



P379/S6-P58 OFFSPRING GENETIC PROFILE, PRENATAL DHA SUPPLEMENTATION, AND CHILD COGNITION AT AGE 5 YEARS

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Background and Objective: Omega-3 polyunsaturated fatty acids are important for brain development and cognition. Maternal supplementation during pregnancy has shown mixed impacts on child cognitive performance. This study assessed whether offspring FADS genotype modified the impact of prenatal DHA supplementation on cognitive scores at age 5 years. **Methods:** POSGRAD (Prenatal Omega-3 Supplementation and Child Growth And Development) was a double-blind randomized controlled trial conducted in Mexico, in which 1094 women were randomly assigned at 18-22 weeks gestation to receive 400 mg/day algal docosahexaenoic acid (DHA) or placebo through delivery. We included children born to mothers enrolled in the original trial who had genetic data and cognitive outcomes at age 5 years assessed using the McCarthy Scales of Child Abilities (MSCA) which includes subscales for verbal, perceptual, quantitative, memory, and motor abilities. Generalized linear models were used to assess interactions between FADS1 and FADS2 SNPs (rs175446, rs174602, rs1535, rs174448, rs174583) and DHA supplementation on child cognitive outcomes at age 5 years. **Results:** 502 children (DHA= 254, placebo = 248) were included. Mean (SD) composite MSCA scores (sum of verbal, perceptual, quantitative) at age 5 years were 121.5 (22.5), and 121.0 (23.5) for the DHA and placebo groups, respectively. There were no significant differences by offspring FADS genotype (overall) on cognitive scores (all $p > .05$), neither was there evidence of effect modification of prenatal DHA supplementation (all p -interaction $>.05$). **Conclusions:** Variations in offspring FADS genotype appear not to influence child cognition at age 5 years and not to modify the impact of DHA on cognition.

Keywords: essential fatty acids, fatty acid desaturases, child development, prenatal supplementation, docosahexaenoic acid, gene-nutrient interactions.

P380/S6-P59 INTERSECTORALITY IN CHILDHOOD OBESITY PREVENTION: DEVELOPMENT AND VALIDATION OF A MANUAL BASED ON THE BRAZILIAN DIETARY GUIDELINE

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Background and objective: Childhood obesity is a chronic condition with a complex and multifactorial cause, associated with several comorbidities and consequent harm to health, including biopsychosocial harm. Intersectoral actions to prevent childhood obesity correspond to the scope of commitments signed within the scope of government public policies and aim to affect this aspect of public health directly or indirectly. In view of this, the objective of this study was to develop and validate an educational intervention protocol for the project "Intersectoral actions to prevent childhood obesity: a municipal community intervention" carried out in Campinas-SP. **Methods:** this was a methodological study, developed in six steps: literature review; exploration of reference material; adaptation to the application context; listening workshop with specialists in childhood obesity; pilot test and, finally, content validation with specialists in nutrition education and childhood obesity. Content validation analyzes were performed by calculating the content validity index (CVI) and data from a form with open questions. **Results:** the protocol development steps resulted in the "Manual for the intersectoral prevention of childhood obesity based on the Dietary Guidelines for the Brazilian population". Validation with experts showed good acceptability of the proposed protocol, with satisfactory scores of clarity and pertinence criteria demonstrated by the average CVI above 0.8 and comments that praised and improved the material. **Conclusions:** The methodological stages of development and the contributions of specialists in the evaluation of the material contributed to build a qualified and useful tool for the processes of health education for the prevention of childhood obesity in the intersectoral scope in the city of Campinas-SP. It should also be noted that this proposal has potential and reproducibility nationwide.

Keywords: childhood obesity, dietary guideline, Intersectoral collaboration, validation study.

