

The Culture of Interprofessional Practice in Cardiac Healthcare: An Axiological Study of Radiology, Cardiac Technology, Laboratory Medicine, and Nursing Roles in Saudi Arabia

Abdulmajeed Abdulaziz Aldubaybi¹, Afaf Muria AlAmeer², Alaa Hail Alanazi³, Ali Nasser Alshehri⁴, Amal Fahhad Alharbi⁵, Anfal Abdullah Alsaahli⁶, Battal Ibrahim Rgyan Alotaibi⁷, Futoon Khalil Alawad⁸, Sarah Hassan A. Al Jayzani⁹, Wejdan Fahhad Alshammari¹⁰

¹Nursing – Prince Sultan Cardiac Center – Riyadh, Saudi Arabia

²Nursing – Prince Sultan Cardiac Center – Riyadh, Saudi Arabia

³Cardiovascular Nursing – Prince Sultan Cardiac Center – Riyadh, Saudi Arabia

⁴Nursing Specialist – Prince Sultan Cardiac Center – Riyadh, Saudi Arabia

⁵Cardiovascular Nursing – Prince Sultan Military Medical City – Riyadh, Saudi Arabia

⁶Cardiovascular Nursing – Prince Sultan Military Medical City – Riyadh, Saudi Arabia

⁷Radiology – Prince Sultan Cardiac Center – Riyadh, Saudi Arabia

⁸Cardiovascular Nursing – Prince Sultan Cardiac Center – Riyadh, Saudi Arabia

⁹Laboratory Technician – Security Forces Hospital – Riyadh, Saudi Arabia

¹⁰ Cardiac Technologist – Prince Sultan Military Medical City – Riyadh, Saudi Arabia

Abstract

Background: Cardiac healthcare is among the most complex clinical domains, requiring close collaboration among diverse healthcare professionals. While interprofessional practice has been widely promoted to improve quality and safety, existing research has largely focused on structural and outcome-based aspects, with limited attention to the cultural and value-based foundations that shape collaboration in everyday practice.

Aim: This study aims to explore the culture of interprofessional practice in cardiac healthcare through an axiological lens, examining how professional values influence collaboration among nursing, radiology, cardiac technology, and laboratory medicine professionals in Saudi Arabia.

Methods: A conceptual and analytical approach was adopted, drawing on established literature in interprofessional practice, healthcare ethics, organizational culture, and axiology. The study synthesizes international and regional evidence to examine shared and discipline-specific values, professional identities, and cultural dynamics shaping interprofessional collaboration within cardiac care settings.

Results: The analysis indicates that interprofessional practice in cardiac healthcare is fundamentally value-driven. Shared values such as patient-centeredness, safety, and accountability form the ethical foundation of collaboration, while discipline-specific values—holistic care in nursing, diagnostic accuracy in radiology, technical precision in cardiac technology, and analytical rigor in laboratory medicine—shape professional identity and interaction. Hierarchical structures, communication patterns, and organizational culture were identified as key mediators influencing value recognition and collaborative effectiveness.

Conclusion: An axiological perspective provides critical insight into the cultural and ethical dimensions of interprofessional practice in cardiac healthcare. Aligning professional values with organizational culture and national healthcare priorities is essential for strengthening collaborative practice in Saudi cardiac care settings. Integrating value-based

frameworks into leadership, education, and policy initiatives may enhance interprofessional collaboration and contribute to improved quality and ethical integrity of cardiac healthcare.

Keywords: Interprofessional Practice; Cardiac Healthcare; Axiology; Professional Values; Organizational Culture; Saudi Arabia

1. INTRODUCTION

Cardiac healthcare represents one of the most complex and high-risk domains within modern health systems, requiring continuous coordination among multiple professional disciplines. Advances in diagnostic imaging, cardiac technologies, and laboratory medicine, alongside expanded nursing responsibilities, have intensified the need for effective interprofessional practice to ensure safe, high-quality patient care. Contemporary healthcare literature increasingly recognizes that optimal clinical outcomes in such settings depend not only on technical competence, but also on the quality of collaboration and the cultural environment in which healthcare professionals operate (Reeves et al., 2017; World Health Organization [WHO], 2010).

Interprofessional practice is defined as the process by which healthcare professionals from different disciplines work collaboratively with shared goals, mutual respect, and collective responsibility for patient outcomes (WHO, 2010). In cardiac healthcare settings, nurses, radiology professionals, cardiac technologists, and laboratory medicine specialists contribute distinct yet interdependent expertise across the continuum of care—from diagnosis and monitoring to intervention and follow-up. However, the effectiveness of this collaboration is profoundly shaped by professional values, organizational culture, and ethical priorities rather than by formal role descriptions alone (D'Amour et al., 2008).

While a substantial body of research has examined interprofessional practice from structural, educational, and outcome-based perspectives, comparatively limited attention has been paid to its axiological dimension. Axiology, as the philosophical study of values, provides a critical framework for understanding how professional beliefs, moral priorities, and cultural norms influence behavior, decision-making, and collaboration in healthcare environments (Hartman, 1967; Beauchamp & Childress, 2019). In high-acuity cardiac settings, where rapid decisions and shared accountability are essential, value alignment among professionals becomes a determining factor in both ethical integrity and clinical effectiveness.

Professional values are deeply embedded within disciplinary cultures formed through education, clinical socialization, and institutional norms. Nursing practice is commonly associated with values of patient-centeredness, advocacy, and continuity of care; radiology emphasizes diagnostic accuracy, safety, and evidentiary rigor; cardiac technology prioritizes technical precision and real-time responsiveness; and laboratory medicine is grounded in reliability, objectivity, and analytical accuracy (Hall, 2005; Lippi & Plebani, 2020). When these value systems are harmonized within a supportive organizational culture, interprofessional collaboration is strengthened. Conversely, when values are misaligned or hierarchically suppressed, collaboration may be compromised despite structural integration.

In the Saudi Arabian context, the relevance of interprofessional practice has been amplified by ongoing healthcare transformation initiatives aligned with **Vision 2030**. National reforms emphasize quality of care, patient safety, accountability, and workforce integration as central pillars of health system development (Ministry of Health [MOH], 2021). Tertiary cardiac centers in Saudi Arabia increasingly rely on multidisciplinary teams operating within technologically advanced environments. However, empirical and conceptual studies examining the cultural and value-based foundations of interprofessional practice in Saudi

cardiac healthcare remain limited, with most existing research focusing on operational or organizational aspects rather than underlying professional values (Alghamdi et al., 2020). Against this backdrop, an axiological examination of interprofessional practice offers a novel and necessary contribution. By focusing on the values that shape professional interaction, role recognition, and collaborative culture, such an approach enables a deeper understanding of how interprofessional practice is experienced and enacted within cardiac healthcare settings. This perspective is particularly relevant in culturally diverse and hierarchically structured healthcare systems, where implicit value assumptions may strongly influence professional behavior.

Accordingly, this study aims to explore the culture of interprofessional practice in cardiac healthcare through an axiological lens, focusing on the roles of nursing, radiology, cardiac technology, and laboratory medicine professionals in Saudi Arabia. By analyzing how professional values intersect with organizational culture and national healthcare priorities, this study seeks to contribute theoretical insight that can inform education, policy, and leadership strategies aimed at strengthening collaborative practice and improving cardiac care outcomes.

2. CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1 Interprofessional Practice in Healthcare

Interprofessional practice (IPP) is widely conceptualized as a collaborative process in which health professionals from different disciplines work together with patients and communities to deliver comprehensive, high-quality care. The World Health Organization defines interprofessional collaboration as occurring when “multiple health workers from different professional backgrounds work together with patients, families, carers and communities to deliver the highest quality of care” (WHO, 2010). This model emphasizes shared goals, mutual respect, and collective accountability, distinguishing it from parallel or siloed approaches to care.

In cardiac healthcare, interprofessional practice is particularly critical due to the acuity of cases, reliance on advanced technologies, and the need for rapid, coordinated decision-making. Evidence indicates that effective interprofessional collaboration is associated with improved clinical outcomes, reduced medical errors, and enhanced patient satisfaction, especially in complex care environments (Reeves et al., 2017). Consequently, IPP has become a central paradigm in contemporary health systems seeking to improve quality and safety.

2.2 Distinguishing Interprofessional, Multidisciplinary, and Transdisciplinary Models

Conceptual clarity between collaborative care models is essential for theoretical rigor. Multidisciplinary care involves professionals from different disciplines contributing independently to patient management, often with limited interaction or shared decision-making. Interprofessional care, in contrast, is characterized by active collaboration, negotiated roles, and shared responsibility for outcomes. Transdisciplinary models extend further by integrating roles across disciplinary boundaries, a practice less common in highly regulated and specialized settings such as cardiac care (D’Amour et al., 2008; Xyrichis & Ream, 2008).

This study adopts the interprofessional model as its primary framework, as it best reflects the collaborative realities of cardiac healthcare while preserving professional specialization and accountability. Understanding interprofessional practice through this lens allows for examination of both functional coordination and the underlying values that sustain collaboration.

2.3 Axiology and Value-Based Perspectives in Healthcare

Axiology, the branch of philosophy concerned with the study of values, provides a theoretical foundation for examining ethical priorities, professional beliefs, and cultural norms that shape human behavior. In healthcare, axiological analysis focuses on how values such as beneficence, nonmaleficence, justice, autonomy, and professional integrity inform clinical practice and decision-making (Hartman, 1967; Beauchamp & Childress, 2019).

Applying an axiological perspective to interprofessional practice enables exploration of the moral dimensions of collaboration, including how professionals prioritize patient welfare, negotiate responsibility, and recognize each other's contributions. This approach extends beyond outcome-based evaluations by examining the ethical and cultural assumptions embedded in everyday clinical interactions, which are particularly salient in high-stakes environments like cardiac healthcare.

2.4 Professional Values and Disciplinary Cultures

Professional values are cultivated through education, training, and clinical socialization, forming distinct disciplinary cultures within healthcare. Nursing culture is commonly associated with holistic care, advocacy, and continuity; radiology emphasizes diagnostic accuracy, safety, and evidentiary clarity; cardiac technology prioritizes technical precision and responsiveness; and laboratory medicine is grounded in reliability, objectivity, and analytical rigor (Hall, 2005; Lippi & Plebani, 2020).

While these value systems are complementary, differences in priorities and communication styles may generate tension within interprofessional teams if not adequately recognized. Research suggests that misalignment of professional values can act as a barrier to collaboration, whereas mutual understanding and respect for disciplinary cultures facilitate effective teamwork (Hall, 2005; D'Amour et al., 2008).

2.5 Organizational Culture as a Mediating Framework

Organizational culture serves as a mediating context in which professional values are enacted. It shapes norms of communication, decision-making, and power distribution within healthcare institutions. According to Schein (2010), organizational culture reflects shared assumptions that guide behavior and influence how values are translated into practice.

In cardiac healthcare settings, organizational culture determines whether interprofessional collaboration is experienced as a shared ethical commitment or merely a procedural requirement. Supportive leadership, inclusive governance structures, and recognition of diverse professional contributions are critical for aligning individual and collective values within interprofessional teams (D'Amour & Oandasan, 2005).

2.6 Conceptual Framework of the Study

Based on the reviewed literature, this study conceptualizes interprofessional practice in cardiac healthcare as a value-driven process shaped by the interaction of:

1. **Discipline-specific professional values** (nursing, radiology, cardiac technology, laboratory medicine);
2. **Shared ethical values** (patient safety, quality of care, accountability);
3. **Organizational culture and leadership;** and
4. **Patterns of interprofessional interaction and collaboration.**

5. 3. Context of Cardiac Healthcare in Saudi Arabia

Cardiovascular diseases (CVDs) constitute one of the leading causes of morbidity and mortality in Saudi Arabia, reflecting broader global epidemiological trends associated with population aging, lifestyle changes, and the increasing prevalence of non-communicable diseases. According to the World Health Organization, CVDs account for a substantial

proportion of premature mortality in the Kingdom, placing significant demand on specialized cardiac healthcare services (WHO, 2022).

In response to this burden, Saudi Arabia has invested heavily in the development of tertiary and quaternary cardiac care facilities equipped with advanced diagnostic imaging, interventional cardiology units, electrophysiology laboratories, and comprehensive laboratory services. These cardiac centers rely on highly specialized healthcare professionals, including nurses, radiology practitioners, cardiac technologists, and laboratory medicine specialists, whose coordinated efforts are essential for managing acute and chronic cardiac conditions across the care continuum.

The transformation of the Saudi healthcare system under **Vision 2030** has further reshaped the organizational and professional landscape of cardiac healthcare. The Health Sector Transformation Program emphasizes quality of care, patient safety, efficiency, and accountability, alongside workforce integration and professional development (Ministry of Health [MOH], 2021). Interprofessional collaboration is increasingly recognized as a strategic mechanism for achieving these goals, particularly in complex clinical domains such as cardiac care, where fragmentation of services may lead to adverse outcomes.

Despite structural integration, interprofessional practice within Saudi cardiac healthcare settings is influenced by contextual factors such as organizational hierarchy, professional role differentiation, and culturally embedded norms of authority and communication. Previous studies conducted in Saudi healthcare institutions suggest that hierarchical decision-making structures and limited role clarity may constrain effective collaboration, particularly among non-physician professionals (Almalki et al., 2011; Alghamdi et al., 2020). These dynamics underscore the importance of examining not only how interprofessional teams are organized, but also how they function culturally and ethically in daily practice.

Professional education and training pathways in Saudi Arabia further contribute to the shaping of interprofessional culture. Most healthcare disciplines are educated and socialized within discipline-specific frameworks, with limited formal exposure to interprofessional education. As a result, professional values and identities may develop in relative isolation, reinforcing silos that persist into clinical practice (Frenk et al., 2010). In cardiac healthcare settings, where rapid interdisciplinary coordination is required, such siloed value formation may hinder collaborative effectiveness.

From an axiological perspective, the Saudi cardiac healthcare context represents a unique convergence of traditional professional hierarchies, rapidly evolving organizational structures, and national reform agendas emphasizing quality and accountability. Understanding how values such as responsibility, respect for expertise, patient-centeredness, and professional integrity are negotiated among nursing, radiology, cardiac technology, and laboratory medicine professionals is essential for advancing interprofessional practice in a manner that is culturally congruent and ethically robust.

Situating this study within the Saudi context therefore allows for a nuanced exploration of how interprofessional values are embedded within institutional culture and influenced by broader health system reforms. This contextual grounding is critical for interpreting axiological dimensions of collaboration and for developing recommendations that are relevant to policy, education, and leadership within Saudi cardiac healthcare settings.

4. Professional Roles within Interprofessional Cardiac Practice

Interprofessional cardiac healthcare is sustained through the coordinated contributions of multiple professional groups, each of which brings distinct expertise, responsibilities, and value orientations to patient care. Understanding these roles from an axiological

perspective requires moving beyond functional descriptions to examine the professional values that shape practice, interaction, and collaboration within cardiac care teams.

4.1 Nursing Roles in Cardiac Healthcare

Nursing professionals constitute a central pillar of interprofessional cardiac care due to their continuous presence at the patient's bedside and their responsibility for care coordination, monitoring, education, and advocacy. Cardiac nurses are directly involved in medication administration, hemodynamic monitoring, peri-procedural care, and patient education across acute and chronic phases of cardiac disease management (International Council of Nurses [ICN], 2021).

From an axiological standpoint, nursing practice is grounded in values of patient-centeredness, beneficence, accountability, and holistic care. These values position nurses as key facilitators of interprofessional collaboration, as they frequently serve as communication bridges between physicians, radiology departments, cardiac technologists, and laboratory services (Hall, 2005). Research indicates that strong nursing engagement in interprofessional teams is associated with improved care continuity and patient safety outcomes (Reeves et al., 2017).

In Saudi cardiac healthcare settings, nursing roles have expanded in response to workforce development initiatives and quality improvement mandates under Vision 2030. However, empirical studies suggest that hierarchical organizational cultures may limit nursing participation in shared decision-making, thereby influencing how nursing values are enacted within interprofessional practice (Alghamdi et al., 2020).

4.2 Radiology Roles in Cardiac Diagnosis and Management

Radiology professionals play a critical role in cardiac healthcare by providing diagnostic imaging that informs clinical decision-making, risk stratification, and procedural planning. Cardiac-related imaging modalities—including echocardiography support, cardiac computed tomography (CT), magnetic resonance imaging (MRI), and interventional imaging—require close coordination with clinical teams to ensure accuracy, safety, and timeliness (European Society of Radiology [ESR], 2019).

Axiologically, radiology practice emphasizes values of diagnostic accuracy, patient safety, risk minimization, and professional accountability. These values shape radiology professionals' interactions within interprofessional teams, particularly in time-sensitive cardiac cases where diagnostic clarity is essential. Effective interprofessional collaboration depends on mutual trust in radiological expertise and clear communication of findings to nursing and technical staff (Hall, 2005).

In the Saudi context, rapid expansion of advanced imaging technologies has increased the strategic importance of radiology services within cardiac centers. Nevertheless, studies indicate that radiology professionals are sometimes positioned as technical consultants rather than active participants in interprofessional deliberation, potentially limiting the full integration of their value-based contributions (Almalki et al., 2011).

4.3 Cardiac Technology Roles

Cardiac technologists occupy a highly specialized role within interprofessional cardiac teams, operating at the intersection of advanced technology and direct clinical care. Their responsibilities include cardiac monitoring, catheterization laboratory support, electrophysiological procedures, and operation of cardiac devices during diagnostic and interventional procedures (American College of Cardiology [ACC], 2020).

The axiological foundation of cardiac technology practice is characterized by values of technical precision, reliability, responsiveness, and procedural integrity. These professionals contribute real-time data and technical expertise that directly influence clinical outcomes, particularly during invasive or emergency cardiac interventions.

Effective collaboration requires recognition of cardiac technologists as clinical partners rather than purely technical operators (Reeves et al., 2010).

Within Saudi cardiac healthcare institutions, the growing reliance on sophisticated cardiac technologies has elevated the role of cardiac technologists. However, variability in role recognition and professional inclusion across institutions highlights the importance of examining cardiac technology practice through a value-based lens to enhance interprofessional integration.

4.4 Laboratory Medicine Roles

Laboratory medicine professionals provide essential diagnostic support in cardiac healthcare through biomarker analysis, hematological testing, biochemical assays, and phlebotomy services. Laboratory results—such as cardiac troponins, lipid profiles, and coagulation parameters—are critical for diagnosis, risk assessment, and therapeutic decision-making in both acute and chronic cardiac conditions (Lippi & Plebani, 2020).

Axiologically, laboratory medicine is grounded in values of analytical accuracy, reliability, objectivity, and timeliness. Trust in laboratory data forms a cornerstone of interprofessional practice, as clinical decisions across nursing, radiology, and cardiac technology depend on the integrity of laboratory results. Despite this centrality, laboratory professionals are frequently positioned at the periphery of interprofessional teams, limiting opportunities for direct collaborative engagement (Plebani, 2017).

In Saudi Arabia, modernization of laboratory services and accreditation standards has strengthened technical quality; however, these advances have not always translated into enhanced interprofessional visibility or value recognition. An axiological analysis underscores the need to integrate laboratory medicine more fully into the collaborative culture of cardiac healthcare.

5. Axiological Dimensions of Interprofessional Practice in Cardiac Healthcare

Interprofessional practice in cardiac healthcare is fundamentally shaped by values that guide professional behavior, ethical judgment, and collaborative interaction. An axiological perspective enables examination of how these values operate across disciplines and how they influence the culture of collaboration beyond formal organizational structures. In high-acuity cardiac environments, where clinical decisions are complex and time-sensitive, value alignment becomes a critical determinant of ethical integrity and care quality.

5.1 Shared Core Values across Cardiac Care Professions

Despite differences in disciplinary training and scope of practice, nursing, radiology, cardiac technology, and laboratory medicine professionals share a set of core values that underpin interprofessional collaboration. These include patient-centeredness, safety, quality of care, and accountability. Such values provide a common ethical foundation that facilitates coordinated action and collective responsibility for patient outcomes (Beauchamp & Childress, 2019; Reeves et al., 2017).

Patient-centeredness, in particular, functions as a unifying value that transcends professional boundaries. In cardiac healthcare, aligning diagnostic, technical, and nursing interventions around patient needs enhances continuity of care and reduces fragmentation. Evidence suggests that teams grounded in shared values demonstrate stronger communication and fewer adverse events (WHO, 2010).

5.2 Discipline-Specific Values and Value Negotiation

While shared values unify interprofessional teams, each discipline also embodies distinct value orientations that shape professional identity and practice priorities. Nursing emphasizes holistic care, advocacy, and continuity; radiology prioritizes diagnostic accuracy, safety, and evidentiary clarity; cardiac technology focuses on precision,

responsiveness, and procedural integrity; and laboratory medicine upholds reliability, objectivity, and analytical rigor (Hall, 2005; Lippi & Plebani, 2020).

In interprofessional cardiac practice, these values are continuously negotiated during clinical interactions. Tensions may arise when urgency conflicts with accuracy, or when procedural efficiency challenges holistic assessment. An axiological analysis interprets such tensions as value-based negotiations rather than operational failures, highlighting the need for mutual recognition and respect among disciplines (D'Amour et al., 2008).

5.3 Ethical Responsibility and Collective Accountability

Ethical responsibility in interprofessional cardiac care extends beyond individual competence to encompass collective accountability. Decisions related to diagnosis, intervention, and monitoring are distributed across professional roles, requiring shared ethical commitment and transparent communication. From an axiological standpoint, accountability is relational, reflecting the interconnected nature of professional contributions within cardiac teams (Beauchamp & Childress, 2019).

Research indicates that interprofessional teams with clearly articulated shared accountability demonstrate improved ethical decision-making and enhanced patient safety outcomes (Reeves et al., 2017). Conversely, fragmented accountability—often reinforced by hierarchical cultures—may undermine collaboration and ethical coherence.

5.4 Power, Hierarchy, and Value Recognition

Professional hierarchy remains a salient feature of healthcare organizations, particularly in specialized cardiac centers. Hierarchical structures influence whose values are prioritized in decision-making and whose expertise is recognized. Studies suggest that undervaluation of nursing, laboratory, or technical perspectives may limit effective collaboration and reduce ethical inclusivity within interprofessional teams (Hall, 2005; Schein, 2010).

An axiological lens brings attention to the moral implications of power dynamics, emphasizing that ethical collaboration requires recognition of the intrinsic value of all professional contributions. Promoting value recognition across disciplines is therefore essential for cultivating a balanced and ethically grounded collaborative culture.

5.5 Cultural Integration of Values in Cardiac Healthcare

The culture of interprofessional practice emerges through the integration of shared and discipline-specific values within an organizational context. Leadership, communication norms, and institutional policies play decisive roles in translating values into everyday practice. In cardiac healthcare, where reliance on interprofessional coordination is unavoidable, value integration becomes a prerequisite for clinical excellence rather than an abstract ethical ideal (D'Amour & Oandasan, 2005).

Within the Saudi healthcare context, national reforms emphasizing quality, accountability, and patient-centered care provide an enabling framework for value-based interprofessional practice. Aligning these national priorities with professional value systems at the institutional level is critical for sustaining a collaborative culture that is both ethically robust and culturally congruent.

6. Culture of Collaboration in Cardiac Healthcare Settings

The culture of collaboration in cardiac healthcare settings reflects how interprofessional values are enacted in everyday clinical practice. While formal structures, protocols, and role descriptions establish the framework for teamwork, it is organizational culture that ultimately determines how professionals communicate, share authority, and negotiate responsibility. In high-acuity cardiac environments, collaborative culture is a decisive factor influencing patient safety, clinical efficiency, and ethical coherence (Schein, 2010). *As summarized in Table 1, the culture of collaboration in cardiac healthcare is shaped by interconnected cultural dimensions that reflect underlying professional values. Communication norms, decision-making practices,*

and role recognition emerge as key mediators through which axiological principles are translated into everyday interprofessional practice.

Table 1 Cultural Dimensions of Interprofessional Collaboration in Cardiac Healthcare Settings

Cultural Dimension	Description in Cardiac Settings	Value-Based Interpretation (Axiological Lens)	Impact on Interprofessional Practice
Communication Culture	Exchange of clinical information among nursing, radiology, cardiac technology, and laboratory medicine during diagnosis, intervention, and monitoring	Grounded in values of transparency, respect, and ethical responsibility	Enhances trust, reduces diagnostic and treatment delays, and supports patient safety
Decision-Making Norms	Processes through which clinical decisions are made under time pressure in acute cardiac care	Reflects values of shared responsibility versus hierarchical authority	Inclusive decision-making strengthens collaboration; rigid hierarchy may marginalize key professional input
Role Recognition	Degree to which each profession's contribution is acknowledged within the care team	Linked to values of professional dignity, equity, and mutual respect	Clear role recognition improves teamwork and reduces interprofessional conflict
Power and Hierarchy	Influence of professional rank and institutional authority on team interaction	Shapes whose values and perspectives are prioritized in clinical practice	Balanced power distribution supports ethical collaboration; dominance undermines value integration
Organizational Leadership Culture	Leadership attitudes toward teamwork, accountability, and professional inclusion	Reflects values of ethical leadership, fairness, and collective accountability	Supportive leadership fosters sustainable interprofessional culture
Accountability Practices	How responsibility for patient outcomes is distributed across professionals	Anchored in values of integrity and collective ethical responsibility	Shared accountability improves coordination and clinical quality
Psychological Safety	Extent to which professionals feel safe to speak up or question decisions	Closely related to respect, trust, and moral inclusion	High psychological safety encourages error reporting and collaborative learning

Interprofessional Learning Culture	Opportunities for shared learning and reflective practice	Based on values of openness, growth, and mutual understanding	Strengthens long-term collaboration and reduces professional silos
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6.1 Communication as a Cultural and Ethical Practice

Effective communication is a cornerstone of interprofessional collaboration in cardiac healthcare. Nurses, radiology professionals, cardiac technologists, and laboratory medicine specialists depend on accurate, timely, and respectful information exchange to support diagnostic and therapeutic decisions. From an axiological perspective, communication is not merely a technical process but an ethical practice grounded in respect, transparency, and accountability (Leonard et al., 2004).

Empirical evidence demonstrates that communication failures are among the leading contributors to adverse events in acute care settings, including cardiac units (The Joint Commission, 2015). Such failures often reflect deeper cultural issues, such as hierarchical barriers or the marginalization of certain professional voices. Interprofessional cultures that encourage open dialogue and psychological safety are more likely to support ethical collaboration and effective teamwork (Reeves et al., 2010).

6.2 Decision-Making Culture and Hierarchical Dynamics

Decision-making in cardiac healthcare frequently occurs under conditions of urgency and uncertainty, amplifying the influence of professional hierarchy. While hierarchical structures may provide clarity in emergencies, excessive dominance of particular disciplines can suppress valuable contributions from nursing, laboratory, or technical professionals. Research suggests that hierarchical decision-making may undermine interprofessional collaboration and limit shared accountability (Hall, 2005).

An axiological analysis emphasizes that inclusive decision-making is a moral as well as a practical requirement. Recognizing the epistemic value of diverse professional perspectives enhances ethical integrity and clinical judgment, particularly in complex cardiac cases where diagnostic, technical, and bedside insights are interdependent (D'Amour et al., 2008).

6.3 Leadership and Organizational Support

Leadership plays a central role in shaping the culture of interprofessional collaboration. Leaders who model respect for professional diversity, encourage shared responsibility, and promote interprofessional dialogue contribute to cultures where collaboration is normalized rather than enforced (Schein, 2010). In cardiac healthcare settings, leadership commitment to interprofessional values is reflected in governance structures, team-based care models, and performance evaluation systems.

Studies indicate that supportive leadership is associated with stronger interprofessional relationships, improved job satisfaction, and enhanced patient outcomes (West et al., 2014). Conversely, lack of organizational support may reinforce professional silos and weaken collaborative culture, regardless of formal interprofessional policies.

6.4 Barriers to Collaborative Culture

Despite structural integration, several cultural barriers may impede effective interprofessional collaboration in cardiac healthcare. These include role ambiguity, unequal power distribution, limited recognition of laboratory and technical contributions, and insufficient interprofessional education. Such barriers are often sustained by implicit value hierarchies that privilege certain forms of clinical knowledge over others (Hall, 2005; Reeves et al., 2017).

In the Saudi healthcare context, hierarchical organizational traditions and discipline-specific training pathways may further reinforce these barriers. Addressing them requires cultural reflection and value realignment rather than procedural change alone.

6.5 Facilitators of a Value-Based Collaborative Culture

Facilitators of collaborative culture include interprofessional education, shared ethical frameworks, reflective practice, and inclusive leadership. Evidence suggests that interprofessional education enhances mutual understanding, reduces professional stereotyping, and strengthens shared values across disciplines (WHO, 2010; Frenk et al., 2010).

In cardiac healthcare settings, cultivating a value-based collaborative culture requires aligning organizational norms with shared professional values and ensuring that nursing, radiology, cardiac technology, and laboratory medicine professionals are recognized as integral contributors to patient-centered care.

7. Implications for Practice and Policy

An axiological understanding of interprofessional practice in cardiac healthcare carries important implications for clinical practice, organizational leadership, and health policy. By foregrounding professional values and collaborative culture, this perspective extends beyond procedural models to address the ethical and cultural determinants of effective teamwork.

7.1 Implications for Clinical Practice

In cardiac healthcare settings, where diagnostic accuracy, rapid intervention, and coordinated monitoring are essential, value-based interprofessional collaboration directly influences patient safety and care quality. Evidence indicates that teams grounded in shared values—such as patient-centeredness, accountability, and mutual respect—demonstrate improved communication and reduced adverse events (Reeves et al., 2017; Leonard et al., 2004). Practically, this underscores the need to integrate value reflection into daily clinical routines, including multidisciplinary rounds, handovers, and case reviews.

For nursing, radiology, cardiac technology, and laboratory medicine professionals, explicit recognition of discipline-specific values supports clearer role identity and ethical engagement. Role clarity informed by value recognition has been associated with higher job satisfaction and stronger collaborative behaviors (D'Amour et al., 2008; Hall, 2005). Cardiac centers should therefore move beyond task allocation toward value-informed role integration.

7.2 Implications for Organizational Leadership

Leadership is pivotal in translating axiological insights into practice. Leaders who model inclusive decision-making, encourage open communication, and acknowledge diverse professional contributions foster cultures where interprofessional collaboration is normalized (Schein, 2010). Embedding interprofessional values into governance mechanisms—such as performance indicators, quality improvement initiatives, and accreditation standards—ensures that collaboration is sustained institutionally rather than reliant on individual effort.

In Saudi cardiac healthcare institutions, aligning leadership practices with national reform priorities under Vision 2030 can reinforce value-based collaboration. Emphasizing accountability, quality, and patient-centered care within leadership development programs may strengthen interprofessional culture across cardiac services (MOH, 2021).

7.3 Implications for Health Policy and Education

From a policy perspective, axiological findings support the expansion of interprofessional education (IPE) as a strategic tool for cultivating shared values across disciplines. Research demonstrates that early and continuous exposure to IPE enhances mutual understanding,

reduces professional silos, and promotes ethical collaboration (WHO, 2010; Frenk et al., 2010). Incorporating axiological content—such as value reflection, ethical negotiation, and cultural competence—into IPE curricula may further strengthen collaborative readiness in cardiac care.

Policy frameworks should also recognize laboratory medicine and technical professions as integral partners in interprofessional care, ensuring representation in decision-making structures and professional development initiatives. Such inclusion aligns with evidence linking comprehensive team integration to improved system performance and patient outcomes (Reeves et al., 2017).

8. DISCUSSION

This study contributes a value-centered interpretation of interprofessional practice in cardiac healthcare by applying an axiological lens to the roles of nursing, radiology, cardiac technology, and laboratory medicine professionals in Saudi Arabia. The findings synthesized from the literature suggest that collaboration in cardiac care is not solely determined by organizational design or clinical protocols, but by the alignment, negotiation, and recognition of professional values within institutional culture.

Consistent with previous research, shared values such as patient-centeredness and safety emerge as foundational to effective interprofessional collaboration (WHO, 2010; Beauchamp & Childress, 2019). However, the axiological perspective highlights that discipline-specific values—when insufficiently acknowledged—may generate tensions that impede collaboration despite structural integration (Hall, 2005). This insight advances existing interprofessional frameworks by emphasizing the moral and cultural dimensions of teamwork alongside functional coordination.

In the Saudi context, hierarchical organizational traditions and discipline-specific training pathways may shape how values are prioritized and enacted in practice. While national reforms emphasize quality and accountability, translating these priorities into everyday interprofessional behavior requires cultural alignment at the institutional level (MOH, 2021). The analysis suggests that value recognition—particularly of nursing, laboratory, and technical contributions—is essential for ethically balanced collaboration in cardiac care.

Comparatively, international literature supports the view that interprofessional cultures grounded in shared ethical commitments demonstrate greater resilience and adaptability in high-acuity environments (Reeves et al., 2017; West et al., 2014). By situating these findings within an axiological framework, this study provides a theoretical bridge between ethics, culture, and interprofessional practice.

This study is grounded in a conceptual and axiological approach, drawing on a comprehensive synthesis of established literature to examine interprofessional practice in cardiac healthcare. By privileging theoretical depth and value-based interpretation, the study offers a reflective framework for understanding how professional values and cultural norms shape collaboration among nursing, radiology, cardiac technology, and laboratory medicine professionals in Saudi Arabia.

Rather than pursuing empirical measurement, this approach enables a nuanced exploration of meaning, ethical orientation, and cultural context—dimensions that are often implicit yet foundational to interprofessional practice. The conceptual insights generated in this study provide a coherent theoretical platform that may inform future empirical inquiries, including qualitative or mixed-methods research, aimed at further exploring value negotiation and cultural dynamics within Saudi cardiac teams.

9. CONCLUSION

Interprofessional practice in cardiac healthcare is fundamentally a value-driven endeavor. Through an axiological lens, this study demonstrates that effective collaboration among nursing, radiology, cardiac technology, and laboratory medicine professionals depends on the alignment and recognition of professional values within organizational culture. In Saudi Arabia's evolving healthcare system, integrating axiological considerations into practice, leadership, and policy offers a pathway to strengthening collaborative culture and enhancing the quality and ethical integrity of cardiac care.

Future initiatives should prioritize value-based interprofessional education, inclusive leadership, and policy frameworks that recognize all professional contributions. Such efforts are essential for sustaining interprofessional practice that is not only efficient, but also ethically grounded and culturally congruent.

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