, focused in changes of anxiety and depression state.

The problem is related with the increased number of inactive people. Nahas (2001, p. 26), considers inactive person "a subject that have a life style with a minimum physical activity equivalent of an energetic expenditure lower than 500 kcal per week (work + leisure + domestic activities +movements). If a subject presents an energetic expenditure as 1000 kcal, could be considered a moderately active; that it's correspond to walk faster during 30 minutes, 5 times per week.

Physical inactivity represents an important cause of diminished quality of life and premature death, principally in developed countries

One study realized by Matsudo et al. (2002), to evaluate the level of physical activity in São Paulo population concluded that the sedentary lifestyle was higher in richest classes than poor ones; and the younger subjects are more actives, and males and females have a similar pattern.

A recent study cited by Nahas (2001) was realized in 1999, in Santa Catarina, revealing that 46,4% of workers didn't do any physical active in leisure time, and this percentage were higher in women(67%) than men (34,8%).

Despite the importance of physical activity to maintain individual health, other information's necessary to conscious populations of the benefits of physical practice, principally related of psychology wellness.

Actual society is living in constant changes; it's creating a new bigger problem: anxiety (KAPLAN e SADOCK, 1990).

Davidoff (2001, p. 390) defines the anxiety as "a feeling of dangerous anticipation, tensions and suffers. It's different of constant scare". Scare word refers to a rational evaluation in front of a real dangerous situation.

In accordance with Cratty (1984), some psychologists use the anxiety term only to denote an abnormal level of apprehension.

Machado (1997, p. 111) defines the anxiety as "a feeling of insecurity caused by a dangerous expecting, treats or existed challenge. It's an important pattern of self-defense.

Anxiety is the emotional answer determined by self-choices and also related by other people. It's included somatic and physiological manifestations that alter the metabolism (MACHADO, 1997).

Anxiety can present 2 patterns: trace-anxiety and state-anxiety. Trace-anxiety is a permanent characteristic of subject personality. State- anxiety is reactions that vary in different situations (MACHADO, 1997).

In accordance with Magill (2002), a person with high level of trace-anxiety will answer with a high level of state-anxiety during many situations, different of a person with low levels of trace-anxiety, however, there are many other things that can interact with trace-anxiety and performance as, the situation importance, doubts, and uncertain results.

Davidoff (2001) point out some factors that cause anxiety as: dangerous situations, chronic problems, changes in life and doubts. Chronic problems are exemplified as poor situation, racism, workless or homeless. Situations as: parents death, divorce, diseases, and pregnancy. Self conflicts also considering factors that cause anxiety.

Bernardi, Cichelero and Vitolo (2005) say that the food behavior has biological and social base, besides of psychological aspects involved (as obesity or overweight).

A worst food behavior associated with psychological factors can reflect in many diseases as food disturbances, bulimic and anorexia problems (FIATES e SALLES, 2001) and principally the obesity (BERNARDI, CICHELERO e VITOLO, 2005). There are also the problems of female athletes of endless of menstruation cycle, osteoporosis and food disturbances (VILARDI, RIBEIRO e SOARES, 2001).

Obesity presents many causes as the results of integration of genetic, psychological, social, culture and economic factors. However the real factors are nutrition and physical activity (FRANCISCHI et alli, 2000).

In agreement with Bernardi, Cichelero and Vitolo (2005), 2/3 of obese subjects consume carbohydrates not only to satisfy their starving but also to alleviate anxiety, to fight tensions, mental fatigue and depression states. These people consume more food in moments of emotional stress.

In accordance with the "Diagnostic Mental Disturbances Guidelines" (1995), food compulsion is a disturbance of no control feeding, in a period maximum of 2 hours; to alleviate tensions and anxiety moments.

There are some kind of food preferred to be consumed as chocolates (SAMPAIO, 2002).

There aren't many studies that interact psychological disturbances with anxiety and food behavior.

The aim of this study is discover if the subjects with higher level of physical activity are lesser anxious and, have a lesser food consumption.

METHODOLOGY

This study is characterized as a descriptive research with transversal delineation (THOMAS e NELSON, 2002).

The sample was constituted of 353 Physical Education students from Federal University of Paraná, males and females, 21.36 ± 3.07 years old. It's a representative sample and it was selected due to better data accessibility.

Data collect was performed during August and September of 2005, in the Physical Education Department from Federal University of Paraná. Three different instruments were used.

Anxiety-trace was analyzed by Spielberg Questionnaire (1968), wich consists of 20 questions, with Likert Scale (never, sometimes, frequent, always). The level of anxiety-trace is classified in low, medium and high.

The level of physical activity was verified from Habitual Physical Activity questionnaire, developed by Russel R. Patê, translated and modified by Nahas (2001). This questionnaire is used to estimate the level of habitual physical activity of teenagers and young adults. It consists of 11 questions, 3 of them related to diary occupational activities and 8 related to leisure activities. Each question has punctuation, that it was added whenever the answer was "yes". The sum classifies the subjects in inactive, moderately active, active and very active. "Active" is considered to be a healthy classification.

Food behavior was analyzed by a validated diagnostic of food consumption that consists of one question that should be marked by the individuals indicating their reactions during an anxiety crisis and nervousness.

Statistical analyses were performed by a descriptive method (mean, sd and frequency) and a linear regression to determine the association level among anxiety, food consumption and physical activity level ($p<0,05$).

RESULTS AND DISCUSSIONS

First of all, it's performed an analyze of frequency for each variable, to detect anxiety, physical activity levels and the most consumed food during an anxiety crisis of the subjects.

In relation of anxiety level, 11,3% subjects presented a low level of anxiety; 69,4% medium level and 19,3% a high level. It's indicating a population relatively anxious, as Table 1 shows:

TABLE 1: Frequency analyze of anxiety level

PONTUATION	CLASSIFICATION	PERCENTAGE
even 32 points	Low level	11,3%
33 – 45 points	Medium level	69,4%
> 46 points	High level	19,3%

Physical activity level presents : 7,9% subjects are inactive, 26,9% moderately active, 38,3% active and 26,9% very active (table 2). It represents an active population, what already one expected, for if dealing with young population of students.

TABLE 2: Frequency analyze of Physical Activity Level

PONTUATION	CLASSIFICATION	PERCENTAGE
0 – 5 points	Inactive	7,9%
6 – 11 points	Moderately Active	26,9%
12 – 20 points	Active	38,3%
21 or + points	Very Active	26,9%

Frequency analyze of food consumption was possible to detect what was the most cited food during the research, as these variable was a free question and the subjects could mark more than one alternative. The candies and chocolates had more frequency, as 33,8% of subjects affirmed to ingest bigger quantities during an anxiety crisis, followed by bread and pasta (22%). Another frequencies are showed below (Table 3):

TABLE 3: Frequency analyze of Food consumption:

	FREQUENCY	PERCENTAGE
1- Candy and Chocolates	166	33,8%
2- Coffee and tea	32	6,5%
3- Bread and Pasta	108	22%
4- Alcoholic Drinks	22	4,5%
5- Cigarettes	70	14,3%
6- Difficulty to consume anything	68	13,8%
7- Another option	25	5,1%

After the frequency analyze, it was performed a linear regression to visualize the level of association among anxiety level, physical activity and food behavior of subjects.

Anxiety level was considered the study dependent variable. It's presented a p-value = 0.0, em relation of food consumption and physical activity level.

TABLE 4: Linear regression Analyze.

MODEL	SQUARE SUM	LD	F	SIG
Regression	1521.714	2	17.292	0,000
Residual	15400.162	350		
Total	**16921.875**	**352**		

The relation between anxiety and physical activity level were demonstrated significant level (R^2=0,90; p=0,000; ß=-0,145) considering an inverse relation, or either, how higher the level of physical activity, lesser anxiety level. The relation between anxiety and food consumption the significance was presented (R^2=0,90; p=0,005; ß=0,243), in a direct relation, or either, how higher the anxiety level, higher the food consumption, principally candies and chocolates.

CONCLUSION

Research hypotheses were proved; and in accordance with Samulski (2002), the right physical activity practice can reduce the anxiety levels and minimizes other health problems, as stress decrease, depression, mood changes, and increase physical and mental wellness, better organic function and higher work levels.

These study was important to acquire knowledge the population about the importance of physical activity to health and wellness. Many studies proved this importance, wherever many people are inactive or sedentary. In accordance with Nahas (2001), physical inactivity represents one important problem of death , principally in developed countries.

Another thing proved was a higher relation between anxiety level and food consumption, as candies and chocolates.

Sampaio (2002), cites the chocolate as the principal food consumption during an anxiety crisis.

Bernardi, Cichelero e Vitolo (2005), agree that subjects consume carbohydrates not only in hungry moments but to combat tensions, anxiety, mental fatigue and depression. It's proved that exists a direct relation between psychological factors and food consumption

It was tried to prove the relationship between anxiety and food behavior, as popularly it knows. However, it's suggests that another researches can study deeply this variables.

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ABSTRACT

The aim of these study is verify the relationship between the anxiety level, the physical activity level and the food consume in physical education students from Physical education curse from federal university of Paraná. The sample was constituted of 353 students, males and females, with medium age (sd) of 21,36 (3,07) years old. During the data collect was used Spielberger questionnaire to evaluate the level of anxiety-trace; the level of physical activity was identified through of Habitual physical activity questionnaire and the food consume from a diagnostic. Statistical treatment was descriptive with a linear regression. It's observed that 69,4% of students shows a medium level of anxiety, 38,3% have an active level of physical activity and 33,8% consume more candies and chocolates during a anxiety crisis. There's a significant difference between anxiety and level of physical activity, and food consume. It's concluding that exists an association between the studied variables.

L´INFLUENCE DE L´ANXIÉTÉ AU NIVEAU DE L´ACTIVITÉ PHYSIQUE ET LA CONSOMMATION ALIMENTAIRE DES ÉTUDIANTS DU COURS D´ÉDUCATION PHYSIQUE DE L´UNIVERSITÉ FEDERAL DU PARANÁ.

RÉSUMÉ

L´objectif de cet étude est vérifier la relation du niveau de l´anxiété avec le niveau de l´activité physique et la consommation alimentaire dans des étudiants du cours de Éducation Physique de l´Université Federal du Paraná. L´échantillon a été constitué de 353 élèves, de tous les deux sexes, avec une âge moyenne de 21,36 ans et détour étalon=3,07 ans. Pour rassemble de données a été utilisé le questionnaire de Spielberger pour évaluer le niveau d´anxiété-trace; le niveau d´activité physique a été identifié à travers le questionnaire d´Activités Physiques Habituelles et la consommation alimentaire à travers un diagnostic. Le traitement statistique employé a été descriptif et une regression linéaire. Il s´est observé dans les resultants que 69,4% des élèves présentent um niveau moyen d´anxiété, que 38,3% ont um niveau d´activité physique actif et que 33,8% consomment plus sucreries et chocolats pendant une crise d´anxiété. Il a eu une différence significative entre l´anxiété et le niveau d´activité physique et la consommation alimentaire. Il se conclut qui existe une association entre les variables étudiées.

Paroles sinificatives: l'anxiete, l'activite physique, consummation alimentaire.

LA INFLUENCIA DE LA ANSIEDAD EN EL NIVEL DE LA ACTIVIDAD FÍSICA Y EN EL CONSUMEN ALIMENTARIO DE ESTUDIANTES DEL CURSO DE EDUCACIÓN FÍSICA DE LA UNIVERSIDAD FEDERAL DEL PARANÁ.

RESUMEN

El objetivo de este estudio es verificar la relación del nivel de ansiedad con el nivel de la actividad física y el consumen alimentario en estudiantes del curso de Educación Física de la Universidad Federal del Paraná. El muestreo fue constituida de 353 alumnos, de ambos sexos, con edad media de 21.36 años y d.p.= 3.07 años. Para la recolecta de datos fue utilizado el cuestionario de Spielberger para evaluar el nivel de ansiedad-trazo; el nivel de actividad física fue identificado a través del cuestionario de Actividades Físicas Habituales y el consumen alimentar a través de diagnóstico. El tratamiento estadístico empleado fue descriptivo y una regresión linear. Se observo en los resultados que el 69,4% de los alumnos

presentaron un nivel medio de ansiedad, que el 38,3% tienen un nivel de actividad física activo y que el 33,8% consumen más dulces y chocolates durante una crisis de ansiedad. Hubo una diferencia significativa entre la ansiedad y el nivel de actividad física y el consumen alimentar. Concluyese que existe una asociación entre las variables estudiadas.

Palabras clave: ansiedad, actividad física, consumen alimentario.

A INFLUÊNCIA DA ANSIEDADE NO NÍVEL DA ATIVIDADE FÍSICA E NO CONSUMO ALIMENTAR DE ESTUDANTES DO CURSO DE EDUCAÇÃO FÍSICA DA UNIVERSIDADE FEDERAL DO PARANÁ

RESUMO

O objetivo deste estudo é verificar a relação do nível de ansiedade com o nível de atividade física e o consumo alimentar em estudantes do Curso de Educação Física da Universidade Federal do Paraná. A amostra foi constituída de 353 alunos, de ambos os sexos, com idade média de 21,36 anos e d.p.=3,07 anos. Para a coleta de dados foi utilizado o questionário de Spielberger para avaliar o nível de ansiedade-traço; o nível de atividade física foi identificado através do questionário de Atividades Físicas Habituais e o consumo alimentar através de um diagnóstico. O tratamento estatístico empregado foi descritivo e uma regressão linear. Observou-se nos resultados que 69,4% dos alunos apresentam um nível médio de ansiedade, que 38,3% tem um nível de atividade física ativo e que 33,8% consomem mais doces e chocolates durante uma crise de ansiedade. Houve uma diferença significativa entre a ansiedade e o nível de atividade física e o consumo alimentar. Conclui-se que existe uma associação entre as variáveis estudadas.

Palavras-chaves: ansiedade, atividade física e consume alimentar.