Welcome letter from the Organizing and Scientific Committee

Dear colleagues and participants,

Welcome to this special supplement dedicated to compiling the abstracts of the communications and lectures of the FINUT 2020 Conference. The supplement accounts for 339 abstracts for oral and poster communications from 18 countries. It also comprises the abstracts of more than 80 selected guest speakers participating in the scientific symposia and special lectures.

The main objective of the FINUT Conference, which will be held every two years, is to create a space for exchange and discussion of ideas regarding the main challenges of Food and Nutrition in Iberoamerica, to provide solutions aimed at improving the health of the populations of the region, where all the stakeholders, both public and private, are present and can share their thoughts. In addition, the Conference seeks to open a place for contrasted science shared by the Iberoamerican region, a necessary space to open opportunities and to display the research work done in Food and Nutrition, especially that from Latin American countries.

The scientific program of the Conference includes 32 parallel symposia, 4 meetings with the experts and 10 special lectures. In this first edition the Conference focused on 4 topics:

- Challenges of nutrition and public health in Iberoamerica.
- Nutrition in the prevention and treatment of chronic diseases.
- Safe, healthy, and sustainable foods.
- Challenges for an effective and efficient public-private partnership in food and nutrition.

The Conference is organized by the Iberoamerican Nutrition Foundation (FINUT), a nonprofit organization founded in 2011 by the International Union of Nutritional Sciences (IUNS), the Latin American Society of Nutrition (SLAN), and the Spanish Nutrition Society (SEÑ) to promote knowledge, research, development and innovation of Nutrition and Food in Iberoamerica. The FINUT programs are aimed at training professionals and researchers interested in these areas and building partnerships with governments, universities, research centers and other organizations.

Although we are living moments full of uncertainty, the FINUT 2020 virtual Conference organizers would like to thank all our speakers, attendees, and collaborators for their effort to share the scientific advances in the fields of nutrition and food sciences. The organization acknowledges and congratulates all the FINUT 2020 participants and members of the committees for their ability to adapt to new communication needs and hope that in the next edition of the Conference we can give you all the very personal thanks for moving forward

and for continuing the valuable work of providing the world with true and scientifically verified research, so essential in these times.

¡We are looking forward to seeing you at the FINUT 2022 Conference!

Very truly yours,

Prof. Luis Moreno
President of the Organizing Committee

Prof. Benjamín Caballero
President of the Scientific Committee

Prof. Angel Gil
President of the Ibero-American Nutrition Foundation (FINUT)

Dr. María José Soto-Méndez
Executive Secretariat of the Conference

Organizer

Collaborators

and 62.5% (p=0.274), for Uosm; and 53.8% and 27%(p=0.082), for Ucol.

Conclusions: A significant difference between the Usg mean in two populations was found, which also indicates a significantly lower proportion of euhydrated women in the Caribbean. It is necessary to conduct more studies with a greater number of lactating women to stratify them by type and extend of breastfeeding.

Keywords: Hydration/euhydrated/ biomarkers/ lactating women/ Guatemala.

DIETARY PATTERNS AMONG MEXICAN ADOLESCENTS LIVING IN THE URBAN AREA AND ADOLESCENTS LIVING IN THE RURAL AREA, HELENA-MEX STUDY

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Challenges of nutrition and public health in Ibero-America

Introduction. The description of the dietary patterns (DPs) allows knowing the food combinations generally eaten. This information is useful for implementing specific interventions, aimed at improving food selection and combination.

Objectives: To describe DPs among adolescents (12-17 years old) living in an urban area (UA) (Guadalajara) and adolescents living in rural areas (RA) (northern Jalisco), Mexico.

Methods: Cross-sectional study. Weight, height, and body fat percentage (BFP) were measured by bioimpedance and BMI was calculated. Participants completed two 24-h dietary recalls (one related to a weekend day) with the help of a nutritionist. Dietary recalls were analyzed with Nutricloud® software (average daily intake of energy, macronutrients, and food groups). The DPs were identified by principal component analysis using 15 food groups; DPs were classified into tertiles. U-de-Mann-Whitney (non-parametric variables), t-student, ANOVA with Bonferroni Post-Hoc (parametric variables; SD=standar-deviation) and Chi^2 (proportions) were applied. A value of $p<0.05$ was considered as significant.

Results: The study was carried-out in 428 adolescents (55.8% women; 52.6% from UA). The RA adolescents presented significantly higher BMI [mean=22.4kg/m^2 (SD=4.2)] and BFP [mean=27.7% (SD=9.5)], compared with UA adolescents [mean=21.6kg/m^2 (SD=4.5) and 25.1% (SD=10.7), respectively, p=0.049 and p=0.008]. There was no significant energy intake and macronutrient differences between participants of both areas. The UA adolescents adhered to the following three DPs (31% variance): DPU1 includes red meat, corn products, prepared foods. DPU2 includes wheat products, sweetened drinks, industrialized foods, dairy products, legumes. Men and those with lower BFP adhered significantly to this DPU2 (Tertil_3), compared with those with less adherence (Tertil_1). DPU3 includes sugar-free drinks, whole grains, fruits, vegetables. RA Adolescents adhered to the following three DPs (31.5% variance): DPR1 includes rice, legumes, poultry, fruits, vegetables. DPR2 includes dairy products, industrialized foods, fats, fruits, wheat products. DPR3 includes red meat, corn products, sugar-free beverages, and sweetened drinks. Men and those with lower BMI and BFP adhered significantly more frequently to this DPR3.

Conclusions: There are no significant differences in energy intake and macronutrients among adolescents from UA and RA; however, differences in the DPs were identified.

Conflicts of interest: The authors declare that they have no conflicts of interest.

Keywords: Dietary patterns / adolescents / Mexico

CLASSIFICATION OF NUTRITIONAL STATUS BY AGE GROUPS AND DEVELOPMENT OF OBESITY IN YOUNG PEOPLE WITH DOWN SYNDROME OF THE FUNDACIÓN LUISA FERNANDA SIMDROME DOWN OF MEDELLÍN, COLOMBIA

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Challenges of nutrition and public health in Ibero-America

Introduction: Investigating obesity is essential, especially when it comes to specific groups with permanent special needs, such as population with Down Syndrome (SD)

Objectives: Determine the classification of the nutritional status by age groups and the development of obesity in population with Down syndrome.

Methods: Descriptive, relational and cross-sectional study; Children and adolescents (53% men and 47% women) between 9 and 14 years old were evaluated, separated into three groups as follows: 9-10 years (33%), 11-13 years (60%), and over 14 years (7%); using the WHO method to determine BMI / Age and, additionally, the Brazilian parameters for classification of nutritional status, since these were constructed after evaluating the Latino population with this condition.

Results: There is a relationship between the classification of nutritional status and BMI / Age, finding that between 9-10 years, 50% of men and 29% of women were classified as deficit. In the group of 11-13 years, 38% of men and 71% of women were classified as adequacy, showing a change that, according to other studies, could lead to obesity. Perhaps triggered by modifiable environmental factors, like those found in this study, such as a food pattern with abundance of

energy foods, largely ultra-processed, to the detriment of groups such as fruits and vegetables, in direct correspondence with the levels of excess weight observed, since 13% of men over 14 years presented obesity, culminating in the process of progressive increase in body weight.

Conclusions: The nutritional status classification methods for people with SD are not recognized or validated in all countries, so the studies are not easily comparable in Colombia. It is proposed to conduct longitudinal studies to determine the relationship between the nutritional classification of each individual throughout the life course. In this way, confirm and correlate findings of this study, as well as derive relevant tables and homologated them with the International ones.

Conflict of Interest: None declared.

Keywords: Body Mass Index / Down syndrome / obesity.

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FOOD HABITS, DIETARY SUFFICIENCY AND NUTRITIONAL STATUS IN CHILDREN BETWEEN 6 AND 18 MONTHS FROM THE CITY OF SANTIAGO DE CHILE

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Challenges of nutrition and public health in Ibero-America

Introduction: Diet among children presents specific qualitative and quantitative characteristics. For this reason, the variety and adequacy of the diet, in both quantity and quality, have great relevance in order to achieve optimal growth and development.

Objetive: To identify the dietary characteristics and nutritional status in children between 6 to 18 months old in the city of Santiago.

Methods: A retrospective study, Dietary intake was assessed by a validated 24-hour Recall Survey through 4 to 7-days, applied on mothers of children. The data obtained then was analyzed with The Food Processor 11.3 software. Demographics, anthropometry and dietary intake were assessed. The numerical variables were shown as averages and standard deviation, and compared with Student's test. The categorical variables as percentages, compared with the chi-square test. A $p < 0.05$ was considered significant and the statistical analyzes were performed with SAS 9.4 and SPSS 17.

Results: The sample consisted of 199 children, 54.8% women, 53.3% from 12 to 18 months of age. Nutritional status: 0.5% of malnutrition, 8.5% risk of malnutrition, 62.3% normal, 21.1% overweight and 7.6% obesity. 59.3% of the children referred a number of meals according to their age, while their daily energy consumption had an adequacy of 90.1% in calories, 190.7% protein, 142.2% carbohydrates, 64.5 % lipids, 13.1% vitamin D, 104.2% calcium, 113.8% iron and 107.7% zinc.

Conclusions: In this sample of children between 6 and 18 months, high representativeness of the nutritional states in relation to the national prevalence was observed. Regarding dietary patterns, 4 out of 10 children referred a higher numbers of meals per day than those suggested at their age according to ministerial guidance, in addition to having high protein and carbohydrate intakes, and low lipid and vitamin D.

Conflicts of interest: The authors declare no conflict of interest.

Keywords: food habits, food intake, nutritional status, children.

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MALNUTRITION AND FOOD PRACTICES INDICATORS, IN CHILDREN UNDER 24 MONTHS: ANTIOQUIA, COLOMBIA 2019

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Challenges of nutrition and public health in Ibero-America

Background: The World Health Organization (WHO) encourages the monitoring of infants and young child feeding practices (IYCF) to promote healthy habits and learn about the progress in the global feeding strategy. Colombia registers different burdens of malnutrition in child population that affects nutrition in the first 1000 days of life with serious implications for health and human capital.

Objectives: Evaluate the compliance of the indicators IYCF in the different malnutrition status of the children under 24 months for the Antioquia department, Colombia 2019**.

Methods: Descriptive observational study. We use data from the Food and Nutrition Profile of the Antioquia Department of 2019. Sociodemographic variables, indicators IYCF and anthropometry according to WHO were analyzed. The information was available for 265 children under 24 months.

Results: Of the households evaluated, 78.1% had food insecurity, 49.4% without service of potable water. Median household income, USD 241.82. The prevalence of stunting, wasting and underweight ($\leq 2Z$ Length / Age, Weight / Length, and Weight / Age) was 6.4%, 2.6% and 1.1%, respectively. Childhood overweight was 6.4% (Weight / Length> 2Z). In the groups of stunting and overweight, the indicators IYCF with the highest rates of non-compliance correspond to exclusive breastfeeding (100% and 80%, respectively), followed by the indicators of adequate breastfeeding for age, predominant and continues until year and two years, minimum acceptable diet (MAD) and bottle feeding. In wasting the high non-compliance was in the indicators such as MAD, minimum dietary diversity, bottle feeding and consumption of iron-fortified foods.

Conclusions: Colombia has little documentation of the analysis proposed in this investigation. This approximation suggests the possible effect of inadequate feeding practices on child malnutrition, strengthens the protective role of breastfeeding and encourages the need for priority