Obesity Risk, Parenting & Diet Quality Assessment for Spanish-speaking Families with Preschool Children: EFNEP, Head Start, Medical Clinic – Year 2

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Abstract

Objectives: Produce final versions of two validated obesity risk assessment tools for Spanish speaking parents; assess feasibility of these tools to the child’s physician; develop and validate a diet quality tool; and determine feasibility of an EFNEP intervention in a medical clinic.

Description: Protocol development, enrollment and data collection commenced in year 2 to validate the Spanish HK and MCMT tools. The cross-sectional study design was used to test consent validity using subjective (parental surveys and 24-hour dietary, sleep and activity logs) and objective (anthropometric and biomarker) measures. Data were collected at 6 time points (T1 to T5, plus videotaping) over a 6-8 week period.

To date, 153 Spanish speaking parent-child pairs were recruited at 10 Head Start, 1 YMCA and 2 WIC sites and 97 completed the 5 data collection time points (%74 retention). Preliminary analyses of the glucose and lipid profiles of children (28% classified as overweight or obese) show that their metabolic data are positively associated with their BMI percentiles. Overall, children with high BMI-for-age have higher levels of plasma cholesterol, LDL and non-HDL cholesterol, and higher plasma triglycerides and LDL/HDL P=0.08). The strong significant association between waist circumference and BMI percentile (P=0.008) suggest that these children already accumulate visceral fat which adversely influence their metabolic profile.

Videotaping of mealtimes began in year 2 to assist with the validation of the Spanish MCMT tool. Families (n=29) have successfully completed the videotaped mealtimes assessment of the tool to date. University of California - San Francisco’s Student Research Assistant has begun training help with the videotape data collection and coding.

Additional Analyses of biomarkers

Clinical biomarkers (grouped into specific indices, from existing children blood samples (English speaking cohort) were used for the validation of the English protocol. Results show that blood markers of vitamin A (n=13, pooled as carotenoid index), inflammation (3 summed as anti-inflammatory index; 7 summed as pro-inflammatory index), and metabolite (2 summed as metabolite index) can be used for convergent validity of specific subscales of HK and the lipid index showed no significant associations between HK.

Distribution analysis of individual parameters commonly used (CRP, TNFα, IL-6, cholesterol, LDL-C, glucose, etc) to measure general differences in adults that showed that these markers did not vary among our group of children. Results from these analyses indicate that not all individual metabolic markers in children are sensitive indicators of parental report using HK or strong predictors of obesity risk, and that grouping these parameters into indices provide more power to serve other purposes. The data will be extremely useful in selecting biomarkers for the current study with a Spanish speaking population.

Validation of Other Tools

Because we had data from the English speaking study, we designed additional obesity related assessment tools for federal programs to use for evaluation: Focus on Veggies (10 items, results reported in journal Appetite last year), Focus on Sota (3 items, manuscript in process), and Focus on Fats & Sweets (12 items, manuscript in process).

Feasibility of Medical Clinic EFNEP Intervention

The intervention protocol was finalized and a bilingual educator was trained & resident training continued and newly developed recruitment materials (poster, handouts, and prescription referral pads) were deployed.

Diet Quality Tool

A 22-item diet quality tool, “My Veggies” was finalized and printed in English. A validation study is underway in collaboration with the ARS Western Human Nutrition Research Center to validate the diet quality tool for use with shared grant mirdns. For validation, My Veggies tool was administered to English-speaking (62%) female, predominantly middle income parents in year one (N=41,8 years old and a BMI of 28.1 (n=34). Additional validation against the Block Food Frequency Questionnaire and also the HEI estimated from 24-hour dietary recalls obtained from the ASA-24 is planned in year 3 although not part of the grant.

Medical Center Kiosk

In consultation with clinic staff and physicians, a kiosk design with attached receipt style printer and clinic location were determined. This kiosk is designed to allow parents of pediatric clinic patients to complete a survey and receive tailored childhood obesity prevention tips. The survey questions in kiosk were determined based on validated HK and MCMT validation studies. Parents completing the survey receive a protocol with tailored childhood obesity prevention tips. This tailored printout will encourage the parent to discuss tips with their pediatrician and advertise the free EFNEP intervention offered at the clinic. Based on the preliminary test pilot, it took on average to complete the HK 22-item kiosk survey was 3 minutes 16 seconds. Parents reported that it was “very easy” or “easy” to complete the survey and they would share the results with their child's

Publications and Presentations


