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Original Research

Teamwork, Team Nursing, and Aristotle: The Whole Versus the Sum of The Parts

M. Agboje[1], O. Omotowa[1], M. Nies[1], J. Kehinde[2]

1. Idaho State University, College of Health, School of Nursing, Pocatello, Idaho, USA; 2. Veterans Health Administration, Washington, DC, Office of Nursing Services, USA

Corresponding Author: Mopelola Agboje, Ph.D., RN, Idaho State University, School of Nursing, Pocatello, USA, mopelolaagboje@isu.edu

Abstract

With rising health care demands, effective teamwork in nursing is essential for quality patient care. This concept analysis explored teamwork and team nursing through Aristotle's lens of the whole versus the sum of its parts. Using a principle-based method, the analysis emphasized communication, collaboration, and trust among nurses and patients. When teams function cohesively, outcomes improve; when fragmented, care suffers. This philosophical foundation highlights the critical role of unity in nursing practice.

Key words: Teamwork, team nursing, whole, parts of the whole, Aristotle.

Teamwork, Team Nursing: The Whole Versus The Sum of Its Parts

In health care, effective teamwork is essential for providing high-quality patient care (1-3). Team nursing, a model of care that emphasizes collaborative practice among nursing staff, is rooted in the belief that the collective effort of a team can achieve better outcomes than individual efforts alone (2). The present concept analysis will explores the definitions, attributes, antecedents, and consequences of teamwork and team nursing using Aristotle's principle to examine the principle that "the whole is greater than the sum of its parts".

Team nursing is the core team of nurses caring for the patient (3). Its composition accounts for the configuration of each health care worker's attributes and skills (2). Forging the team involves the conglomeration of every member's skills, knowledge, training, and abilities, with the goal of influencing and enhancing patient outcomes with a melting pot of strengths (3, 4). The words of Aristotle—the whole is greater than the sum of its parts—are poignant to teamwork. Aristotle's principle suggests that when individual elements are combined effectively, they create a cohesive system or entity that possesses qualities and strengths greater than each individual element could achieve unilaterally. This concept emphasizes the power of collaboration and synergy. In a team, effective communication and psychological safety are critical to giving and receiving information, asking questions, admitting mistakes, resolving conflicts, and expressing ideas and concerns (2, 4, 5)

Health care organizations are highly team-oriented, especially those that value efficiency and productivity (4). Despite the ubiquitous use of "team" in health care organizations, its meaning has tended to be variable and superficial. Indeed, people interchangeably use "group" and "team" in the same sentences. A group is a collection of individuals who come together to achieve a common goal, but they may not necessarily have a shared sense of interdependence or coordinated effort. A team is a subset of a group characterized by a high level of collaboration, interdependence, and mutual accountability among its members to achieve specific objectives (8). While all teams are groups, not all groups are teams. The distinction lies in the structured interaction, clear roles, and collective focus on outcomes that define a team, whereas a group may lack these cohesive elements.

The gap in the literature that this concept analysis aims to fill is the lack of a philosophical and conceptual understanding of teamwork in nursing, specifically analyzed through Aristotle's concept of the whole being greater than the sum of its parts. While existing literature often addresses teamwork in terms of practical strategies, roles, and outcomes, this concept analysis uniquely contributes to the body of science by offering a principle-based, theoretical exploration that integrates philosophical insights, particularly emphasizing communication, collaboration, and trust as foundational to cohesive team functioning and high-quality patient care.

This concept analysis of teamwork and team nursing, in relation to Aristotle's principle of "the whole is greater than the sum of its parts," focuses on the exploration of the application of Aristotle's principle to modern nursing practices. This analysis will examine the essential components of teamwork in nursing, such as communication, collaboration, and shared goals, and how these elements create a synergistic effect in team nursing. By applying Aristotle's philosophical insights, the analysis aims to elucidate how teamwork can enhance patient care, optimize outcomes, and foster a more cohesive and efficient nursing environment, particularly

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in geriatric settings. There are teams in team nursing. The Whole team nursing is the core team caring for the patient (3). Team composition is the configuration of each healthcare worker's attributes and skills. Forging the team depends on everyone's skills and training combined into a melting pot of abilities. The team composition influences teamwork and outcomes (3, 4). In a team, effective communication and psychological safety are critical to giving and receiving information, asking questions, admitting mistakes, resolving conflicts, and expressing ideas and concerns. Members can ask themselves, "Will my part continue to be part of the Whole with my mistakes?"

Background

During the COVID-19 pandemic, care and nursing services faced many serious challenges, such as nursing staffing shortage (2, 9) and rapid turnover of nurses, including in geriatric long-term care (2, 9). Therefore, hospitals explored many strategies to manage the crisis, including the adoption of the Team Nursing Model to leverage many Skillset pooled from different patient care areas to support direct patient care (9). Significant nursing shortages continued across health care institutions for several months following the COVID-19 outbreak when little was known about the disease, its transmission, and its treatment (11). The virus spread rapidly, and case numbers surged, creating a cumulative effect of increasing the number of acutely ill patients and staff absence owing to COVID-19 infection or quarantine (9).

During the COVID-19 pandemic, the exodus of experienced nurses from the workforce became a global issue that exacerbated the problem of providing high-quality patient care (2, 9). Hospitals recognized that not all staffing models would work in all settings; many organizations adjusted to the decreased number of nurses available to work. Although health care organizations have always faced emerging nursing shortage (11, 12), the COVID-19 pandemic created an additional patient load due to the widespread transmission of the disease, causing increased hospitalization, coupled with increased demand for nurses to administer COVID-19 testing and vaccination (9, 13). Moreover, nurse burnout and moral distress resulted in the depletion of nursing staff in many health care organizations (9).

Health care leaders assessed their staff resources in response to the contracting nursing workforce and increasing number of hospitalized patients. In geriatric settings, such as long-term care and/or community living centers, leaders adopted the team nursing model to maximize their nursing staff's skills and knowledge for high-quality, safe patient care at lower costs (10, 14). The philosophy was that team nursing would maximize the various licenses/certifications available to ensure quality care in a low-staffed nursing environment (2, 5).

Purpose of Concept Analysis of Teamwork in Team Nursing

The present study concept analysis aimed to explore and clarify how the integration of individual nursing roles within a cohesive team can lead to enhanced patient care and outcomes. By applying Aristotle's philosophy, the sought to demonstrate how effective teamwork in the nursing context can create a synergistic environment, where the collective efforts of the team can surpass the capabilities of individual contributions, ultimately leading to higher standards of care and improved efficiency in health care settings, particularly in geriatric care.

Methods

The principle-based concept analysis approach developed by Morse et al. (17) to analyze teamwork and team nursing concepts and connect them logically to Aristotle's principle (i.e., the whole is greater than the sum of its parts). This approach exclusively relies on scientific principles that focus on the intentional and strategic extraction of data as its foundation (16-19). We intentionally and strategically extracted data to form the foundation of this method. The principle-based concept analysis approach recognizes the dynamic and evolving nature of concept advancement, thereby providing a robust framework for theoretically defining and understanding a concept's status within the scientific community (16, 18).

Concept analysis is critical in nursing and health care for clarifying and defining key concepts that inform practice, research, and education (16, 20). The principle-based concept analysis approach is beneficial for complex, multidimensional concepts and involves four main principles: epistemological, pragmatic, linguistic, and logical (16, 21). This method is comprehensive and rigorous, making it suitable for analyzing complex concepts in health care. The epistemological principle examines the concept's nature and source of knowledge and can be applied to elucidate teamwork and team nursing (16). The logical principle involves the critical evaluation of a concept's clarity and compatibility within a theoretical framework. This comprehensive evaluation is essential for establishing the relevance and applicability of the concept in scholarly discussions and practical applications (16, 22, 23). The pragmatic principle, which evaluates the practical applications and usefulness of a concept in real-world settings, is particularly useful for understanding the implementation of a concept, its impact on patient care, and its utility in improving outcomes (24). Lastly, the linguistic principle analyzes the language and terminology used to describe the concept (16, 19, 22).

Purpose of Concept Analysis of Teamwork in Team Nursing

In nursing, teamwork is a patient-centered approach to goal sharing and skill leveraging among nurses. The team composition involves the configuration of the diverse attributes and skills of the team members. Configuration has a significant influence on the teamwork process and outcome. Proper configuration indicates that team members are comfortable with sharing information and satisfied with giving and taking constructive feedback in ways that benefit all members. If this definition holds, then patient care will improve, positive health outcomes are achieved, and the nurses will feel fulfilled in their work.

Epistemological Principles of Teamwork and Team Nursing

Research has noted the epistemological beliefs and assumptions at play in nursing (25). These beliefs tend to assume that health care processes occur in a straightforward, linear manner that can be clearly outlined in policies and procedures. Another assumption is that teamwork can be quantified and that any inadequacies in teamwork can be remedied through intervention (25). Team nursing is a nursing care model. In team nursing, a group of staff (licensed and unlicensed professionals) collaboratively work together to provide comprehensive and quality patient care in different hospital unit types and health care settings. In the team nursing model, team-based nursing provides health care services by at least two nursing staff (licensed and unlicensed) collaboratively working with the patients, their families, and communities to accomplish a shared goal of high-quality care.

In team nursing, the team typically consists of a charge nurse or a team leader who is knowledgeable about the patient's plan of care and responsible for patient assignments to the team members, including registered nurses or licensed practical nurses. The latter then assign or delegate tasks to the care technicians or certified nursing assistants as appropriate within their scope of practice. Each team is responsible for several assigned patients (26).

Epistemology, the study of knowledge and justified belief, examines the nature, sources, and limits of knowledge and how it is acquired, justified, and validated. Key epistemological principles include empiricism, rationalism, constructivism, skepticism, and pragmatism. Empiricism emphasizes knowledge derived from sensory experience and observation, whereas rationalism prioritizes reasoning and logical deduction. Constructivism posits that knowledge is built through interactions and experiences, and pragmatism suggests that the truth of knowledge is determined by its practical applicability. Skepticism, meanwhile, promotes the critical examination of beliefs, ensuring that knowledge claims are robust and well-founded (27).

These epistemological principles play a critical role in fostering effective teamwork, particularly in interdisciplinary and team nursing settings (27). Constructivism encourages the integration of diverse perspectives, enabling team members to collaboratively construct shared knowledge that achieves common goals. Empiricism and rationalism guide teams to balance evidence-based practices with logical reasoning, ensuring informed and practical decisions. Skepticism fosters the critical analysis of ideas, preventing groupthink and encouraging innovative solutions. Pragmatism ensures that teamwork focuses on actionable insights and meaningful outcomes (27). For instance, in nursing teams, empiricism ensures that clinical decisions are grounded in research and data, constructivism fosters collaborative care planning, and pragmatism emphasizes real-world applicability. By embracing these principles, teams can enhance communication, mutual understanding, and accountability, leading to improved problem-solving and goal achievement (27).

Linguistic Principles of Teamwork in Team Nursing

The effectiveness of teamwork in nursing is significantly influenced by linguistic principles that govern communication among team members (1, 25). In a profession where collaboration is essential for optimal patient care, understanding these principles can help enhance team dynamics and patient outcomes (9, 29). Diversity in team composition can enhance the team's capability to effectively address complex patient needs (3). Achievement of the common patient care goals among team members requires task interdependence—the extent to which team members rely on one another to fulfill their responsibilities (3). A high level of interdependence necessitates strong communication and collaboration, as each member's performance significantly impacts the team's overall success.

The proper alignment between team composition and task interdependence fosters a collaborative environment that ultimately improves patient outcomes and the quality of care delivered. Baek et al. (1) noted that team leaders, but not team members, perceive increased confidence in communication. While no study has directly measured delegation and team nursing, Beckett et al. (2) noted that lack of support to work in an unfamiliar role or environment (unit or ward) can create unethical situations. Therefore, ineffective delegation skills affect patient care undesirably. They also reported that nurses who receive some level of training on delegation demonstrate improved decision-making and delegation knowledge compared with those who did not (2). Moreover, fragmentation of care, shared responsibilities, lack of accountability, and complex communication channels contribute to low quality of care in team nursing

and give patients the impression that their needs are unimportant to the nurses (1, 2). Lacking communication and collaboration between team members can negatively impact patient care (2).

Pragmatic Principles of Teamwork

Pragmatically, health care is a team sport where nurses rely on each other to deliver safe and quality care (2). Team backup is an essential element in health care, especially in nursing where nurses rely on one another for positive patient outcomes (1, 25). In a team sport, teamwork can be built and rebuilt, with intentional work (1). The dynamic changes during the COVID-19 team composition made it hard for nurse leaders to sustain the mental acuity that staff needed to work together effectively. Tannenbaum et al. (32), in their study on team effectiveness, discussed the following four fundamental attitudes and beliefs that play a crucial role in determining the effectiveness and functionality of teams in Table 1.

Table 1. Attitudes and Beliefs for Team Effectiveness and Functionality

Fundamental Attitudes and Beliefs for Effectiveness and Functionality	
Shared Mental Model	Indicate that successful teams thrive on a foundational understanding of their tasks, goals, roles, and responsibilities. This shared mental model serves as a cognitive framework that allows team members to anticipate others' actions and decisions. It fosters seamless coordination, as each member can predict how others will respond in various situations, leading to a synchronized and efficient team dynamic.
Mutual Performance Monitoring	Implies that effective teamwork hinges on team members' ability to be attuned to one another's performance and progress. This encompasses the practice of continuously observing and evaluating not only one's own contributions but also those of fellow teammates. By offering timely feedback and support, team members ensure that everyone is pulling their weight, which is crucial for maintaining momentum and striving toward their shared objectives.
The shared Goals and Purpose	Suggest that a strong collective sense of purpose acts like a guiding star for the team. When team members deeply believe in the significance of their collective work and clearly understand how their individual contributions align with the larger mission, they become more engaged and motivated. This shared commitment fosters a sense of ownership and investment in the team's achievements, driving members to put forth their best efforts.
Team Cohesion	The bond formed among team members is critical for fostering a successful team environment. A sense of unity and camaraderie creates an atmosphere of trust and respect, encouraging open communication and facilitating the free exchange of ideas. When team members feel safe and valued within a group, they are more likely to collaborate effectively, share information, and leverage one another's strengths to achieve common goals.

Tannenbaum et al. (32) highlighted that for teams to function optimally, they must cultivate a shared understanding, uphold mutual accountability, establish a clear purpose, and foster strong interpersonal relationships. These elements work together to enhance team effectiveness and drive successful outcomes.

Team effectiveness hinges on several key components, which often align with input–process–output models. These models categorize team dynamics as input (i.e., team composition, resources, and contextual factors, such as organizational culture and leadership), processes (i.e., interpersonal and task-oriented behaviors, such as communication, coordination, and conflict resolution), and output (i.e., team performance, satisfaction, and goal attainment). They emphasize the principles of teamwork, such as team leaders establishing clear goals and managing team dynamics, team members monitoring one another's work to ensure standards are met, team backup behavior, adaptability, and orientation (i.e., a shared mindset focused on collective success).

The pragmatic principles in teamwork (32) emphasize the practical application of teamwork concepts in real-world scenarios. Team interventions must be contextually appropriate, ensuring that recommendations fit the team's environment and constraints. Training should focus on developing essential competencies, such as communication and decision-making. Moreover, metrics for team effectiveness should balance theoretical rigor and practical relevance, providing actionable insights rather than abstract evaluations.

Therefore, in nursing, these principles can be adapted to evaluate and improve the team nursing model, which relies on collaboration to deliver patient care efficiently. By emphasizing mutual support, adaptability, and goal alignment, nursing teams can address challenges such as staffing shortages, patient complexity, and dynamic health care environments.

Logical Principles Exploration of the Whole Team in Team Nursing

The expression "the whole is greater than the sum of its parts," attributed to the Greek philosopher Aristotle, is a frequently referenced in health care because of its broad applicability to nursing practice, where successful high-quality patient care relies on teamwork. The phrase was initially written in Metaphysics as follows: "In the case of the things which have several parts where totality is not, is a mere hip, but the whole is something besides the part" (33), which has been translated to "The whole is greater than the sum of the parts" (33).

In team nursing, positive patient outcomes depend on nursing staff working together to share, use, and implement best practices to influence nursing care excellence, thereby comprising "the whole team." In effective team nursing, critical thinking is essential and drives the level of interaction among the members. Key elements that help promote good teamwork include critical thinking, communication, collaboration, delegation, coordination, idea sharing, peer support, accountability, and integrity. When the team allows itself to embrace allows its formation, conform to the rules and responsibilities, and accept the shared goal, the outcome is better patient care with improved patient care outcomes, as the primary goal of every nursing team member is to contribute to the shared goal by providing high-quality patient care. The team that embraces collaboration can learn from and about one another.

In team nursing, effective communication enhances the flow of information while optimizing the delivery of patient care. An effective whole team is one in which team members communicate with one another's patients and merge their expertise, responsibilities, and observations to optimize patient care. Applying "the whole team" in the context of patient safety, effective teamwork minimizes adverse patient events caused by a lack of communication or miscommunication within the team (29). With the

increasing amount of information applicable to nursing, no single nursing team member can fully understand, absorb, and use all the information. Thus, collaboration and transparent communication are key teamwork elements.

Managing the Sum of Its Parts (Not Whole) with Teamwork in Team Nursing

In team nursing, when team members work separately, the care provided can be fragmented, resulting in low-quality care. As parts of the whole team, team members must remain connected to and engaged in the shared goal. Team communication is a challenging aspect of team nursing—it may be lacking owing to inadequate time allocation (5). In team nursing, all members must be open to communication; if dedicated time for communication is not provided, patient care can be fragmented (5, 34, 35).

Conclusions

This analysis clarified the term "teamwork in team nursing" and differentiated its related concepts. The resulting logical principle is expected to help build internal consistency and coherence. Applying the logical principle will help construct a coherent and consistent framework for understanding how teamwork and team nursing function in the nursing practice. It will also aid in identifying and addressing any contradictions or ambiguities. This analysis provides a rationale for using the principle-based concept analysis approach to analyze the concepts of teamwork and team nursing, as well as the principle that "the whole is better than the sum of its parts.

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Ethical standards: This analysis did not involve human participants or animals. The authors do not have ethical concerns.

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