70 - ANALYSIS OF IMC AND THE PERFIL DERMATOGLÍFIC OF THE STUDENTS OF THE SUBSEQUENT TECHNICAL TEACHING OF IFPA

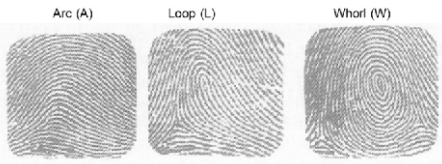
MARCO JOSÉ MENDONÇA DE SOUZA
ELIANA DA SILVA COÊLHO MENDONÇA
KAMILA BATISTA DA SILVA BARBOSA
LARICI KELI ROCHA MOREIRA
JOSÉ FERNANDES FILHO
INSTITUTO FEDERAL DE EDUCAÇÃO, CIÊNCIA E TECNOLOGIA DO PARÁ,
Altamira e Itaituba/Pará, Brasil
marco.souza@ifpa.edu.br

INTRODUCTION

According to Fernandes-Filho (1997) are of great interest to research performed by the Laboratory of Anthropology, Morphology and Genetics VNIIFK of Sports in Moscow. Such searches occurred after 1966 and were held in two directions: digital dermatoglyphics - the physical qualities, end digital dermatoglyphics – the type of sports activity.

Cummins and Midlo (1942) distinguish three groups of designs: arch (A), loop (L) and whorl (W), as shown in Figure 1. The shape of the drawings is a qualitative characteristic, while the number of lines (CL) - the sum of the total quantity of lines (LQTS), and the amount of skin ridges in the drawing represent the quantitative trait. The severity of drawings is effected based on the presence of the deltas, and thus calculates the index called delta (D10), which is the minimum of 0 and a maximum of 20. Arc (A) has no delta, the loop (L) presents a delta, and whorl (W) has two deltas (Gladkov, 1966).

Figure 1 - Models of dermatoglyphic drawings.



In recent decades, the prevalence of overweight and obesity has increased alarmingly worldwide (Wang et al., 2002). In fact, this is a universal disease of increasing prevalence and which is acquiring epidemic proportions alarmingly, is a major public health problems of modern society (Lopes, 2006).

As the Guidelines (national Curriculum, 2004) falls to a PE teacher knowing, mastering, producing, selecting end evaluating the effects of applying different techniques, tools, equipment, procedures and methodologies for thr production and intervention in academic and professional fields prevention, promotion, protection and rehabilitation of health, cultural background, education and rehabilitation motor (PIETROBELLI et al., 1998). Specifically, "Physical Education is integrated into the school's educational proposal is part of basic education curriculum, adjusting for age and conditions of the school population." (Meizer et al., 2002). Thus, this professional education and health must be present in all series with no exceptions. Therefore, the major task of this discipline is to unite the knowledge of social, economic, political and environmental to their content, aiming to make people not only for the autonomous practice of physical exercise throughout their lives, but also with knowledge to discern the reality they live (Terre et al., 2006). Lameira (1999) argues that epidemiological studies are the first steps towards developing a preventive program.

Therefore the objective of this study is to make a descriptive analysis of BMI and profile dermatoglyphic for pupils in the school following the Federal Institute of Education, Science and Technology of Pará (IFPA) and make the relationship between such variables.

MATERIALS AND METHODS

Was conducted a descriptive analysis of BMI and dermatoglyphic profile of pupils in subsequent IFPA in the period September-October 2010. Study participants were 42 pupils in subsequent IFPA, in relation to sex, both sexes were investigated. It was made a anmenese, an anthropometric assessment and collection of fingerprints of students. Following this result, we analyzed data on BMI and dermatoglyphics, and later held the descriptive statistics, using graphs to better describe these results, characterizing it with the kind of characteristic dermatoglyphics and BMI.

This is a descriptive research, whose goal is to correlate the pattern of BMI with characteristic dermatoglyphic for pupils in subsequent IFPA, municipalities of Altamira and Itaituba (Pará) and correlate with BMI Dermatoglyphic characteristics of students.

The body mass index (BMI) was calculated as the ratio of weight (kg) / height²(m) and subsequently classified according to the protocol of Bray (1992).

1.Sample

The sample was selected randomly. 42 students participated in the research of teaching following the IFPA and Itaituba Altamira-PA, of both sexes (n = 42). Data collection of the survey was between September and October 2010, where all students were informed about the purpose of research, and eventually signed the free informed consent (IC). All participants agreed to participate, with the inclusion criteria: being a student of subsequent signing the free and enlightened to have been chosen randomly. Exclusion criteria: they are further education students and do not accept to participate.

2.Study Design

Students were informed about the research through a lecture, after acceptance by the participants was made a anmenese, where there was sex, birth date, among other questions relating to health nad physical activity.

To measure BMI were used as instruments of data collection two devices, one to measure the weight and another to measure their height. The first device it is one of the anthropometric scale Filizola® that has the objective of measuring body weight and a second Sanny® stadiometer to measure height.

The third unit comes from the Collector of Fingerprint that aims to collect the drawings of the proximal phalanges, with the goal of making the analysis of dermatoglyphics.

Later we used the protocol of dermatoglyphics Cumins and Midlo (1942), where it was found Dermatoglyphic characteristics.

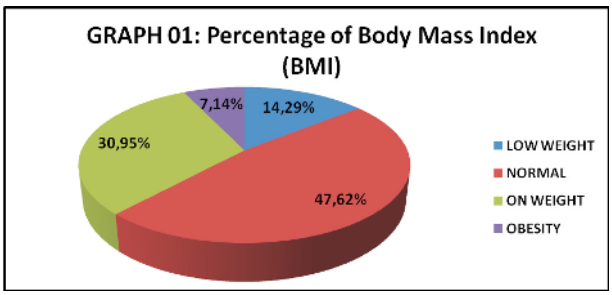
3.DATA ANALYSES

We used descriptive statistics to get the conclusion obtained in the survey. Descriptive statistics examined the percentage of the predominance of ID (fingerprints) and BMI of the students and their relationships.

RESULTS AND DISCUSSION

As the analysis of Body Mass Index (BMI), this study showed that 47.62% of the students are normal, but the vast majority, 52.38% showed some abnormalities, such as underweight (14.29%), overweight (30.95%) and obesity (7.14%). These results are shown by Figure 1.

Graph 01: Percentage of Body Mass Index (BMI)

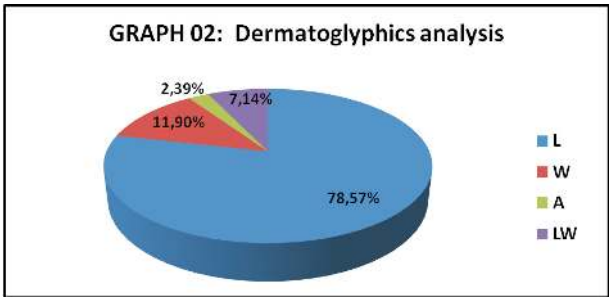


Source: Souza & Mendonça, 2010.

Obesity is characterized by excessive accumulation of body fat, caused largely by a chronic imbalance translated by caloric intake greater than the metabolic demand. The diagnosis is confirmed by quantifying the proportion of fat stored in the body in relation to other tissues. Factors such as lifestyle, food habits that emphasize hypercaloric and hyperlipidemic diets, and sedentary lifestyle, are some explanations for this phenomenon. Changes in patterns of physical activity and nutrition are also responsible for this change (SMITH et al., 2008).

In analyzing the fingerprints obtained as a result of the loop in the predominance of about 78,57% the union of other digital features characterized with about 21,43% of the fingerprints, concluding then that greater dermatoglyphic features for pupils in subsequent Federal Institute of Para (IFPA) was the clip, according to the graphic display 02.

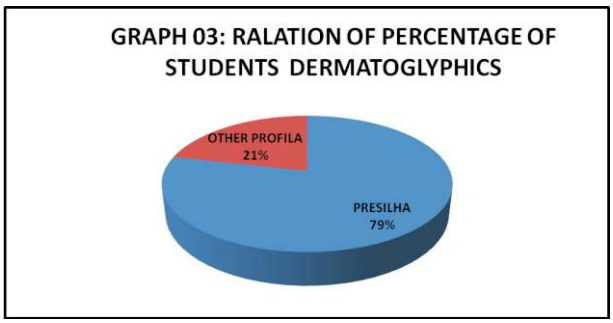
Graph 02: Dermatoglyphics Analysis



Source: Souza & Mendonça, 2010.

In relation to existing abnormalities, characterized as the highest abnormality on weight, low weight and obesity has its hidhest percentage in the tabs as the graphic display 03, it's observed that about 33 students has 26 students and this feature corresponds to approximately 52.38% of the sample had abnormal characteristic (underweight, overweight and obesity) in the parameter quality of life advocated by the WHO (World Health Organization). Thus, this study demonstrates that the highest concentration of quality loss of life was with the sample that has a predominance of dermatoglyphic clip design.

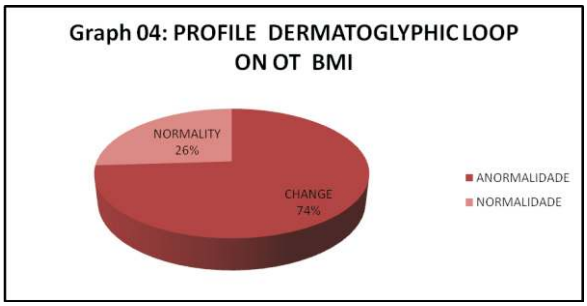
Graph 03: Ralation of Percentage of Students Dermatoglyfics



Source: Souza & Mendonça, 2010.

Since the graph 04 that features only the profile bracket (78,57%, as chart 02) was approximately 74,00% pf changes within the abnormality. As the largest percentage clip this study, we could say that the population was larger and because of this there was a greater proportion, but the idea was found that larger and dermatoglyphic profile among them which had the highest abnormality in the study of the IMC, so we chose Descriptive statistics in this regard since the same percentage and proportion define this calculation. Therefore, it was proved that the highest percentage in this study was to clip.

Graph 04: Profile Dermatoglyphic Loop on ot BMI



Source: Souza & Mendonça, 2010.

CONCLUSION

We conclude that abnormal body mass index (BMI) is part of a situation that affects not only students from the west of Para, but the whole world, we find that each region there is a predominance os certain foods that may or may not contribute to this indeed, the times or the feeding may lead to this abnormality, but the food not only contributes to quality of life or accelerate that capacity.

BMI can be explained, at least in part, by genetic differences, environmental school between each of the previous studies. The students from the study have characteristics linked to them alone, since the location of each survey (city) has characteristics bio-socio-cultural characteristics. In recent years, obesity has greatly increased in all populations irrespective of class or color, is due to genetic, environmental and psychosocial factors.

The dermatoglyphic contributed to this study found that each feature may or may not be an equilibrium point in the improvement of this epidemic we know as obesity or malnutricion, based on this scientific understanding can best orient our students not only further education, but by every network education in Brazil.

The ratio showed positive and worrying in relation to physical activity to correct the student body. The lack of activity can lead to various diseases, those diseases that appear after a period and is termed hypokinetic diseases, lack of a correct program accelerates this appearance, so the aim of this study was to determine whether the lack of physical activity could affect the subsequent school students. This study has shown that the inclusion of a work in the area of Physical Education in the subsequent teaching of the Federal Institutes of Education, Science and Technology of Para, can improve quality of life for our students, not only to gain knowledge, but also health, because it is essential to improving overall student. These data demonstrate that low weight over weight and obesity is a public health problem.

REFERENCES

CONDE, W. L. & MONTEIRO, C.A. **Body mass index cutoff points for evaluation of nutritional status in Brazilian children and adolescents.** J Pediatr. 2006; 82 (4): 266-72.

CUMMINS, H.; MIDLO, C.H. **Palmar and Plantar Dermatoglyphics in primates.** Philadelphia, 1942.

CHUARTZ, V. B.; ALEKCEEV, C. V. **As quantidades e qualidades da avaliação dos índices das Impressões dermatoglíficas nas crianças no prognóstico de suas perspectivas esportivas.** Marcas Genéticas na Antropogenética e Medicina. Anais Trabalhos Científicos, Rimelnitzki,1988.

DIETZ WH, GORTMAKER SL. **Preventing obesity in children and adolescents.** Annu Rev. Public Health 2001; 22:37-53. FERNANDES FILHO, J. **Impressões dermatoglíficas – marcas genéticas na seleção dos tipos de esporte e lutas (a exemplo do desportista do Brasil)**. 1997. Tese (Doutorado) Moscou.

GAYAA, Silva G. **Projeto Esporte Brasil – Indicadores de saúde e fatores de prestação esportiva em crianças e jovens. Manual de aplicação de medidas de testes somatomotores**. Porto Alegre: Universidade Federal do Rio Grande.

GRIEVE, GP. **Moderna terapia manual da coluna vertebral.** São Paulo: Pan Americana, p.25, 1994.

GLADKOVA, T. D**. Desenhos nas mãos e nos pés dos homens dos macacos.** Moscou, 1996.

GUEDES, DP, GUEDES, JERP. **Prevalência de sobrepeso e obesidade em crianças e adolescentes do município de Londrina (PR), Brasil.** Rev. Motriz, 4(1), 1 8-25, 1998.

LIMA WA, Glaner MF. **Principais fatores de risco relacionados às doenças cardiovasculares.** Rev Bras Cineantropom Desemp Humano. 2006; 8 (1): 96-104.

LUCA, MCZ. **Prevenção e tratamento das lombalgias.** Revista Fisioterapia em Mov, 13(1), 61-78, 1999.

LOPES, AC. **Tratado de Clínica Médica.** Editora Roca, São Paulo, 2006, vol. II.

MEIZ et al. **Validity of body mass index compared with other body-composition screening indexes for the assessment of body fatness in children and adolescents.** Am J Clin Nutr 2002; 75(6):978-85.

MOREIRA et al. **Predição da resistência à insulina em crianças: indicadores antropométricos e metabólicos**. J. de Pediatr. (Rio de Janeiro) vol. 84, no. 1 Porto Alegre Jan./Feb. 2008.

PIETROBELLI et al. **Body mass index as a measure of adiposity among children and adolescents: A validation study.** J. de Pediatr. 1998; 132(2):204-10.

PCN, **Parâmetros Curriculares Nacionais, Secretaria de Educação Fundamental, Brasília: MEC/SEF, 1998.**

PINHEIRO, AR0, Freitas, SFT, Corso, ACT. **Uma abordagem epidemiológica da obesidade.** Rev. Nutr., Campinas, 17(4), 523-533, 2004.

TERRES et al. **Prevalência e fatores associados ao sobrepeso e à obesidade em adolescentes.** Rev. Saúd. Públ. 2006; 40:627-33.

Av. Dr. Hugo de Mendonça nº 183 Bairro Aeroporto Velho – Cep: 68181-000
Itaituba – Pará – Brasil.
E-mail: marco.souza@ifpa.edu.br

ANALYSIS OF IMC AND THE PERFIL DERMATOGLÍFIC OF THE STUDENTS OF THE SUBSEQUENT TECHNICAL TEACHING OF IFPA

ABSTRACT:

This study is characterized as a descriptive study whose objective was to make her a BMI analysis and

dermatoglyphic profile of pupils in subsequent IFPA. Focus aimed to identify the characteristics of BMI and dermatoglyphic profile of the students and to relate them. The study sample consisted of forty-two (N = 42) pupils in subsequent Federal Institute in relation to age have not established any criteria, because teaching is not following a pre-established and in relation to sex, we used It is both. The measurement instrument was used in a anmenese, protocol for measuring the BMI and dermatoglyphics of Midler and Cumins (1942), and the data were collected on the campus of Itaituba and Altamira / PA. As the result, the dermatoglyphic profile was most predominant (78.57%) with clips and features on BMI was characterized with some (52.38%) with abnormalities, the study was conducted between September-October 2010. From the results and using descriptive statistics, we get the following results: Dermatoglyphic characteristics of the students were 2.39% for A, 11.90% for W, 7.14% to 78.38% and LW for L. In BMI was featured in 14.29% underweight, 47.62% normal, 30.95% and 7.14% on weight obese. When does the summation of all sorts of abnormal BMI is the value of 52.38%, the relationship between BMI and higher prevalence Dermatoglyphic characterized clip that had a high rate of abnormality. We made a link between the characteristics of abnormal BMI and the profile of the clip and concluded that about 74% of the clips feature has a high rate of change in BMI.

KEYWORDS: Dermatoglyphics, BMI and Subsequent Teaching.

ANALYSE D'IMC ET LE PERFIL DERMATOGLÍFIC DES ÉTUDIANTS DE L'ENSEIGNEMENT TECHNIQUE SUBSÉQUENT D'IFPA

RÉSUMÉ:

Cette étude est considérée comme une étude descriptive dont l'objectif était de lui faire une analyse IMC et le profil des élèves dans dermatoglyphique ultérieure IFPA. Focus visait à identifier les caractéristiques de l'IMC et le profil dermatoglyphique des élèves et de les rapporter. L'échantillon de l'étude se composait de quarante-deux (N = 42) des élèves dans les prochains Institut fédéral en fonction de l'âge n'ont pas établi de critères, car l'enseignement n'est pas la suite d'une pré-établis et en fonction du sexe, nous avons utilisé Il est à la fois. L'instrument de mesure a été utilisée dans un anmenese, le protocole de mesure de l'IMC et dermatoglyphes de Midler et Cumins (1942), et les données ont été recueillies sur le campus de Itaituba et Altamira / PA. Comme le résultat, le profil a été dermatoglyphique prédominante (78,57%) avec des clips et des reportages sur l'IMC a été caractérisée avec certains (52,38%) avec des anomalies, l'étude a été menée entre Septembre-Octobre 2010. D'après les résultats et l'utilisation de statistiques descriptives, nous obtenons les résultats suivants: caractéristiques dermatoglyphique des étudiants ont été de 2,39% pour les A, 11,90% pour W, 7,14% à 78,38% et LW pour L. Dans l'IMC a été présenté dans 14,29% d'insuffisance pondérale, 47,62% normal, 30,95% et 7,14% sur les obèses de poids. Quand la somme de toutes sortes de anormale IMC est la valeur de 52,38%, la relation entre l'IMC et une prévalence plus élevée dermatoglyphique caractérisé clip qui avaient un taux élevé d'anomalie. Nous avons fait un lien entre les caractéristiques des anormale IMC et le profil du clip et a conclu qu'environ 74% de la fonctionnalité de clips a un taux élevé de variation de l'IMC.

MOTS-CLÉS: Dermatoglyphes, enseignement IMC et ultérieure.

EL ANÁLISIS DE CMI Y EL PERFIL DERMATOGLÍFIC DE LOS ESTUDIANTES DE LA ENSEÑANZA TÉCNICA SUBSECUENTE DE IFPA

RESUMEN:

Este estudio se caracteriza como un estudio descriptivo cuyo objetivo fue hacer un análisis de su índice de masa corporal y el perfil de los alumnos en dermatoglífico posteriores IFPA. Enfoque el objetivo de identificar las características del índice de masa corporal y el perfil dermatoglífico de los estudiantes y de relacionarlos. La muestra del estudio consistió en cuarenta y dos (N = 42) alumnos en posteriores Instituto Federal en relación con la edad no han establecido ningún criterio, porque la enseñanza no es a raíz de una pre-establecido y en relación al sexo, se utilizó Es a la vez. El instrumento de medición se utilizó en un anmenese, el protocolo para la medición del IMC y de dermatoglifos Midler y cominos (1942), y los datos fueron recolectados en el campus de Itaituba y Altamira / PA. Como resultado, el perfil dermatoglífico fue más predominante (78,57%) con los clips y las características de IMC se caracterizó a algunos de ellos (52,38%) con anormalidades, el estudio se realizó entre septiembre y octubre 2010. De los resultados y el uso de la estadística descriptiva, obtenemos los siguientes resultados: dermatoglífico características de los estudiantes fueron 2,39% para A, 11.90% para W, 7,14% a 78,38% y LW para L. En el índice de masa corporal fue presentado en peso 14,29%, 47,62% normal, 30.95% y 7.14% en obesos de peso. ¿Cuándo la suma de toda clase de anormal índice de masa corporal es el valor del 52,38%, la relación entre el IMC y la mayor prevalencia dermatoglífico caracteriza clip que había una alta tasa de anormalidad. Hicimos un vínculo entre las características de anormal índice de masa corporal y el perfil del clip y la conclusión de que cerca del 74% de la función de los clips tiene una alta tasa de cambio en el IMC.

PALABRAS CLAVE: IMC, Dermatoglíf e enseñanza subsecuente

ANÁLISE DESCRITIVA DO IMC E O PERFIL DERMATOGLÍFICO DOS ALUNOS DO ENSINO TÉCNICO SUBSEQUENTE DO IFPA

RESUMO:

Este estudo caracteriza-se como uma pesquisa descritiva cujo seu objetivo foi fazer uma análise do IMC e o perfil dermatoglífico dos alunos do ensino subsequentes do IFPA. Como foco objetivou-se identificar as características do IMC e o perfil dermatoglífico dos alunos e relacioná-las. A amostra estudada foi constituída de quarenta e dois (N= 42) alunos do ensino subsequente do Instituto Federal, em relação a idade não se estabeleceu nenhum critério, pois o ensino subsequentes não tem uma idade pré-estabelecida e relação ao sexo, utilizou-se ambos. Já o perfil da dermatoglíficas a maior predominância foi (78,57%) com características de presilha e sobre o IMC caracterizou-se com cerca de (52,38%) com anormalidade, o estudo foi realizado no período entre setembro a outubro de 2010. Como instrumento de medida, utilizou-se uma anmenese, protocolo de medida do IMC e a dermatoglífia de Midlo e Cumins (1942), sendo que a coleta dos dados ocorreu no campus de Itaituba e Altamira/PA. A partir dos resultados ocorreu á estatística descritiva denominada para ser estabelecer a conclusão, chegamos aos seguintes resultados: as características dermatoglíficas dos alunos foram (2,39%) A, (11,90 %) W, (7,14%) LW e (78,38%) L, já o IMC dos mesmos ficou caracterizado em (14,29%) abaixo do peso, (47,62 %) normal, (30,95%) sobre peso e (7,14 %) obeso e a junção da anormalidade ficou com .(52,38%), já a relação entre a maior predominância dermatoglífica e o IMC caracterizou-se que presilha teve um grande índice de anormalidade ou seja (78,57%), Fizemos uma relação entre as anormalidade do IMC e o perfil da presilha e concluímos que cerca de 74% da característica presilha tem um grande índice de alterações do IMC.

PALAVRAS CHAVES: Dermatoglífia, IMC e Ensino Subseqüente.