

INDEPENDENT ASSOCIATIONS OF SOCIOECONOMIC STATUS INDICATORS AND ETHNIC BACKGROUND WITH LOW VEGETABLE AND FRUIT CONSUMPTION IN 4-12 YEAR OLDS: A CROSS-SECTIONAL STUDY

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Background & objective

- **Vegetable and fruit consumption** have been found to be associated with a reduced risk of **non-communicable diseases**, **overweight**, and **obesity** in adults & eating behaviors may track into later life
- Many children worldwide do not meet recommendations for **vegetable and fruit** consumption; particularly **socially disadvantaged children**
- Previous studies focused on SES as a one-dimensional aspect while SES is **multidimensional aspect** that entails several related indicators

Therefore we investigated associations of **SES indicators** (Parental education, material deprivation, financial difficulties and neighborhood SES) and **ethnic background** with low **vegetable** and low **fruit** consumption

Conclusion

- Lower/intermediate parental education, material deprivation, a non-Western ethnic background, and a low NSES were independently associated with low vegetable consumption.
- Material deprivation and lower/intermediate parental education were independently associated with low fruit consumption.
- important for researchers, policy makers and health professionals as they provide clues to multiple potential entry points for reducing socioeconomic and ethnic inequalities in vegetable and fruit consumption

Take home message

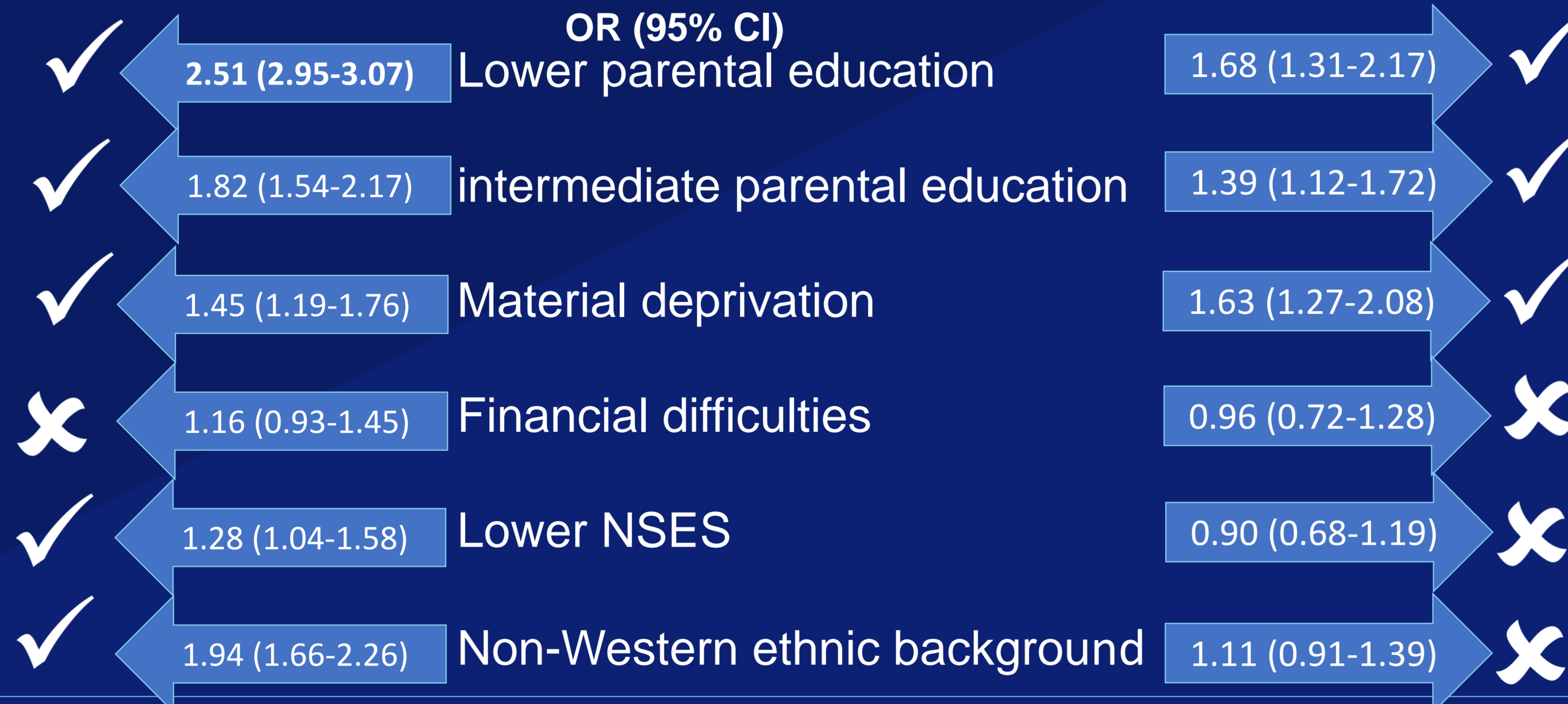
- These results suggest distinct pathways of different SES indicators and ethnic background in vegetable and fruit consumption in children.
- In order to improve vegetable and fruit consumption in children all these pathways need to be considered.

Results

Multilevel multivariable logistic regression

Low vegetable consumption

MOR= 1.31



Low fruit consumption

MOR= 1.54

Additional analyses

- No interaction effects found
- Complete case analyses yielded similar results
- Sensitivity analyses using non-daily vegetable and fruit consumption yielded similar results

Methods

Setting and participants

This cross-sectional study used data from 5,010 parents of 4-12 year olds participated who in a Dutch public health survey in 2018.

Data linked with data on neighborhood SES from the Netherlands Institute for Social Research.

Measures

Exposure variables

- Socioeconomic status indicators;
 - parental education
 - material deprivation
 - financial difficulties
 - neighborhood SES
- Ethnic background

Outcome variables

- Low vegetable consumption (≤4 days a week)
- Low fruit consumption (≤4 days a week)

Confounding variables

- Age, sex and family status

Statistical analysis

Missing data on covariates were imputed. Multilevel multivariable logistic regression analysis with a random intercept for neighborhood and fixed slopes to examine associations of SES indicators and ethnic background with low vegetable and low fruit consumption. Median odds ratio (MOR) to quantify the magnitude of the variation in vegetable and fruit consumption that is explained by the neighborhood level.

In additional analyses multiple interactions were tested and as sensitivity analyses non-daily vegetable and fruit consumption were used as outcome measures.

Complete-case analyses produced the same results (N= 3,946).

