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Organizational Management Factors in Hospitals that Influence Nurses' Compliance in Providing Nutrition to Pediatric Patients

Ririn Probowati*, Dewi Pitriawati, Pepin Nahariani, Kolifah
Stikes Pemkab Jombang, Indonesia
Email: ririn_probowati@yahoo.com*, pitriawatidewi@gmail.com, pepin@spj.ac.id, kolifah11ifa@gmail.com

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Abstract

Adequate nutrition is essential for the recovery and overall health of pediatric patients in hospitals. Despite established guidelines, malnutrition among hospitalized children remains a global challenge, exacerbated by gaps in nurse compliance with nutrition protocols. Organizational management factors such as supervision, staff training, workload, availability of protocols, multidisciplinary collaboration, and organizational culture play a crucial role in ensuring adherence to nutrition standards. This study aims to analyze the influence of hospital organizational management factors on nurses' compliance in providing nutrition to pediatric patients. A systematic literature review was conducted using PubMed, Google Scholar, ScienceDirect, Garuda Portal, and ResearchGate. Following PRISMA guidelines, 260 articles were initially identified, screened, and 13 articles were selected for narrative synthesis. Organizational factors including training, protocols, supervision, workload, collaboration, and culture were critically analyzed. Findings indicate that nurse compliance improves significantly when hospitals provide structured training, clear protocols, effective supervision, adequate resources, and supportive organizational culture. Multidisciplinary collaboration further enhances adherence to nutrition practices. High workloads and limited resources were consistently identified as barriers. Organizational management factors are pivotal in optimizing pediatric nutrition services. Hospitals should implement continuous training programs, standardized protocols, effective supervision, workload management, and interprofessional collaboration to improve nurse compliance and pediatric patient outcomes. Future research should explore interventional and longitudinal studies to establish causal relationships between organizational strategies and nutritional outcomes.

INTRODUCTION

Adequate nutrition is essential to the healing process of pediatric patients in hospitals. Providing proper nutrition not only accelerates clinical recovery but also prevents various complications such as nosocomial infections, growth and development disorders, and extended hospitalizations (Niseteo, Hojsak & Kolaček, 2020). Malnutrition in hospitalized children remains a global challenge (Falahaini & Wanda, 2022). Pediatric inpatients face a risk of malnutrition and experience a decline in nutritional status during treatment. This reflects the

gap between established nutrition service standards and their implementation in clinical settings (Brown et al., 2021).

Nurses play a central role in the hospital's nutrition chain. Many nutrition procedures, ranging from feeding tubes and gastric residual assessment to oral care and enteral and parenteral nutrition, fall within nursing responsibility (Berman, Snyder & Frandsen, 2021). However, guidelines for pediatric feeding are still not implemented optimally (Bilal et al., 2018). In Ghana, it is reported that only 41.0% of nurses implement at least 70% of the WHO's ten protocol steps for managing severe acute malnutrition correctly, with overall compliance rates rated as poor (Anafo & Adjeso, 2025).

Nurse compliance in nutrition is not merely a matter of individual competence, but a reflection of how hospital organizational management systems are designed and operated. Organizational factors that affect healthcare worker compliance include clinic supervision, availability of guidelines and protocols, staff training levels, workload, interprofessional collaboration, and organizational culture within service units (Jasman et al., 2025).

The existence and quality of clinic supervision significantly influence compliance. Supervision carried out regularly and facilitatively by the head of the ward and the nutrition care team has been proven to increase nurse competence and compliance in carrying out nutrition procedures (Revelation et al., 2018; Cunningham et al., 2018). Effective supervision enables early identification of implementation gaps while providing constructive feedback to nurses (Banda Aceh Health Office, 2025).

The availability and dissemination of standard operating procedures (SOPs) and nutrition protocols are critical. The adoption of nutrition guidelines in healthcare facilities is greatly influenced by organizational characteristics such as the degree of centralization, formalization, and complexity of applicable procedures (Cahill et al., 2010; Li et al., 2025). The existence of feeding protocols managed by nurses resulted in a 95% compliance rate with the protocol, although an average of 25.6 hours without nutrition provision was still identified per patient. This finding indicates that protocol alone is insufficient; an integrated monitoring system is needed to ensure there are no unnecessary interruptions in nutrition delivery (Cunningham et al., 2018).

Training and capacity building of nurses are essential. Malnutrition management training for healthcare workers in health facilities has proven to be a key strategy for improving the quality of nutrition services for malnourished children (Ministry of Health of the Republic of Indonesia, 2020). Various training programs, such as Integrated Management of Sick Toddlers (IMST) and malnutrition management courses, focus on improving healthcare workers' ability to assess toddler conditions, detect danger signs early, and implement management according to Ministry of Health guidelines (Anam et al., 2023). Implementation of nutrition programs must be accompanied by training programs for nurses and other staff to ensure that clinical knowledge and skills are effectively internalized (Fitriani & Purnomo, 2026).

Adequate nutrition is universally recognized as critical to pediatric patient recovery. Globally, malnutrition remains a persistent problem, with the World Health Organization reporting that nearly 45 million children under five suffer from undernutrition, resulting in prolonged hospital stays, increased susceptibility to infections, and delayed cognitive and physical development (Niseteo, Hojsak & Kolaček, 2020). Despite the existence of international guidelines for pediatric nutritional care, gaps remain in the consistent

implementation of these protocols across diverse healthcare settings, highlighting the need for systemic approaches to improve adherence.

Hospitalized children are particularly vulnerable to nutritional deficiencies, with evidence showing that malnutrition often worsens during hospitalization due to inadequate feeding practices and insufficient monitoring (Falahaini & Wanda, 2022). In many facilities, the nutritional status of pediatric patients declines despite available resources, reflecting inconsistencies between recommended standards and actual practice. This phenomenon underscores the urgency of examining organizational factors that influence healthcare worker compliance in nutrition delivery, as inadequate management can directly compromise patient outcomes.

Nurses occupy a central role in the pediatric nutrition chain, overseeing tasks ranging from enteral and parenteral feeding to the maintenance of oral hygiene and the monitoring of gastric residuals (Berman, Snyder & Frandsen, 2021). Research from Ghana indicates that only 41% of nurses correctly implement at least 70% of the WHO protocol steps for managing severe acute malnutrition, revealing suboptimal compliance levels even when guidelines exist (Anafo & Adjeso, 2025). These findings suggest that nurse adherence is shaped not merely by individual competence but by the broader organizational environment within hospitals.

Several organizational determinants have been identified as critical to compliance, including the quality of supervision, accessibility of protocols and guidelines, staff training, workload management, interprofessional collaboration, and organizational culture (Jasman et al., 2025). Supervision by nursing leaders and nutrition care teams improves adherence by providing timely feedback and identifying gaps in practice (Banda Aceh Health Office, 2025). Meanwhile, clear SOPs and institutional guidelines are necessary but insufficient without integrated monitoring systems that prevent interruptions in nutritional care (Cahill et al., 2010; Li et al., 2025).

Training is consistently highlighted as a dominant factor influencing compliance. Studies in Ghana and Ethiopia reveal that nurses who receive targeted nutrition training demonstrate significantly higher adherence to protocols than untrained counterparts (Anafo & Adjeso, 2025; Ahmed et al., 2024). Globally, surveys indicate that insufficient training and competence deficits impede effective implementation of enteral nutrition in pediatric intensive care units, emphasizing the need for continuous professional development programs (Tume et al., 2020; Søiland et al., 2025).

Workload and resource constraints remain pervasive barriers across healthcare settings. Research indicates that high nurse-to-patient ratios, limited human resources, and inadequate facilities lead to missed nutrition procedures and delayed feeding interventions (Endris et al., 2023; Elhady et al., 2023). These challenges are exacerbated in low- and middle-income countries, where organizational support systems are often underdeveloped, reinforcing the need for interventions that optimize staffing, resource allocation, and task distribution.

Interprofessional collaboration and organizational culture significantly affect the quality of nutrition care. Effective coordination between nurses, nutritionists, and physicians enhances adherence to feeding protocols, while supportive work cultures that prioritize patient-centered care foster compliance (Noky, Tauho & Nugroho, 2021; Hall et al., 2025). Conversely, environments that deprioritize nutrition or lack cohesive communication networks see frequent

protocol deviations, illustrating the mediating role of organizational dynamics on nurse behavior.

Despite extensive studies examining isolated factors, a research gap exists in synthesizing multiple organizational determinants into a single conceptual framework that elucidates their interaction and cumulative impact on nurse compliance. Prior studies have predominantly focused on single elements such as training, protocols, or supervision without systematically considering how these factors interrelate across varied healthcare contexts (Cunningham et al., 2017; Farmer et al., 2014). This gap highlights the need for integrative research that informs evidence-based hospital management strategies.

The novelty of the present study lies in its narrative synthesis approach, integrating diverse organizational factors—training, guidelines, supervision, workload, collaboration, and culture—into a coherent conceptual framework applicable to pediatric care settings globally. By comparing patterns across multiple countries and healthcare systems, the study offers a unique perspective on dominant factors in different contexts, facilitating targeted interventions that enhance nurse compliance and optimize nutritional outcomes for hospitalized children.

Ultimately, the research purpose is to provide actionable insights for hospital administrators and policymakers to improve pediatric nutritional care through systemic interventions. The study contributes to the scientific understanding of organizational management in healthcare by identifying multidimensional influences on nurse compliance, while practical benefits include strengthening training programs, standardizing protocols, improving supervision practices, enhancing interprofessional collaboration, and optimizing resource management. Collectively, these measures aim to elevate the quality of pediatric nutrition services and promote better clinical outcomes for vulnerable patient populations.

METHOD

This study uses a systematic literature review design, which is a research method that aims to identify, evaluate, and critically synthesize research results that are relevant to a particular topic. This approach was chosen because it allows researchers to summarize empirical evidence related to organizational management factors that affect nurses' compliance in feeding pediatric patients comprehensively and systematically.

Literature Search Strategy

Literature searches were conducted in April 2026 using the following electronic databases: PubMed; Google Scholar; ScienceDirect; Garuda Portal; ResearchGate. Keywords used in the search were arranged with Boolean operators (AND, OR) in English "supervision" OR "workload" OR "organizational culture") AND ("nurse compliance" OR "nurse adherence") AND ("nutrition administration" OR "enteral nutrition" OR "feeding protocol") AND ("pediatric patients" OR "hospitalized children" OR "toddlers")

Inclusion and Exclusion Criteria

The inclusion criteria set in this study are a) Scientific articles or publications published within the last 10 years (2016–2026); b) Articles that discuss specifically organizational management factors (supervision, workload, training, protocols, collaboration, organizational culture) in relation to nurse compliance; c) Articles on the topic of nutrition for pediatric patients in hospital or primary health facility settings; d) Type of publication: original research

(cross-sectional, cohort, qualitative), policy report, or review article; e) The article is available in full text and can be accessed openly; Written in Indonesian or English.

Meanwhile, the exclusion criteria set in this study are a) Articles that only discuss patient or family compliance, not nurse compliance; b) Studies conducted on adult or elderly populations without child populations; c) Editorial opinions, comments, or single case studies without systematic analysis; d) Articles that do not provide access to the full text even though they have been sought through the institution's library.

Literature Selection Procedure

The literature selection procedure follows the flow of Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020. The first step is the identification of related research journal articles obtained from a database of 248 articles and additional articles were found from reference search/manual searching of 12 articles, and a total of 260 articles were identified. The second step is to screen articles with a total of 151 articles with the removal of duplicates of 54 articles, articles eliminated because they are not relevant to nurse compliance with 72 articles, do not discuss organizational factors for 48 articles, and 31 articles are not related to child nutrition/nutrition. So that the total number of articles that entered the full-text review stage was 55 articles. The third step found that 13 articles were screened for titles and abstracts from full-text articles were evaluated based on inclusion and exclusion criteria. Articles were excluded because 8 articles were not available in full-text, 11 articles focused on adult patients without a pediatric context, 10 articles did not assess specific organizational factors, incomplete results data for 7 articles, and 6 review/editorial/commentary articles. The total number of articles eliminated at the eligibility stage is 42 articles. The fourth step is the final selection of articles that meet the inclusion criteria and are included in the narrative synthesis with a total of 13 articles analyzed.

RESULTS AND DISCUSSION

Table 1. Study Quality Assessment

Yes	Researcher	Research Design	Instrumen Appraisal	Score	Percentage	Categories Quality	Quality Record
1	Anafo & Adjeso (2025)	*Cross-sectional*	*JBI Cross-Sectional*	7/8	87,5%	Height	*Self-report* has the potential to be biased
2	Cunningham et al. (2017)	*Observational*	*Modified NOS*	8/10	80%	Height	Single setting PICU
3	Ahmed et al. (2024)	*Cross-sectional*	*JBI Cross-Sectional*	6/8	75%	Medium	*Desain cross-sectional*
4	Dark et al. (2020)	*Survey*	*Modified NOS*	7/10	70%	Medium	*Self-report global survey*
5	Søiland et al. (2025)	*Qualitative synthesis*	*CASP Qualitative Checklist*	9/10	90%	Height	*Heterogenitas studi*
6	Noky et al. (2021)	*Qualitative*	*CASP Qualitative Checklist*	8/10	80%	Height	Limited generalizations

7	Elhady et al. (2023)	*Qualitative*	*CASP Qualitative Checklist*	8/10	80%	Height	Subjective interpretation
8	Dwinta et al. (2022)	*Quantitative*	*Modified NOS*	7/10	70%	Medium	Limited research locations
9	Tilahun et al. (2024)	*Cross-sectional*	*JBI Cross-Sectional*	7/8	87,5%	Height	Unable to determine causality
10	Farmer et al. (2014)	*Mixed-method*	*Modified NOS*	8/10	80%	Height	Non-hospital context
11	Endris et al. (2023)	*Qualitative (CFIR)*	*CASP Qualitative Checklist*	8/10	80%	Height	The potential subjectivity of interviews
12	Zaher (2022)	*Cross-sectional*	*JBI Cross-Sectional*	6/8	75%	Medium	*Self-report* bias
13	Zaher et al. (2024)	*Cross-sectional*	*JBI Cross-Sectional*	6/8	75%	Medium	Bias responden

Table 1 shows that the results of the quality assessment of 13 articles reveal that 7 articles fall into the high-quality category with a score of ≥80%, namely the research by Anafo & Adjeso (2025), Cunningham et al. (2017), Søiland et al. (2025), Noky et al. (2021), Elhady et al. (2023), Tilahun et al. (2024), Farmer et al. (2014), and Endris et al. (2023). These studies generally have clear research objectives, appropriate data collection methods, relevant instruments, and systematic data analysis. Additionally, several studies demonstrate strength in aspects of instrument validity, alignment of research design with study objectives, and consistency between results and conclusions. This indicates that the findings regarding the influence of training, protocols, leadership, organizational culture, and multidisciplinary collaboration on nurse compliance have a fairly strong level of trustworthiness.

Meanwhile, 5 articles fall into the medium-quality category with scores of 60–79%, namely Ahmed et al. (2024), Tume et al. (2020), Dwinta et al. (2022), Zaher (2022), and Zaher et al. (2024). The main limitations of these studies generally stem from the use of cross-sectional designs that cannot directly explain causal relationships, the use of self-report questionnaires that have the potential to cause respondent bias, and study location limitations that can affect the generalization of results. Nevertheless, these articles still make important contributions in identifying organizational barriers such as limited human resources, service coordination, and work environment to nutrition practices.

No articles fell into the low-quality category (<60%), so all articles were considered worthy of inclusion in the narrative synthesis. However, some research results still need to be interpreted carefully, especially in studies with potential subjectivity bias and generalization limitations. For example, qualitative interview-based research has the power to explore deeply the experiences of healthcare workers, but it has limitations in broader population representation. In contrast, large-scale survey research has broad respondent coverage but is susceptible to respondent perception bias.

The results of the critical appraisal show that the methodological quality of the articles used in this study is quite good and supports the credibility of the synthesis results. The

dominance of high-quality articles shows that the scientific evidence regarding the influence of organizational management factors on nurse adherence in feeding pediatric patients has a strong methodological basis. This demonstrates that organizational factors such as training, protocols, leadership, organizational culture, and resource support are important determinants in improving compliance with nutrition practices in children's health services.

Article 1: Anafo & Adjeso (2025) from Ghana studied Factors Associated with Nurses' Adherence to WHO's Guidelines for Managing Severe Acute Malnutrition: A Cross-Sectional Study in Northern Ghana. This research used a cross-sectional design with a population of hospital nurses. Organizational factors examined included training, protocols, and workload. Compliance instruments consisted of questionnaires and checklists. Results showed low compliance levels, and training and protocol use significantly affected compliance. The study limitation was the presence of self-report bias.

Article 2: Cunningham et al. (2017) from the USA studied Adherence to a Nurse-Driven Feeding Protocol in a Pediatric Intensive Care Unit using an observational design on PICU nurses. Organizational factors analyzed included protocols and time management, with instruments consisting of clinical audits. Results showed high compliance levels (95%) despite delays in certain procedures. Limitation: the research was conducted in only one setting.

Article 3: Ahmed et al. (2024) from Ethiopia studied Enteral Tube Feeding Practices and Associated Factors among Nurses Working in South Wollo Zone Specialized and General Hospitals. This cross-sectional research involved hospital nurses. Organizational factors included resources, training, and guidelines, with questionnaires as instruments. Findings showed that practices were influenced by resource availability and familiarity with guidelines. Limitation: cross-sectional design.

Article 4: Dark et al. (2020), on a global scale, studied Barriers to Delivery of Enteral Nutrition in Pediatric Intensive Care: A World Survey using a survey of 920 healthcare professionals. Organizational factors included training, staffing, and policies, with surveys as instruments. Results showed that major barriers were related to time limitations, human resources, and nutrition expertise. Limitation: self-report.

Article 5: Søiland et al. (2025), global in scope, conducted Factors that Influence the Provision of Enteral Feeding for Critically Ill Children: A Qualitative Evidence Synthesis using qualitative synthesis. Organizational factors included human resources, competence, and resources, with data review as instruments. Findings indicated that shortages in human resources and skills hindered nutrition provision. Limitation: heterogeneity of studies.

Article 6: Noky et al. (2021) from Indonesia studied Collaboration of Nurses and Nutritionists in Handling Nutritional Problems of Toddlers in the Working Area of the West Halmahera Health Center. This qualitative research involved nurses and nutritionists. Organizational factors included collaboration and communication, with interviews as instruments. Results showed that collaboration affected program success. Limitation: limited generalization.

Article 7: Elhady et al. (2023) in low- and middle-income countries (LMICs) studied Barriers to Adequate Nutrition Care for Child Malnutrition in a Low-Resource Setting: Perspectives of Healthcare Providers. This qualitative research with healthcare providers examined organizational factors including systems, training, and resources, with interviews as

instruments. Findings indicated that resource system limitations were the main barriers. Limitation: subjectivity.

Article 8: Dwinta et al. (2022) from Indonesia studied Legal Effectiveness of Nutrition Services for Pediatric Inpatients at Wijayakusuma Army Hospital Purwokerto using a quantitative method on hospital patients. Organizational factors included facilities and communication, with questionnaires as instruments. Findings showed that service effectiveness was influenced by service quality. Limitation: limited study location.

Article 9: Tilahun et al. (2024) from Ethiopia studied What Influences Nurses' Practice Towards Enteral Nutrition Support in the Intensive Care Units? using a cross-sectional design on PICU nurses. Organizational factors included training and knowledge, with questionnaires as instruments. Findings showed a significant gap between knowledge and practice. Limitation: cross-sectional design.

Article 10: Farmer et al. (2014) from Canada studied Organizational Characteristics and Processes are Important in the Adoption of the Alberta Nutrition Guidelines for Children and Youth in Child-Care Centers. Using a mixed-method approach with child-care managers, the research examined organizational factors: leadership and organizational culture. Instruments included surveys and interviews. Findings showed that leadership and organizational culture increased guideline compliance. Limitation: non-hospital context.

Article 11: Endris et al. (2023) from Ethiopia studied Barriers and Facilitators to the Implementation of Nutrition Interventions at Primary Health Care Units of Ethiopia: A Consolidated Framework for Implementation Research. Using a qualitative method (CFIR) with healthcare professionals, the research examined organizational factors: workload, motivation, tools, and leadership, with interviews as instruments. Findings indicated that barriers were related to resources, motivation, and case volume. Limitation: subjective.

Article 12: Zaher (2022) from Saudi Arabia studied Barriers to Delivery of Enteral Nutrition in Intensive Care Settings in Saudi Arabia: A Comparative Study of the Perceptions of Healthcare Providers Working in Adult and Pediatric ICUs using a cross-sectional design on ICU personnel. Organizational factors included coordination, physicians, and systems, with questionnaires as instruments. Findings showed that order delays and coordination were the main barriers. Limitation: self-report.

Article 13: Zaher et al. (2024) from Saudi Arabia studied Understanding Nursing Perspective Towards Barriers to the Optimal Delivery of Enteral Nutrition in Intensive Care Settings. Using a cross-sectional design on ICU nurses, organizational factors included work environment and human resources, with questionnaires as instruments. Findings showed that technical and organizational factors affected practices. Limitation: respondent bias.

Due to the high heterogeneity in research design, population characteristics, healthcare service context, and measurement instruments between studies, data synthesis was conducted through narrative synthesis. The synthesis was carried out through thematic mapping, cross-study comparisons, identification of consistency patterns, and the development of a conceptual framework related to organizational management factors that affect nurses' compliance in feeding pediatric patients.

1. Thematic Mapping of Organizational Management Factors

The results of the narrative synthesis of 13 studies show that organizational management factors that affect nurse compliance can be grouped into several main themes, namely training, protocols and policies, workload and human resources, supervision and leadership, multidisciplinary collaboration, organizational culture, and service systems and facilities.

a. Training and Competencies

Training is the most consistent factor found in improving nurses' adherence to nutrition practices. Research Anafo and Adjeso (2025) in Ghana found that lack of training led to low nurses' adherence to WHO guidelines in the management of severe acute malnutrition. Nurses who received training showed better adherence to nutrition procedures. Similar findings were reported by Ahmed *et al.* (2024) in Ethiopia, where the practice of enteral tube feeding is influenced by the level of knowledge and familiarity of nurses with nutritional guidelines. In another study, Dejen Tilahun, liyew and Kassew (2024) It also found a significant gap between nurses' knowledge and practice in the provision of enteral nutrition in the ICU, which shows the need for ongoing training to improve the implementation of clinical practice.

In addition, Tumble *et al.* (2020) In a global survey of 920 health workers found that lack of training and staff competence are the main obstacles in the provision of enteral nutrition at PICU. These results are reinforced by Søiland *et al.* (2025) who reported that the clinical skills and competence of health workers greatly determine the success of the implementation of enteral feeding in critical children. Elhady *et al.* (2023) It also shows that the lack of training in low-resource countries causes child nutrition services to be suboptimal.

b. Protocols, Guidelines, and Organizational Policies

The availability of protocols and guidelines is an important factor that supports nurse compliance. Cunningham *et al.* (2018) reported that the implementation of nurse-driven feeding protocols at PICU resulted in a high compliance rate of 95%. However, operational obstacles such as procedural delays still affect the implementation of the protocol. Anafo and Adjeso (2025) also found that the use of non-optimal WHO protocols was associated with low nurse adherence.

Dejen Tilahun, liyew and Kassew (2024) It shows that nurses who are familiar with the Enteral Nutrition Guideline have better practices than those who are unfamiliar. Farmer *et al.* (2014) found that organizations with clear policies and implementation systems were more successful in adopting the Alberta Nutrition Guidelines than organizations with weak policy support. These findings suggest that clear guidelines can improve the standardization of nutrition services.

c. Workload, Human Resources, and Resources

High workload and resource limitations are the dominant barriers in various studies. Tumble *et al.* (2020) found that time constraints, lack of staff, and high workload are the main obstacles to providing enteral nutrition at PICU. Søiland *et al.* (2025) It also reported that a lack of health workers and high caseload led to delays in nutrition delivery.

Endris *et al.* (2023) found that high workloads, lack of tools, and limited facilities are barriers to the implementation of nutrition interventions in Ethiopia's primary health

services. Elhady *et al.* (2023) It also shows that limited resources and weak service systems are the main factors in non-optimal child nutrition services in developing countries. Zaher, Sumairi and Ajabnoor (2024) reported that the unsupportive work environment and limited human resources affected the enteral nutrition practices of nurses in the ICU.

d. Supervision and Leadership

Organizational leadership and supervision play a role in shaping healthcare worker compliance. Farmer *et al.* (2014) Found that strong leadership and organizational support improved the implementation of nutrition guidelines in child-care centers. Endris *et al.* (2023) also identified weak leadership as an obstacle to the implementation of nutrition programs. In the context of hospital services, lack of supervision leads to low monitoring of compliance with nutrition practices.

e. Multidisciplinary Collaboration and Communication

Collaboration between professions is an important factor in the success of nutrition services. Noky, Tauho and Nugroho (2021) in Indonesia, it was found that collaboration between nurses and nutritionists had an effect on the success of handling nutritional problems in toddlers in health centers. Good communication speeds up decision-making and increases service effectiveness.

Zaher (2022) found that the delay in doctor's orders and weak coordination between health workers are the main obstacles to the provision of enteral nutrition in adult and pediatric ICUs. Dwinta, Rahmah and Utami (2022) It also shows that service communication affects the effectiveness of nutrition services in pediatric inpatients.

f. Organizational Culture and Work Motivation

A supportive organizational culture improves health workers' compliance with service standards. Farmer *et al.* (2014) It shows that an organizational culture that supports innovation and service quality improves the successful implementation of nutrition guidelines. Endris *et al.* (2023) found that low motivation of health workers is an obstacle to the implementation of nutrition interventions. A positive work environment encourages health workers to be more compliant with service procedures.

2. Cross-Study Comparison

Cross-study comparisons showed consistency that training, protocols, and resources were the main determinants of nurse adherence in providing nutrition. Studies in Ghana, Ethiopia, Saudi Arabia, and LMIC countries show a similar pattern that lack of training and limited resources lead to a low quality of nutrition practices (Anafo & Adjeso, 2025; Dejen Tilahun et al., 2024; Elhady et al., 2023; Zaher et al., 2024).

However, there are differences in the strength of the relationship between factors in each service. In countries with more advanced service systems such as the United States, the main obstacles are more related to procedural efficiency and time management than limitations of facilities (Cunningham et al., 2017). In contrast, in developing countries, the lack of human resources, tools, and organizational support is the dominant factor (Endris et al., 2023).

3. Identify Patterns and Consistency of Findings

Most studies show a consistent pattern that nurse compliance improves when organizations provide regular training, clear guidelines, effective supervision, and adequate resource support. Supportive organizational factors are generally positively correlated with the quality of nutrition practices.

There were no major contradictions between studies, but there were variations on the most dominant factors. In the ICU setting, coordination obstacles and delays in medical orders are more prominent (Zaher, 2022), while in primary services the main obstacle is the limitation of facilities and workload (Endris et al., 2023). This variation is likely influenced by differences in the health care system, organizational culture, and resource level in each country.

4. Development of Conceptual Frameworks

Based on the results of the synthesis, a conceptual framework can be developed showing that nurses' compliance in feeding pediatric patients is influenced by the multidimensional interaction of organizational factors. Training improves the knowledge and competence of nurses in providing nutrition. These competencies will be more effective if they are supported by clear protocols, good supervision, and an organizational culture that supports service quality.

On the other hand, high workload factors, limited human resources, and lack of facilities can weaken the implementation of nutrition practices even if nurses have good knowledge. Multidisciplinary collaboration between nurses, doctors, and nutritionists acts as a mediator that strengthens service coordination to improve clinical practice compliance. Thus, nurses' compliance in providing nutrition is not only influenced by individual factors, but is the result of interaction between the competence of health workers, organizational systems, leadership, work culture, and support of health service resources.

The results of the synthesis show that organizational management factors have a central role in determining nurses' compliance with nutrition and enteral nutrition practices in pediatric and critical patients. Factors such as training, protocols, supervision, workload, multidisciplinary collaboration, organizational culture, and resource support have consistently been found to affect the quality of nutrition service implementation. These findings align with various international studies that confirm that clinical practice compliance is not only influenced by individual competencies, but also by the readiness of organizational systems to support the implementation of evidence-based practice-based services.

Training is the most dominant organizational factor in improving nurse compliance. Nurses who received training related to severe acute malnutrition had better adherence to WHO guidelines than nurses who did not receive training (Anafo & Adjeso, 2025). Nutrition training and knowledge are significantly related to enteral nutrition practices in the ICU (Tilahun, Liyew & Kassew, 2024). Successful implementation of volume-based feeding protocols is strongly influenced by ongoing staff education and multidisciplinary team involvement (Hall et al., 2025). Lack of education leads to low consistency in the implementation of nutrition protocols in ICUs (Ahmed et al., 2022; Hall et al., 2025).

In addition to training, the existence of clear protocols and guidelines has been proven to increase compliance with nutrition services. Application of nurse-driven feeding protocols in PICUs results in compliance rates of up to 95%. These results suggest that clear operational standards can help nurses carry out nutrition practices more consistently (Cunningham et al.,

2018). Multifaceted, intervention-based guidelines are able to improve the nutritional adequacy of critical patients through audits, identification of organizational barriers, and the preparation of implementation plans tailored to the needs of each ICU (Cahill et al., 2014). With protocols integrated into the work system, nurses can more easily follow the flow of care and minimize variations in clinical practice (Cahill et al., 2014; Cunningham et al., 2018; Søiland et al., 2025; Dark et al., 2020).

High workloads and resource constraints are the main obstacles that are most consistently found in various studies. Limited time, lack of staff, and high workload are the main obstacles to providing enteral nutrition in PICUs globally (Dark et al., 2020). Lack of health workers and clinical skills leads to delays in feeding critically ill children (Søiland et al., 2025). Limited facilities and high caseloads hinder the implementation of nutrition interventions in developing countries. This condition can cause service priorities to be more focused on emergency actions than on the fulfillment of patient nutrition. Other international research shows that ICU patients on average only receive about 60% of their prescribed nutrition targets due to various organizational and operational barriers (Elhady et al., 2023; Endris et al., 2023).

Organizational supervision and leadership are also important factors in improving healthcare worker compliance. Strong leadership and an organizational culture that supports service quality have an impact on the successful implementation of the Alberta Nutrition Guidelines (Farmer et al., 2014). Effective leadership can improve monitoring, work motivation, and compliance with service standards. Management support and project leadership are key factors in the success of implementing feeding protocols in the ICU. Without good supervision, the implementation of protocols often does not run consistently due to the lack of monitoring and evaluation of the clinical practices of health workers (Hall et al., 2025).

Multidisciplinary collaboration and interprofessional communication have been proven to strengthen the implementation of nutrition services. Collaboration between nurses and nutritionists increases the success of handling nutritional problems for toddlers in primary care (Noky, Tauho & Nugroho, 2021). Delays in doctors' orders and weak coordination between health workers are the main obstacles to providing enteral nutrition in the ICU. Other international research confirms that successful enteral nutrition requires the active involvement of doctors, nurses, nutritionists, and pharmacists in multidisciplinary teams (Zaher, 2022). Nutrition support team activities significantly improved the administration of enteral nutrition in the ICU due to better coordination between health professions (Zaher, Sumairi & Ajabnoor, 2024).

Organizational culture also affects nurses' adherence to nutrition practices. Organizations that have a supportive work culture, are open to innovation, and prioritize nutrition tend to have better compliance rates. An organizational culture that considers nutrition as an important priority is a key supporting factor for successful implementation of feeding protocols (Hall et al., 2025). Conversely, a work culture that places nutrition as a secondary priority causes nutrition practices to often be delayed or not optimal (Zaher, Sumairi & Ajabnoor, 2024).

This study shows that nurses' compliance in providing nutrition to pediatric patients is the result of complex interactions between individual factors and organizational factors. Training improves the competence of health workers, but its effectiveness is greatly influenced by the existence of protocols, leadership, organizational culture, supervision, team collaboration, and the adequacy of resources. Therefore, improving nurse compliance cannot

only focus on improving individual knowledge, but must be accompanied by strengthening the health service organizational system as a whole.

The implications of this research—namely the importance of training—are the most consistent factors in increasing nurses' compliance with nutrition practices. Therefore, hospitals and health facilities need to develop continuous training programs related to child nutrition management, enteral feeding, and the implementation of WHO guidelines and evidence-based nutrition care. Hospitals should also develop competency-based training modules and clinical mentoring by senior nurses or nutrition support teams. Additionally, compliance increases when there are clear and easy-to-implement protocols. Supervision and leadership support affect the compliance of health workers. High workload and limited human resources are also main obstacles to the implementation of nutrition services. Collaboration between nurses, doctors, and nutritionists is needed to improve the success of nutrition services. Therefore, health facilities need to form a Nutrition Support Team (NST) that involves various health professions. Organizational cultures that support service quality and patient-centered care have been proven to improve compliance with nutrition practices.

The novelty of this study lies in integrating various organizational factors in one synthesis model, focusing on nurses' compliance in child nutrition, using the narrative synthesis approach in multi-context studies, developing a conceptual framework for the interaction of organizational factors, showing the differences in dominant factors by country, and providing the basis for the development of nursing management interventions.

CONCLUSION

The study concludes that organizational management factors have a significant influence on nurses’ compliance in providing nutrition to pediatric patients. Key determinants include the availability of structured training programs, clear protocols and guidelines, effective supervision and leadership, adequate workload management, multidisciplinary collaboration, and a supportive organizational culture. The interaction of these factors enhances the competence, motivation, and adherence of nurses to evidence-based nutrition practices. Hospitals that integrate these organizational components can achieve higher compliance rates, resulting in improved nutritional outcomes and accelerated recovery for pediatric patients.

For future research, it is recommended to conduct longitudinal and interventional studies to evaluate the causal effects of specific organizational interventions on nurse compliance across diverse hospital settings. Comparative studies between high- and low-resource facilities could provide deeper insights into context-specific barriers and facilitators. Additionally, incorporating patient outcome measures, such as growth metrics, recovery rates, and incidence of complications, would strengthen the evidence linking organizational management practices to pediatric nutritional health. This approach can guide policymakers and hospital administrators in designing targeted, evidence-based strategies for optimizing pediatric nutrition services.

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