The Role of Nurses and Midwives In Handling Malnutrition Among Pregnant Women and Children: A Scoping Review

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Abstract

The incidence of under-five children suffering from malnutrition in Indonesia continues to rise. Nurses and midwives play a crucial role in providing appropriate interventions to prevent and manage malnutrition. Objective: This scoping review aims to identify and analyze the role of nurses and midwives in the management of malnutrition in pregnant women and children. Methods: The descriptive scoping literature review was conducted using databases such as Google Scholar, PubMed, ScienceDirect, Scopus, and ResearchGate, focusing on studies from the last five years based on inclusion criteria. Article selection were enforced following the PRISMA-ScR pathway. Results: Six articles highlight the roles of nurses and midwives in managing malnutrition in pregnant women and children. Nurses focus on monitoring nutritional status, health education, and medical interventions, while midwives emphasize nutritional monitoring during pregnancy, emotional support, and education. Discussion: Nurses and midwives collaborate in managing malnutrition, requiring proper training and intervention strategies for effective care. Conclusion: The roles of nurses and midwives in the management of malnutrition in pregnant women both play complementary functions in preventing and addressing malnutrition through a coordinated and holistic approach. Suggestion: Further research is needed on nurse-midwife collaboration to reduce malnutrition and stunting.

Keywords: Collaboration; Malnutrition; Midwife; Nurse; Stunting

Introduction

A survey conducted by the Kementrian Kesehatan RI (2021) revealed that, in Indonesia, one in twelve children under the age of five are wasted and one in five are stunted. The role of nurses and midwives in the management of malnutrition in pregnant women and children is of great significance, as they occupy a pivotal position to disseminate nutritional education to pregnant women during antenatal care. Nurses and midwives are often the first health provider that individuals will encounter when seeking Primary Health Care (World Health Organization (WHO), 2024). In terms of community awareness, midwives frequently serve as a conduit between the family and the healthcare system, while nurses can facilitate the dissemination of health programs to the community (Yuliani, 2022). Based on research by Olloqui-Mundet et al., (2024), it was found that 56.5% of midwives considered the nutrition training they received during their education to be inadequate, and midwives felt less confident in dealing with certain topics. Other study have also suggested that midwives often lack comprehensive knowledge of maternal nutrition, partly due to a lack of nutrition education in their training programs (Arrish et al., 2014). This gap impacts their ability to provide detailed and personalized nutrition counseling to pregnant women. So it requires the collaboration of other professionals, such as nurses and midwives, to work together in designing educational programs at posyandu, pregnant women's classes, and home visits; then there is a role for health cadres in designing education. Study show that interdisciplinary teamwork in maternal nutrition services significantly lowers malnutrition rates and improves pregnancy outcomes (Morris et al., 2024; Nnam, 2015). In numerous rural regions, nurses serve as the primary healthcare providers for pregnant women and children facing malnutrition, playing a vital role in implementing community-based nutritional interventions. Nurses are pivotal in identifying individuals at risk of malnutrition by integrating nutritional screening into care pathways and initiating conversations about dietary intake (Holdoway, 2012; Holdoway & Anderson, 2019). However, nurses can expand by working at the community level with families and communities to support environments that support child health, such as hygiene, sanitation, and access to clean water (Nankumbi et al., 2020), so that effective collaboration is needed to get maximum results.

Several studies have shown the importance of collaboration between health workers in addressing malnutrition and stunting, but very few have examined the specific roles of nurses and midwives in this regard. For example, Nankumbi et al., (2020) found that midwives often had inadequate knowledge of nutritional needs during pregnancy and lacked specific training in nutrition. One study only showed that nutrition education provided to pregnant women by trained health professionals such as midwives and nurses can increase the motivation of pregnant women to prevent malnutrition and stunting, but no one has explicitly discussed how effective collaboration and best practices between nurses and midwives can reduce the occurrence of malnutrition and stunting. In the results of research by Situmorang & Sinaga, (2022), it was explained that there is a relationship between the role of midwives and nurses, such as the role of midwives who provide education to pregnant women about the importance of nutritional intake during pregnancy, exclusive breastfeeding, and complementary feeding. The role of nurses supports this education by providing additional information related to clean and healthy lifestyles, as well as the importance of immunization and the management of infectious diseases that can affect child growth (Cowell, 2013; Ersson et al., 2021; Guarinoni & Dignani, 2021). So collaboration between nurses and midwives works together in designing education programs at posyandu, pregnant women's classes, and home visits. Not only that, there is usually a role for health cadres in designing education. The purpose of this literature review is to identify and analyze the role of nurses and midwives in managing malnutrition in pregnant women and children and evaluate their intervention strategies to improve the nutritional status of pregnant women and children.

Research Methods

The method used in this study is scoping literature review which is a literature review method that describes, assesses, and interprets all findings on a research topic that includes analysis of various literature sources both national and international articles related to collaboration between nurses and midwives in handling malnutrition. The search process used several databases, namely 30 articles, with the results being 6 articles from several online databases, namely ScienceDirect, PubMed, Scopus, ResearchGate, and Google Scholar. As well as the following keywords: 'Nurse' AND "Midwife" AND "Collaboration" AND "Malnutrition management" AND "Or Stunting" with its synonyms. The inclusion criteria were (1) correlational studies; (2) published within the last 5 years; (3) independent variables measured; (4) in English or Indonesian; Using the inclusion criteria, the researcher will screen all literature selected for review. In the quality assessment in the scoping literature review method, what is meant is the assessment of eligible journal data sources with examples of the following criteria: peer reviewer, indexed CiteScore, Journal Impact Factors (JIF), Source Normalised Impact per paper (SNIP) for Elsevier Scopus journals, and SCImago Journal Rank (SJR). These criteria can cancel the data or journals that have been obtained for further analysis. The article selection process followed the Preferred Reporting of Items for Systematic Reviews and Meta-Analyses Extension for Scoping Review (PRISMA-ScR).

1. Table Identification of databases of literature review results

PRISMA 2020 flow diagram for new systematic reviews which included searches of databases and registers only
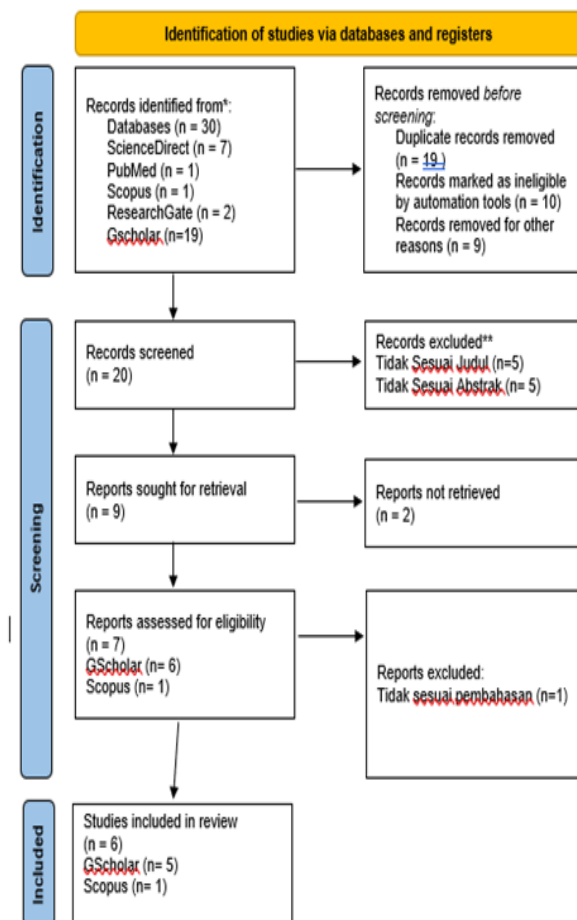
Results

30 articles were selected based on search performance in three databases and adjusted to align with pre-established criteria.

2. Table of characteristics of the literature review

Authors	Objectives	Setting	Research Design	Sample	Data Collection Method	Result
(Wulandari & Kusumastuti, 2020) Pengaruh Peran Bidan, Peran Kader, Dukungan Keluarga dan Motivasi Ibu terhadap Perilaku Ibu dalam Pencegahan Stunting pada Balitanya.	This study aims to assess the impact of midwives, cadres, family support, and maternal motivation on maternal behavior in preventing stunting in toddlers at the Nanga Mau Health Centre, Sintang Regency, in 2019.	Puskesmas Nanga Mau, Sintang Regency	The research method employed was quantitative, utilizing a cross-sectional design.	A total of 65 mothers of toddlers participated in the study.	Maternal behavior in preventing stunting in toddlers at Puskesmas is influenced by midwives (16.70%), cadres (21.35%), family support (19.66%), and maternal motivation (23.13%). Maternal behavior prevents stunting by 80.84% and 12.95% indirectly.	Midwives play a key role in preventing stunting by promoting maternal awareness of nutrition, encouraging healthcare visits, and advocating for breastfeeding. As innovators, they develop engaging counseling methods using visual media, stories, or games to educate families. In collaboration with health cadres, communities, and nurses, midwives integrate nutrition and health interventions to enhance stunting prevention. Their interdisciplinary efforts ensure comprehensive support, addressing both nutritional needs and overall health to improve child growth and development.
(Situmorang & Sinaga, 2022) Eksplorasi Pengalaman Tim Kesehatan Stunting di Puskesmas dalam Pencegahan dan Penatalaksanaan Stunting pada Anak di Jayapura Papua. Manuju	This study aims to explore the experiences of health workers in the stunting team at Puskesmas on the prevention and management of stunting in children.	The study was conducted at the Jayapura Health Centre in Papua Province, Indonesia. The objective of this study was to gain insight into the experiences of the health team in preventing and managing childhood stunting in the area.	The research employs a qualitative descriptive approach, accompanied by the analysis of data through the lens of a thematic analysis.	The participants involved in this study were health workers employed at the puskesmas, who constituted part of the stunting reduction acceleration team. They were eligible for inclusion in the study if they met the predefined criteria.	The study employed descriptive qualitative research with data collection methods conducted through interviews. The technique of selecting research participants was by purposive sampling. The study's participants were health workers at the puskesmas who were part of the stunting reduction acceleration team and met the criteria of inclusion and exclusion.	Overall, nurses play a central role as educators, companions, and facilitators in the community to ensure that prevention and handling of stunting can be carried out effectively and sustainably. The results of the study above explain that there is a relationship between the roles of midwives and nurses, one of which is in Midwives: Providing education to pregnant women about the importance of nutritional intake during pregnancy, exclusive breastfeeding, and complementary foods for breast milk. Nurses: Supporting this education by providing additional information related to clean and healthy lifestyles, the importance of immunization, and management of infectious diseases that can affect child growth and development.

(Nankumbi et al., 2020) Knowledge, confidence and skills of midwives in maternal nutrition education during antenatal care.	The nutritional status of the mother during pregnancy has been demonstrated to exert a significant influence on the health of both the mother and her infant. Midwives can educate pregnant women about nutrition, but they may lack the skills to do so effectively. Collaboration is key to improving maternal nutritional education (MNE) and establishing a strong health system. This study explores the knowledge, confidence, and skills of midwives in Kampala, Uganda.	The research was carried out at an urban antenatal care (ANC) clinic in Kampala, Uganda.	The research is exploratory and qualitative.	The midwife and pregnant mother checking the progress of her pregnancy in a clinic.	The study used an exploratory qualitative design. Six in-depth interviews, six direct observations of group education, and 12 direct observations of pregnant women interacting with midwives were conducted. The transcripts of the interviews and field observation notes were analyzed by means of latent content analysis.	Midwives play a crucial role in stunting prevention by providing maternal nutrition education (MNE) during antenatal care. They educate pregnant women on proper nutrition, local nutritious foods, micronutrient supplementation, and food hygiene while promoting healthy weight gain and exclusive breastfeeding. However, language barriers and resource limitations can hinder training effectiveness, highlighting the need for further midwife education. Collaboration with nurses strengthens efforts by extending support to families and communities, ensuring child-friendly environments with proper hygiene, sanitation, and safe water access. Strengthening midwives' role in nutrition education improves maternal and infant health, ultimately reducing child stunting risks.
(Yuliani, 2022) Studi kualitatif: Peran bidan dalam implementasi kebijakan stimulasi deteksi dan intervensi dini tumbuh kembang anak	The main objective of this research is to explore midwives' role in implementing early childhood development detection and intervention in Pekalongan Regency. This study aims to identify the barriers to effective coverage of early detection and intervention programs for child development and to evaluate the efforts made to address these challenges.	This research focused on the local health department and midwives responsible for child health services in Pekalongan Regency, Indonesia.	This research uses a qualitative descriptive research design, allowing for flexible and open exploration of the issue. The study is a single case study approach with a focus on one site (the local health department) and one group (midwives). Through detailed description and interpretation of participants' experiences, this design is well suited to understanding complex social phenomena.	The sample consists of midwives and key informants from the Pekalongan Regency Health Office. Purposive sampling is used to select participants with relevant knowledge and experience in implementing early detection and child development intervention programs. This method ensures rich and informative data is collected.	Semi-structured interviews, observation, and document analysis are the methods used to collect data.	Midwives play a crucial role in addressing malnutrition in Pekalongan Regency through the Early Stimulation, Detection, and Intervention Program for Child Growth and Development (SDIDTK) program. They conduct early detection of developmental issues, educate parents on child nutrition, and promote the use of the Mother and Child Health Book (KIA). Midwives also receive government training to enhance their skills in identifying and intervening in growth problems. They follow up on malnutrition cases, referring children for further care when needed. Collaboration with nurses and other stakeholders strengthens health programs, increasing community awareness and ensuring early intervention for child growth and development, ultimately improving overall child health outcomes.

(Olloqui-Mundet et al., 2024) Nutrition education in the midwife consultation room. A cross sectional survey in Spain.	The objective of this study is to investigate the strategies utilized by midwives in Spain to educate pregnant women on nutritional matters, with the aim of enhancing maternal health outcomes.	The study was carried out in Spain with the involvement of midwives from diverse autonomous regions across the country.	Descriptive cross-sectional observational study.	The present study involved the participation of 466 midwives in Spain. The sampling technique employed was convenience sampling.	The data is collected through an online questionnaire, which is distributed via email, websites, and social media. The questionnaire comprises questions pertaining to demographics, nutritional training, attitudes towards nutritional education, and nutritional knowledge.	Most midwives (98.9%) recognize nutrition as crucial in prenatal care, and 95.9% see their role in nutrition education as significant. All community midwives provide nutritional information, but time constraints and low patient interest hinder effectiveness. Over half (56.5%) report insufficient nutrition training, with gaps in knowledge about vegetarianism and gestational diabetes. Nutritional expertise varies, highlighting the need for improved midwife training programs. Strengthening nutrition education and ongoing support will enhance the quality of maternal nutrition counseling, ultimately benefiting pregnant women in Spain.
(Hendra & Sariwulan, 2020) An Analysis of The Nurses Service In Preventing Stunting at UPT Puskesmas Astana Anyar Bandung.	The main purpose of this study is to analyze and improve the quality of nurse services in preventing stunting at the Astana Anyar Health Center, Bandung. nursing services.	This research was conducted at the Astana Anyar Health Center, a public health center located in Bandung, Indonesia. The facility serves as a leading healthcare provider, with a focus on training and integrated healthcare in its work area. The study was conducted from April 2019 to August 2019, allowing researchers to gather relevant data and insights from healthcare providers and patients.	This study employs a qualitative research design with a phenomenological focus. This design is appropriate for investigating the life experiences and perspectives of nurses and patients about stunting prevention programs. Qualitative methods enable a thorough grasp of the subtleties in health care and the subjective experiences of people engaged.	The sample included four informants: two nurses and two patients from the Astana Anyar Health Center. This modest sample size is meant to provide more thorough insights on the specific context of nursing care for stunting prevention. The selection of informants is intended to convey a variety of opinions on the quality and usefulness of these services.	Data is collected utilizing a variety of qualitative methods, including interviews, observations, documentary studies, and questionnaires.	Nurses at UPT Puskesmas Astana Anyar play a crucial role in stunting prevention by educating parents on child nutrition, especially during the first 1,000 days of life. They provide holistic care, support families' well-being, and educate the community on breastfeeding, complementary feeding, and hygiene. Nurses monitor child growth, assess nutritional status, and intervene when needed. They collaborate with families and communities to improve awareness and ensure access to healthcare. Working alongside midwives, nurses continue monitoring children's development after birth, ensuring comprehensive care to prevent stunting and promote healthy growth in the community.

Discussion

A review of the literature revealed that nurses and midwives can work together effectively to manage malnutrition among pregnant women and children. Collaboration between these two professions is crucial for holistic malnutrition prevention and management. Midwives are responsible for the provision of nutritional education to pregnant and lactating women. This education encompasses the significance of nutrition during pregnancy, the advantages of exclusive breastfeeding, and the appropriate provision of complementary foods (Nankumbi et al., 2020). Midwives monitor pregnant women's weight, height, and upper arm circumference to detect nutritional issues. In children, monitoring is conducted through stimulation, detection, and early intervention programmes for child growth and development, with the objective of identifying the risk of malnutrition at an early stage (Yuliani, 2022). Furthermore, midwives contribute to the prevention of micronutrient deficiencies by providing iron and folic acid supplements and by educating patients about healthy eating patterns and food hygiene (Wulandari & Kusumastuti, 2020). As a conduit between the community and the health system, midwives collaborate with health cadres, doctors, and nutritionists to organise communication activities, such as posyandu and pregnant women's classes, with the objective of preventing malnutrition (Olloqui-Munder et al., 2024).

Nurses also play an important role in extending nutrition interventions to the communication level. Nurses provide

health education that focuses on clean and healthy lifestyles (PHBS), immunization, and the management of infectious diseases that can affect children's nutritional status (Situmorang & Sinaga, 2022). Nurses support midwives by monitoring children's nutrition. Indicators include weight, height, and head circumference. Furthermore, nurses are responsible for monitoring the efficacy of intervention programs, including supplementary feeding and iron supplements (Hendra et al., 2020). The collaboration between nurses and midwives is of paramount importance to the effective management of malnutrition in pregnant women and children. In collaboration, these two professions develop educational and intervention programs that encompass posyandu activities, antenatal classes for pregnant women, and home visits (Situmorang & Sinaga, 2022). Home visitation programs by midwives and nurses play a crucial role in the early detection and management of maternal and child nutritional deficiencies (Duffee et al., 2017; Sulistyaningsih et al., 2023). The responsibility for providing nutrition education during pregnancy falls to midwives, while nurses are tasked with ensuring the general health and wellbeing of the patient, including the prevention and management of infections that can affect nutritional status (Nankumbi et al., 2020). This collaboration links midwives' and nurses' work on nutrition during pregnancy and child health (Wrammert et al., 2017). It also raises awareness about balanced diets in pregnancy and childhood. (Olloqui-Mundet et al., 2024)

The findings of this analysis demonstrate that the collaborative nursing role between nurses and midwives not only enhances the efficacy of nutrition programs but also facilitates a more comprehensive and community-centered approach. Effective collaboration between these two professions can lead to a notable reduction in the prevalence of malnutrition among vulnerable groups, particularly pregnant women and children (Keats et al., 2021). However, study found that barriers to effective collaboration included role ambiguity and limited training opportunities for joint professional development (Fealy et al., 2018; Trusson

et al., 2019). The analysis shows that collaboration between nurses and midwives is vital in multi-professional teams working on nutrition prevention and management. The prevention and management of malnutrition can be achieved through collaboration, which may entail the provision of nutrition education, monitoring of child development, and direct intervention by midwives, nurses, and other qualified health professionals. The studies conducted by Wulandari & Kusumastuti (2020) also Situmorang et al. (2022) emphasize the significance of collaboration between midwives and nurses in ensuring adequate nutrition during the first 1000 days of life (HPK). Midwives educate on the importance of nutrition during pregnancy and lactation. Nurses provide information on the benefits of a healthy lifestyle and the need for immunization. Health cadres are crucial to the success of the stunting prevention program.

Other research conducted by Nankumbi et al., (2020) and Palapessy et al., (2023) has additionally indicated that collaboration can facilitate enhanced community engagement in health programs. Furthermore, Teweldemedhin et al., (2021) and Olloqui-Mundet et al., (2024) emphasized the efficacy of nutrition education imparted by healthcare professionals in enhancing awareness and promoting healthy dietary practices among pregnant women. Furthermore, the study demonstrated that effective collaboration between midwives and nurses not only resulted in a reduction in nutrition-related issues but also led to an increased public awareness of the significance of balanced nutrition for pregnant women and children.

These findings have implications for public health, particularly in preventing and managing stunting. Collaboration between nurses and midwives is essential in ensuring sustainable nutrition interventions, particularly in resource-limited settings (Nygaard Moller, 2024; Rosa et al., 2021). Effective teamwork between these healthcare professionals not only enhances the quality of antenatal and postnatal nutrition services but also strengthens community-based approaches to malnutrition prevention (Azhimia et al., 2023). By working together, nurses and midwives can create integrated

programs that combine medical, educational, and social support interventions to address both immediate and long-term nutritional challenges. Nurses and midwives can help address malnutrition by integrating education and intervention efforts within the antenatal context. Midwives play a key role in providing nutrition education during antenatal care, while nurses support this by monitoring maternal and child health, ensuring proper follow-ups and referrals (Wahyu et al., 2024). This integration ensures that pregnant women receive timely guidance on dietary intake, micronutrient supplementation, and breastfeeding practices, all of which are crucial for optimal fetal and infant growth (WHO, 2013). Furthermore, interprofessional collaboration fosters a supportive healthcare environment where both professions can leverage their expertise to deliver patient-centered nutrition care (Utley et al., 2020). This helps health workers educate patients more effectively. Furthermore, the findings of this study reinforce the necessity for a comprehensive approach to be adopted in antenatal care (ANC) services, with the objective of enhancing awareness about the significance of balanced nutrition for pregnant women (Palapessy et al., 2023). This will ensure that the interventions implemented are effective, sustainable, and targeted. In order to achieve this, it is essential to secure policy support and cross-sectoral cooperation.

Conclusion

The roles of nurses and midwives in the management of malnutrition in pregnant women are complementary in nature, with each profession contributing to the prevention and treatment of malnutrition through a coordinated and holistic approach. The roles of nurses and midwives in the prevention and management of malnutrition are of great importance and are complementary to one another. Nurses are responsible for monitoring the overall health of their patients, educating them on healthy eating habits, and managing any other medical conditions that may support the recovery process. In contrast, midwives are directly involved in the management of pregnancy and childbirth and are able to provide insight

into the nutritional needs of both mother and infant throughout this period. It is imperative that nurses and midwives collaborate in order to optimize health services for malnourished pregnant women and children. By integrating the planning, implementation, and evaluation of nutrition programs, it is possible to reduce the incidence of malnutrition among this vulnerable group with the support of a more integrated and effective health system.

It is imperative that research be conducted which explicitly discusses how effective collaboration and best practices between nurses and midwives can be employed to reduce the occurrence of malnutrition and stunting.

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