DIETARY PATTERNS IN 5-6 YEAR OLD CHILDREN AND THE RELATION WITH SOCIOECONOMIC STATUS: THE ABCD COHORT

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Background

Dietary patterns may be more predictive for weight development in children than individual foods or nutrients. We identified dietary patterns and the relation between dietary pattern score and socioeconomic status (SES) in 5-6 year old children in the multi-ethnic Amsterdam Born Children and their Development (ABCD) cohort.

Methods

A validated Food Frequency Questionnaire (FFQ) was completed by parents or caretakers of 2,769 children (5.7±0.5y, 51% boys). Energy-adjusted intake (g/d) of 41 predefined food groups was calculated and Principal Component Analysis (PCA) was used to derive dietary patterns.
Children were categorized in three socioeconomic status groups based on the years of mother's post-primary education (<6y=low, n=313; 6-10y=middle, n=980; >10y=high, n=1476) and related to tertiles of dietary pattern scores to describe distribution of SES per pattern. GLM and post-hoc Bonferroni tests were used to explore association between dietary pattern score and socioeconomic status.

Results

PCA identified 4 major dietary patterns explaining 21% of the total variation of dietary intake. Pattern 1 "snacking" was defined by high component loadings on food groups savory snacks (0.47), refined breakfast products (0.45) and ice cream (0.42); pattern 2 "full-fat" by high loadings on full-fat spreads (0.48) and full-fat cheese (0.37); pattern 3 "meat" by high loadings on meats (0.44), sauces (0.35) and processed meats (0.28); and pattern 4 "healthy" was defined by high loadings on water/tea (0.48), vegetables (0.47) and fish (0.46).

Dietary pattern scores were significantly related to SES ($p<0.001$). Children from low SES group were most present in the high tertile of the "snacking" pattern (23%, vs "meats" 15%, healthy" 14% and "full-fat" 10%). Children from high SES group were most present in high tertile of the "full-fat" pattern (56%, vs "snacking" 35%, "meats 46% and "healthy" 49%). (Figure 1).

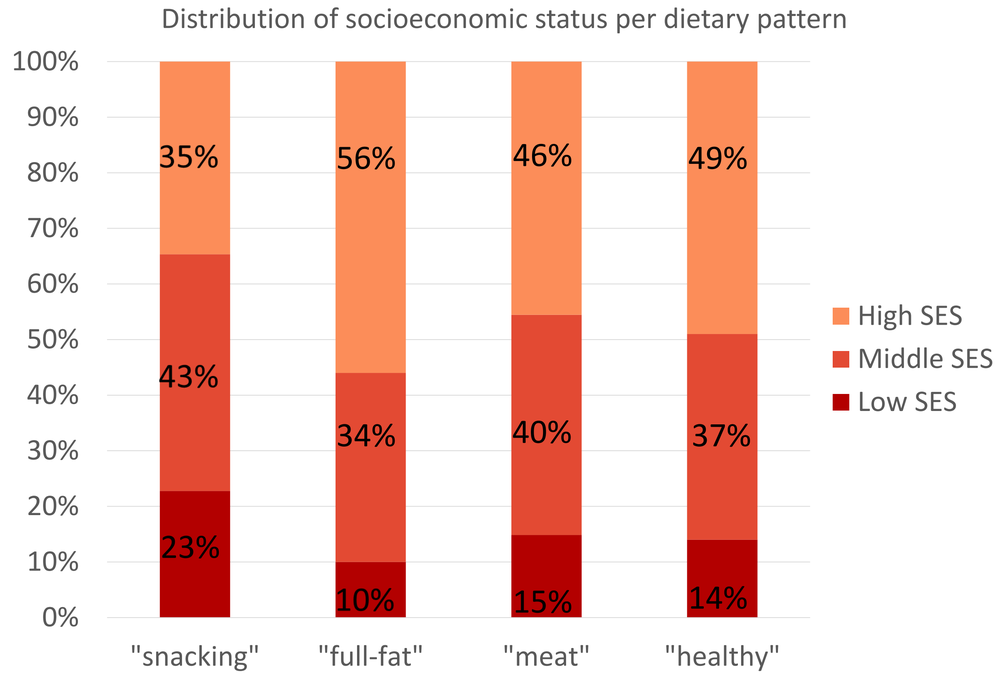

Figure 1. Percentage of children per socioeconomic status group in the highest tertile per dietary pattern.

Conclusion

In this multi-ethnic group where low socioeconomic status was relatively underrepresented, dietary pattern score was significantly related to SES. The low SES group was most presented in the "snacking" pattern. Further analyses will focus on the consequences of dietary patterns on weight development.

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