OW-015 Oral communication

Nutritional status and risk factors for malnutrition among girls in two different seasons?

Sílvia D. 1,2; Valente A. 1; Dias C. 1; Almeida F. 1; Cruz H. 1; Neves E. 1; Almeida M.D. 1; Caldas-Afonso A. 1,2; Guerra A. 1,2,4 and Study Group *; Unidade de Nutrição/Hospital Pediátrico Integrado/Centro Hospitalar São João1; Faculdade de Ciências da Nutrição e Alimentação da Universidade do Porto2; Instituto Marques de Valle de Bioestatística e Informática, Hospital Dr Ayres de Meneses2; Instituto Marques de Vale Flô2; Faculdade de Medicina da UP2

Objectives: to assess the nutritional status as well as evaluate the risk factors that may contribute to malnutrition during infancy in a representative sample from two Trended Principle.

Material and methods: 1285 children aged less than 5 years old were randomly selected from 24704 children enrolled in the vaccination program of 2010. Children’s nutritional status was assessed by weight-for-length (≥24 months) and Body Mass Index (>24 months), mothers nutritional status was determined according to the World Health Organization. Birth weight was evaluated based on Olsen growth curves. Catch-up and catch-down growth were defined as a change in standard deviation scores of ≥0.67 from birth to 2 years of age. Statistical analysis was performed with SPSS®, according to the total sample and by age groups. The study was approved by Ethics Committee of Dr. Ayres Menezes and Centro Hospitalar São João.

Results: Of the 1285 children, 45.5% were male and the median age 22 months. A high percentage (30%) of malnutrition was observed in the youngest children (≤24 months) vs 22% of the older (≥24 60 meses). In children under 12 months there is a lower risk of malnutrition associated with BMI (≥25 kg/m²) [OR=0.476 (0.234-0.968) (p=0.04) and maternal education (>10 years) [OR=0.448 (0.244-0.825) (p=0.01)]. Likewise, it is observed a lower risk of malnutrition in children with adequate birth weight [OR=0.485 (0.259-0.793) (p=0.003) and catch-up growth in the first half of 12 months] vs 22% of the mothers who had their children's survival until 24 months] [OR=0.526 (0.265-0.960) (p=0.01)]. No other significant associations were found for either of the seasons.

Key findings: Although we found modest evidence that this simple tool could be used to predict low serum zinc, the finding was not consistent in both seasons. WDDS was not a predictor of low haemoglobin, iron depletion, or low vitamin A or folate status. As a tool, the score might be too simple to capture the different qualities of diets that may predict micronutrient status. Moreover, micronutrient status is affected by factors other than the diet, effect against malnutrition. On the contrary, mortality attributable to control hypertension may have precluded us from finding some associations. Our data from Mozambique provide very little evidence supporting the idea that WDDS could be used to assess low micronutrient status when used in a cross-sectional manner.

OW-017 Oral communication

Community health workers prevent harmful infant feeding and caring practices among mothers of children under 5 in Palestine.

Al Rachel H.1, World Vision Jerusalem – West Bank – Gaza

Objective: Infant and young child feeding practices are critically important for children’s survival growth and development. Sub-optimal feeding practices, inappropriate feeding duration of breastfeeding, and the number of supplementary foods administered are important risk factors for improved growth and development. In the West Bank and Gaza, CaRHaM conducted two surveys in 2011 and 2012 among a sample of CHWs who were identified as part of a larger sample of women who had participated in an infant feeding intervention. This paper focuses on the findings from the second survey and compares findings with the first.

Methods and Materials: An intervention study was carried out by World Vision in eleven villages surrounding Bethlehem. Mothers (n=360) of infants born during the year 2011, 2012 were identified by trained CHWs. The CHWs targeted the mothers with key messages and support for positive infant and young child feeding practices during organizational home visits throughout 14 months. Baseline and endline data were collected through household interviews.

Results: Infant and young child feeding practices were significantly improved after the intervention; exclusive breastfeeding until 6 months increased from 44.7% to 65.7% (p < 0.001), duration of breastfeeding above one year increased from 66.8% to 82.5% (p < 0.001), timely introduction of the complementary foods increased from 71.5% to 87%, offering the minimum meal diversity increased from 28.3% to 79.3% (p < 0.001), mea frequency increased from 4.2% to 75.9% (p < 0.001), giving the appropriate feeding duration increased from 40.7% to 76% (p < 0.001), giving vitamin A supplements increased from 44.6% to 57.6% (p < 0.001) and giving iron supplement increased from 38.8% to 76.7% (p < 0.001).

Key findings: Home based interventions by trained community health workers have positively influenced different practices related to infant and young child feeding, feeding during illnesses supplements intake and newborn caring practices in Bethlehem villages. Due to context similarities in most Palestinian localities scale up plans for this intervention, integrated with early childhood stimulation components, is envisioned.

OW-016 Oral communication

Is dietary diversity associated with biomarkers of micronutrient status among non-pregnant adolescent Mosambican girls in two different seasons?

Korkalo L1; Erkioa M1; Heironen A1; Freese R1; Selvester K2; Mutanen M1

1Department of Food and Environmental Sciences, Division of Nutrition, University of Helsinki, Finland. 2Food Security and Nutrition Association (ANSIA), Mozambique

Objectives: Studies in low-income settings have shown that dietary diversity scores (DDSs) are positively associated with micronutrient adequacy of diets. Less is known about whether different DDSs could be used as proxy tools to assess the risk of micronutrient deficiencies on a population level. We studied whether one of the dietary diversity tools proposed by FACO, the Women’s Dietary Diversity Score (WDDS), is associated with low concentrations of haemoglobin, serum ferritin, zinc, and folate and plasma retinol among 14-19-year-old non-pregnant Mozambican girls.

Materials and methods: We used data from the ZANE Study (Estudo do Estado das Dieta e Desenvolvimento Adolescente na Zambézia). The data were collected cross-sectionally in different regions of Zambézia Province in 2010. Non-pregnant participants with a venous blood sample and 24-hour dietary recall data (n=225 in January-February and n=220 in May-June) were included in the analysis. We constructed the WDDS consisting of nine food groups and a 24-hour dietary recall data. We performed logistic regression analyses stratified by season to examine associations between low (≤3), and medium/high (≥4 food groups) WDDS and low blood concentrations (the lowest quartile in each season). An asset score was created by assigning scores for type of housing and possession of household items, animals and land. Sampling weights were used. Results: In January-February, a low WDDS was associated with a higher odds of having low serum zinc, compared with a medium/high WDDS. This association remained significant after adjusting for region, age, breastfeeding, BMI-for-age, elevated high-sensitivity C-reactive protein, asset score, and literacy (adjusted odds ratio: 3.35, 95% confidence interval: 1.41-7.94, n=221).

No other significant associations were found for either of the seasons.

OW-018 Oral communication

Nutritional Status of Primary School Children in the Oio and Cacheu Region in Guinea-Bissau.

Schlossman N1,2; Beth P1; Balan E3; Cogilene N3; Wood L1; Santos M1; Pfitzner W3; Saltzman E1; Roberts S8

1Global Food & Nutrition Inc. Tufts University. 2International partnership for Human Development

To date, there has been no survey of nutrition status among primary school children in Guinea-Bissau. To fill this gap and in preparation for a Randomized Control Trial to improve nutrition in the population, we assessed anthropometric and biomarkers in 4,807 children in two rural urban bistos. This research was funded by the United States Department of Agriculture (USDA) Micronutrient Fortified Food Aid Pilot Project and took place in primary schools participating in a Food for Education program run by International Partnership for Human Development.

Methods: Student’s weight in light clothing and no shoes was measured using a portable digital scale (Seca model 813) placed on a flat surface and calibrated at regular intervals. Standing height was measured without shoes using a portable stadiometer (Seca model 213). Hemoglobin was analyzed by HemoCueTM from finger stick blood samples. WHO cut-offs for Weight-for-Age Z-scores (WAZ), Height-for-Age Z-scores (HAZ), BMI-for-age Z-score (BAZ), and Hemoglobin (Hb) concentration were used for analysis.

Results: Nutrition status of children in primary school (2,163 girls and 2,647...