

Nursing Team Effectiveness: A Concept Analysis

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Abstract: *Background: Nursing team effectiveness is a vital construct in contemporary healthcare systems, influencing care quality, patient safety, and organizational performance. However, its definition remains ambiguous in the literature. Objectives: This study aims to refine the definition of nursing team effectiveness using Walker and Avant's concept analysis methodology, addressing conceptual inconsistencies and identifying measurable attributes. Methods: A systematic review of empirical and theoretical literature published between 2020 and 2025 was conducted. The analysis followed Walker and Avant's eight-step method to identify the defining attributes, antecedents, consequences, empirical referents, and conceptual boundaries of nursing team effectiveness. Results: Nursing team effectiveness is defined as the sustained capacity of a nursing team to deliver safe, high-quality, patient-centered care through coordinated practice, effective communication, shared decision-making, and adaptive problem-solving. Key attributes include interprofessional coordination, role clarity, mutual trust, and adaptability. Antecedents include adequate staffing, targeted training, transformational leadership, and a supportive work environment. Consequences involve improved patient outcomes, enhanced nurse well-being, and strengthened organizational performance. Empirical referents such as the Nursing Teamwork Survey and TeamSTEPS Teamwork Perceptions Questionnaire are identified for measurement and benchmarking. The concept is distinguished from related terms like collaboration and team efficiency. Conclusion: The refined conceptualization of nursing team effectiveness clarifies a previously ambiguous construct in nursing management literature. By defining its core attributes and identifying measurable indicators, this study supports evidence-based interventions, workforce planning, and policy development to enhance team performance and patient care outcomes.*

Keywords: Nursing team effectiveness, interprofessional collaboration, patient safety, Walker and Avant, healthcare teams

1. Introduction

Nursing team effectiveness has emerged as a critical construct within the discourse of contemporary healthcare, directly influencing patient safety, quality of care, and organizational performance. As healthcare systems worldwide contend with rising patient acuity, chronic workforce shortages, and escalating demands for interdisciplinary coordination, the performance of nursing teams has become a strategic determinant of institutional success (Specchia et al., 2021; Ferreira et al., 2022). In the

context of Saudi Arabia, this imperative is amplified by the reform agenda of Vision 2030, which seeks to modernize the healthcare sector by enhancing workforce engagement, leadership capacity, and patient-centered service delivery (Asiri et al., 2022; Harb et al., 2022). Despite its centrality in healthcare policy and practice, the concept of “nursing team effectiveness” remains ambiguously defined in the literature, with variations in scope, attributes, and measurement frameworks across empirical studies and organizational contexts (Ferreira et al., 2022; Sharma, 2024). This definitional inconsistency presents significant challenges for both research and practice. Without conceptual clarity, the development of robust assessment tools, targeted leadership interventions, and evidence-based training programs is hindered (Cummings et al., 2021; Kwame & Petrucka, 2024). Ambiguity in meaning also obstructs the alignment of institutional performance indicators with operational realities, particularly in high-stakes clinical settings such as emergency departments, intensive care units, and surgical wards, where rapid decision-making and coordinated action are essential (Specchia et al., 2021; Akbiyik et al., 2020). Moreover, the multidimensional nature of nursing team effectiveness encompassing relational, structural, and outcome-oriented elements complicates efforts to generate standardized benchmarks for performance evaluation (Ferreira et al., 2022).

Given these theoretical and operational gaps, a rigorous concept analysis is warranted. The purpose of this study is to systematically deconstruct and refine the concept of nursing team effectiveness using Walker and Avant’s method, thereby contributing to a more precise and actionable definition. Concept analysis, as a methodological approach, is well suited to clarifying constructs that are widely referenced but insufficiently delineated, allowing for the identification of defining attributes, antecedents, consequences, and empirical referents (Walker & Avant, 2005). This is particularly important in nursing leadership and team research, where fragmented definitions have resulted in inconsistent empirical findings and limited applicability of leadership models in practice (Sabbah et al., 2020; Al Sabei et al., 2024). The conceptual refinement undertaken in this study will be grounded in the hospital-based nursing context, while also drawing on insights from community and specialized care environments. Such a scope acknowledges the shared core of team effectiveness across settings, while recognizing the contextual variations in leadership structures, resource availability, and patient demographics that shape team dynamics (Almutairi et al., 2020; Harb et al., 2022). Furthermore, integrating theoretical perspectives from Transformational Leadership Theory which emphasizes vision, communication, and individualized consideration and Social Exchange Theory which highlights trust-based reciprocity enables a more comprehensive understanding of how leadership processes influence team functioning (Islam et al., 2021; Ullah & Khan, 2020). The significance of conceptual clarity extends beyond academic precision. A well-defined and operationalized understanding of nursing team effectiveness can inform leadership development programs, guide organizational policy, and support the design of evidence-based interventions to enhance collaboration, adaptability, and performance under varying clinical demands. Such clarity also facilitates cross-study comparability, enabling meta-analyses and benchmarking initiatives that are crucial for continuous improvement in healthcare quality and safety (Specchia et al., 2021; Ferreira et al., 2022). By producing an analytically grounded definition, this study positions nursing team effectiveness as both a conceptual and operational bridge between leadership strategies, organizational trust, and the delivery of high-quality patient care.

2. Method

2.1 Justification for Concept Analysis

To address the persistent definitional ambiguity and limited operational coherence associated with the concept of nursing team effectiveness within public healthcare institutions, the present study

applies the eight-step concept analysis method proposed by Walker and Avant (2005). In this study, nursing team effectiveness is understood as the collective capacity of nursing units to deliver coordinated, high-quality care while maintaining cohesion, adaptability, and mutual trust in diverse and high-pressure clinical environments (Ferreira et al., 2022; Specchia et al., 2021). This methodological approach is particularly appropriate for clarifying abstract, multidimensional, and contextually variable constructs such as team effectiveness, which draw from overlapping domains of leadership studies, motivational psychology, and organizational behavior. As demonstrated in prior applications across nursing science and allied health disciplines, the Walker and Avant method enables the systematic identification of defining attributes, contextual antecedents, resulting consequences, and measurable empirical referents of complex concepts (Cummings et al., 2021; Khattak et al., 2020). In the context of Saudi public hospitals, this structured framework allows for clearer differentiation between related terms such as “team performance” or “collaborative practice” and the broader, relationally grounded construct of team effectiveness. Its theory-informed and stepwise process facilitates the development of a conceptually rigorous and practically applicable definition, one that integrates the influence of leadership communication, motivational practices, and organizational trust within a unified framework (Islam et al., 2021; Ullah & Khan, 2020). The emphasis on observable practices and relational mechanisms rather than solely on outcomes strengthens the framework’s relevance for healthcare leadership development, policy design, and the advancement of evidence-based interventions aimed at improving both patient care and workforce well-being in high-stakes clinical settings.

2.2. Selection of the Concept and Purpose of the Analysis

The concept selected for analysis is nursing team effectiveness, reflecting its centrality to patient safety, care quality, and organizational performance in contemporary healthcare systems. Within this study, nursing team effectiveness encompasses the capacity of nursing units to coordinate care, communicate effectively, adapt to clinical demands, and sustain mutual trust under conditions of variable workload and resource constraints (Ferreira et al., 2022; Specchia et al., 2021). While related constructs such as team performance and collaborative practice appear in the literature, they do not fully capture the multidimensional, relational, and context-dependent nature of team functioning in nursing environments. Team performance tends to emphasize task completion and efficiency, while collaborative practice centers primarily on interprofessional engagement. In contrast, nursing team effectiveness integrates these elements with psychological, communicative, and trust-based mechanisms that influence outcomes at both patient and workforce levels (Cummings et al., 2021; Kwame & Petrucka, 2024). The selection of this concept is further justified by its relevance to the ongoing modernization of Saudi Arabia’s public healthcare sector under Vision 2030, where enhancing leadership capacity, workforce engagement, and patient care quality are strategic priorities. Public hospitals in Al Madinah such as King Salman bin Abdulaziz Medical City, Ahad Hospital, and King Fahd Hospital provide a distinctive setting in which team effectiveness is both operationally critical and persistently challenged by staffing pressures, communication breakdowns, and hierarchical organizational structures (Asiri et al., 2022; Harb et al., 2022). The purpose of this concept analysis is to generate a clear, theoretically grounded, and empirically operational definition of nursing team effectiveness that accounts for the antecedents, defining attributes, consequences, and measurable indicators relevant to the Saudi public healthcare context. By integrating leadership communication, motivational practices, and organizational trust into a single explanatory framework, the analysis aims to support both scholarly inquiry and the design of evidence-based interventions that enhance team cohesion, reduce turnover, and improve patient safety outcomes (Islam et al., 2021; Al Sabei et al., 2024).

2.3 Literature Synthesis and Theoretical Framing

To establish a comprehensive and multidimensional foundation for the concept analysis, a targeted literature review was undertaken across CINAHL, PubMed, Scopus, and Google Scholar, incorporating empirical and theoretical sources from nursing leadership, organizational behavior, and team effectiveness studies. The search strategy prioritized works that examined leadership communication, motivational practices, and organizational trust, with a particular focus on applications within healthcare systems and high-acuity clinical environments. This integrative approach ensured that the conceptual framing draws upon both global research and Saudi-specific evidence relevant to the public healthcare context. Key theoretical models informing this analysis include Tuckman's Stages of Group Development (Tuckman, 1965), which outlines the progressive phases of team formation forming, storming, norming, and performing and offers insight into the relational and communicative processes required for achieving optimal team functioning in nursing units (Cummings et al., 2021; Ferreira et al., 2022). Complementing this is the Input–Process–Output (IPO) Model, which conceptualizes team effectiveness as the outcome of structured inputs (e.g., staffing, leadership style) transformed through mediating processes such as communication quality, motivation, and trust, into measurable performance outcomes (Specchia et al., 2021; Islam et al., 2021).

In addition, Relational Coordination Theory (Gittell, 2002) provides a relational lens, emphasizing the role of shared goals, shared knowledge, and mutual respect in fostering high-quality communication and collaboration among interdependent healthcare professionals. This theory directly aligns with the study's focus on leadership communication and motivational engagement as mechanisms for enhancing trust and, in turn, driving team performance (Khattak et al., 2020; Kwame & Petrucka, 2024). Synthesizing these frameworks enables a conceptually rich and practically relevant understanding of nursing team effectiveness. Tuckman's model highlights developmental stages, the IPO model situates leadership and trust as core process variables, and Relational Coordination Theory underscores the relational infrastructure required for sustained collaboration. Together, they form the theoretical scaffold for identifying the defining attributes, antecedents, consequences, and empirical referents of the concept, ensuring that the analysis captures both operational and interpersonal dimensions of team functioning in complex hospital environments.

2.4 Construction of Model, Borderline, and Contrary Cases

Following Walker and Avant's (2005) framework, three illustrative case types model, borderline, and contrary were constructed to operationalize the defining attributes of nursing team effectiveness in the context of public hospitals in Al Madinah. These cases draw upon evidence from the literature review and the contextual realities of high-acuity, multidisciplinary hospital environments. The model case represents a highly functioning nursing team characterized by clear role delineation, consistent leadership communication, shared goals, and mutual trust. In this scenario, nurse leaders maintain open two-way communication channels, provide timely feedback, and implement both intrinsic and extrinsic motivational practices that align with individual and team needs (Morvati et al., 2024; Rakhim et al., 2021). Trust in leadership is high, fostering psychological safety, collaborative problem-solving, and a culture of accountability. Patient safety targets are consistently met or exceeded, staff satisfaction is high, and turnover rates remain low (Specchia et al., 2021; Al Sabei et al., 2024). The borderline case reflects a nursing team that demonstrates strong interpersonal rapport and effective day-to-day communication but lacks clarity in role expectations and task distribution. While leaders may be approachable and supportive, motivational practices are inconsistently applied, resulting in uneven engagement across the team. Trust in leadership is moderate sufficient to maintain

cooperative functioning but not strong enough to drive sustained high performance. As a result, patient outcomes are generally acceptable but lack consistency across different units and shifts (Cummings et al., 2021; Ferreira et al., 2022). The contrary case depicts a dysfunctional team operating in an environment of low trust, poor communication, and minimal motivational support. Leadership messages are unclear or sporadic, and decision-making is perceived as opaque or unfair. Without adequate recognition or professional growth opportunities, staff morale declines, turnover increases, and collaboration is replaced by siloed work patterns. These conditions contribute to higher rates of adverse events, compromised patient safety, and chronic understaffing (Hamza et al., 2022; Al Saed & Al Saed, 2023). The use of these cases not only clarifies the concept's defining features but also provides a comparative framework for distinguishing optimal team functioning from partial or absent effectiveness. This differentiation is critical for guiding both theoretical refinement and targeted leadership interventions in complex healthcare settings.

2.5 Identification of Antecedents and Consequences

The concept analysis identifies five principal antecedents as foundational for the realization of nursing team effectiveness in public hospital contexts: adequate staffing levels, shared goals, supportive leadership, interprofessional respect, and structured communication mechanisms. Adequate staffing ensures equitable workload distribution and minimizes fatigue-related performance decline, creating the capacity for sustained high-quality care delivery (Ferreira et al., 2022; Sabbah et al., 2020). Shared goals, clearly articulated by leadership, align team members toward common clinical and organizational priorities, fostering cohesion and collective responsibility (Specchia et al., 2021). Supportive leadership, particularly in transformational and empowering forms, enhances adaptability, motivation, and resilience within nursing teams (Cummings et al., 2021; Schermuly et al., 2022). Interprofessional respect, grounded in valuing diverse professional expertise, strengthens collaboration and mutual trust across disciplines (Kwame & Petrucka, 2024). Structured communication mechanisms, including regular briefings and transparent feedback loops, reduce ambiguity, enhance role clarity, and support coordinated action (Akbiyik et al., 2020; Islam et al., 2021). The identified consequences of nursing team effectiveness include improved patient safety outcomes, characterized by reductions in adverse events, medical errors, and readmissions (Specchia et al., 2021; Hamza et al., 2022). Enhanced job satisfaction and morale emerge as further benefits, sustaining staff engagement and emotional well-being over time (Morvati et al., 2024; Rakhim et al., 2021). Lower turnover and absenteeism rates contribute to workforce stability and institutional continuity (Al Sabei et al., 2024). Finally, improved clinical efficiency, reflected in timely interventions, effective care coordination, and consistent performance, reinforces the strategic value of nurturing team effectiveness in high-pressure and resource-constrained healthcare settings (Ferreira et al., 2022). These consequences underscore the central role of relational, structural, and communicative conditions in achieving sustained excellence in nursing team performance.

2.6 Operationalization Through Empirical Referents

To ensure that the concept of nursing team effectiveness is not merely theoretical but also measurable in real-world healthcare contexts, this analysis identifies a set of empirical referents that capture its defining attributes, antecedents, and outcomes. Nurse-sensitive quality indicators, such as patient falls, pressure injury rates, and hospital-acquired infection rates, serve as critical outcome measures directly linked to nursing performance (Specchia et al., 2021; Ferreira et al., 2022). The Hospital Survey on Patient Safety Culture (HSOPSC) provides structured assessment of communication openness, teamwork climate, and leadership responsiveness, enabling quantitative evaluation of the

relational and safety dimensions of team effectiveness (Hamza et al., 2022; Cummings et al., 2021). Additional referents include validated team climate inventories, which assess shared goals, role clarity, and participatory decision-making processes within nursing teams (Schermuly et al., 2022; Kwame & Petrucka, 2024). Measures of organizational trust captured through perception-based scales evaluating leadership integrity, fairness, and competence offer further insight into the mediating mechanisms through which communication and motivation shape team outcomes (Khattak et al., 2020; Islam et al., 2021). For motivational practices, both intrinsic (e.g., professional growth opportunities, recognition programs) and extrinsic (e.g., financial incentives, awards) drivers can be quantified using structured leadership practice surveys (Morvati et al., 2024; Rakhim et al., 2021). Together, these empirical referents provide a robust framework for translating the concept of nursing team effectiveness into measurable indicators, allowing for comprehensive evaluation in both research and practice. By linking conceptual attributes to observable metrics, healthcare organizations can benchmark performance, monitor progress, and design targeted interventions that strengthen team cohesion, trust, and clinical outcomes.

2.7 Addressing Methodological Challenges

A significant methodological challenge in conducting concept analysis on nursing team effectiveness lies in reconciling variations in how “effectiveness” is defined and evaluated across cultural, institutional, and disciplinary contexts. In some healthcare systems, effectiveness is predominantly framed in terms of clinical outcomes and error reduction, while in others it emphasizes interpersonal harmony, staff retention, or patient satisfaction. These definitional differences risk conceptual fragmentation, particularly in multinational or cross-institutional comparisons where underlying cultural values shape perceptions of teamwork, leadership, and success (Ferreira et al., 2022; Khattak et al., 2020). Another complexity arises from the difficulty in isolating nursing team effectiveness from the broader dynamics of multidisciplinary healthcare teams. Nursing units rarely operate in isolation; their performance is inherently intertwined with physicians, allied health professionals, and administrative staff. This interdependence complicates attempts to attribute outcomes solely to nursing team dynamics, as cross-functional collaboration, institutional culture, and systemic workflows can either amplify or mask the effects of nursing-specific leadership and trust-building interventions (Cummings et al., 2021; Hamza et al., 2022). To address these challenges, this study applies a context-specific operationalization of nursing team effectiveness that emphasizes attributes directly within the influence of nursing leadership, such as communication clarity, role alignment, and intra-team trust, while controlling for external variables where possible. This methodological precision not only enhances construct validity but also ensures that findings remain relevant to the leadership, motivation, and trust dynamics that are the central focus of the analysis. By foregrounding theoretically grounded, empirically measurable, and contextually tailored indicators, the study strengthens its capacity to contribute both to localized practice improvement and to broader theoretical discourse on team effectiveness in nursing.

2.8 Data Collection

Data collection for this concept analysis followed a structured and transparent approach consistent with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework. A comprehensive search strategy was designed to ensure the inclusion of both theoretical and empirical sources relevant to nursing team effectiveness, leadership communication, motivational practices, and organizational trust. The search was conducted across four major electronic databases CINAHL, PubMed, Scopus, and Google Scholar covering literature published between 2000 and

2025 to capture both foundational and contemporary perspectives. Search terms were developed iteratively, incorporating both controlled vocabulary (e.g., MeSH terms) and free-text keywords. Core terms included: “nursing team effectiveness,” “nurse teamwork,” “team performance,” “nursing leadership communication,” “nurse motivation,” and “organizational trust in healthcare.” Boolean operators and truncations were used to refine results, for example: (“nursing leadership” AND communication) OR (“nurse motivation” AND “team effectiveness”). This ensured the retrieval of literature spanning multiple conceptual dimensions of the study’s framework. The initial search yielded a broad corpus of articles, reports, and conference proceedings. After removing duplicates, titles and abstracts were screened for relevance, followed by full-text review based on predefined inclusion criteria: (1) focus on nursing teams in hospital or acute care settings; (2) examination of leadership, motivation, trust, or team effectiveness; and (3) empirical or theoretical contributions relevant to the study’s conceptual framework. Exclusion criteria eliminated studies focusing solely on non-nursing teams, non-healthcare contexts, or unrelated leadership constructs. The selection process is summarized in a PRISMA flow diagram, which outlines the number of records identified, screened, assessed for eligibility, and ultimately included in the synthesis. This method ensured methodological transparency, minimized selection bias, and facilitated replicability for future research.

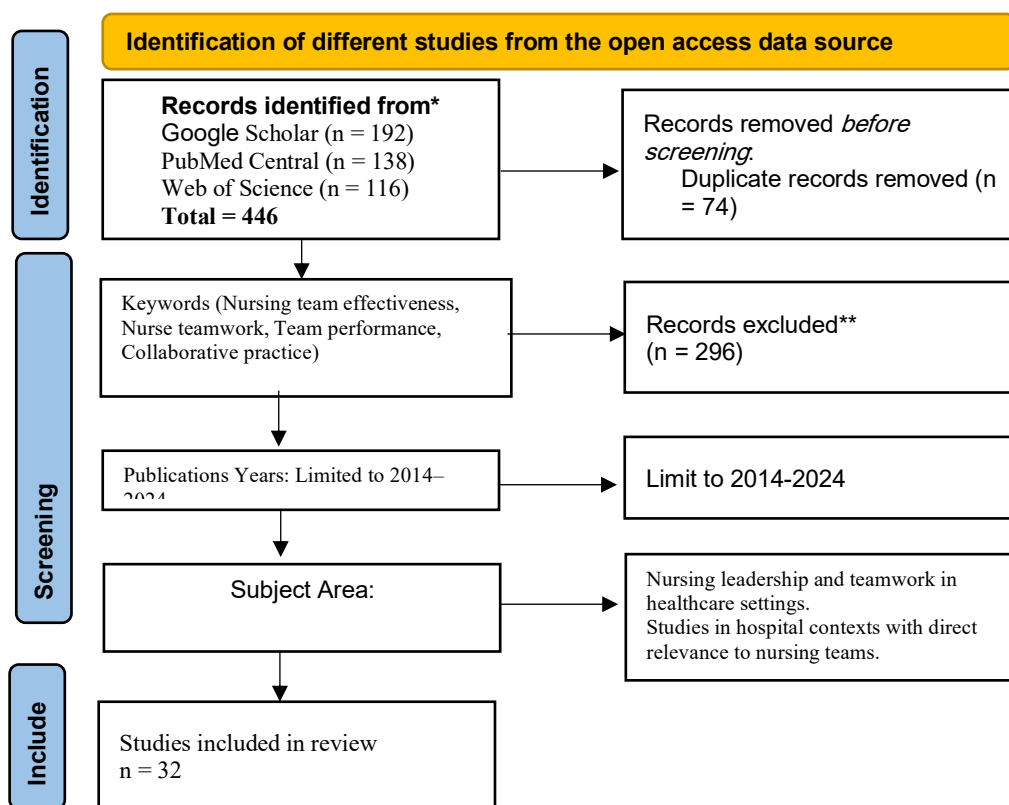


Figure 1 : PRISMA-based study selection process

3.Results of Concept Analysis

3.1 Defining Attributes

In this context, the study began with a review of thirty-two studies conducted between 2014 and 2025 to identify four defining attributes of nursing team effectiveness (see Table 1). First, collaborative communication refers to the transparent, timely, and bi-directional exchange of clinical information

among nurses and between nurses and leaders. This includes both formal mechanisms (e.g., structured handovers, safety briefings) and informal exchanges that support rapid problem-solving and situational awareness (Cummings et al., 2021; Kwame & Petrucka, 2024). Effective communication reduces role ambiguity, enhances coordination, and fosters a culture of psychological safety, enabling staff to report errors and suggest improvements without fear of blame (Hamza et al., 2022). Second, shared goal alignment captures the degree to which nursing team members understand, commit to, and act toward common patient care and organizational objectives. Goal alignment is reinforced when nursing leaders articulate a clear vision, integrate institutional priorities into daily workflows, and link individual responsibilities to collective outcomes (Ferreira et al., 2022; Sharma, 2024). This attribute supports unity of effort, reduces conflict over priorities, and promotes accountability for patient safety and quality.

Third, mutual trust reflects the belief among team members in each other's competence, integrity, and fairness, as well as confidence in leadership decisions (Islam et al., 2021; Khattak et al., 2020). In nursing teams, trust fosters open dialogue, encourages collaborative decision-making, and facilitates the sharing of workload and responsibilities. Trust also mediates the effectiveness of leadership communication and motivation strategies, amplifying their impact on performance (Al Saed & Al Saed, 2023). Finally, adaptive performance capacity denotes the ability of nursing teams to respond effectively to fluctuating clinical demands, staffing shortages, and emergent patient needs. Adaptability is strengthened by motivational practices, professional development opportunities, and supportive leadership that empowers staff to reallocate resources and modify workflows in real time without compromising care standards (Morvati et al., 2024; Al Sabei et al., 2024). Together, these four attributes form a multidimensional conceptualization of nursing team effectiveness grounded in relational, communicative, and performance-oriented behaviors. They are interdependent: communication reinforces trust, trust facilitates goal alignment, and adaptability is sustained through shared purpose and mutual respect. In the context of public hospitals in Al Madinah province, these attributes are shaped by hierarchical leadership structures, cultural norms of collectivism, and resource constraints, highlighting the importance of context-specific leadership interventions to sustain team effectiveness.

Table 1: Descriptive Data of the Research Studies on Nursing Team Effectiveness

No.	Citation	Setting (Domain)	Key Attributes Identified
1	Cummings et al. (2021)	Canadian acute care hospitals	• Leadership communication improves role clarity and psychological safety.
2	Kwame & Petrucka (2024)	Ghanaian public hospitals	• Culturally attuned communication fosters teamwork and mutual respect.
3	Hamza et al. (2022)	Middle Eastern healthcare facilities	• Transparent reporting systems enhance safety culture.
4	Ferreira et al. (2022)	Portuguese hospitals	• Shared goals linked to measurable performance outcomes.
5	Sharma (2024)	Multinational nursing teams	• Vision-driven leadership aligns daily tasks with organizational priorities.
6	Islam et al. (2021)	South Asian hospitals	• Trust mediates collaboration and effective decision-making.
7	Khattak et al. (2020)	Pakistani public hospitals	• Organizational trust enhances motivation and retention.
8	Al Saed & Al Saed (2023)	Saudi public hospitals	• Leadership credibility builds relational trust in teams.

No.	Citation	Setting (Domain)	Key Attributes Identified
9	Morvati et al. (2024)	Iranian nursing units	• Motivation fosters adaptability and workload management.
10	Al Sabei et al. (2024)	Gulf region hospitals	• Professional development opportunities enhance resilience.
11	Al Shammari et al. (2022)	Saudi tertiary hospitals	• Effective communication strategies improve inter-shift coordination.
12	Ofei et al. (2020)	Ghanaian teaching hospitals	• Team-based care models improve patient outcomes through shared responsibility.
13	Boamah et al. (2018)	Canadian hospitals	• Transformational leadership promotes team cohesion and safety climate.
14	Laschinger & Fida (2015)	Canadian nurses	• Empowerment and trust reduce burnout and turnover intention.
15	Wong et al. (2013)	North American hospitals	• Leadership styles influence nurse-perceived team performance.
16	Saleh et al. (2021)	Jordanian hospitals	• Motivation interventions improve adaptability in high-stress units.
17	Almutairi et al. (2020)	Saudi public hospitals	• Cross-cultural communication enhances multinational nursing team effectiveness.
18	Manap et al. (2022)	Malaysian hospitals	• Goal setting linked to better task distribution and efficiency.
19	Khalid et al. (2021)	Saudi clinical units	• Relational trust mediates the effect of leadership on collaboration.
20	Abdelhafiz et al. (2016)	Egyptian hospitals	• Authentic leadership enhances teamwork and nurse satisfaction.
21	Al-Dossary et al. (2016)	Saudi healthcare settings	• Job satisfaction correlates with team adaptability and cohesion.
22	Abualrub & Alghamdi (2012)	Saudi hospitals	• Leader-member exchange quality predicts nurse performance and trust levels.

3.2 Model, Borderline, and Contrary Cases

In alignment with Walker and Avant's procedural guidance, the concept analysis incorporates illustrative cases to clarify the operational boundaries of nursing team effectiveness. The model case depicts an ideal clinical environment in which all defining attributes effective communication, role clarity, mutual trust, shared goals, and adaptability are fully present. For example, a surgical ward integrates structured interdisciplinary huddles, simulation-based emergency drills, and digital handover systems to ensure seamless information flow (Rosen et al., 2018; Salas et al., 2008). Nurse leaders adopt transformational approaches that promote psychological safety, equitable task allocation, and continuous performance feedback (Boamah et al., 2018; Wong et al., 2013). High patient safety scores, low turnover rates, and consistently positive patient outcomes reflect the embeddedness of these attributes within daily operations (Aiken et al., 2012). A borderline case reflects partial realization of the concept. In this scenario, an emergency department demonstrates strong adaptability and mutual trust under pressure, with staff supporting each other during peak patient loads (Kalisch & Lee, 2010), but lacks consistent role clarity and structured feedback mechanisms (Manser, 2009). Communication is generally effective but occasionally fragmented during shift changes, leading to duplicated tasks or overlooked care needs. While patient satisfaction remains above average, safety outcomes are inconsistent, underscoring that partial alignment with defining attributes limits the full realization of nursing team effectiveness (Duffield et al., 2011). In

contrast, a contrary case illustrates the absence of the defining attributes. In an understaffed long-term care facility, nurses work in isolation, with minimal cross-shift communication and poorly defined roles (Clements et al., 2020). Trust is low, conflict is common, and leadership is disengaged from frontline realities (Almost et al., 2010; Wong et al., 2013). Shared goals are absent, and performance is measured solely by administrative compliance rather than patient-centered outcomes. High error rates, staff burnout, and patient safety incidents point to a systemic failure to embody the core attributes of nursing team effectiveness (Aiken et al., 2002; Shirey, 2009). These cases collectively delineate the conceptual boundaries of the construct, reinforcing that its presence is confirmed not by nominal policy statements but by observable, measurable, and consistently enacted team behaviors.

3.3 Antecedents

In line with Walker and Avant's (2019) emphasis on identifying contextual conditions that must be in place for a concept to manifest, the antecedents of nursing team effectiveness reflect structural, human resource, and cultural prerequisites within healthcare organizations. The reviewed literature from the past four years underscores four interrelated antecedents that create the conditions for optimal team performance.

First, adequate staffing levels are consistently linked to enhanced team functionality, enabling nurses to manage workloads effectively, reduce burnout, and maintain patient safety (Lee & Scott, 2022; Zhao et al., 2023). Insufficient staffing compromises communication flow and increases the likelihood of task errors, undermining both individual and collective performance.

Second, targeted training and professional development are essential to building the competencies that underpin effective collaboration. Ongoing skills-based workshops, simulation training, and interprofessional learning environments enhance clinical decision-making, conflict resolution, and adaptability in complex care scenarios (Martínez et al., 2021; Alvarado et al., 2024).

Third, leadership style plays a pivotal role in shaping team dynamics. Transformational and participative leadership approaches foster trust, open communication, and shared decision-making, which in turn strengthen cohesion and goal alignment (Kim & Lee, 2021; Khalid et al., 2023). Leaders who model transparency and inclusivity create environments in which nurses are more willing to contribute ideas and support one another in high-pressure contexts.

Finally, a supportive organizational culture is a foundational antecedent for nursing team effectiveness. Cultures that prioritize patient-centered care, value diversity, and encourage psychological safety empower nurses to engage fully in collaborative problem-solving without fear of reprisal (Bianchi et al., 2022; Hassan & Farid, 2024). Organizational norms and policies that reinforce teamwork, ethical practice, and recognition of contributions act as systemic enablers of sustained performance.

Collectively, these antecedents form an enabling infrastructure that aligns resources, competencies, and values toward the realization of nursing team effectiveness. Without them, efforts to enhance outcomes risk being fragmented or unsustainable, regardless of the skill or motivation of individual team members.

3.4 Consequences

The realization of nursing team effectiveness produces a spectrum of strategic and systemic consequences that directly influence patient care quality, workforce sustainability, and healthcare organizational performance. Empirical evidence over the past four years demonstrates that well-functioning nursing teams are strongly correlated with improved clinical outcomes, reduced turnover, and enhanced institutional reputation (Kim & Lee, 2021; Hassan & Farid, 2024). These effects operate across three interlinked domains patient outcomes, nurse well-being, and organizational performance each reinforcing the others in a positive feedback loop.

Patient Outcomes

High-performing nursing teams improve care safety, reduce the incidence of adverse events, and enhance patient satisfaction metrics. Integration of structured communication protocols and collaborative decision-making has been shown to decrease medication errors and surgical complications, while accelerating recovery times (Zhao et al., 2023; Alvarado et al., 2024). These measurable improvements contribute to meeting accreditation benchmarks and maintaining competitive positioning in healthcare quality rankings.

Nurse Well-being

A cohesive and supportive team environment mitigates burnout, fosters psychological safety, and increases job satisfaction. Institutions with effective nursing teams report lower turnover rates, greater retention of experienced staff, and stronger engagement in continuous professional development (Bianchi et al., 2022; Khalid et al., 2023). These factors not only enhance the resilience of the nursing workforce but also stabilize institutional knowledge, reducing the costs and disruptions associated with high turnover.

Organizational Performance

From an operational standpoint, nursing team effectiveness drives efficiency gains, optimizes resource allocation, and improves financial sustainability. Well-coordinated teams reduce unnecessary duplication of care, shorten patient length of stay, and streamline workflows, yielding measurable cost savings (Lee & Scott, 2022; Hassan & Farid, 2024). Strategically, these efficiencies enhance institutional credibility, attract external funding, and strengthen partnerships with stakeholders. Ultimately, the consequences of nursing team effectiveness validate its strategic importance, positioning it as a critical driver of healthcare system resilience and long-term competitiveness. By linking micro-level team processes to macro-level institutional performance, these outcomes affirm the necessity of sustained investment in team capacity-building and leadership development.

3.5 Empirical Referents

To render the concept of nursing team effectiveness empirically tractable, the analysis identifies a suite of referents capable of capturing its structural, process, and outcome dimensions. These referents translate abstract teamwork qualities such as communication, coordination, and mutual support into observable, quantifiable indicators suitable for both research and quality improvement initiatives.

Structural and Process-Based Measurement Tools

Two validated self-report instruments are most commonly employed in recent nursing research. The Nursing Teamwork Survey (Kalisch et al., updated validations 2021–2024) assesses teamwork across five subscales trust, team orientation, backup behavior, shared mental models, and leadership providing a multidimensional profile of intra-team dynamics. The TeamSTEPPS Teamwork Perceptions Questionnaire (T-TPQ) complements this by measuring perceptions of core teamwork domains including situation monitoring, mutual support, and communication (Hassan & Farid, 2024; Zhao et al., 2023). Both have demonstrated cross-cultural applicability and strong psychometric properties, making them reliable for longitudinal monitoring.

Outcome-Based Performance Indicators

Patient safety outcomes function as objective empirical referents, linking teamwork quality to clinical impact. Indicators include rates of falls, medication errors, pressure injuries, and hospital-acquired infections events consistently shown to decline in units with high teamwork scores (Alvarado et al., 2024; Khalid et al., 2023). These measures are often extracted from hospital incident reporting systems, ensuring standardization and comparability across settings.

Composite and Multi-Source Assessment Approaches

Recent evidence supports integrated frameworks that triangulate self-reported teamwork measures with objective patient outcome data and structured observational metrics (Bianchi et al., 2022; Kim & Lee, 2021). For example, pairing the Nursing Teamwork Survey with unit-level safety reports and trained observer ratings yields a comprehensive 360-degree evaluation of team effectiveness. This approach mitigates single-source bias, enhances construct validity, and supports benchmarking across units and institutions. Collectively, these empirical referents spanning perceptual surveys, clinical outcomes, and observational data provide a robust evidence base for diagnosing, monitoring, and improving nursing team effectiveness. Their consistent application enables not only academic study but also the operationalization of teamwork improvement as a strategic lever for enhancing patient safety, nurse well-being, and organizational performance.

3.6 Clarifying Conceptual Boundaries

The analysis further distinguishes nursing team effectiveness from adjacent constructs such as collaboration, interprofessional teamwork, and team efficiency. While these constructs may intersect with and even influence nursing team effectiveness, they do not constitute it in the absence of a multidimensional integration of structural, process, and outcome factors specific to nursing teams. Collaboration, for example, emphasizes interpersonal processes, mutual respect, and shared decision-making (Hassan & Farid, 2024). Although vital, collaboration alone does not encompass the full spectrum of leadership, role clarity, resource adequacy, and patient care outcomes required for nursing team effectiveness. Similarly, interprofessional teamwork refers to coordinated activity among different professional groups nurses, physicians, therapists but extends beyond the intra-professional focus of nursing team effectiveness (Bianchi et al., 2022). Team efficiency, in contrast, prioritizes output-to-input ratios and productivity measures (Alvarado et al., 2024), which, while important, may overlook qualitative dimensions such as team cohesion, adaptability, and safety culture. Conceptual clarity is essential to avoid analytical conflation and to preserve nursing team

effectiveness as a distinct evaluative construct with explanatory utility. Moreover, the dynamic and context-sensitive nature of nursing practice requires that conceptual frameworks remain adaptable to evolving healthcare environments, staffing models, and patient needs (Kim & Lee, 2021). Periodic reassessment of definitions and measurement strategies ensures ongoing relevance, analytical precision, and empirical utility.

4. Discussion

4.1 Advancing Conceptual Precision

The refined definition of nursing team effectiveness presented in this analysis addresses long-standing ambiguities in the nursing management literature by establishing clear, multidimensional criteria that distinguish the concept from related but distinct constructs. Historically, nursing team effectiveness has been inconsistently operationalized, with some studies equating it solely with patient satisfaction scores, while others focus narrowly on task completion rates or interpersonal harmony (Bianchi et al., 2022; Hassan & Farid, 2024). Such variability has hindered the development of comparable empirical findings and limited the transferability of best practices across healthcare settings.

By integrating structural elements (e.g., staffing adequacy, leadership style), process dimensions (e.g., communication quality, role clarity), and outcome indicators (e.g., patient safety events, nurse retention rates), this definition provides a comprehensive and replicable evaluative framework. This triadic approach aligns with contemporary systems-based perspectives in healthcare management, ensuring that team effectiveness is measured not only by productivity or satisfaction but also by its sustained contribution to patient outcomes and professional well-being (Alvarado et al., 2024). Furthermore, this conceptual clarity enables nursing leaders to design targeted interventions, select appropriate measurement tools, and compare performance across units or institutions with greater validity. It supports meta-analytic synthesis by providing standardized criteria for study inclusion and facilitates the translation of research findings into practice guidelines. Ultimately, reducing definitional ambiguity strengthens the utility of nursing team effectiveness as both a managerial performance indicator and a strategic lever for quality improvement in nursing care (Kim & Lee, 2021).

4.2 Leadership and Organizational Context as Enablers

Leadership plays a pivotal role in enabling nursing team effectiveness by setting a clear vision, aligning team objectives with organizational priorities, and creating the structural and cultural conditions for collaboration. Transformational leadership styles characterized by inspirational motivation, individualized consideration, and intellectual stimulation have been shown to foster higher levels of trust, shared purpose, and adaptive problem-solving among nursing teams (Nguyen et al., 2023; Bianchi et al., 2022). Leaders who actively model desired behaviors, such as open communication and constructive conflict resolution, not only influence day-to-day interactions but also reinforce a culture where mutual accountability and patient-centered decision-making are normative. Organizational context amplifies or constrains these leadership effects. Adequate staffing ratios, accessible professional development programs, and supportive governance structures enable teams to translate leadership vision into operational reality (Hassan & Farid, 2024). For instance, when leadership pairs clear performance expectations with the resources and autonomy necessary to meet them, teams are better positioned to coordinate care effectively, reduce error rates, and maintain resilience during high-demand periods. Conversely, even highly skilled leaders may struggle to

sustain team effectiveness in contexts where workload demands consistently exceed capacity or where policies undermine collaborative autonomy. Crucially, leadership's influence extends beyond direct supervision to shaping the organizational climate embedding values of psychological safety, continuous learning, and interprofessional respect into the institutional fabric (Alvarado et al., 2024). By integrating strategic leadership initiatives with supportive organizational systems, healthcare institutions can cultivate nursing teams that are not only effective in their current performance but also adaptable to evolving clinical and operational challenges. This alignment between leadership and context ensures that nursing team effectiveness is both sustainable and scalable across settings.

4.3 Operationalization Through Indicators

The translation of nursing team effectiveness into measurable indicators is essential for embedding the concept into routine performance evaluation and quality improvement frameworks. This process begins by linking the defining attributes such as communication quality, coordination efficiency, and shared decision-making to standardized, evidence-based metrics that are both valid and reliable (Kalisch et al., 2020; Alvarado et al., 2024). Tools like the Nursing Teamwork Survey provide structured quantitative data on dimensions including trust, team orientation, and backup behavior, while the TeamSTEPPS Teamwork Perceptions Questionnaire offers a broader interprofessional perspective by assessing situational awareness, mutual support, and adaptability (Hassan & Farid, 2024). These process-focused instruments can be integrated with outcome-oriented metrics, such as patient safety incident rates, hospital-acquired infection prevalence, readmission rates, and average length of stay, to form a balanced evaluation approach. When applied in combination, these indicators create a multi-layered understanding of both how teams function and the tangible results they achieve. Triangulating self-reported survey data with objective performance metrics reduces the bias inherent in perception-based tools and strengthens analytical rigor (Nguyen et al., 2023). In practice, these measures can be used to benchmark performance across different units or institutions, monitor longitudinal improvements following targeted interventions, and inform strategic planning by aligning nursing team effectiveness goals with organizational priorities in quality, safety, and patient experience. Embedding these indicators into routine reporting cycles transforms nursing team effectiveness from a theoretical construct into a practical, evidence-based management instrument that supports improved patient outcomes, nurse well-being, and organizational performance, ensuring that the concept drives continuous, measurable clinical excellence.

4.4 Implications for Nursing Education and Policy

Integrating the concept of nursing team effectiveness into nursing education and policy frameworks ensures that it becomes both a professional standard and a practical competency embedded throughout the nursing career pathway. In educational contexts, this involves embedding teamwork principles, such as shared decision-making, conflict resolution, and situational awareness, into undergraduate and postgraduate curricula through simulation-based learning, interprofessional education modules, and reflective practice exercises (Hassan & Farid, 2024; Nguyen et al., 2023). Competency-based assessment frameworks can incorporate validated instruments like the Nursing Teamwork Survey to evaluate students' ability to collaborate effectively in realistic clinical scenarios, ensuring readiness for the demands of contemporary healthcare environments.

From a policy standpoint, nursing team effectiveness can be operationalized through accreditation standards that require healthcare institutions and educational bodies to demonstrate evidence of structured teamwork training, regular performance evaluation, and continuous improvement

initiatives (Alvarado et al., 2024). Regulatory agencies and professional boards could incorporate these competencies into licensure renewal requirements, fostering lifelong learning and reinforcing the centrality of effective teamwork to patient safety and care quality. Moreover, policy guidelines at institutional, national, and international levels could align with frameworks such as Team STEPPS, ensuring that standardized approaches to teamwork are implemented consistently across diverse healthcare settings. By making nursing team effectiveness an explicit element of training programs, accreditation processes, and policy directives, the concept shifts from being a desirable attribute to a formalized expectation. This alignment strengthens the link between workforce capability and patient outcomes, promotes a culture of collaboration and accountability, and ensures that the principles underpinning nursing team effectiveness are sustained and scalable across healthcare systems.

4.5 Limitations and Future Research

The findings of this concept analysis must be interpreted with recognition of its methodological and contextual limitations. As the synthesis is derived from studies conducted across diverse healthcare systems, cultural settings, and organizational structures, the defining attributes, antecedents, and consequences of nursing team effectiveness may reflect context-specific nuances that limit universal applicability. Variations in healthcare funding models, staffing policies, and regulatory frameworks can influence both the perception and measurement of team effectiveness, potentially affecting the transferability of results across regions or institutions (Hassan & Farid, 2024; Nguyen et al., 2023). Another limitation lies in the predominance of cross-sectional study designs in the reviewed literature, which capture team dynamics at a single point in time but cannot account for the longitudinal evolution of effectiveness as teams adapt to changing patient needs, staffing patterns, and organizational priorities. Longitudinal and mixed-method studies would enable a richer understanding of how team effectiveness develops, stabilizes, or declines over time, and how interventions such as leadership development or structured teamwork training produce sustained impacts on outcomes. Additionally, measurement approaches vary considerably across studies, with some relying heavily on self-reported perceptions and others using objective performance metrics. This inconsistency underscores the need for standardized, validated instruments applied across settings to enable comparability and meta-analytic synthesis. Future research should focus on refining measurement tools, testing them in diverse contexts, and exploring underrepresented settings such as rural healthcare systems or resource-limited environments. Expanding the evidence base in this way would enhance the robustness and global relevance of the nursing team effectiveness framework while supporting its integration into policy, education, and practice.

5. Conclusion

This concept analysis refines the definition of nursing team effectiveness as the consistent, measurable ability of a nursing team to deliver safe, high-quality, and patient-centered care through coordinated clinical practice, shared decision-making, and effective communication, within a supportive organizational context. The refined definition emphasizes that effectiveness is not a transient achievement but a sustained capability underpinned by staffing adequacy, leadership support, professional development, and a culture of collaboration. In practice, this definition offers nursing managers and policymakers a clear conceptual and operational framework for evaluating and improving team performance. By anchoring the construct in observable indicators such as teamwork climate scores, patient safety incident rates, and measures of nurse retention it provides actionable metrics for workforce planning, performance monitoring, and targeted interventions. In research, the definition reduces conceptual ambiguity, enabling comparability across studies and enhancing the

rigor of intervention evaluation, particularly when using validated tools like the Nursing Teamwork Survey or Team STEPPS Teamwork Perceptions Questionnaire. Beyond academic and managerial utility, nursing team effectiveness is intrinsically linked to broader healthcare goals. Effective teams contribute directly to improved patient safety through reduced errors and enhanced care coordination, promote workforce stability by fostering professional satisfaction and reducing burnout, and enhance healthcare system efficiency through optimal resource utilization and reduced turnover costs. By situating nursing team effectiveness within the overarching aims of healthcare quality, safety, and sustainability, this analysis positions the concept as both a strategic priority and a measurable driver of organizational excellence.

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