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Defining the commercial determinants of obesity in adolescence: a systematic review protocol

Yanaina Chavez-Ugalde, Frank de Vocht, Russell Jago, Zoi Toumpakari, Matt Egan, Steven Cummins, Martin White

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Review question

This study aims to conduct a systematic review to define the commercial determinants of obesity in adolescence and propose a framework of how these commercial factors determine obesity in adolescence.

This aim will be achieved through the following objectives:

- 1) Identifying how the CDoH have been defined in the literature.
- 2) Identifying how the different posited mechanisms or frameworks for how commercial factors determine obesity (e.g. CSR, regulation avoidance, government lobbying, public discourse) and if these mechanisms differ by sector (e.g. agriculture, finance, trading, retail, government).
- 3) Identifying whether the CDoH literature describes or theorise the mechanisms through which commercial factors determine obesity in adolescence.
- 4) Proposing a comprehensive definition and framework by which commercial factors determine obesity in adolescence.

Searches

Relevant published articles will be searched through MEDLINE (Ovid), PubMed, Web of Science, and Scopus.

On finding relevant studies, the reference lists will be searched to see whether they cite any other relevant documents which the initial search did not identify.

The search strategy will include the following terms:

("Obesity" OR "Overweight" OR "Health") AND ("commercial determinant*" OR "commercial*" OR "corporate") AND ("big food" OR "food*" OR "drink*" OR "food industry")

References will be exported to EndNote and Rayyan to be screened independently by two researchers. Duplicates will be identified and deleted.

Types of study to be included

Inclusion criteria:

- Published in peer-reviewed journals.
- Provide a definition or description for the commercial determinants of health or propose a mechanism through which commercial factors determine obesity.
- Written in English.
- Research conducted in humans.

Exclusion criteria:

- CDoH definitions referring to tobacco, alcohol, gambling only.

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- Studies that don't include definition or description for CDoH.

Condition or domain being studied

Articles that include a definition, description or a posited mechanism for how commercial factors effect health and obesity will be included.

The commercial determinants of health (CDoH) have been recently identified as important factors affecting obesity from macro-social and political factors, to shaping individual consumption patterns, through the production and marketing of commercially produced food and drink, particularly those containing high levels of sugar, salt and trans fats. However, there has not been a comprehensive definition or review that summarises these factors and the ways in which they can have an influence on obesity in adolescents. Providing a definition and a framework for the commercial determinants of obesity in adolescence can facilitate understanding and cooperation between different disciplines within the obesity prevention field, which may contribute to a more successful approach to tackling the complex public health challenge of obesity.

This study aims to conduct a systematic review to define the commercial determinants of obesity in adolescence and propose a framework of how these commercial factors determine obesity in adolescence.

Participants/population

In the first search for terms and definitions, there will be no restrictions on age groups in order to capture the whole range of definitions that have been attempted in the literature. Once the included articles have been selected, articles will be reviewed to extract and analyse if the literature has identified commercial factors that determine obesity in adolescence.

Intervention(s), exposure(s)

Commercial determinants of health and commercial factors that determine obesity (e.g. marketing, advertising, price promotion).

Comparator(s)/control

None.

Context

Main outcome(s)

This review will provide a systematic documentation and analysis of existing definitions and frameworks of the commercial determinants of obesity.

The commercial determinants will be defined as commercial or corporate activities that stem from the profit motive and shape the food environment determining the availability, promotion and pricing of products we buy and consume (e.g. shaping individual consumption patterns, through production and marketing of commercially produced food and drink, particularly those containing high levels of sugar, salt and trans fats) which evidence suggest have an influence on obesity.

Timing and effect measures

Not applicable.

Additional outcome(s)

None

Timing and effect measures

Not applicable.

Data extraction (selection and coding)

Retrieved article titles and abstracts will be screened by one reviewer for eligibility. The full texts of potential eligible articles will be then retrieved and reviewed to determine whether they meet inclusion criteria. A

second reviewer will double-screen all the included studies.

Reasons for exclusion will be documented and reviewed by the second reviewer. Identified discrepancies will be discussed and resolved by the two reviewers, and if still uncertain, an additional researcher will be asked to review the inclusion criteria.

Data extraction will be carried out by one researcher from a final list of articles (previously screened by two researchers) and independently checked by a second reviewer (data extraction for 90% of the articles will be carried out by one reviewer, and an independent reviewer will carry out a secondary data extraction for the remaining 10% of all included studies).

An extraction table will be used, which will include:

- Author (year);
- Publication type (e.g. review, commentary);
- Country;
- Population age group;
- Outcome (e.g. health, overweight, obesity);
- Definition for commercial determinants;
- Conceptual framework or diagram for determinants (yes/no);
- Description of commercial factors determining obesity;
- Keywords;
- References to other relevant articles;
- Other comments.

Risk of bias (quality) assessment

Since the primary aim of this systematic review is to identify how the literature has defined the commercial determinants of obesity and any posited mechanisms or frameworks for how commercial interests influence obesity, articles will not be excluded based on poor or inappropriate methodology.

Strategy for data synthesis

A narrative synthesis and summary of findings from existing literature will be presented.

Articles will be organised and themes will be generated using NVivo QSR software.

Eligible articles will be coded for definitions, mechanisms, key terms, and concepts which emerge repeatedly in the literature. Coded information will be tabulated to determine how frequently they appear in the literature and will also be interpreted narratively.

The results will be presented, firstly, introducing descriptive findings in terms of number of articles included, publication type, geographic setting, age group, number of articles which provide a definition, number of articles which provide a conceptual framework or mechanism, and frequency of key words.

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Findings regarding the different definitions, keywords and posited mechanisms found in the literature will be grouped into wider themes to synthesise the literature of the commercial determinants of obesity and will be explored in depth and will be interpreted narratively. Regarding age groups, a focus will be put on definitions and mechanisms that target adolescents (11-18 years). This will allow to identify if the literature describes specific mechanisms in this age group and identify gaps in the literature for future research.

Finally, a comprehensive definition and a framework for the commercial determinants of obesity in adolescence will be proposed.

Analysis of subgroups or subsets

By country type, age groups, sectorial factors (e.g. agriculture, government, retail, finance), conflict of interest will be explored using Cullerton et al. (2019) guiding principles for population health researchers working with food industry to identify any bias or patterns for reporting in the commercial determinants of health literature.

(Cullerton, K, Adams, J, Forouhi, N, Francis, O, White, M. What principles should guide interactions between population health researchers and the food industry? Systematic scoping review of peer-reviewed and grey literature. Obesity Reviews. 2019; 1– 12.)

Contact details for further information

Yanaina Chavez-Ugalde
ic14896@bristol.ac.uk

Organisational affiliation of the review

University of Bristol.

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www.bristol.ac.uk/medical-school/

<https://sphr.nihr.ac.uk>

Review team members and their organisational affiliations

Ms Yanaina Chavez-Ugalde. University of Bristol, NIHR School for Public Health Research

Dr Frank de Vocht. University of Bristol, NIHR School for Public Health Research

Professor Russell Jago. University of Bristol, School for Public Health Research

Dr Zoi Toumpakari. University of Bristol

Dr Matt Egan. London School of Hygiene and Tropical Medicine, NIHR School for Public Health Research

Professor Steven Cummins. London School of Hygiene and Tropical Medicine, NIHR School for Public Health Research

Professor Martin White. Cambridge University, NIHR School for Public Health Research

Collaborators

Dr Gemma Morgan. Consultant in Public Health, South Gloucestershire

Ms Claire McIver. Public Health and Adult Social Care, Stoke-on-Trent City Council

Type and method of review

Epidemiologic, Narrative synthesis, Systematic review

Anticipated or actual start date

01 February 2019

Anticipated completion date

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Conflicts of interest**Language**

English

Country

England

Stage of review

Review Ongoing

Subject index terms status

Subject indexing assigned by CRD

Subject index terms

Adolescent; Adolescent Health; Body Mass Index; Commerce; Consumer Behavior; Direct-to-Consumer Advertising; Food Packaging; Humans; Obesity; Overweight; Pediatric Obesity; Product Packaging; Public Health; Socioeconomic Factors

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Details of any existing review of the same topic by the same authors**Stage of review at time of this submission**

Stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	Yes	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Versions

03 June 2019

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