

Nursing Interventions for Childhood Obesity Prevention: A Scoping Review

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Abstract

Introduction

Childhood obesity is considered a serious public health problem because it affects millions of people worldwide and is associated with several chronic diseases. Interventions involving families have been shown to be more effective than those focusing only on children. Nursing interventions for childhood obesity prevention are essential for promoting professional empowerment and improving care.

Objective

To map and synthesize nursing interventions for childhood obesity prevention.

Methods

The search was conducted following Joanna Briggs Institute methodology between October 2024 and February 2025, using specific search terms. MEDLINE (via PubMed) and CINAHL (via EBSCO) were searched for articles published in the previous 10 years. Data were extracted by two independent reviewers.

Results

Eighteen studies were included, highlighting the importance of the family in childhood obesity prevention and the role of nursing interventions in facilitating the management of this condition. Four categories were identified: educational interventions targeting children and families; parent and family skills-building interventions; interventions promoting physical activity and healthy lifestyles; and school- and community-based interventions.

Conclusion

Childhood obesity is a complex condition with a global impact, and its prevention requires family-centered interventions. The studies analyzed show that the family is essential in shaping healthy habits and that family health nurses play a strategic role in implementing effective interventions. Professional barriers and gaps in health policies reinforce the need for integrated, culturally sensitive approaches supported by public policies that value the role of nursing in promoting child health.

Keywords

Childhood obesity; Family; Nurse; Parents; Prevention.

Introduction

Childhood obesity is one of the major public health challenges today because of its high prevalence and significant impact on children's physical, psychological, and social health.¹ Over recent decades, the number of

children and adolescents with overweight has increased steadily worldwide, contributing to increased morbidity and an increased risk of developing chronic diseases throughout the life course.^{2,3} Evidence shows that overweight during childhood substantially increases the likelihood of obesity in adulthood, reinforcing the importance of implementing early preventive strategies⁴. In addition to behavioral and environmental factors, susceptibility to obesity may be influenced by genetic factors and family dynamics, reflecting the multifactorial nature of this condition.⁵

In this context, childhood obesity prevention is a public health priority, with an emphasis on interventions that promote healthy eating habits, regular physical activity, and the adoption of health-promoting lifestyles from the earliest years of life. Early implementation of these strategies helps reduce the incidence of obesity and its complications, promoting sustained health gains across the life course.

Family health nurses play a key role in providing follow-up care for children with overweight or obesity, working with families to promote healthy lifestyles and provide health education.⁶ Their close relationships with families and their systems-oriented approach enable early identification of risk factors and the implementation of actions tailored to family dynamics and the contexts in which families live.

Studies show that approaches involving parents and the family as a system are more effective than those targeting only the child because they enable changes in eating habits, routines, and physical activity patterns.^{1,7} However, nurses face significant challenges, including a lack of resources, family resistance, and the need for ongoing training to tailor interventions to each family's circumstances.⁸

The literature indicates that primary prevention, when implemented in the family setting, is critical to the success of childhood obesity prevention strategies. However, nursing interventions addressing this issue have not been systematically synthesized, limiting the sharing of best practices and the development of evidence-based policies.^{9,10}

Childhood obesity prevention is a complex and multidimensional area of practice involving different domains of nursing, namely pediatric nursing, community and public health nursing, school nursing, and family health nursing. Despite their different emphases, these areas contribute in complementary ways to promoting healthy lifestyles and implementing preventive interventions in family, school, and community settings. Several studies indicate that promoting healthy eating habits early in life is more effective than treating children with overweight through dietary interventions.^{8,11}

Despite advances in research, a gap remains in understanding how family dynamics and the specific role of nurses can be better integrated into childhood obesity prevention strategies. Although a body of evidence highlights the importance of parental influence and the family context in childhood obesity, many aspects remain underexplored.¹²

Although growing recognition of the role of nursing in childhood obesity prevention, evidence on interventions developed by nurses remains scattered across different care settings and specialty areas. This dispersion makes it difficult to identify the most commonly used strategies and their potential contributions to promoting child and family health.

This review aimed to map and synthesize the existing scientific evidence on nursing interventions for childhood obesity prevention, contributing to the consolidation of knowledge in this area and the development of evidence-based clinical practices.

In this context, the review question was formulated using the Population, Concept, and Context (PCC) framework as follows: What nursing interventions targeting families with children (Population) are used for childhood obesity prevention (Concept) across different health care settings, including primary health care (PHC), community, school, and family settings (Context)?

Methods

A search for scientific articles relevant to the topic was conducted in MEDLINE (via PubMed) and CINAHL (via EBSCO). MeSH terms were used. This scoping review was conducted according to Joanna Briggs Institute (JBI) methodological guidance to map and analyze the existing scientific evidence on nursing interventions for childhood obesity prevention.

The protocol for this scoping review was previously registered in the Open Science Framework (OSF) under DOI 10.17605/OSF.IO/JVKH2, thereby enhancing the transparency, traceability, and reproducibility of the methodological process.

Nursing practice should be based on the best available scientific evidence, ensuring effective, safe care responsive to the population's needs. The systemic use of evidence strengthens the quality of clinical decision-making and contributes to continuous improvements in health^{13,14}.

The review was conducted according to the steps outlined in the JBI Manual for Evidence Synthesis, namely: formulation of the review question based on the PCC framework; development of the search strategy; study selection and data extraction; and narrative and descriptive presentation of the results¹⁵. Accordingly, this

scoping review constitutes a rigorous and appropriate methodological approach to consolidating knowledge of nurses' role in childhood obesity prevention.

Inclusion criteria

The inclusion criteria were essential for guiding the search and ensuring the relevance of the selected studies, so that the review remained focused and aligned with the proposed objective. Accordingly, the eligibility criteria were defined using the PCC framework, following JBI methodological guidance, to ensure that the review addressed the review question in a structured manner.

As for the Population (P), studies involving families with children aged 0–18 years were included, with particular emphasis on families of children at risk for childhood obesity or with overweight.

For the Concept (C), studies that described or evaluated nursing interventions for childhood obesity prevention were considered, explicitly including educational interventions (e.g., nutrition education, promotion of physical activity), behavioral interventions (e.g., lifestyle modification, promotion of healthy routines), and community- or family-based interventions (e.g., family-centered programs, home visits, parent skills-building), provided that they were delivered or mediated by nurses.

With respect to the Context (C), studies conducted in PHC, community, school, or home settings were included, provided that they involved nursing care with a focus on families and childhood obesity prevention. Studies conducted exclusively in hospital settings without a preventive or family component were excluded.

Primary studies and reviews were included, consistent with the purpose of scoping reviews to comprehensively map the existing evidence on a given phenomenon. The inclusion of both types of studies made it possible to identify nursing interventions described in original studies and to synthesize knowledge previously consolidated in systematic reviews, meta-analyses, and other literature reviews. It is recognized, however, that this methodological choice may introduce evidence overlap, which was considered when interpreting the results.

Regarding study type, quantitative, qualitative, and mixed-methods studies were included, as well as literature reviews, experimental and quasi-experimental studies, and observational and descriptive studies, provided that they reported relevant data on nursing interventions.

Studies published from 2014 to 2025 were considered to ensure the inclusion of current scientific evidence aligned with contemporary nursing and public health practices, particularly in childhood obesity prevention. The 10-year time frame makes it possible to balance the breadth of the review with the relevance of the included data while avoiding the incorporation of outdated evidence given developments in interventions and health policies.

The restriction to Portuguese and English was justified by the reviewers' language proficiency and the broad representation of scientific literature in these languages, while acknowledging the potential language bias associated with this choice.

Search strategies

The search strategy for this scoping review was carefully planned to ensure comprehensive and systematic identification of studies relevant to the review question. Controlled vocabulary terms (MeSH) and free-text terms related to the Population, Concept, and Context of the review were used. The strategy was adapted to each database searched.

The search was conducted in MEDLINE (via PubMed) and CINAHL (via EBSCO), selected because they are major sources of scientific information in health, nursing, and public health. MEDLINE provides broad coverage of the international biomedical literature, whereas CINAHL provides specialized literature in nursing and the health professions. The use of these databases made it possible to identify relevant and complementary evidence to address the review question, as shown in Table I. It is acknowledged, however, that the exclusion of other databases, such as Scopus, Web of Science, or Embase, may have limited the retrieval of some potentially eligible studies.

Following JBI recommendations, the search was conducted in three sequential stages. In the first stage, an initial exploratory search was conducted in MEDLINE (via PubMed) and CINAHL (via EBSCO) to identify the most frequent words and phrases in titles, abstracts, and indexing terms (MeSH and DeCS) related to childhood obesity and nursing interventions for its prevention.⁴

In the second stage, based on the terms identified, a detailed search strategy was developed and adapted to each selected database and repository, ensuring that the search terms and Boolean operators ("AND," "OR") were appropriate to the specific features of each platform. In the third stage, the reference lists of the included studies were checked to identify additional relevant articles not retrieved in the initial search.

All search results were exported to the EndNote 21 reference management software, which enabled reference organization and automatic duplicate removal, thereby ensuring rigor and transparency in the study selection process.

Table 1. Database search strategy

Search date	Database	Search terms	Search results
January 18, 2025	PubMed	("Child"[Mesh] OR child* OR pediatric*) AND ("Obesity"[Mesh] OR obes* OR overweight) AND ("Nursing"[Mesh] OR nurse* OR nursing intervention*) AND ("Family"[Mesh] OR famil* OR parent*) AND ("Prevention and Control"[Mesh] OR prevention OR intervention*)	136
January 18, 2025	CINAHL	("family" OR "parents") AND ("child") AND ("obes*") AND ("nurs*") AND ("intervention")	56

Study/Source of Evidence Selection

EndNote software (version 21) was used to organize and manage the references, facilitating the identification and removal of duplicates and ensuring accuracy in study selection. Screening was conducted by two independent reviewers based on predefined eligibility criteria. Disagreements were resolved by consensus, with a third reviewer consulted whenever necessary. Information on study characteristics was extracted using a predefined instrument aligned with the review objectives, including author(s), year of publication, country of origin, study design, population characteristics, intervention setting, type of nursing intervention, and main findings. When necessary, discrepancies between reviewers were resolved by consensus, with a third reviewer consulted.

After data extraction, an inductive thematic analysis of the findings was conducted. Initially, the characteristics of the interventions described in each study were identified, including objectives, components, target population, implementation setting, and the role of nurses. Subsequently, the studies were grouped according to conceptual and operational similarities, allowing the thematic categories presented in the Results to be developed progressively. This process was carried out iteratively by the reviewers until consensus was reached on the final structure of the categories.

Results

The study selection process is detailed in the flow diagram in Figure 1, prepared in accordance with the PRISMA Extension for Scoping Reviews (PRISMA-ScR) guidelines.

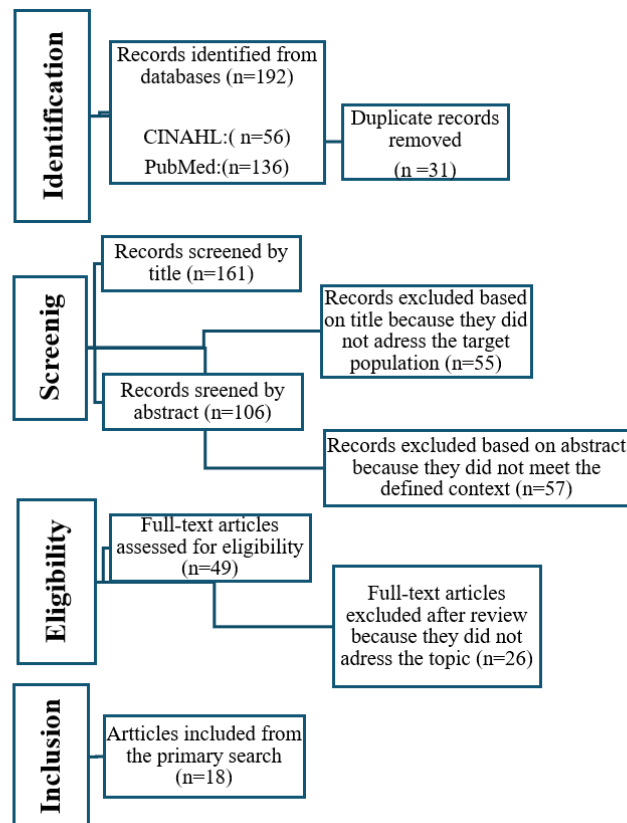


Figure 1 - Flowchart of the study selection process.

The search strategy resulted in the identification of 192 articles, 136 from MEDLINE (via PubMed) and 56 from CINAHL (via EBSCO). After 31 duplicates were removed using EndNote software (version 21), 161 unique articles underwent screening. Of these, 112 were excluded because they did not meet the inclusion criteria: 55 did not address the target population (families with children at risk for childhood obesity), and 57 did not meet the defined context (PHC). Consequently, 49 articles were selected for full-text review, of which 18 met all eligibility criteria and were included in the final analysis.

Table II was also prepared to present the 18 studies included in the review, highlighting their main characteristics, such as authors, year of publication, country of origin, and study type. Portuguese studies were sparsely represented, and those identified were recent, dating from 2023 and 2024.

The table provides a comprehensive and structured overview of the available evidence and facilitates understanding of the selected studies.

Table 2. Key characteristics of the studies, settings, and nursing interventions

Nº	Author(s)/ Year	Country	Study design	Population	Setting	Nursing intervention
1	Anggraini & Pratiwi (2024)	Indonesia	Quasi-experimental study	Child with obesity and family	Family/community	Family-centered educational program, nutrition education, and family follow-up
2	Wills-Ibarra et al. (2024)	United Kingdom	Scoping review	Children and families	Family	Family systems-based interventions
3	Nygaard & Øen (2024)	Sweden	Quantitative	Children and families	Primary health care	Ongoing follow-up in PHC
4	Koetsier et al. (2023)	Netherlands	Qualitative	Families and professionals	Pediatric care	Psychosocial assessment and therapeutic communication

5	Whitehead et al. (2021)	Australia	Systematic review	Children and adolescents	School, community, and family	Nurse-led interventions involving nutrition education and physical activity
6	Santos et al. (2021)	Brazil	Exploratory	Family health nurses	Primary health care	Care coordination and health education
7	Roy et al. (2023)	New Zealand	Observational	Preschool-aged children	Family	Sleep hygiene interventions
8	Karakitsiou et al. (2024)	Greece	Qualitative	Children and families	Community	Interventions focused on family and social determinants
9	Aleid et al. (2024)	Saudi Arabia	Meta-analysis	Children and parents	Family	Parent skills-building interventions
10	Brown et al. (2019)	Multiple countries	Systematic review	Children	School, community, and family	Multicomponent programs
11	Mahmood et al. (2021)	Spain	Descriptive	Children and families	Family	Nutrition education and family counseling
12	Ahmed et al. (2023)	United Kingdom	Systematic review	Primary care health professionals	Primary health care	Diagnosis and intervention for childhood obesity
13	Van den Eynde et al. (2024)	Netherlands	Qualitative	Families and professionals	Integrated care	Integrated and tailored care
14	Cheng et al. (2021)	Australia	Scoping review	Children and adolescents	Multiple settings	Nurse-led interventions
15	Llewellyn et al. (2016)	United Kingdom	Systematic review	Children	General population	Early prevention strategies
16	Holmen et al. (2025)	Norway	Systematic review	Children with overweight and parents	Family and community	Promotion of parental health literacy
17	Thompson et al. (2021)	United States	Cross-sectional	Children and school professionals	School	Reducing obesity-related stigma
18	Paes et al. (2015)	United Kingdom	Qualitative	Children and families	Family	Exploration of early dietary determinants

The analysis of the 18 included studies identified different nursing interventions for childhood obesity prevention, implemented in family, community, school, and PHC settings. Despite methodological heterogeneity across the studies, the interventions could be grouped into four main categories: (1) Educational interventions targeting children and families; (2) Parent and family skills-building interventions; (3) Interventions promoting physical activity and healthy lifestyles; and (4) School- and community-based interventions.

It should be noted that not all included studies described nursing interventions in the strict sense. Some studies focused on identifying determinants of childhood obesity, barriers to the implementation of preventive programs, or health professionals' perceptions of care for children with overweight. However, these studies were retained in the review because they provided relevant contextual information for understanding the factors that influence the development, implementation, and effectiveness of nursing interventions. Their inclusion provided a broader understanding of the phenomenon under study, consistent with the exploratory purpose of scoping reviews to map the available evidence and factors associated with the phenomenon of interest. These studies were not considered sources of evidence on intervention effectiveness, but rather contributions to understanding the contextual factors that shape nursing practice in childhood obesity prevention.

Educational interventions targeting children and families

Educational interventions constituted the strategy most frequently identified in the studies analyzed. These interventions included nutrition education, nutrition counseling, promotion of healthy food choices, and development of skills for adopting health-promoting lifestyles.^{8,16}

The studies showed that nurse-led educational programs contribute to improving knowledge among children and their caregivers about healthy eating, overweight prevention, and the importance of regular physical activity. The results also tend to be more favorable when educational activities involve both children and their caregivers, promoting consistent changes in the family environment.^{17,18,19,20}

Parent and family skills-building interventions

The second category identified refers to interventions focused on building the skills of parents and caregivers. The studies analyzed show that nurses play an important role in strengthening parenting skills related to diet, management of family routines, organization of mealtimes, reduction of sedentary behavior, and promotion of physical activity.^{10,12, 21}

The strategies used included individual counseling, family follow-up, home visits, motivational interviewing, and decision-making support. The results suggest that active parental involvement is one of the most important factors in the success of preventive interventions, supporting sustained changes in children's health behaviors⁶.

Interventions promoting physical activity and healthy lifestyles

Several studies identified interventions aimed at promoting physical activity and reducing sedentary behaviors. These strategies included structured exercise programs, encouragement of regular participation in recreational activities, reduction of screen time, and promotion of healthy sleep habits.^{16,22}

The results indicate that combining physical activity, nutrition education, and family follow-up produces greater benefits than isolated interventions. Parental involvement was also found to increase children's adherence to healthy lifestyle recommendations.²³

School- and community-based interventions

School and community settings emerged as favorable environments for implementing childhood obesity prevention programs. The studies analyzed describe interventions implemented in schools, community centers, and PHC services, often coordinated or supported by nurses.^{1,7}

The interventions included educational sessions, nutritional status screening, periodic follow-up of children, and coordination among families, schools, and health services. The results suggest that strategies implemented in these settings help create health-promoting environments and reinforce the adoption of healthy behaviors by children and their families.

Overall, the studies analyzed show that the nursing strategies most frequently associated with favorable effects are those that combine health education, parent skills-building, promotion of physical activity, and ongoing family follow-up. The evidence identified in the review reinforces the importance of multicomponent, family-centered approaches, highlighting the strategic role of nurses in childhood obesity prevention across different care settings.

Discussion

The findings of this scoping review showed that nursing interventions for childhood obesity prevention favor multicomponent, family-centered approaches that integrate health education, parent skills-building, promotion of healthy eating habits, encouragement of physical activity, and ongoing follow-up. The analysis of the included studies showed consensus on the central role of the family in the adoption and maintenance of health-promoting behaviors, reinforcing that interventions targeting only the child provide more limited benefits than those that actively involve parents and caregivers.^{1,12,17,24} This finding is consistent with the multifactorial nature of childhood obesity, in which family behaviors, the home environment, and social determinants of health substantially influence the risk of becoming overweight.

Parental involvement was the main element shared across the identified interventions, although the studies used different strategies to promote this participation. While Aleid et al.¹² showed in a meta-analysis that interventions with active parental involvement have a greater impact on childhood obesity prevention, Wills-Ibarra et al.²⁵ emphasized the importance of family systems-based approaches, highlighting interactions among family members as a key factor in behavior change. In addition, Mahmood et al.²¹ showed that parents' dietary habits and lifestyles directly influence children's behaviors, suggesting that building caregivers' skills is essential to the effectiveness of interventions. Taken together, these studies support prioritizing childhood obesity prevention strategies that target the family as the unit of care rather than interventions centered exclusively on the child.

Educational interventions represented the nursing strategy most frequently described in the included studies. However, comparison across the studies shows that providing information alone yields limited benefits when not accompanied by behavioral support strategies and ongoing monitoring. The Cochrane review by Brown et al.¹⁸ concluded that multicomponent programs are more effective in childhood obesity prevention, a finding also reported by Cheng et al.⁷, whose scoping review identified better outcomes in nurse-led interventions combining nutrition education, promotion of physical activity, goal setting, regular follow-up, and family involvement. Whitehead et al.¹ also found that intervention effectiveness depends on integrating different

components, highlighting that nurses' role extends beyond traditional education to include ongoing skills-building, follow-up, and support for behavior change.

Despite convergence on the importance of family-based interventions, differences were observed in the structure, duration, and intensity of the programs implemented. Some studies prioritized short-term interventions centered on health education, whereas others developed longer-term programs integrating individualized follow-up and ongoing assessment of family needs. This methodological heterogeneity makes direct comparison of the results difficult and limits the identification of the components responsible for the more favorable effects. However, there is a consistent trend toward greater effectiveness among interventions that combine different strategies and include follow-up over time, suggesting that continuity of care is a key factor in consolidating behavior change.^{7,18,25}

Another aspect highlighted by the studies was the importance of continuity in the therapeutic relationship established between nurses and families. Nygaard and Øen⁸ note that ongoing follow-up fosters trusting relationships and facilitates the identification of each family's specific needs, allowing interventions to be progressively tailored. This perspective is also consistent with Whitehead et al.¹, who argue that nurses are well-positioned to support families throughout child development, promoting early and sustained preventive interventions. Thus, the findings of this review reinforce the specific contribution of nursing to childhood obesity prevention, not only through health education but also through parent skills-building, growth monitoring, and the promotion of family environments conducive to adopting healthy lifestyles.

The analysis of the studies also identified several factors that affect the implementation of nursing interventions. Although there is consensus on the relevance of family-centered approaches, difficulties persist in relation to families' adherence to recommendations, low health literacy, socioeconomic constraints, and insufficient coordination across different care settings. Koetsier et al.²⁶ showed that professionals recognize limitations in psychosocial approaches to families and in managing factors that affect behavior change, while van den Eynde et al.²⁷ highlighted that the implementation of integrated models remains dependent on coordination across health care, school, and community settings. These findings suggest that intervention effectiveness depends not only on nurses' competencies but also on organizational, family, and social factors that shape implementation.

Despite the methodological diversity of the included studies, there is consistency regarding the components considered essential to successful interventions. Health education, parent skills-building, individualized goal setting, ongoing monitoring, and positive reinforcement were identified as complementary strategies rather than standalone interventions. This observation is consistent with the findings reported by Cheng et al.⁷ and Whitehead et al.¹, who argue that nurse-led interventions produce better outcomes when they integrate different components and are tailored to the specific needs of children and their families. Thus, the findings of this review reinforce that childhood obesity prevention requires personalized and sustained interventions rather than standardized or exclusively informational approaches.

It is also important to consider that heterogeneity in study designs, population characteristics, and outcome measures made direct comparisons across studies difficult. In addition to differences in intervention duration and intensity, variability was observed in the description of nurses' specific competencies, the instruments used to assess outcomes, and follow-up periods, limiting the identification of the components responsible for the more favorable effects. This limitation, common to scoping reviews, does not compromise the mapping of the available evidence but highlights the need for studies using more comparable methodological approaches and providing more detailed descriptions of the interventions implemented.

The implications for clinical practice are particularly relevant. The findings of this review reinforce that nurses are well-positioned to deliver preventive interventions from the earliest years of life, establishing close therapeutic relationships with families and promoting the adoption of healthy lifestyles. Integrating these interventions into PHC may facilitate the early identification of risk factors, monitoring of child growth, and implementation of prevention strategies tailored to each family's needs. At the same time, the findings support the importance of investing in nurse training in areas such as motivational interviewing, family-centered communication, and the promotion of health literacy, competencies essential for facilitating sustained behavior change.^{6,13,28}

Regarding future research, the findings highlight the need to conduct primary studies with greater methodological rigor, using experimental or quasi-experimental designs and incorporating longer follow-up periods and standardized outcome measures. It will also be important to describe nursing interventions in greater detail, specifying their duration, intensity, components, and follow-up strategies, thereby making it possible to identify which elements contribute most to childhood obesity prevention and facilitating the replication of effective programs across different care settings.

In summary, this scoping review showed that nurses play a central role in childhood obesity prevention through multicomponent, family-centered interventions based on health education, parent skills-building, promotion of

healthy lifestyles, and ongoing follow-up. Comparison of the included studies shows consistent agreement on the importance of these strategies, although challenges related to intervention heterogeneity and barriers to implementation remain. These findings reinforce the need to strengthen evidence-based nursing programs developed in close collaboration with families and coordinated across different care settings, contributing to more effective and sustainable childhood obesity prevention.

Implications for clinical practice

The findings of this review reinforce the need to develop structured, family-centered nursing interventions tailored to the sociocultural characteristics of each setting. Implementing multicomponent programs grounded in continuity of care and coordination across different sectors may help improve the effectiveness of childhood obesity prevention strategies and strengthen nurses' role in promoting child and family health.

In this context, PHC provides a particularly favorable setting for implementing preventive strategies, allowing nurses to provide ongoing interventions and monitor families' progress over time.

Conclusion

This scoping review mapped the nursing interventions described in the literature for childhood obesity prevention, showing that family-centered strategies are most frequently associated with positive outcomes. The interventions identified include nutrition education programs, promotion of physical activity, parent skills-building, ongoing family follow-up, and initiatives implemented in school and community settings.

The findings reinforce the importance of family involvement as a central element in the effectiveness of nursing interventions.

Nurses' role is particularly relevant in PHC and family health nursing, contexts that support a preventive, ongoing approach centered on the needs of children and their families.

The findings suggest that interventions integrated and coordinated across health care, school, and community sectors have greater potential to promote sustainable changes. However, challenges related to socioeconomic barriers, resource limitations, and heterogeneity in the interventions described in the literature persist and may compromise their implementation and sustainability.

Although the literature reviewed reinforces the contribution of nursing to childhood obesity prevention, considerable variability was found in study designs and descriptions of the interventions, making it difficult to compare results and identify the most effective strategies. Accordingly, primary studies with greater methodological rigor and more detailed descriptions of nursing interventions are recommended to strengthen the available evidence and support evidence-based clinical decision-making.

In summary, this review reinforces nurses' contribution to childhood obesity prevention, supporting the development of family-centered interventions based on the best available evidence.

Study limitations

Some limitations inherent to this review should be acknowledged. First, the literature search was conducted exclusively in MEDLINE and CINAHL and may therefore not have identified all the available evidence on the topic. In addition, the inclusion of only studies published in Portuguese and English may have contributed to language and publication bias.

Considerable methodological heterogeneity was also observed in the included evidence, which encompassed quantitative, qualitative, and mixed-methods studies, as well as different types of reviews. This diversity made direct comparison of the results difficult and hindered the unequivocal identification of the most effective approaches.

Another relevant limitation concerns the variability in the description of nursing interventions. In several studies, the components, duration, and intensity of the strategies, as well as the outcome measures, were not described in sufficient detail, limiting comparative analysis and the possibility of replication across different settings.

It should also be noted that some of the included publications focused primarily on determinants of childhood obesity, barriers to implementing care, or professionals' perceptions, without describing specific nursing interventions. Although these studies contributed to understanding the phenomenon, their inclusion may have influenced the final synthesis of the results.

Lastly, because this is a scoping review, no critical appraisal of the methodological quality of the included studies was performed, consistent with this methodology. Consequently, the findings should be interpreted as a mapping of the available evidence rather than an assessment of the effectiveness of the interventions identified.

Author contributions

CN: Study conception and design; Data collection; Data analysis and interpretation; Drafting the manuscript; Critical review of the manuscript; Approval of the final version of the manuscript and assumption of responsibility for it.

ES: Study conception and design; Data collection; Data analysis and interpretation; Drafting the manuscript; Critical revision of the manuscript; Approval of the final version of the manuscript and taking responsibility for it.

RF: Conception and design of the study; Data collection; Analysis and interpretation of data; Drafting the manuscript; Critical review of the manuscript; Approval of the final version of the manuscript and taking responsibility for it.

PF: Critical review of the manuscript; Approval of the final version of the manuscript and taking responsibility for it.

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Data availability statement

The data and materials that support the results of this study are available upon request from the corresponding author.

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