


BMJ Open Mapping the existing evidence of the effects of school food policies on health, acceptance and affordability of secondary school children in Europe: a scoping review protocol

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ABSTRACT

Introduction Unhealthy diets pose a significant public health risk among European children, contributing to the increasing prevalence of overweight and non-communicable diseases. Children spend a substantial amount of time at school daily, including lunchtime, so the school setting becomes crucial for promoting healthy diets and lifestyle habits. While there is a large body of literature on the impact of school food policies on health and non-health outcomes, it is essential to identify which policies are effective and can be recommended for implementation to ensure the efficient use of resources. This article presents a protocol for a scoping review that aims to map the current published literature on the effects of school food policies on health outcomes, acceptance and affordability in secondary school children in Europe. Moreover, the scoping review will map the measurements used to assess health outcomes, acceptance and affordability.

Methods and analysis The scoping review protocol and review follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Review. To identify eligible studies, we will search MEDLINE, PsycINFO, CINAHL and Web of Science. The reference lists of the included articles will be checked for additional studies. In addition, country-specific ministry reports from Member States of the European Union, the UK, Norway, Iceland and Switzerland will be identified. The WHO and European Commission websites will also be searched for relevant reports. The scoping review will include literature published until 20 September 2023. No restrictions to study design and language will be applied. Screening and data extraction will be carried out independently by three reviewers. Disagreements will be resolved by discussion. A pretested data charting table will be used to extract key information. Findings will be presented in tabular and visualised summaries and a narrative summary.

Ethics and dissemination This scoping review does not require ethical approval. Our dissemination strategy comprises peer-reviewed publications, conference presentations and recommendations to policy-makers.

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ The scoping review targets literature focusing on secondary school children, which is currently rarely researched.
- ⇒ It provides a methodological overview of approaches to assess health outcomes, acceptability and affordability of school food policies for European secondary school children.
- ⇒ The literature search will be conducted in the most important databases and additionally extended to country-specific ministry reports from Member States of the European Union (EU), the UK, Norway, Iceland and Switzerland. Further, the WHO and European Commission websites will be searched for relevant reports. Thus, the most important sources for relevant publications will be covered.
- ⇒ This scoping review will be limited to peer-reviewed published literature and WHO/EU reports and country-specific ministry reports of the EU Member States, the UK, Iceland, Norway and Switzerland until 20 September 2023; this may bias the analysis by excluding potentially relevant sources.
- ⇒ The literature search will focus on Europe, which may limit the generalisability of findings to other countries and systems.

INTRODUCTION

According to the WHO, non-communicable diseases account for 74% of all deaths yearly worldwide.¹ Non-communicable diseases, such as diabetes, cardiovascular diseases and cancer, are associated with dietary consumption patterns and weight gain.^{2 3} In recent decades, eating patterns worldwide have shifted from unprocessed, nutrient-dense, low-energy foods towards diets high in sugar, saturated fat, energy and ultra-processed food items.^{4 5} However, a healthy diet is fundamental to leading a long and healthy life.⁶ Specifically, early childhood is a crucial

period for learning and habituating good dietary habits, with evidence suggesting that patterns internalised at this age may persist throughout adulthood.^{7–10} On the other hand, an unhealthy diet jeopardises children's future by affecting their cognitive, physical and social development.^{10–16} These delays have profound implications for children's future health and well-being, preventing them from achieving their full potential, escaping poverty and participating in society.¹⁵

Over the past decades, overweight and obesity have become significant public health issues among European children, affecting one in three school-aged children and one in four adolescents.¹⁷ In response to this health issue, notable efforts have been made to combat this trend, including the European Union (EU) action plan on childhood obesity 2014–2020¹⁸ and the WHO's 2006 guidance paper supporting the development of school nutrition programmes in the European Region.¹⁹ Recently, policy-makers have focused on schools as a suitable environment to establish healthier eating habits. Schools can potentially reach a large share of children regardless of socioeconomic status (food security), gender, cultural background²⁰, and over a decade of their life.²¹ As schools are environments where food policies and practices can be implemented to reach a large proportion of children,²² they can be seen as critical settings for interventions encouraging healthy eating patterns on-site and at home because the school food policy reaches children, their families and community members. One way in which schools can support children's health, apart from food education inside and outside the classroom, is by providing healthy meals through canteens or cafeterias.²³

As outlined in the EU action plan on childhood obesity 2014–2020, school meal provision can play a crucial role in establishing a healthier environment for children,¹⁸ as it complements children's daily dietary intake and plays a fundamental part in calorie and nutrient control. However, there is little evidence of health outcomes due to the lack of programme evaluation.²⁴ Moreover, health outcomes depend on the quality and modalities of the school meal provision.²¹ As studies analysing health outcomes of school food interventions mostly contain multiple interventions (eg, education, food provision, promotion of healthy diet), the solemn effect of school meals on health is hard to confine. A review by Chaudhary *et al*²² found that school-based food and nutrition interventions can affect healthy eating and improve dietary behaviour, attitude and anthropometry. Van Cauwenberghe *et al*²⁵ confirmed these findings, as they found evidence for the effectiveness of especially multi-component interventions on the dietary behaviour of school-aged children in the EU countries. Evidence was inconclusive regarding the effects of interventions on anthropometric measures.²⁵

Providing well-balanced school meals is a promising way to improve children's health and well-being. However, meals must be affordable to ensure regular uptake. Although school meals are an integrated part of every

school in Europe, the organisation of meal provision varies across and within nations. Funding arrangements differ between universal free school meals and governmental and/or parental subsidise.^{20 21}

Irrespective of the scope of food provision and financial arrangements, students' and parents' acceptance of school meals is crucial for the programme's effectiveness and the economic success of school meal providers. Literature suggests numerous factors involved in the acceptability of school meals, such as meeting and availability of food preferences, physical and cultural environment and pricing.^{26 27} Despite its importance, there is currently no consensus on which measure should be used to assess the acceptability of school meals.²⁷

While the literature on school food policies is broad, evaluations of those focusing on school meals regarding health impact on secondary school children (10–18 years), acceptability and affordability are scarce. Hence, the evidence of outcomes and impacts of school meal policies is still limited. Given the need for synthesising evidence of the effectiveness of school meal policies on the health of secondary school children in Europe, the foreseen scoping review aims to fill this gap. Findings from the scoping review will assist policy-makers in designing appropriate nutrition intervention policies targeting secondary school children in Europe. In this paper, the protocol for the scoping review is outlined.

Study objective and research questions

The scoping review aims to synthesise the evidence and assess the scope of the literature relating to the effectiveness of school food policies, particularly those focusing on improving full school meals, health outcomes, acceptability and affordability among students in European secondary schools. The following research questions will be addressed:

- What types and scope of school food policies targeting full meals are being addressed in the literature with a focus on:
 - Health (any reported health outcome).
 - Acceptance by different stakeholders (secondary school children, teachers, school administrators, parents, as reported).
 - Affordability.
 - What implementation measures are being used to increase the uptake and maintenance of the school food policy?

Furthermore, methodological aspects are of interest:

- What frameworks are used in the literature to analyse school food policies?
- What methods are used to evaluate health, acceptability, affordability and implementation (eg, standardised scales, interviews)?

Further, this scoping review will help to identify evidence gaps in this area.

METHODS AND ANALYSIS

This protocol describes the methods for a scoping review. The Preferred Reporting Items for Systematic Reviews

Table 1 Inclusion and exclusion criteria according to PICO (population, intervention, comparator, outcomes, study design)

PICOs	Inclusion	Exclusion
Population	<ul style="list-style-type: none"> ▶ Children in secondary school (ISCED level 2 and 3/ ages 10–18) within EU Member States, the UK, Norway, Iceland, Switzerland. 	<ul style="list-style-type: none"> ▶ Literature focusing on primary school-age children ▶ Literature covering countries outside of EU Member States, Norway, Switzerland, Iceland, the UK
Intervention	<ul style="list-style-type: none"> ▶ School food policies aiming at improving school full meals. 	<ul style="list-style-type: none"> ▶ Policies focusing solely on snacks, vending machines or changes in beverages ▶ Parents packed lunch boxes ▶ Breakfast club ▶ School fruit or milk programmes ▶ Research projects
Outcomes	<ul style="list-style-type: none"> ▶ Health ▶ Acceptability ▶ Affordability ▶ Implementation determinants 	
Study design	<ul style="list-style-type: none"> ▶ Primary studies published in peer-reviewed journals ▶ WHO, EU and country-specific ministry reports of the EU Member States, the UK, Norway, Iceland and Switzerland assessing the effectiveness of school meal policies 	<ul style="list-style-type: none"> ▶ No reviews, conference abstracts, bachelor, master and dissertation theses

EU, European Union; ISCED, International Standard Classification of Education.

and Meta-analysis for Protocol extension for Scoping Reviews checklist was used to draft this protocol (see online supplemental appendix 1).

Eligibility criteria for selecting studies for inclusion

Studies meeting all the following criteria will be considered for inclusion in the scoping review. Eligibility for inclusion into the scoping review is based on the P (population), I (intervention), C (Context/setting) and O (outcome) criteria (table 1).

Types of participants and setting

The target population will be children and adolescents who attend secondary school (International Standard Classification of Education (ISCED) level 2 and level 3²⁸) in Europe. According to the European Commission, pupils entering the ISCED level 2 are typically between 10 and 13 years old. Students finishing ISCED level 3 are generally around age 17 or 18 years old.²⁹ Therefore, the scoping review will include articles focusing on children and young adolescents between 10 and 18 years. Studies based on special-needs schools will be included as well. Studies that report only combined results for primary and secondary schools will be included if the authors report the data separately. Otherwise, studies will be excluded.

The setting will be limited to secondary schools in Europe. This scoping review defines Europe as all EU Member States and additionally includes Switzerland, Norway, Iceland and the UK.

Types of interventions

Policies targeting full school meals will be assessed. By full meals, we mean school lunches served in canteens

or cafeterias. Breakfast club, lunch boxes provided by parents and policies focusing solely on snacks, beverages and vending machines will not be discussed. No restriction regarding the policy's implementation level (local, regional and national) will be made.

In this scoping review, policies are defined, according to Lobczowska *et al.*,³⁰ 'as actions developed and implemented to achieve specific goals within a society, with national or regional governments participating in the development and/or implementation of these actions. In contrast, interventions are actions targeting similar goals, not yet endorsed, enabled or executed by regional or national governments' but, for example, through research projects, initiatives or programmes funded by foundations, research programmes or associations are excluded.

Types of outcomes

We focus on the impact of school food policies, particularly improvements in full meals, on students' health (health outcome reported in the primary study), acceptability and affordability (outcome reported in the prior studies). However, it should be noted that all these outcomes can be significantly influenced by the implementation process. Effective implementation is crucial in order to translate policy intentions into tangible benefits for students. Incorporating implementation determinants as an additional focus in our scoping review emphasises their central role in determining the success or failure of school food policies. By including implementation determinants, we aim to provide a comprehensive overview of the contextual factors contributing

to the observed impacts of school food policies in European secondary schools. This approach ensures that our scoping review not only evaluates the intended outcomes but also considers the practical aspects that underpin the success of these interventions in real-world educational settings.

We will include studies that report on health and/or acceptability, and/or affordability but not on implementation determinants in our scoping review. Studies focusing solely on implementation determinants without addressing health outcomes, acceptability or affordability will be excluded from our analysis.

Types of study design

Primary studies with any designs (qualitative and/or quantitative methods) will be considered for inclusion. Grey literature will be included but limited to authoritative documents or reports and WHO and EU reports. The WHO, EU Commission websites and country-specific ministry reports of the EU Member States, the UK, Iceland, Norway and Switzerland, will be searched.

Information sources and search strategy

Relevant studies will be searched in the following electronic databases: MEDLINE, PsycINFO, CINAHL and Web of Science. We will search papers published in peer-reviewed journals until 20 September 2023. Keywords, MeSH and other index terms, as well as combinations of these using Boolean operators, will be used to construct the search strategy. An interprofessional team comprising experts in health sciences, sociology, epidemiology, nutrition, psychology and social sciences collaborated to develop the search strategy. This was guided by an experienced research librarian and tailored to each database. An iterative technique adapted from JBI's three approach was used for the development. A preliminary search was conducted on MEDLINE based on an initial set of key terms. The retrieved papers were reviewed regarding their topical fit. Keywords, synonyms and index terms were identified from the retrieved papers and used to revise the search strategy. A second search was undertaken across all included databases using all identified keywords and index terms. Retrieved papers were tested according to their topical fit. For example, the MEDLINE search strategy can be found in online supplemental appendix 2. A third step, screening the reference lists, will be performed with all included full-text papers. In addition to the electronic sources, the WHO and EU Commission websites will be searched for relevant reports. Country-specific ministry reports of the EU Member States, the UK, Norway, Iceland and Switzerland, will also be identified.

Study/source selection process

All identified references will be imported into the Endnote reference manager version to remove duplicates. After removal, the remaining references will be uploaded to Covidence (<http://www.covidence.org>). First, all titles and abstracts of potentially relevant studies identified by

the database searchers will be screened independently by three reviewers (WH, NB and JM) against the inclusion criteria. Second, the three reviewers will screen the full-text articles and document the reasons for exclusion. Any disagreements will be resolved by discussion. If no agreement can be reached at the title/abstract screening stage, the paper will be included in the full-text screening. In the case of conflicts in the full-text screening, conflicts are resolved by discussion. If no agreement can be reached, a fourth person not involved in the screening process will be consulted.

Data extraction

Three independent reviewers will systematically extract data from eligible articles. A data extraction sheet will be designed and pilot-tested before use based on three included studies to standardise data extraction. The following characteristics of the included studies will be extracted and entered into Excel spreadsheets: first author, corresponding author, year of publication, country, study title, study design, aim, the number of participants, participant characteristics, description of the setting, number of schools, description of the policy and, if applicable, control arms. The following points will be extracted: framework, intervention duration, frequency, intensity and content of the components and intervention outcomes (ie, results on effectiveness of intervention; health and health measurement, acceptability and acceptability measurement, affordability and affordability measurement), implementation steps, level of jurisdiction (national, subnational, city), legal quality (hard/soft law), instruments (which instruments were used: eg, tax relief, free school meals, subsidies) and actor (who is responsible for the programme). If information needs to be included, the authors will contact the corresponding author of any included study with missing information relevant to the charting form via email.

For large projects, the questions addressed in this scoping review may be divided into several papers. Therefore, the homepages of the projects will be searched to see if further papers can be included based on the identified project. Further identified papers are included as hand searches and screened analogously to the studies identified in the databases.

Assessment of methodological quality

An assessment of the methodological quality of articles is not envisioned because of the broad inclusion of study designs.

Collecting, summarising and reporting the results

Data will be charted and displayed graphically, diagrammatically or tabularly where appropriate and accompanied by a narrative summary. The narrative summary will explain how the results relate to the review's objective and question(s) and include qualitative and quantitative synthesis approaches. Data will be summarised and grouped into similar categories based on commonalities.

Some examples of themes that could be used to organise the results are: study type, country, framework, outcome measures and practice recommendations/implications. No overall assessment of the strength of the evidence will be performed, as evaluating the quality of the individual studies will not be the purpose of this scoping review.

Patient and public involvement

No patients or members of the public were involved in developing the scoping review protocol.

ETHICS AND DISSEMINATION

No ethical approval for this review is required, as data will be obtained from publicly available materials. This protocol is registered on the Open Science Framework (<https://osf.io/rg7dy>). Essential protocol amendments postregistration will be recorded and included in dissemination. The results of this scoping review will be published in a peer-reviewed journal and possibly presented at conferences. We will provide recommendations and conclusions based on the findings from the synthesis.

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Contributors The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted. AH, MW, HB and SF conceived the idea and contributed to the writing and revision of the manuscript. JM, NB and WH developed the research questions and study methods. NB and LC developed the search strategy. JM drafted and edited the manuscript with AH, MW, HB and SF providing critical revisions to the manuscript. The final version of the manuscript was read and approved by all authors. SF acted as guarantor.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

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Appendix I: PRISMA-ScR Checklist

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	1.
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	1.
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	3-5.
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	5-6.
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	1, 11.
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	6-9.
Information sources*	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	9-10.
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Appendix 2
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	9-10.
Data charting process‡	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	10.

Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	9-10
Critical appraisal of individual	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe	NA.
SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
sources of evidence§		the methods used and how this information was used in any data synthesis (if appropriate).	
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	10.
RESULTS			
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	NA.
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	NA.
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	NA.
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	NA.
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	NA.
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	NA.
Limitations	20	Discuss the limitations of the scoping review process.	NA.
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	NA.
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	11.

JB1 = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses

extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document)

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Appendix II: Search strategy

Medline via PubMed (Date: 20 September 2023)

Search number	Query	Results
20	#3 AND #6 AND (#7 OR #8 OR #9) AND #18 AND #19	161
19	#12 OR #15	2.882.227
18	#16 OR #17	2.091.492
17	(Austria[MeSH] OR Belgium[MeSH] OR Bulgaria[MeSH] OR Croatia[MeSH] OR Cyprus[MeSH] OR "Czech Republic"[MeSH] OR Denmark[MeSH] OR Estonia[MeSH] OR Finland[MeSH] OR France[MeSH] OR Germany[MeSH] OR Greece[MeSH] OR Hungary[MeSH] OR Iceland[MeSH] OR Ireland[MeSH] OR Italy[MeSH] OR Latvia[MeSH] OR Lithuania[MeSH] OR Luxembourg[MeSH] OR Malta[MeSH] OR Netherlands[MeSH] OR Norway[MeSH] OR Poland[MeSH] OR Portugal[MeSH] OR Romania[MeSH] OR Slovakia[MeSH] OR Slovenia[MeSH] OR Spain[MeSH] OR Sweden[MeSH] OR Switzerland[MeSH] OR "United Kingdom" [MeSH] OR England[MeSH] OR Scotland[MeSH] OR Wales[MeSH] OR "Northern Ireland" [MeSH] OR "Scandinavian and Nordic Countries" [MeSH] OR Europe[MeSH])	1.552.168
16	(Austria[Title/Abstract] OR Belgium[Title/Abstract] OR Bulgaria[Title/Abstract] OR Croatia[Title/Abstract] OR Cyprus[Title/Abstract] OR "Czech Republic"[Title/Abstract] OR Denmark[Title/Abstract] OR Estonia[Title/Abstract] OR Finland[Title/Abstract] OR France[Title/Abstract] OR Germany[Title/Abstract] OR Greece[Title/Abstract] OR Hungary[Title/Abstract] OR Iceland[Title/Abstract] OR Ireland[Title/Abstract] OR Italy[Title/Abstract] OR Latvia[Title/Abstract] OR Lithuania[Title/Abstract] OR Luxembourg[Title/Abstract] OR Malta[Title/Abstract] OR Netherlands[Title/Abstract] OR Norway[Title/Abstract] OR Poland[Title/Abstract] OR Portugal[Title/Abstract] OR Romania[Title/Abstract] OR Slovakia[Title/Abstract] OR Slovenia[Title/Abstract] OR Spain[Title/Abstract] OR Sweden[Title/Abstract] OR Switzerland[Title/Abstract] OR "United Kingdom"[Title/Abstract] OR England[Title/Abstract] OR Scotland[Title/Abstract] OR Wales[Title/Abstract] OR "Northern Ireland"[Title/Abstract] OR Britain[Title/Abstract] OR Scandinavia*[Title/Abstract] OR Europe*[Title/Abstract])	1.100.373
15	#13 OR #14	198.331
14	Schools[MeSH Terms]	146.761
13	("Secondary school*" [Title/Abstract] OR "secondary education*" [Title/Abstract] OR "middle school*" [Title/Abstract] OR "high school*" [Title/Abstract] OR "upper school*" [Title/Abstract] OR "junior high school*" [Title/Abstract])	63.736
12	#10 OR #11	2.794.018
11	adolescent[MeSH Terms]	2.220.971
10	(teen* [Title/Abstract] OR adolescen* [Title/Abstract] OR youth [Title/Abstract] OR boy [Title/Abstract] OR boys [Title/Abstract] OR girl* [Title/Abstract] OR pupil* [Title/Abstract] OR student* [Title/Abstract])	1.010.540
9	affordab* [Title/Abstract] OR cost* [Title/Abstract] OR "economic viability" [Title/Abstract] OR sustainabilit* [Title/Abstract]	866.171
8	(Health* [Title/Abstract] OR "health outcome*" [Title/Abstract] OR nutrition* [Title/Abstract] OR "healthy foo*" [Title/Abstract] OR "healthy choic*" [Title/Abstract] OR "healthy consumption" [Title/Abstract] OR "eating health*" [Title/Abstract] OR "nutrition benefit*" [Title/Abstract] OR "diet qualit*" [Title/Abstract] OR "nutrition improvement*" [Title/Abstract] OR "food educat*" [Title/Abstract] OR "diet inequalit*" [Title/Abstract])	3.946.593

7	(Accept*[Title/Abstract] OR compliance[Title/Abstract] OR cooperat*[Title/Abstract] OR attendance[Title/Abstract] OR participat*[Title/Abstract] OR attitude [Title/Abstract])	1.587.538
6	#4 OR #5	13.836
5	(nutrition policy[MeSH Terms])	12.771
4	("food-based standard*[Title/Abstract] OR "food-based guideline*[Title/Abstract] OR "school food standard*[Title/Abstract] OR "school food guideline*[Title/Abstract] OR "food-based recommendation*[Title/Abstract] OR "food guideline*[Title/Abstract] OR "food polic*[Title/Abstract] OR "nutrition standard*[Title/Abstract])	1.702
3	#1 OR #2	30.358
2	(lunch[MeSH Terms]) OR (food services[MeSH Terms])	16.102
1	("School meal*[Title/Abstract] OR "school lunch*[Title/Abstract] OR "school cafeteria*[Title/Abstract] OR "school canteen*[Title/Abstract] OR "School menu*[Title/Abstract] OR "School food*[Title/Abstract] OR "School feeding*[Title/Abstract] OR "food suppl*[Title/Abstract])	15.894