Trends in child and adolescent obesity prevalence according to socioeconomic position: a systematic review

Alexandra Chung, Anna Peeters, Kathryn Backholer, Claire Palermo, Evelyn Wong, Catherine Keating

Review question(s)
Do trends in childhood obesity prevalence since 1990 differ according to socioeconomic position in developed countries?
Has recently observed levelling in obesity prevalence among children and adolescents occurred across all socioeconomic groups?

Searches
The search strategy will include searches of the following electronic databases: MEDLINE, EMBASE, CINAHL, Scopus and Cochrane Collaboration. Search terms will include relevant medical subject headings (MeSH) and keywords in the title, abstract and text for terms including overweight, obesity, socioeconomic position, children and adolescents, and developed countries. Databases will be searched for articles published in English between January 1990 and February 2014. We will also search grey literature and hand-search reference lists of relevant articles identified through the database and grey literature searches.

Types of study to be included
Cross-sectional studies that report obesity prevalence trends according to socioeconomic position for children and adolescents will be included. Cohort studies will only be included if they report time trends independent of aging.

Condition or domain being studied
Obesity among children and adolescents.

Participants/ population
Studies that report on children and adolescents aged 2 to 18 years living in developed countries will be included. Participants involved in treatment for obesity will not be included. Intervention studies and studies carried out in clinical settings or among single or high risk groups such as ethnic minorities or low socioeconomic populations will be excluded.

Intervention(s), exposure(s)
The exposure to be reviewed is low socioeconomic position. Socioeconomic position will be determined through the reporting of at least one individual or family (parent education, parent occupation, family income), area (household postcode, area level socio-economic index), or population (school, neighbourhood) indicator of socioeconomic position.

Comparator(s)/ control
The comparator against which low socioeconomic position will be compared is middle to high socioeconomic position.

Context
The review will examine data that reports on child and adolescent obesity prevalence where obesity prevalence has been measured at two or more time points since 1990.
Outcome(s)

Primary outcomes
The primary outcome is obesity prevalence. Obesity will be defined through at least one measured or self reported anthropometric measure (weight and height, BMI, BMI z-scores, height and weight plotted on growth charts/percentile charts, waist circumference, waist to hip ratio, percentage body fat, skinfold thickness). Trends will be identified by the inclusion of studies that report data recorded for at least two points in time since 1990.

Secondary outcomes
None.

Data extraction, (selection and coding)
The initial screening of titles and abstracts will be completed by two authors. Full text articles will then be retrieved and assessment against inclusion criteria and data extraction will be conducted independently by two authors, using an electronic spreadsheet. Discrepancies will be resolved through discussion with a third author. We will extract: author; journal; year of publication; location of study (country/state/city); survey years and time points of data collection; sample population (national survey/community survey/school); sample size; response rate or participation rate; age of population; measure of overweight and/or obesity and whether this is measured or self reported; indicator of socioeconomic position; any other stratification of results; descriptive results including time trends and obesity prevalence according to SEP; results of significance testing for differences in trends.

Risk of bias (quality) assessment
The quality of included studies will be evaluated independently by two authors, according to criteria adapted from an existing quality assessment tool for quantitative studies from the Effective Public Health Practice Project. We will descriptively assess internal and external validity of included studies with questions on selection bias, study design, confounders, data collection and data analysis. We will perform a sensitivity analysis to evaluate the potential effect of study quality on our conclusions by repeating our analysis on only those studies with high quality ratings for all components.

Strategy for data synthesis
Narrative synthesis will be undertaken to report on trends in child and adolescent obesity prevalence according to socioeconomic position and discuss whether trends in obesity in children and adolescents are homogenous across the socioeconomic strata. We will generate summary tables, firstly using crude results data on prevalence from all articles and then, where data is available we will compile results of significance testing of differences in trends.

Analysis of subgroups or subsets
The analysis will explore variations in findings by country, across certain time periods and, where data is available, age and sex.

Dissemination plans
We intend to publish the review upon completion.

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Conflicts of interest
None known

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English

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Australia

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Subject indexing assigned by CRD

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Adolescent; Child; Health Status Disparities; Humans; Obesity; Overweight; Socioeconomic Factors

Stage of review
Ongoing

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Stage of review at time of this submission
Preliminary searches
Started Yes
Completed No
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<td>Formal screening of search results against eligibility criteria</td>
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<td>Data extraction</td>
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<td>Risk of bias (quality) assessment</td>
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