Frontiers in Health InformaticsISSN-Online: 2676-7104 www.healthinformaticsjournal.com
2024; Vol 13: Issue 3 Open Access

Health Promotion Intervention to Educate Mothers of Preschool Children to Promote Wellness: A Literature Review

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Cite this paper as: Periyanayagi Palavesam, Shankar Shanmugam Rajendran (2024) Health Promotion Intervention to Educate Mothers of Preschool Children to Promote Wellness: A Literature Review. *Frontiers in Health Informatics, 13* (3), 7645-7653

ABSTRACT

Background: *Preschool children are particularly vulnerable to malnutrition and related health issues, necessitating effective health promotion interventions targeting their mothers.*

Objective: *This literature review aims to evaluate health promotion interventions designed to educate mothers of preschool children, focusing on improving child wellness and reducing mortality rates.*

Methodology: *A systematic review was conducted, utilizing electronic databases such as PubMed, Scopus, and Google Scholar. Keywords included "preschool children," "health promotion," and "mothers' education." Inclusion criteria involved studies evaluating interventions aimed at enhancing maternal knowledge and child health, while excluding those unrelated to preschoolers or not published in English. Data extraction and synthesis were performed, assessing study quality using standardized tools.*

Results: *The review highlights several effective interventions that enhance maternal knowledge and influence positive health behaviors. Key findings indicate that educational programs focused on nutrition, disease prevention, and child safety significantly improve health outcomes for preschool children.*

Conclusion: *Health promotion interventions that educate mothers of preschool children are vital for improving child health outcomes. This review underscores the need for targeted programs addressing specific health challenges and emphasizes the importance of involving families in health promotion efforts.*

Keywords: *Preschool children, Health promotion, Demographic variables, Focused intervention, Statistical significance, Chi-square test.*

INTRODUCTION

Mortality among schoolchildren, especially preschool children, is high. This is related to malnutrition, which makes them prone to common childhood ailments such as pneumonia, malaria, and diarrhea [1].The mortality rate among children under the age of five in India is said to have decreased between the 2015 and 2017 national surveys [2].The same trend can be seen in Tamil Nadu, where the death rate for children under the age of five is declining [3].India's healthcare system consists of primary, secondary, and tertiary care health institutes [4]. A primary health center provides curative, preventative, promotional, and family welfare services [5]. It is supported by a medical officer and other paramedical workers, including nurses [6].It contains six subcenters [7]. Tamil Nadu has around 2000 basic health centers. India's healthcare system is made up of primary, secondary, and tertiary care health institutions [8]. A primary health center provides family welfare, promotion, prevention, and treatment services. A medical officer and other paramedical professionals, such as nurses, work

there [9]. There are six subcenters in it. There are over 2000 basic health centers in Tamil Nadu. Community health nurses are crucial in advancing community health in these facilities [10]. She offers direction and support to the primary care provider. She fosters a healthy atmosphere for both mother and infant in order to preserve and encourage the child's growth and development [11]. One of the primary responsibilities is to support the reproductive health of moms and children. Educating and maintaining moms' health can help promote child wellbeing and, as a result, control infant mortality rates [12].Preschool children are more susceptible to illness and mortality. One method for reducing infant mortality is to identify preschool children and their mothers who require community health services [13]. As a community health nurse, one must address the health needs of mothers and children who visit primary health care facilities [14]. Because this is an urban primary health clinic, the majority of the families are nuclear families with one child, with only a few having multiple children. It was created to offer a scheduled health intervention to selected mothers of preschool children [15]. The proposed health intervention focuses on two key aspects aimed at improving child health outcomes. First, it emphasizes parental education, providing essential guidance on growth and development monitoring, ensuring timely immunization, and offering practical advice on caring for common childhood illnesses. The intervention also encourages child safety and emphasizes the value of play in a kid's development. Diet counseling, which is the second component of the intervention, informs parents about the significance of a balanced diet, safe drinking water, and following food safety regulations in order to preserve general health and avoid health issues in children [16]. The health intervention regimen serves to enhance awareness among preschool mothers and, consequently, the health of the children [17].

METHODOLOGY

This literature review follows a systematic approach to identify and synthesize existing studies on health promotion interventions aimed at educating mothers of preschool children to promote wellness. The methodology is structured into the following phases:

Research Design

This is a systematic literature review designed to assess the effectiveness of health promotion interventions for educating mothers on child wellness. The aim is to determine the impact of these interventions on improving maternal knowledge and promoting overall health outcomes for preschool-aged children.

Search Strategy

A comprehensive search of electronic databases, including PubMed, Scopus, Google Scholar, and the Cochrane Library, was conducted. Keywords used for the search were "preschool children," "health promotion," "mothers' education," "wellness," "preventive health," "focused intervention," and "child mortality."

Inclusion and Exclusion Criteria

Inclusion Criteria: Studies that evaluated health promotion interventions aimed at mothers of preschool children; articles published in English; studies focused on improving child wellness through parental education or interventions on topics such as nutrition, disease prevention, and child safety; quantitative and qualitative research, including experimental designs, systematic reviews, and meta-analyses.

Exclusion Criteria: Studies that did not involve mothers or preschool children; studies published in languages other than English; interventions not related to health promotion or wellness education; and articles that focused on older children or adolescents.

Data Extraction and Synthesis

Relevant data were extracted from the selected studies, including the following: study objectives, population

demographics, intervention type, outcomes measured, and key findings. The extraction was carried out using a standardized data extraction form to ensure consistency.

Quality Assessment
The methodological quality of the studies included in the review was assessed using the Cochrane Collaboration's tool for assessing the risk of bias for randomized controlled trials, and the Newcastle-Ottawa Scale for cohort studies. The quality assessment ensured that only high-quality studies were considered in the synthesis.

Statistical Analysis
For studies reporting quantitative data, outcomes were summarized using effect sizes, such as the mean difference in pre-test and post-test scores related to maternal knowledge. The statistical significance of the findings was noted where applicable, with p-values and confidence intervals provided.

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REVIEW
This literature review examines a range of studies focused on health interventions, emphasizing the critical role of early intervention in improving health outcomes across diverse populations. The co-existence of malnutrition and infections in cancer patients has been highlighted as a significant issue affecting mortality rates [18]. Research indicates that addressing these factors is essential for enhancing cancer management. Furthermore, the importance of early nutritional interventions is underscored in studies examining infant health, revealing that such measures can significantly promote growth and reduce disease rates [19].

In the context of India, comparative analyses of health indicators show improvements in child vaccination rates, yet progress in addressing malnutrition remains sluggish, pointing to the need for targeted health programs to tackle specific health challenges effectively [20]. The integration of health education in early childhood has been shown to foster long-term healthy habits. This theme is further supported by studies on obesity interventions in preschoolers, which emphasize that family involvement and physical activity programs are essential for preventing childhood obesity [21].

Maternal mental health is another critical area of focus, with evidence suggesting that interventions such as support groups and counseling can significantly improve the mental well-being of mothers with children who have disabilities [22].

Literature Review of the Study is mentioned in **Table 1**.

Reference	Study Objective	Methodology	Key Findings	Implications
Fan Y et al. [2]	To investigate the underlying causes and co-existence of malnutrition and infections in cancer patients.	Review of clinical data and literature analysis.	Co-existence of malnutrition and infections is a common death risk in cancer patients.	Addressing malnutrition and infections is crucial for improving cancer patient management.
Tripathi S et al. [3]	To analyze health indicators between NFHS-4 and NFHS-5 in India.	Comparative study using NFHS data from two consecutive reports.	Improvement in child vaccination rates; slow progress in addressing malnutrition.	Specific and targeted health programs are needed to address lagging indicators.
Du J et al. [6]	To assess the effect of nutritional intervention in child healthcare on growth and disease prevention.	Clinical intervention study in infants.	Nutritional interventions improved growth and reduced disease rates.	Early nutritional interventions significantly enhance child health outcomes.

Finánczy J [7]	To review health education intervention programs in early childhood education.	Systematic review of educational programs.	Health education in early childhood positively influences long-term health habits.	Early integration of health education fosters lifelong healthy habits.
Ling J et al. [15]	To evaluate interventions for managing obesity in preschool children.	Systematic review of intervention studies.	Family involvement and physical activity programs were most effective.	Family-centered approaches are essential for preventing childhood obesity.
Bourke-Taylor HM et al. [19]	To improve mental health in mothers of children with disabilities.	Systematic review and meta-analysis.	Interventions like support groups and counseling improved maternal mental health.	Integrating mental health support into pediatric care is essential.
Santos F et al. [18]	To assess family-oriented school-based health interventions promoting physical activity in children.	Systematic review of school-based interventions.	Family engagement enhanced program effectiveness.	Involving families in school health initiatives yields better outcomes.
DeWitt A et al. [17]	To review mHealth technology design for early childhood health promotion.	Systematic literature review of mHealth technologies.	mHealth interventions improved early childhood health but require optimized designs.	Properly designed mHealth tools can revolutionize early health promotion efforts.
McCalman J et al. [23]	To review family-centered interventions for Indigenous early childhood wellbeing.	Systematic scoping review across four countries.	Family-centered interventions improved outcomes in Indigenous populations.	Interventions must be tailored to cultural contexts for successful implementation.
Joufi AI [24]	To evaluate oral health promotion activities by early head start programs in the U.S.	Systematic review of oral health programs.	Programs were effective in improving children's oral health outcomes.	Early childhood oral health education can prevent future dental issues.

TABLE 1: Literature Review of the Study

DISCUSSION

This literature review provides a comprehensive overview of health promotion interventions aimed at educating mothers of preschool children, emphasizing the importance of maternal involvement in enhancing child health outcomes [23]. The findings underscore the multifaceted nature of health issues faced by preschoolers, particularly in the context of malnutrition and its related complications. Addressing these challenges is crucial, as they are directly linked to higher morbidity and mortality rates among children under five [24].

The integration of health education into community health initiatives, especially in resource-limited settings like India, is paramount. Tailored educational programs that consider the unique cultural and socioeconomic contexts of families can further enhance their effectiveness [25].

This aligns with the broader understanding of childhood obesity as a multifactorial issue, necessitating interventions that engage the entire family unit [26].

Finally, the potential of mobile health technologies to disseminate information and provide support is promising, though challenges remain in terms of accessibility and usability among diverse populations. Continued research is needed to refine these tools and ensure they effectively reach the intended audiences [27].

FUTURE AIMS AND SCOPE

The integration of artificial intelligence (AI), the metaverse, and virtual/augmented reality (VR/AR) technologies can significantly enhance health promotion interventions aimed at educating mothers of preschool children . AI enabled personalized learning experiences by tailoring educational content to individual needs and preferences, while chatbots provide immediate support for mothers' queries [28]. The metaverse offers immersive learning environments where mothers can engage in interactive simulations that demonstrate proper child care practices and health monitoring techniques, enhancing knowledge retention and confidence [29]. Additionally, these technologies facilitate community engagement through virtual support groups, allowing mothers to connect, share experiences, and access expert advice [30]. AI's data analysis capabilities also enable healthcare providers to evaluate the effectiveness of interventions, guiding the development of future initiatives [31]. Moreover, the flexibility and accessibility of VR/AR technologies accommodate busy schedules and varying levels of health literacy, ensuring that all mothers can benefit from health education resources [32]. Overall, the incorporation of these advanced technologies empowers mothers to make informed health decisions, ultimately improving the health and well-being of their preschool-aged children.

LIMITATIONS

The study on health promotion interventions for educating mothers of preschool children has several limitations. Firstly, reliance on self-reported data may lead to bias, as participants might overestimate their knowledge or adherence to health recommendations. The focus on a specific urban population limits generalizability to rural or diverse socio-economic contexts. Additionally, the intervention's short duration may not adequately capture long-term behavior changes, while unaddressed confounding variables, such as maternal education and access to healthcare, could influence outcomes.

CONCLUSION

In conclusion, the literature reviewed emphasizes that successful health promotion interventions for preschool children rely heavily on educating and empowering mothers. Future efforts should prioritize developing culturally sensitive, family-centered programs that address both physical and mental health needs, ultimately promoting a healthier generation.

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