72 - EVALUATION OF PHYSICAL GROWTH AND NUTRITIONAL STATE OF SCHOOL CHILDREN FROM "CREMAÇÃO" CHILDISH EDUCATION UNIT - BELÉM, PARÁ, BRAZIL - A CASE STUDY.

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INTRODUCTION

To follow the nutritional situation of school children enrolled in the "Cremação" Childish Education Unit, belonging to the municipal network of Education Secretary of Belém (SEMEC), is an essential action for the analysis of the health conditions of the child population, that is inserted in the school environment, making it a unique opportunity to obtain objective measures of the evolution of living conditions of those school children.

For many years, the nutrition researches are dedicated to investigate aspects related to malnutrition and its consequences for health. Currently, the focus of attention of researchers (BASTOS, 2002, JUNIOR et al, 2008, PETROSKI et al, 2007 ZOLLINER And FISBERG, 2006) is facing to the increasing desorderly overweight and obesity, which is affecting people of all ages and from different social and economic conditions, belonging to the developing and developed countries.

In our country, changes occur due to nutritional transition that reaches the lowest buying power population. In the beginning, is the prevalence of malnutrition in low-income population, especially in the poorer regions of Brazil (FISBERG, 2003)

Although growth and development are often considered synonymous terms, we can say that: "growth refers to biological changes that imply increased body considering mainly the evolution of the weight, stature and cranial perimeter" (LION et al, 1998, p. 71). "Development is a process, basically serial and summative, of abilities acquisition each more complex." (LION et al, 1998, p. 99). Therefore, it is important to monitor the growth and development, because they are considered the axis in attention to children's health.

The nutritional status of a population, especially children until 4 years, is an excellent indicator for their growth and development, and there is no other form of intervention if the same is not properly diagnosed. To this end, the assessment of nutritional status of these children is a fundamental step in the study, so that you can verify if growth is moving away from the standard expected by disease and/or by adverse social conditions. The more children are evaluated from nutrition point of seem, early interventions may be imposed, certainly improving quality of life of the population in general.

The complexity of the nutrient profile of the country and the coexistence of typical problems from underdeveloped societies and the developed ones show the need to know the magnitude of nutritional injuries in the regions of the country. To realize this study the school children from 1 year and 11 months up to 5 years and 1 month of age were investigated, who attend Childish Education Unit located in the neighborhood of Cremação, in Belém. The CEU "CREMAÇÃO" has 240 school children registered that start to attend from 6 months until 5 years old in 10 classes, that being 4 partial and 6 integrals. The period of operation is from 7:30 am. to 6:30 pm., where children receive 4 meals a day, except on partial classes in the morning and in the afternoon that receive only 2 meals.

Before these possibilities, an evaluation was realized in 157 school children enrolled at Cremação CEU, present on the day of data collection. This evaluation arose from the necessity of finding the effects related to the development evidenced in childhood education that will allow, through these measures, to estimate the impact of school nutrition as growth contribution of school children from Childish Education Unit of SEMEC.

METHODOLOGY

The preparation of this research objectifies to register and to evaluate the growth and nutritional status of school children of Childish Education Unit of SEMEC, Belém (PA), characterized as descriptive diagnostic research, being a case study investigated. It was considered, as population, students of both sexes, aged from 1 year and 11 months to 5 years, that at the time of data collection were regularly enrolled in CEU of Cremação. The sample was consisted by 157 school children chosen intentionally for being present at the data collection time forming the population included in this page.

Were excluded from the research all school children with complete 6 years old. Body weight was verified through portable digital balance with capacity of 100 Kg and with an accuracy of 100 g, placed on flat surface. The school children were weighed barefoot, with minimal clothing possible, erect body in the centre of the balance, arms extended at body side and without movement. For the measurement of height, the instrument was a undeformable measure tape with subdivision 0.1 cm, measured in a smooth wall without footer, verified with a square on the school children head. Dates of birth were obtained through the school birth registration. These measures are necessary for the physical growth of school children, using the indicators of weight for age (W/A), for being the most recommended and for reflect the development and to enable control measures to reduce the impact on children's health, for this age, and stature to age.

The data of stature, age and birth date were transferred to the electronic means via software Whoantro-2006/WHO.

For the classification of nutritional status, it was used as reference childish growth curves proposed by the World Health Organization (WHO, 2006).

Through the Coordinator responsible for CEU of Cremação, upon presentation of the research proposal, the authorization for survey data of school children from the Childish Education Unit "Cremação" was given. It was forwarded to parents and/or guardians, the Free Enlightened Consent Term, as well as the procedure adopted for the development of research and requested the appropriate signature authorizing the viability and participation of schoolchildren on assessments. So were made the data collections of assessed school children individually, on days and times combined with the coordination of CEU Cremação, respecting availability of evaluated.

RESULTS AND DISCUSSION

The results will be presented on topics according to the proposed objectives, and in each one is included the analysis and discussion of the questions that guided the study and that directly contributed to meeting the goals of this research. So, initially bodyweight curves are presented and, then, the results for stature.

In a total of 157 present children, aged from 1 year and 11 months until 5 years and 1 month of age, the observed weight for age index determined that 94.26% of children have submitted themselves with weight appropriate to age according to table 1 below.

Table 1: Index weight for Age

| Nutritional status	No Students	%
Weight suitable for age- WSA	148	94,26
Low Weight for age- LWA	2	1,27
Monitoring high weight p/p/age – MHWA	2	1,27
Surveillance p/low weight p/age – SLWA	3	1,93
High weight for age- HWA	2	1,27
TOTAL	**157**	**100**

WEIGHT INDEX FOR AGE
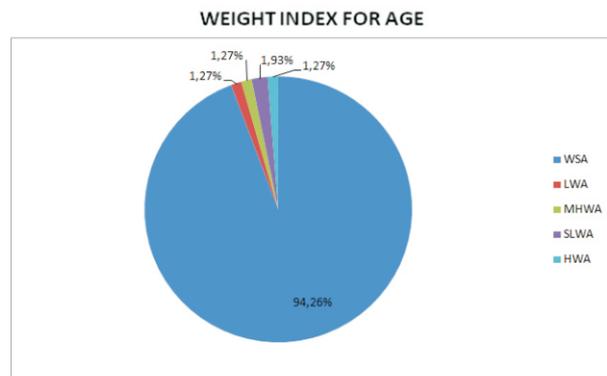
The results presented differ from studies realized by Tolocka et al (2008) in Piracicaba-SP, that present an index of 23% considered high and out of the expected in percentiles of overweight, obese and high overweight in evaluated children, aged between two and six years, which becomes more worrying. With indexes higher than expected by NCHS (2.3%), studies of Kuranishi et al (2001) in maringá-PR, points to changes in nutrition for obesity, since the result was 8.21%.

Unsuitable growth rates for the childish education age are associated with many factors that relate to obesity disorders with difficulties in motion motor activities. (ROMAN Honorable; VIEIRA, PINHEIRO AND VIEIRA, 2005; BERLEZE, HAEFFNER And VALENTINI, 2007).

It was Identified adequacy of stature to age focused on 92.99% of children present and 6.37% of children with short stature as table 2.

Table 2-Index Stature to Age

Stature	No students	%
Stature suitable for age – SSA	146	92,99
Stature to age- SA	10	6,37
Very low stature to age – VLSA	1	0,64
TOTAL	**157**	**100**

STATURE INDEX FOR AGE
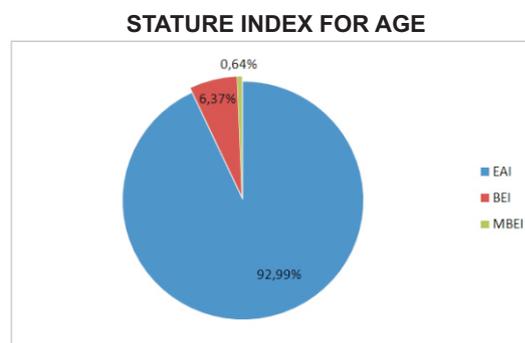
Results of prevalence of short stature for age (chronic malnutrition) were found in studies in municipal daycares of Maringá-PR, by Kuranishi et al (2001) who presented 1.33% and 10.21% of evaluated children, that were at risk for malnutrition. Tolocka (2008) presented results found by sex and, in relation to the nutritional status of children examined in the city of Piracicaba-SP, it was verified that the majority (62% of boys and 59% of girls) is eutrophic i.e. lies within the nutritional patterns of growth for the age.

CONCLUSION

The results obtained reveal no nutritional changes in evaluated children in this study, that are enrolled in CEU

"Cremação". For this reason, periodic reviews should be conducted, as well as the follow-up of School Feeding Program conducted by the competent sectors. In addition, studies about the environment are needed, to check the feeding of children outside the school environment, their eating habits and cultural inherent in the northern region in which they are inserted.

The home conditions and hygiene can exert impact on lifestyle and health of persons. Thus, it is also important to give continuity to the achievement of these evaluate studies, that pass the growth curve of school children of CEU "Cremação", aim to identify problems in the development of these school children.

Children identified with high and low weight, low stature and in States of surveillance should be accompanied by researching the subject from the family, and referrals to health care programs, but also to promote actions to minimize the impacts that environmental conditions related to diverse social and economic situations have on life state and health of these school children.

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EVALUATION OF PHYSICAL GROWTH AND NUTRITIONAL STATE OF SCHOOL CHILDREN FROM "CREMAÇÃO" CHILDISH EDUCATION UNIT -BELÉM, PARÁ, BRAZIL- A CASE STUDY.

ABSTRACT:

This research aims to register and to evaluate anthropometric measures of school children from Cremação Childish Education unit of SEMEC, Belém. It is a case study realized with 157 children of both sexes, aged from 1 year and 11 months up to 5 years and 1 month of age. For verification of body weight, it was used a balance with digital portable platform, with capacity of 100 kg, with 100 grams precision and a undeformable measure tape, with subdivision 0.1 'cm, to verify the stature. The stature, age and date of birth data were transferred to the electronic means via software Whoantro-2006/WHO. For nutritional status classification it was used as reference child growth curves proposed by WHO (WHO, 2006). According to the results, it was identified adequacy of stature to age focused on 92.99% of children present and 6.37% of children with short stature. The weight index for age observed had determined that 94.26% of children show age appropriate to weight.

KEYWORDS : Nutritional evaluation; Physical Growth and Stature.

ÉVALUATION DE LA CROISSANCE PHYSIQUE ET L'ÉTAT NUTRITIONNEL DES ÉLÈVES DE LA UNIDADE DE EDUCAÇÃO INFANTIL "CREMAÇÃO"-BELÉM, PARÁ, BRASIL- UNE ÉTUDE DE CAS.

RÉSUME

Cette recherche c'est pour registrer et évaluer des mesures antropometriques de élèves de la "Unidade de Educação Infantil Cremação da SEMEC de Belém". C'est une étude de cas realisée avec 157 enfants de les deux genres, agés entre 1 an et 11 mois et 5 ans et 1 mois. Pour peser les élèves, il a eté utilisé une balance avec plataforme digital portable, capacité de 100kg, et precisée en 100g et un mètre indeformable subdivié par 0,1cm pour verifierier la stature. Informations sur la stature, l'âge et la date de naissance ont eté transferé pour le forme eletronique avec le software Whoantro-2006/OMS. Pour classifier l'état nutritionnel, Il a utilisé comment reference les virages de croissance des enfants proposé par la OMS (WHO, 2006). Selon les résultats identifiésle stature adéquate pour l'âge concentrée dans 92,99% des enfants et 6,37% des enfants de petite taille, l'indication de poids pour l'âge observée, il a déterminé que 94,26% des enfants ont poids approprié pour son âge.

MOTS-CLÉS: évaluation nutritionnelle, la croissance et la stature physique.

EVALUACIÓN DEL CRECIMIENTO FÍSICO Y ESTADO NUTRICIONAL DE LA UNIDAD DE LA ESCUELA DE EDUCACIÓN DE LA PRIMERA INFANCIA "CREMACIÓN" - BELÉM, PARÁ, BRASIL - UN ESTUDIO DE CASO.

RESUMEN:

Esta investigación tiene como objetivo registrar y evaluar las medidas antropométricas de la escuela de la Unidad de Educación del Niño Cremación, de la SEMEC, de Belén. Es un estúdio de caso realizado con 157 niños de ambos sexos, con edades entre 1 año y 11 meses a 5 años y 1 mes de edad. Para verificar el peso corporal, se utilizó una balanza portátil plataforma digital con una capacidad de 100 kg, con una precisión de 100 gramos, y una cinta métrica indeformable, con la subdivisión de 0,1 cm para verificar la altura. Los datos sobre la altura, edad y fecha de nacimiento fueron transferidos al medio electrónico a través de Whoantro-2006/OMS software. Para la clasificación del estado nutricional, se utilizó como referencia para las curvas de crecimiento de los niños propuestos por la OMS (2006). De acuerdo con los resultados identifican que la altura adecuada para la edad se concentra en 92,99% de los niños presentes y el 6,37% de los niños con baja estatura. El peso para la edad observada ha determinado que el 94,26% de los niños tienen un peso adecuado para la edad.

PALABRAS CLAVE: Evaluación nutricional, crecimiento físico y estatura.

AVALIAÇÃO DO CRESCIMENTO FÍSICO E ESTADO NUTRICIONAL DOS ESCOLARES DA UNIDADE DE EDUCAÇÃO INFANTIL "CREMAÇÃO"- BELÉM, PARÁ, BRASIL- UM ESTUDO DE CASO.

RESUMO:

Esta pesquisa visa a registrar e avaliar as medidas antropométricas dos escolares da Unidade de Educação Infantil Cremação da SEMEC de Belém. É um estudo de caso realizado com 157 crianças, de ambos os sexos, na faixa etária de 1 ano e 11 meses até 5 anos e 1 mês de idade. Para verificação do peso corporal, utilizou-se uma balança de plataforma digital portátil com capacidade de 100 kg, com precisão de 100 gramas, e uma fita métrica indeformável, com subdivisão 0,1 cm, para verificar a estatura. Os dados de estatura, idade e data do nascimento foram repassados para o meio eletrônico através do software Whoantro-2006/OMS. Para classificação do Estado Nutricional, utilizou-se como referência as curvas de crescimento infantil propostas pela OMS (WHO, 2006). De acordo com os resultados, identificou-se adequação de estatura para idade concentrada em 92,99% das crianças presentes e 6,37% de crianças com baixa estatura. O índice de peso para idade observado determinou que 94,26% das crianças apresentam peso adequado à idade.

PALAVRAS-CHAVE: Avaliação Nutricional; Crescimento Físico e Estatura.