# Literatur Review: Family-Based Nutrition Intervention Strategies for Improving Children's Nutritional Status

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## ABSTRACT

Background: The family forms the foundation for providing the best possible care, particularly in terms of improving children's nutrition; consequently, mothers play a crucial role in providing nutrition, as do other family members. Objective: To analyse family-based nutritional intervention strategies to address wasting, stunting, and underweight in children under five years of age. Methods: A PRISMA-based systematic review (2021–2026) utilising the Google Scholar, ScienceDirect, and PubMed databases. Article quality was assessed using the JBI critical appraisal tool, resulting in eight final articles for analysis. Results: The implementation of Family-Centred Care (FCC) education involving all household members (including husbands) significantly improved child feeding practices ($p=0.043$). Integrated growth monitoring programmes (GMP) proved effective in improving children's anthropometric Z-scores. Furthermore, expanded access to healthcare empowered mothers economically to provide a more diverse diet. Conversely, low income, low parental education, and the tendency of poor families to prioritise harmony during meals over nutritional value were the main barriers to the intervention. Conclusion: Sustainable improvement in infant and toddler nutrition requires strengthening mothers' economic capacity and active support for the family ecosystem through community-based health policies.

Keywords: Child Nutrition, Family-Centered Care, Malnutrition, Dietary Diversity.

## INTRODUCTION

Improving the well-being of mothers and children is one of the most significant policy priorities in many developing countries. In these regions, structural and institutional barriers often hinder access to healthcare services, which ultimately exacerbates children's health status. Malnutrition among children under the age of five is a serious global challenge and one of the leading causes of child mortality. This situation is far more critical in rural areas and among poor households, where the rates of stunting and severe malnutrition are significantly higher than in urban areas. A lack of dietary diversity and essential micronutrients such as animal products and fruits and vegetables rich in vitamin A, directly threatens children's growth and cognitive function. Resolving the challenge of malnutrition, families play a central role as the primary unit of care. Health and social interventions designed to target maternal well-being have been shown to have a strong downstream impact on the health and social outcomes of their children. This intergenerational relationship demonstrates that mothers and families serve as the primary channel for transferring knowledge, norms, and best practices regarding investment in children's wellbeing. Intervention programmes focused on strengthening family capacity not only serve as a form of health support but also enhance families' agency and ability to manage their children's nutritional needs independently (Efobi et al., 2024).

The intensity and scope of services available to families at the community level largely determines the intensity The success of child nutrition improvement programmes. The presence of adequate health facilities in the vicinity of people's homes increases the frequency of contact between families and health professionals. This, in turn, creates a mutually reinforcing cycle between family economic empowerment and improvements in children's dietary diversity. Consequently, the role of the family as the primary pillar of care—supported by expanded access to healthcare and the economic empowerment of mothers can effectively reduce the risk of malnutrition and improve the quality of nutritional intake for children under five (Janaki et al., 2025). Optimal child nutrition and development are determined by factors relating to diet, behaviour and health, which are influenced by food security, parenting resources and environmental conditions. Low-income households typically rely on a monotonous diet dominated by staple foods, and a lack of dietary diversity is associated with inadequate intake and the risk of essential micronutrient deficiencies. Food production is only one factor in the availability and consumption of nutrients. Food is stored, distributed, processed, marketed, prepared, and consumed in ways that affect access, acceptance, and the nutritional quality of food for consumers during critical stages of the life cycle, including infancy, childhood, and adolescence (Gelli et al., 2025).

Dietary patterns and other eating behaviours are established in childhood and continue throughout a person's life, contributing to their relative risk of preventable diseases. Factors contributing to deviations from these nutritional guidelines include parental feeding practices, which impact dietary quality, food intake, and weight gain in six-month-old infants. Therefore, the early years of life are crucial in shaping the development of health-promoting dietary patterns and food-related behaviours associated with the risk of lifestyle-related diseases (Bailey et al., 2020). Exclusive breastfeeding is one of the key indicators in addressing child nutrition issues. Feeding practices typically begin with exclusive breastfeeding for the first 0–6 months, followed by the introduction of solid foods at 6–24 months. The introduction of complementary foods plays a crucial role in meeting the nutritional needs of children that cannot be met by breastfeeding alone. This process begins when breast milk alone is no longer sufficient to meet the infant's nutritional needs, necessitating the introduction of foods and fluids other than breast milk. Consequently, the transition from exclusive breastfeeding to family foods is referred to as complementary feeding. As a result, the period from birth to the age of two years has been recognised as the optimal time for fostering healthy eating habits (Munjahidah et al., 2024).

## METHODS

A. Design and Search Methods

The search for this literature review was conducted across three databases: Google Scholar, Science Direct, and PubMed, covering articles published between 2021 and 2026. The process of extracting articles for this review utilised specific clinical questions related to PCC [Population (P), Concept (C) and Context (C)]. Population (P) refers to children with nutritional, Concept (C) family based for improving nutritions (C) refers to the community environment. We used several keywords with a Boolean search, namely "Family-Based Nutrition Intervention Strategies for Improving Children's Nutritional Status at 0-2 years old". The selection of articles in this study followed the method known as "Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA)".

B. Research question

This literature review aims to answer the following question: what is the Family-Based Nutrition Intervention Strategies for Improving Children's Nutritional Status for wasting, stunting and underweight at 0-2 years old? To determine the validity of the question based on the literature review, the population, exposure and outcomes were considered.

C. Inclusion and Exclusion Criteria

The inclusion criteria for this study are as follows: (1) scientific articles discussing feeding guidelines; (2) empirical research articles published within the last five years (2021–2026); (3) full-text publications with open access; and (4) original research papers. Exclusion criteria all systematic or literature review

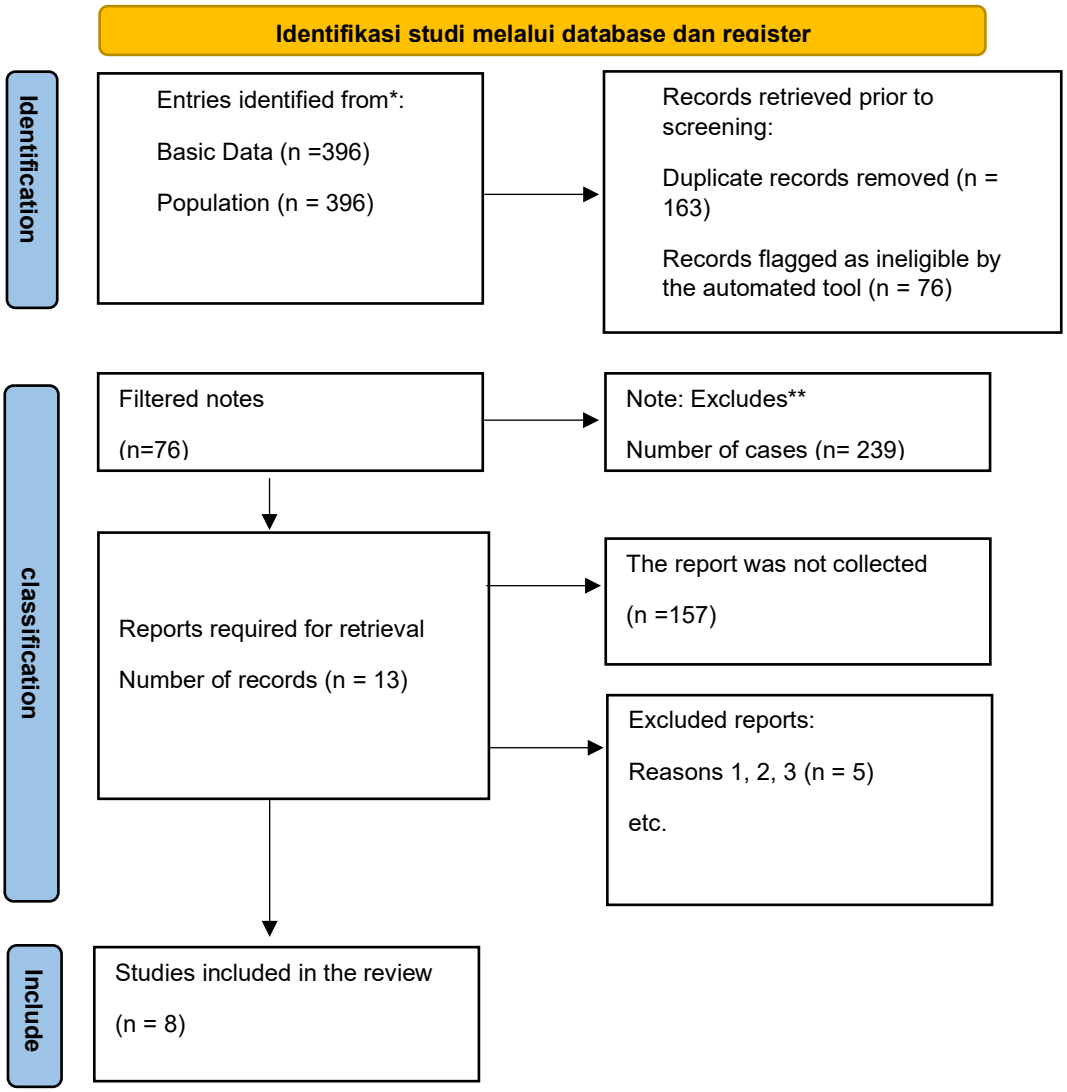
## RESULTS

A. Search Results

The team's search results were found in the Google Scholar database: 194, ScienceDirect: 94, and PubMed: 108. Filtering by year and remove the duplicate articles left 157 articles; subsequent screening of titles, abstract, and availability of full-text articles reduced this to 26; and screening based on inclusion and exclusion criteria (eligibility criteria) left 11 articles. Subsequently, the articles underwent quality assessment using the JBI critical appraisal tool, and 2 articles were excluded; thus, the remaining 8 articles were analysed (Figure 1).

B. Data Extraction and Analysis

At this stage, a total of 8 articles were extracted and analysed to identify the authors, year of publication, country of origin, objectives, population and sample size, methods, and key findings based on the review questions.




## C. Quality Assessment

Prior to conducting the quality assessment, the authors' team thoroughly reviewed the ten selected full-text articles. Following this initial review, a critical appraisal was carried out using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist applicable to cross-sectional analytical studies, case-control studies, randomised controlled trials, quasi-experimental studies, cohort studies, and qualitative research. All ten articles underwent quality assessment using the relevant JBI tools and were found to meet the required standards. Consequently, no articles were excluded on the basis of quality assessment.

**Table 1. General Information of the Included Articles**

| No | Authors | Year of Publication | Country of Origin | Continent |
|---|---|---|---|---|
| 1. | Liu et al., | 2025 | Cambodia | Asia |
| 2. | Parajuli et al., | 2025 | Thailand | Asia |
| 3. | Munjahidah et al., | 2024 | Indonseia | Asia |
| 4. | Richard et al., | 2020 | Australia | Australia |
| 5. | Uchenna et al., | 2024 | Nigeria | Afrika |
| 6. | Sanne et al., | 2021 | Belanda | Eropa |
| 7. | Sunny et al., | 2019 | India | Asia |

**Table 2. Summary of Included Articles**

| No | Authors, years | Research Purposes | Research Design | Setting | Research Population |
|---|---|---|---|---|---|
| 1. | Liu et al., | to investigate the impact of a longer mixed-family and community-based growth monitoring and promotion (GMP) program on the growth trajectories of children in developing countries. | The study used a prospective longitudinal design. | The study was conducted in Pot Sar commune, Takeo province, a rural area in Cambodia**,** from 2017 to 2020, involving a community-based program. | The population in this study were children under 5 years old who lived in Pot Sar Commune, Takeo Province, Cambodia, and participated in the Growth Monitoring and Promotion (GMP) program. |
| 2. | Parajuli et al., | This review aims to examine adolescent nutrition as a critical and often neglected component of global health agendas. | This study uses a Narrative Review design | The scope and setting of this review are Global and Regional. Data were obtained by screening various | The primary population focused on in this literature analysis is Adolescents aged 10–19 years. Approximately |

| No | Authors, years | Research Purposes | Research Design | Setting | Research Population |
|---|---|---|---|---|---|
| | | Additionally, it explores the 'triple burden' of malnutrition (undernutrition, micronutrient deficiencies, and overnutrition) affecting this population and analyzes the individual, social, environmental, and socio-economic factors influencing adolescent nutritional status. | | international literatures as well as official reports from leading global health organizations such as WHO, UNICEF, and FAO. | 110 relevant scientific references were selected and critically reviewed to draw the final conclusions regarding the health and nutrition of this age group |
| 3. | Munjahidah et al., | The objective of this study was to determine the effectiveness or efficacy of implementing family-centered care in changing child feeding practices. | The research design employed in this study was a true experimental analysis with a pre-posttest group design. | The study was conducted in the Wonokromo sub-district, Surabaya City, East Java, Indonesia, with thedat collection period spanning from March to June 2023. | The population consisted of 130 respondents, specifically families with infants/babies aged 6 to 23 months.The participants included both boys and girls who were not currently ill or suffering from congenital defects,and belonged to Muslim, Javanese, and Madurese families.They were selected using a probability sampling technique,specifically purposive random sampling. |
| 4. | Richard et al., | The primary objective of this study is to evaluate the effectiveness of the PICNIC peer-education intervention in improving child feeding practices and the dietary intake of children | This study utilizes a prospective, multi-center, non-experimental pre-test/post-tes cohort study design. | The study is set within the Mid North Coast Local Health District (MNCLHD) of New South Wales (NSW), Australia. It is conducted across various community | The target population consists of parents and caregivers of children aged 6 months to 3 years old living within the MNCLHD region. The participants are divided into |

| No | Authors, years | Research Purposes | Research Design | Setting | Research Population |
|---|---|---|---|---|---|
| | | aged six months to three years old. It aims to assess changes in parents' feeding practices, children's fruit and vegetable intake, and overall diet quality, while evaluating the feasibility and acceptability of the peer-education model. | | settings, including local playgroups, family support groups, and online spaces, across regional and rural areas. | two categories: Peer Educators (parents who undergo initial training) and Peer Learners (parents within the educators' existing social networks who receive the nutrition information). |
| 5. | Uchenna et al., | To investigate the impact of a nationwide maternal health program (SURE-P)—which targets both demand-side and supply-side factors—on the nutritional status of children under five years old. It also examines how expanding healthcare facility coverage affects child dietary diversity through maternal economic empowerment. | A quasi-experimental approach using the difference-in-differences (diff-in-diff) method by matching program beneficiary facilities to the districts and communities where households reside. | Rural areas and districts across 36 states and the Federal Capital Territory, Nigeria. | Children under five years old (cohort children) born during the implementation period of the SURE-P program (between 2012 and 2015) and their mothers, with data spanning responses from approximately 120,000 children from the DHS survey. |
| 6. | Sanne et al., | To analyze food practices in families with low socio-economic status and to explain how family households come to prioritize one food practice over another based on the values and capabilities of family members. | A theory-based qualitative ethnographic study using the capability approach and cultural schema theory as the analytical frameworks. Data were collected through in-depth | The Northern Netherlands region. | Family members from three generation (children, parents, and grandparents) living in households with low socio-economic status. |

| No | Authors, years | Research Purposes | Research Design | Setting | Research Population |
|---|---|---|---|---|---|
| | | | interviews and direct observations. | | |
| 7. | Sunny et al., | To determine the prevalence of undernutrition (such as underweight, stunting, and wasting) and its associated determining factors among under-five tribal children. | A community-based cross-sectional study. The association with determinants was assessed using a log-binomial regression model. | Tribal population areas in The Nilgiris, Tamil Nadu, Southern India. | Under-five children (under the age of five) from tribal populations (such as the Paniya,Katunayakan,Mulakurumba, and Betta Kurumba tribes), with a total sample size of 605 children. |

**Table 3. Family Based to Improving Nutritions**

| No | Writers, Years | Research Result |
|---|---|---|
| 2. | Liu et al., | The integrated GMP program significantly improved children's anthropometric indicators over time, as evidenced by increases in weight-for-age (WAZ), weight-for-length/height (WHZ/WLZ), and height/length-for-age (HAZ) Z-scores. The family-based interventions and active community engagement proved effective in reducing the prevalence of stunting, wasting, and underweight among children in rural Cambodia. |
| 3. | Parajuli et al., | Adolescent nutrition remains a "hidden crisis" with long-term implications for cardiometabolic diseases. However, adolescence represents a unique window of opportunity that is highly responsive to targeted nutritional interventions, including family-led programs, environmental reforms, and comprehensive policies. |
| 4. | Munjahidah et al., | The implementation of family-centered care education was proven effective in significantly improving child feeding practices (p=0.043). Engaging the whole family (such as husbands or other household relatives) plays a vital role in supporting successful child nutrition compared to focusing solely on the mother. |
| 5. | Richard et al., | This protocol outlines a framework to assess the feasibility of a model where trained parents pass on evidence-based nutritional knowledge to their existing social networks to improve children's fruit/vegetable intake and overall family diet quality. |

| No | Writers, Years | Research Result |
|---|---|---|
| 6. | Uchenna et al., | 1. The maternal health program significantly increased child dietary diversity (particularly the consumption of fruits, vegetables, and animal-source foods) in districts with two health facilities.<br>2. The presence of these facilities empowered mothers economically by enabling them to re-enter the labor market sooner after childbirth, thereby increasing their cash income to purchase nutritious food for their children. |
| 7. | Sanne et al., | 1. Families with low socio-economic status prioritized having a harmonious meal (avoiding conflicts with children, convenience, and shared comfort) over the nutritional/health value of the food.<br>2. Children's choices and agency were highly influential in determining food menus, which often led to less healthy food options because parents were reluctant to waste food due to financial constraints. |
| 8. | Sunny et al., | 1. The rate of undernutrition was critically high: 75% of children under five were undernourished (63% underweight, 62% stunted, and 31% wasted).<br>2. The primary driving factors included being male, children over 2 years of age, low family income, and having illiterate or uneducated parents (fathers or mothers). |

## DISCUSSION

The GMP programme is unlikely to succeed if mothers lack awareness of appropriate feeding practices or if they do not receive support from other family members. Another key factor influencing the success of the GMP is the mother's level of education. Various studies consistently show that higher levels of maternal education correlate with better child nutritional outcomes. In this region, we found that many caregivers are grandparents. Therefore, individually tailored nutritional counselling can address caregivers' knowledge gaps. Involving local stakeholders in the policy design process from the early stages allows us to tailor interventions to the specific needs of the community. This collaboration not only enhances the relevance and sustainability of the programme but also strengthens community support, increasing participation and adherence to GMP recommendations (Liu et al., 2025). Adequate nutritional intake is vital at all stages of life, but particularly in early life, not only to support rapid growth and physiological development, but also to lay the foundations for good health in the future. A range of factors, including brain development and understanding of health issues, as well as the family, social, and wider economic environments in which they live, eat, learn, work, and play, influence adolescents' dietary patterns and behaviour (Sunny et al., 2021).

In feeding practices following the implementation of a family-centred care model. This care model involves education for family members living in the same household. This study demonstrates the effectiveness of a family-centred care education approach in improving previously inappropriate child feeding practices. Traditionally, child care has largely focused on the mother-child relationship; however, this study involves the family, including the husband and other household members. Changes in child feeding practices following the delivery of education based on the family-centred care model largely shifted in a positive direction. This demonstrates the positive role of the family in child rearing, consistent with the theory that family-centred care can be applied across various healthcare settings and age groups. The core principles of family-centred care include mutual respect, information sharing, participation, and cooperation. The philosophy of family-centred care stems from an environment where families are empowered to support their mental health and contribute significantly to improving quality of life (Munjahidah et al., 2025)

Feeding practices encompass a range of elements, including the mother's management of meal schedules, menus, ingredients, preparation methods, serving styles, and feeding techniques, as well as how she handles feeding difficulties and her attitude when the child refuses to eat. Families who adopt a family-centred care approach will not only understand but also actively engage in their child's feeding practices. Two aspects of the family-centred approach to care serve as guidelines for midwives, nurses, and healthcare workers, highlighting the importance of family involvement in child care, and the family-centred approach can function as an effective strategy for changing child feeding practices (Munjahidah et al., 2025). The PICNIC study will expand on current research into early childhood nutrition by (i) examining parents' feeding practices in community settings, using a peer-education intervention model that can be implemented at the population level; (ii) collecting data on dietary intake and feeding practices for children aged between six months and three years over a 24-month period, thereby enabling an assessment of the intervention's effectiveness in the medium term; and investigating nutrition-related factors in a representative sample of rural children aged six months to three years, a demographic group previously under-represented in child nutrition studies (Ball et al., 2020)

## CONCLUSION

Based on the results of a study using a literature review method improvements in child nutrition are influenced by various factors, one of which is the role of the mother. The mother's role encompasses self-efficacy, education and income; furthermore, the importance of the family's role in supporting the mother is also crucial in enhancing factors that improve child nutrition. Programmes implemented by policymakers also play a significant role in improving child nutrition, particularly among children under the age of five.

**Conflicts of Interest:** there is no conflict of interest in this article

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