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The role of obesity in socioeconomic inequalities in mental health in childhood: The question of differential exposure or differential impact.

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Introduction: We investigated to what extent socioeconomic disparities in young adolescent's mental health are due to differential exposure (mediation) or differential impact (effect modification) of obesity.

Methods: We used data from 4,660 children of the Generation R study and defined mother's education and household income at child's age 5 as a disparity measure. Using marginal structural models with inverse probability of treatment weighting, we employed a four-way-decomposition with interventional analogues to estimate the contribution of differential exposure to and differential impact of body fat percentage at age 9 to the total disparity in internalizing and externalizing symptoms at age 13.

Results: The total disparity in internalizing symptoms was 0.98 points (95%CI 0.35, 1.63) and 1.68 points (95%CI 1.13, 2.19) comparing children from the least and most-educated mothers, and lowest and highest income households, respectively. We estimated that 0.50 points (95%CI 0.15, 0.85) and 0.24 points (95%CI 0.09, 0.46) of these total disparities were due to differential exposure to obesity. Differential exposure to and differential impact of obesity did not contribute to the observed disparities in externalizing symptoms.

Conclusion: Our results indicate that tackling the higher prevalence of obesity of children from low socioeconomic settings may also reduce inequalities in internalizing symptoms in early adolescence.

Conflicts of interest to disclose: We declare no competing interests

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SARS-CoV-2 vaccination uptake in six ethnic groups living in Amsterdam, the Netherlands

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Introduction: Ethnic minority populations have experienced a disproportionate burden of COVID-19, and should therefore be especially encouraged to receive SARS-CoV-2 vaccination. This study aimed to compare SARS-CoV-2 vaccination uptake across six ethnic groups residing in Amsterdam, the Netherlands.

Methods: We analysed data from participants enrolled in the population-based, multi-ethnic HELIUS cohort, who consented to link their data to registries. We linked their data to the SARS-CoV-2 vaccination registry data at the Public Health Service of Amsterdam. We included data from January 8, 2021 (i.e., the start of the Dutch vaccination campaign) until September 6, 2021. By this date, all Dutch adults could have received one or two vaccine doses. SARS-CoV-2 vaccination uptake was defined as having received at least one vaccine dose. We used a series of multivariable logistic regression models to examine the association between ethnicity and vaccination uptake.

Results: We included 19,006 participants (median age 53 years [interquartile range 41-62], 57% female). SARS-CoV-2 vaccination uptake was highest in the South-Asian Surinamese group (1,721/2,734, 63%), followed by the Dutch (2,574/4,230, 61%), Ghanaian (1,187/2,085, 57%), Turkish (1,617/3,075, 53%), African Surinamese (1,700/3,620, 47%) and Moroccan (1,234/3,262, 38%) groups. After adjusting for several determinants (i.e., age, sex, perceived social support and having relevant comorbidities) those of African Surinamese, Ghanaian, Turkish and Moroccan origin were significantly less likely to receive vaccination than those of Dutch origin. In sensitivity analyses, associations remained similar when using full SARS-CoV-2 vaccination as an endpoint. Higher intent to receive SARS-CoV-2 vaccination was strongly correlated with higher vaccination uptake; this association was similar across ethnic groups (p-value for interaction=0.279).

Conclusion: SARS-CoV-2 vaccination uptake was lower in some, but not all, ethnic minority groups compared to the population of Dutch origin. Prevention strategies should be tailored to specific ethnic groups to encourage vaccination uptake and reduce vaccination barriers.

Conflicts of interest to disclose: We declare no competing interests

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Early identification of individual and parent related determinants associated with later use of intensive child welfare services services among Dutch children

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Introduction: Intensive forms of child welfare services, such as child protection or residential care, are expensive and can have a negative impact on the child. To limit these intensive forms of child welfare by timely referring to preventive interventions, it is essential to know which children have a high risk for child welfare involvement. The aim of this study is to identify determinants for intensive forms of child welfare services among children in the Netherlands.

Methods: Register data of 15,116 children and their parents was retrieved from Statistics Netherlands. The use of child welfare services was divided into three ordered levels; none, light and intensive. Ordinal logistic regression analyses were used to assess the association between individual and parent related determinants at age 0-4 and the use of child welfare services at age 5-8.

Results: Of all children, 2565 (17%) used child welfare services between age 5-8, of which 534 (21%) received intensive forms. Parent related determinants that were associated with higher use of intensive child welfare, compared to no use or light forms, were receiving social benefits, having a low educational level, having mental health problems and having a history of delinquent behavior. Individual determinants that were associated with less use of intensive child welfare were being a girl and having a migrant background .

Conclusion: Children from parents with a low socio-economic status, mental health problems and delinquent behavior had a higher risk for receiving intensive forms of child welfare services, while girls and children with a migrant background had a lower risk. This could help professionals to estimate the need of future child welfare services and timely refer children and their parents to preventive interventions or other forms of assistance.

Conflicts of interest to disclose: We declare no competing interests

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Socioeconomic inequalities in smoking attributable mortality Trends in Europe between 2000 and 2020

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Introduction: Smoking is the most important single contributor to morbidity and mortality worldwide. However, the effects of smoking are not evenly distributed across society. Absolute inequalities in smoking attributable mortality have been decreasing while relative inequalities are widening. Understanding smoking contributes to differences in mortality between socioeconomic groups, and how these change over time, is important for public health and public health policy.

Methods: All-cause and lung cancer mortality rates between 2000 and 2020 in ten European countries (Austria, Belgium, Denmark, Estonia, Finland, Italy (Turin), Lithuania, Spain, Sweden and Switzerland) were used to calculate partial life expectancy between age 50 and 80 and to estimate the smoking attributable fraction (SAF) using the Preston-Glei-Wilmoth method. Changes in partial life expectancy, and the differences in life expectancy between low and high educated in each year were decomposed into the age-specific contributions attributable and not-attributable to smoking, using the continuous change model.

Results: Remaining life-expectancy between age 50 and 80 ranged between 21.5 (lower educated men in Lithuania, 2008) and 29.3 (higher educated females in Spain (Barcelona), 2018). Among men, SAF decreased over time for all countries, but remained largest among lower educated. For women increases in smoking attributable mortality were observed, but with a less profound educational gradient. The gap in partial life expectancy between lower and higher educated increased among all countries and sex except for Swiss and Austrian males. For women, the contribution of smoking to this gap increased between 2000 and 2020.

Conclusion: In the past 20 years, SAF in Europe changed differently for men and women. While the SAF decreased among men, smoking remains an important factor contributing to socioeconomic inequalities in life-expectancy. The need for tobacco control measures that decrease these gaps remains high, especially for women.

Conflicts of interest to disclose: We declare no competing interests

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Sex differences in the intensity of statin prescriptions at initiation in a Dutch primary care setting: a population-based cohort study.

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Introduction: Statins are universally recommended by clinical guidelines for the prevention and management of cardiovascular disease. While guidelines make no sex-specific recommendations, evidence has shown that women are less likely than men to fill a prescription for statins. This study aims to investigate sex differences in the intensity of statins at initiation over a ten-year period in a Dutch primary care setting.

Methods: Data from statin dispensing was extracted from the PHARMO Database from 2011-2020. Individuals were included at their first statin prescription and a washout period of one year was defined. Age-standardised trends and descriptive analyses were used to describe prescription patterns over time. Poisson regressions with robust standard errors were used to investigate sex differences in statin intensity at initiation, with adjustment for age, Low Density Lipoprotein (LDL) cholesterol levels in the year before the first prescription and the year of prescription. Analyses were stratified by history of coronary heart disease (CHD) before the first prescription.

Results: Overall 82,274 adults (46% women) with a mean age of 65 years old were included in the study population. Between 2011 and 2020, 13% of men and 8% of women were first dispensed a high-intensity statin. Age-standardised trends showed an increase in the prescription of high-intensity statins for both sexes among statin users, with an increase in the proportion of high-intensity statins between 2011 and 2020 from 5 to 21% in men and from 4 to 15% in women. The adjusted risk ratio (RR) for receiving a high-intensity statin prescription comparing women with men with a history of CHD was 0.85 (95% CI 0.74 – 0.98) and with no history of CHD was 0.76 (95% CI 0.69 – 0.84).

Conclusion: Women received less high-intensity statins prescriptions at initiation than men, despite non-sex-specific guidelines.

Conflicts of interest to disclose: We declare no competing interests

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Longitudinal effects of perceived neighborhood social capital on self-rated health: a random effects within-between analysis

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Introduction: Although it is well established that neighborhood social capital is positively associated with individual health, it remains unclear whether improving social capital will actually lead to better health. A better understanding of the causal relationships between social capital in the community and individual health can help policymakers decide on how to improve the living environment. The objective of this study is to examine the longitudinal effects of perceived neighborhood social capital on self-rated health among a general Dutch urban population.

Methods: We analyzed four waves of data across seventeen years from the GLOBE study, a prospective cohort study designed to understand socio-economic inequalities in health in the Netherlands. We used a multi-level logistic Random Effects Within Between (REWB) model, on respondents who did not relocate during follow-up, to estimate the association of differences in perceived social capital between individuals and the likelihood of poor self-rated health (i.e., between-effects) and the association of changes within individuals in perceived social capital and changes in the likelihood of poor self-rated health (i.e., within-effects). REWB models were adjusted for age, gender, education, marital status, employment, income, financial strain, years of residence, household size, home ownership, and place of birth.

Results: Preliminary results indicate that perceived neighborhood social capital was significantly associated with poor self-rated health (O.R. 0.58; 95%CI 0.46-0.73). There was no significant association of within-person changes in social capital with changes in self-rated health.

Conclusion: Using REWB models that are capable of simultaneously examining between-individual and within-individual effects, our study observed that while individuals with higher perceives social capital generally also have better self-rated health, within-individual changes in social capital do not seem to be associated with changes in self-rated health. This suggests that merely increasing social capital may not lead to the necessary changes required to positively impact residents' health.

Conflicts of interest to disclose: We declare no competing interests