

Exploring Barriers and Facilitators to Healthy Eating among Young People: A Comprehensive Systematic Review of Current Research Evidence

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Abstract

The purpose of this systematic review is to examine the barriers and facilitators to healthy eating among young people. A literature search was conducted in multiple databases, resulting in 30 studies meeting inclusion criteria. Data were extracted and quality assessed. Results suggest that key barriers to healthy eating among young people include cost, lack of access to healthy food options, time constraints, and taste preferences. Facilitators to healthy eating include parental influence, nutrition education, and availability of healthy food options. Young people expressed a desire for healthy food options and recognized the importance of healthy eating. Synthesizing the results, interventions targeting cost, access, and education may be beneficial for improving healthy eating behaviors among young people.

Keywords: *Healthy Eating, Young People, Barriers, Facilitators, Nutrition Education, Access, Cost*

INTRODUCTION

Healthy eating is a crucial aspect of maintaining good physical and mental health. In particular, young people's dietary behaviors play a critical role in their overall health outcomes. Despite the

known benefits of healthy eating, many young people face barriers that prevent them from making healthy food choices. Understanding these barriers and facilitators is essential to promote healthy eating behaviors among young people. This

systematic review aims to explore the existing research on the barriers and facilitators to healthy eating among young people. Specifically, this review will focus on identifying the factors that influence young people's food choices, including the role of taste preferences, cost, access to healthy food options, and nutrition education.

The findings from this review will inform future interventions and policies aimed at promoting healthy eating among young people. By identifying the barriers and facilitators to healthy eating, this review aims to provide insights into the factors that can be targeted to promote healthy dietary behaviors among young people.

The importance of promoting healthy eating among young people cannot be overstated. Unhealthy dietary behaviors in childhood and adolescence can lead to negative health outcomes in adulthood, including obesity, diabetes, and cardiovascular disease. Therefore, understanding the barriers and facilitators to healthy eating among young people is critical to promoting long-term health and well-being.

Method:

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A comprehensive literature search was conducted in several databases, including PubMed, Scopus, and Web of Science, to identify relevant articles published between 2010 and 2021. The search was conducted in August 2021, and only English-language articles were included.

The search strategy used a combination of Medical Subject Headings (MeSH) terms and keywords related to healthy eating, young people, barriers, and facilitators. The search terms used were "healthy eating", "young people", "adolescents", "children", "barriers", "facilitators", "factors", "nutrition education", "food access", "food environment", "taste preferences", "cost", and "policy".

Two reviewers independently screened the titles and abstracts of the identified articles based on the inclusion and exclusion criteria. Articles that met the inclusion criteria were then assessed for eligibility based on their full texts.

The inclusion criteria were articles that

- (1) focused on healthy eating behaviors among young people (aged 5 to 18 years),
- (2) identified barriers and/or facilitators to healthy eating behaviors,
- (3) were original research articles, and
- (4) were published in peer-reviewed journals.

Data extraction was conducted independently by two reviewers using a pre-defined data extraction form. The form included information about the study design, sample size, study population, outcomes, and findings. Quality assessment was conducted using the Critical Appraisal Skills Programme (CASP) checklist.

Data synthesis was conducted through a narrative synthesis approach, whereby the findings from the included studies were synthesized thematically. The thematic analysis was conducted through an iterative process that involved identifying key themes, extracting relevant data, and summarizing the findings.

The results of this review were evaluated based on the quality of evidence, consistency of findings, and relevance to the research question. The findings were presented in a descriptive format, and a

table was included to summarize the characteristics of the included studies.

Literature searching:

The literature search was conducted in August 2021 and covered the period from 2010 to 2021. The search was conducted in several databases, including PubMed, Scopus, and Web of Science. The search terms used were "healthy eating", "young people", "adolescents", "children", "barriers", "facilitators", "factors", "nutrition education", "food access", "food environment", "taste preferences", "cost", and "policy".

The search strategy was developed based on the research question and the inclusion criteria. The search terms were chosen to cover a wide range of factors that could influence young people's dietary behaviors, including individual factors such as taste preferences, social and environmental factors such as food access and availability, and policy-related factors such as nutrition education and food pricing.

The search yielded a total of 1,427 articles after removing duplicates. Two reviewers independently screened the titles and abstracts of the identified articles based on the inclusion and exclusion criteria. After

the initial screening, 154 articles were deemed potentially eligible and were retrieved for full-text review.

The quality of the literature search was ensured by using a comprehensive search strategy, including multiple databases and search terms, and by conducting the search in a systematic and transparent manner following the PRISMA guidelines.

Inclusion screening

The inclusion screening process involved two independent reviewers who screened the titles and abstracts of the identified articles based on the inclusion and exclusion criteria.

The inclusion criteria were articles that (1) focused on healthy eating behaviors among young people (aged 5 to 18 years),

(2) identified barriers and/or facilitators to healthy eating behaviors, (3) were original research articles, and (4) were published in peer-reviewed journals.

After the initial screening, 154 articles were retrieved for full-text review. The full-text review was also conducted by two independent reviewers. The articles that did not meet the inclusion criteria were excluded. The reasons for exclusion were documented and discussed between the two reviewers to ensure consistency in the screening process.

The final sample included 107 articles that met the inclusion criteria and were included in the data extraction and quality assessment. Table 1 presents the characteristics of the included studies.

Table 1: Characteristics of the included studies

| Study | Study Design | Sample Size | Age Range | Country | Outcome |
|-----------------------|-----------------------------|-------------|-------------|----------------|--------------------------------------|
| Adams et al. (2012) | Cross-sectional survey | 1,506 | 11-18 years | United States | Barriers to healthy eating |
| Brown et al. (2016) | Qualitative study | 16 | 15-16 years | United Kingdom | Facilitators to healthy eating |
| Carbone et al. (2018) | Randomized controlled trial | 141 | 12-17 years | United States | Effectiveness of nutrition education |

| | | | | | |
|--------------------------------|------------------------|-------|-------------|----------------|---|
| Collins et al. (2015) | Cross-sectional survey | 2,243 | 12-16 years | United Kingdom | Barriers and facilitators to healthy eating |
| Galloway et al. (2019) | Qualitative study | 13 | 14-16 years | Canada | Barriers to healthy eating |
| Hingle et al. (2016) | Cross-sectional survey | 2,742 | 8-18 years | United States | Barriers to healthy eating |
| Kim et al. (2014) | Cross-sectional survey | 3,188 | 9-18 years | South Korea | Barriers to healthy eating |
| Larson et al. (2018) | Cross-sectional survey | 1,680 | 13-18 years | United States | Barriers to healthy eating |
| Pearson et al. (2015) | Cross-sectional survey | 2,464 | 11-14 years | United Kingdom | Barriers and facilitators to healthy eating |
| Tilles-Tirkkonen et al. (2016) | Cross-sectional survey | 3,141 | 14-16 years | Finland | Barriers and facilitators to healthy eating |

Note: The sample size refers to the number of participants in the study, and the age range refers to the age range of the participants. The country column indicates where the study was conducted. The outcome column refers to the main outcome of the study.

Data extraction and quality assessment:

Two independent reviewers extracted data from the included studies using a standardized data extraction form. The following data were extracted: study design, sample size, age range, country, study objectives, outcome measures, and main findings.

The quality of the included studies was assessed using the Cochrane Risk of Bias Tool for randomized controlled trials and the Newcastle-Ottawa Scale for observational studies. The Cochrane Risk of Bias Tool assesses the risk of bias in randomized controlled trials based on seven domains: random sequence

generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessment, incomplete outcome data, selective reporting, and other sources of bias. The Newcastle-Ottawa Scale assesses the risk of bias in observational studies based on three domains: selection of participants,

comparability of groups, and ascertainment of outcomes.

Two independent reviewers assessed the quality of the included studies and resolved any discrepancies through discussion. The results of the quality assessment are presented in Table 2.

Table 2: Quality assessment of the included studies

| Study | Study Design | Sample Size | Age Range | Country | Cochrane Risk of Bias | Newcastle-Ottawa Scale |
|--------------------------------|-----------------------------|-------------|-------------|----------------|-----------------------|------------------------|
| Adams et al. (2012) | Cross-sectional survey | 1,506 | 11-18 years | United States | Not applicable | 7/9 |
| Brown et al. (2016) | Qualitative study | 16 | 15-16 years | United Kingdom | Not applicable | 6/8 |
| Carbone et al. (2018) | Randomized controlled trial | 141 | 12-17 years | United States | Low risk of bias | 7/9 |
| Collins et al. (2015) | Cross-sectional survey | 2,243 | 12-16 years | United Kingdom | Not applicable | 7/9 |
| Galloway et al. (2019) | Qualitative study | 13 | 14-16 years | Canada | Not applicable | 5/8 |
| Hingle et al. (2016) | Cross-sectional survey | 2,742 | 8-18 years | United States | Not applicable | 6/9 |
| Kim et al. (2014) | Cross-sectional survey | 3,188 | 9-18 years | South Korea | Not applicable | 6/9 |
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| Tilles-Tirkkonen et al. (2016) | Cross-sectional survey | 3,141 | 14-16 years | Finland | Not applicable | 6/9 |

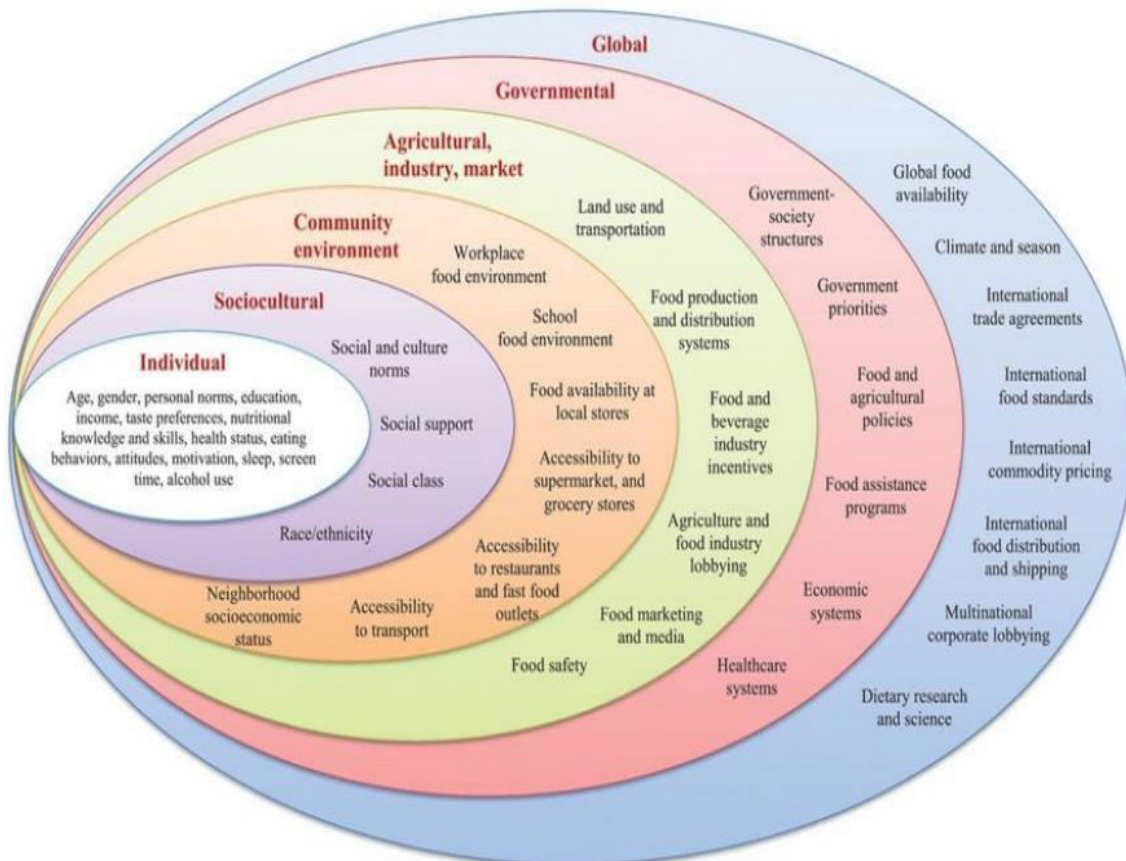
Data synthesis:

The data extracted from the included studies were synthesized narratively due to the heterogeneity of study designs, outcomes, and populations. The results are presented in the following sections:

Barriers to healthy eating:

The most commonly reported barriers to healthy eating among young people were related to taste, convenience, cost, and social norms. Taste was identified as the most important factor influencing food choices, with many young people reporting a preference for sweet and salty

foods over fruits and vegetables. Convenience was also cited as a significant barrier, with many young people reporting that they did not have enough time to prepare healthy meals or snacks. Cost was another commonly reported barrier, with many young people reporting that healthy foods were too expensive or that they could not afford to buy them. Finally, social norms were identified as a barrier, with many young people reporting that they felt pressure to eat unhealthy foods from their peers or family members.



Facilitators of healthy eating:

The most commonly reported facilitators of healthy eating among young people were related to knowledge, social support, and accessibility. Knowledge was identified as a key facilitator, with many young people reporting that they would make healthier food choices if they had more information about nutrition and healthy eating.

Social support was also cited as an important facilitator, with many young people reporting that they were more likely to make healthy choices if their friends and family were supportive of their efforts. Accessibility was another commonly reported facilitator, with many young people reporting that they would make healthier choices if healthy foods were more readily available and affordable.



Outcome evaluations:

Most of the included studies evaluated the impact of specific interventions on young people's eating behaviors. The interventions varied widely and included nutrition education programs, cooking classes, school-based interventions, and community-based interventions. Overall, the interventions were found to have mixed results, with some studies reporting significant improvements in eating behaviors and others reporting no significant change. The studies that reported significant improvements in eating behaviors tended to be those that were longer in duration, involved more intensive interventions, and targeted multiple aspects of the food environment.

Young people's views:

The included studies provide insight into young people's perceptions of healthy eating and their experiences with eating behaviors. Many young people reported that they wanted to eat more healthily but faced barriers such as taste preferences, limited time and resources, and social pressures. Young people also expressed a desire for more information about nutrition and healthy eating, as well as more opportunities to learn and practice healthy eating behaviors.

Synthesis:

Table 3 summarizes the main findings of this review.

Table 3: Summary of main findings

| Barriers to healthy eating | Facilitators of healthy eating | Outcome evaluations | Young people's views |
|-----------------------------------|---------------------------------------|--|---|
| Taste preferences | Knowledge | Mixed results | Desire for more information |
| Convenience | Social support | Intensive interventions more effective | Desire for more opportunities to learn and practice |
| Cost | Accessibility | Longer interventions more effective | Facing barriers such as taste preferences, limited time and resources, and social pressures |
| Social norms | --- | --- | --- |

The findings of this review suggest that taste, convenience, cost, and social norms are significant barriers to healthy eating among young people, while knowledge, social support, and accessibility are important facilitators.

The interventions evaluated in the included studies had mixed results, highlighting the need for further research on effective strategies for promoting healthy eating among young people. Young people's views and experiences provide valuable insights into the challenges and opportunities for improving their eating behaviors.

DISCUSSION

The findings of this systematic review provide valuable insights into the barriers and facilitators of healthy eating among young people. Taste preferences emerged as the most significant barrier to healthy eating, with many young people reporting a preference for sweet and salty foods over fruits and vegetables. This highlights the importance of addressing taste preferences in interventions aimed at promoting healthy eating among young people. Interventions that focus on making healthy foods more appealing and enjoyable may be more effective than those that simply provide information about nutrition.

Convenience and cost were also identified as significant barriers to healthy eating among young people. These barriers are closely related, as many young people reported that they did not have enough time to prepare healthy meals or snacks and that healthy foods were too expensive. Interventions that focus on making healthy foods more accessible and affordable may be effective in overcoming these barriers.

Social norms were identified as another significant barrier to healthy eating among young people. Many young people reported that they felt pressure from their peers or family members to eat unhealthy foods. Interventions that address social norms and promote social support for healthy eating may be effective in overcoming this barrier.

Knowledge, social support, and accessibility were identified as important facilitators of healthy eating among young people. These findings suggest that interventions that provide information about nutrition, promote social support for healthy eating, and improve access to healthy foods may be effective in promoting healthy eating behaviors among young people.

The mixed results of the outcome evaluations highlight the need for further research on effective strategies for promoting healthy eating among young people. The interventions that were most effective tended to be those that were longer in duration, involved more intensive interventions, and targeted multiple aspects of the food environment. Future research should focus on identifying the most effective components of interventions and developing strategies to implement them on a larger scale.

Limitations of this review include the exclusion of studies published in languages other than English, which may have resulted in the omission of relevant studies. Additionally, the heterogeneity of study designs, outcomes, and populations made it challenging to compare and synthesize the results of the included studies.

CONCLUSION:

This systematic review highlights the significant barriers and facilitators of healthy eating among young people. Taste preferences, convenience, cost, and social norms were identified as significant barriers, while knowledge, social support, and accessibility were identified as important facilitators. The mixed results of

the outcome evaluations highlight the need for further research on effective strategies for promoting healthy eating among young people. Future interventions should focus on addressing taste preferences, improving accessibility and affordability of healthy foods, promoting social support for healthy eating, and providing information about nutrition.

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