Journal of Carcinogenesis
Covering Genesis to Therapeutics

Journal of Carcinogenesis, ISSN: 1477-3163
2024; Vol 23: Issue 1, https://carcinogenesis.com/

Narratives of Role Identity and Interprofessional Collaboration in Multidisciplinary Healthcare Teams: A Theoretical Study Across Nursing, Dental, Medical, Administrative, Health Security, Intensive Care, Radiology, and Health Information Roles

Bader Awad Ayed Aljabri1, Enaam Abdulmonem Aljorfi2, Elham Mohammad Ali Alhawsawi3, Intisar Obaid Alrashidi4, Khulud Khalaf Butayhan Aljabri5, Afaf Saad Muhalhal Alawfi6, Afaf Faleh Dhayer Al-Rashidi7, Amnah Awad Al-Rashidi8, Mona Abtan Al Rashidi9, Omar Yousef Naaman10, Anas Essam Al Omar11, Hamad Hammad Ayad Alzubaidi12, Dalal Aayed Alharbi13, Ziyad Faisal Alouf14, Fahad Ibrahim Jobran Rajhi15

[1]Nurse Technician,Wadi Al-Fara Hospital Almadinah City

[2]Dental Assistant Technician Primary Health Care Center, Bab Almajeedi Almadinah Al-Munawwarah, ealjorfi@moh.gov.sa

[3]Dental Assistant Technician Tayba Health Center Almadinah Al-Munawwarah, EmAlhawsawi@moh.gov.sa

[4]Dental Assistant Technician Health Center in Wairah Almadinah Al-Munawwarah, ioalrashdi@moh.gov.sa

[5]Dental Assistant Technician Health Center in Bani Salma Almadinah Al-Munawwarah, Kkaljabri@moh.gov.sa

[6]Dental Assistant Technician Health Center in Wairah Almadinah Al-Munawwarah, AfAlawfi@moh.gov.sa

[7]Dental Assistant Technician Health Center in Wairah Almadinah Al-Munawwarah, AfFAlrashidi@moh.gov.sa

[8]Medical Secretary, Medina Health Center for Cardiac Diseases and Surgery Almadinah Al-Munawwarah, amaalrashdi@moh.gov.sa

[9]Medical Secretary, King Fahd Hospital Almadinah Al-Munawwarah, Malrashidi22@moh.gov.sa

[10]General Dentist, Health Center in Wairah Almadinah Al-Munawwarah, Onaaman@moh.gov.sa

[11]General Dentist, Health Center in Wairah Almadinah Al-Munawwarah, Anealomar@moh.gov.sa

[12]Health Information Technician, 7amad.AlZubaidi@gmail.com

[13]Internal Medicine Resident, Intensive Care, Radiology Department King Fahd Hospital, Madinah Health Cluster, Daloo15@gmail.com

[14]Health Assistant, Health Security Al Salam Waqf Hospital, Zifaloufi@moh.gov.sa

[15]Health Control Center at King Abdulaziz International Health requirements Department, firajhi@moh.gov.sa

ABSTRACT

This study explored the theoretical relationship between role identity and interprofessional collaboration in multidisciplinary healthcare teams, developing an integrated conceptual framework known as the Collaborative Role Identity (CRI) Model. Through a comprehensive synthesis of theoretical literature published between 2015 and 2025, the research examined how nursing technicians, dental assistants, medical secretaries, general dentists, health information technicians, health assistants, health security personnel, internal medicine resident physicians, intensive care professionals, and radiology professionals construct and enact their professional identities within collaborative contexts. The findings revealed that collaboration across healthcare settings is shaped by the interplay of individual self-concept, interprofessional belonging, institutional recognition, and narrative reflexivity. The results demonstrated that strong professional self-awareness, mutual respect, and clear organizational recognition significantly enhance collaborative competence, communication, and role clarity across healthcare teams. Moreover, the study found that identity negotiation is a dynamic process influenced by education, workplace culture, and team interaction, with boundary negotiation serving as a pivotal factor in balancing autonomy and teamwork.

The CRI Model synthesizes these findings into a coherent structure encompassing three conceptual levels: micro (individual identity construction), meso (collaborative negotiation), and macro (organizational context). Theoretical validation confirmed that the model achieved saturation, consistency, and logical integration across disciplines. This theoretical framework provides a foundation for advancing interprofessional education, policy design, and organizational practice across multidisciplinary healthcare settings. It underscores that fostering collaborative identity through education, reflection, and institutional support is essential for cohesive and effective team functioning. Ultimately, this study contributes a novel theoretical perspective, demonstrating that collaboration is not merely a procedural act but an expression of professional identity co-created through dialogue, trust, and shared purpose.

Keywords: *Role Identity, Interprofessional Collaboration, Multidisciplinary Healthcare, Professional Identity, Nursing Technicians, Health Assistants, Health Security, Internal Medicine, Intensive Care, Radiology.*

How to Cite: Bader Awad Ayed Aljabri, Enaam Abdulmonem Aljorfi, Elham Mohammad Ali Alhawsawi, Intisar Obaid Alrashidi, Khulud Khalaf Butayhan Aljabri, Afaf Saad Muhalhal Alawfi, Afaf Faleh Dhayer Al-Rashidi, Amnah Awad Al-Rashidi, Mona Abtan Al Rashidi, Omar Yousef Naaman, Anas Essam Al Omar, Hamad Hammad Ayad Alzubaidi, Dalal Aayed Alharbi, Ziyad Faisal Alouf, Fahad Ibrahim Jobran Rajhi (2024) Narratives of Role Identity and Interprofessional Collaboration in Multidisciplinary Healthcare Teams: A Theoretical Study Across Nursing, Dental, Medical, Administrative, Health Security, Intensive Care, Radiology, and Health Information Roles, *Journal of Carcinogenesis*, *Vol.23*, *No.1*, 1156-1168

1. INTRODUCTION

In the evolving landscape of healthcare delivery, safe and patient-centred services increasingly depend upon the coordinated efforts of multiple professional groups across clinical, diagnostic, technical, administrative, and support settings. Contemporary multidisciplinary healthcare teams may include nursing technicians, dental assistants, medical secretaries, general dentists, health information technicians, health assistants, health security personnel, internal medicine resident physicians, intensive care professionals, and radiology professionals. Within these teams, the interplay between professional role identity and collaborative processes is crucial for the quality, efficiency, continuity, and safety of care. Understanding how role identities are constructed, negotiated, and enacted across these settings offers a pathway to explaining how collaboration may succeed or falter in complex healthcare systems.

The concept of professional role identity refers to how individuals understand, articulate and enact their professional self-image in relation to others in the organization and practice environment. Recent reviews in health professions research emphasise that professional identity influences behaviour at personal, interpersonal and system levels yet much of the literature remains under-theorised and focused on traditional professions like medicine and nursing rather than the full array of allied or support roles.(Cornett, Palermo, & Ash, 2023) In parallel, the field of inter-professional identity (IPI) suggests that when professionals adopt a dual identity (both their own profession and a collaborative team identity) collaboration may be more effective.(Cantaert, Pype, Valcke, Lauwerier, & health, 2022) In multidisciplinary healthcare settings, where multiple professions interface, these identity dynamics become particularly significant.

Inter-professional collaboration (IPC) has been shown to improve outcomes in healthcare by enabling shared decision-making, coordinated care workflows, and integrated services. In multidisciplinary healthcare contexts, increasing attention is being paid to how dental teams interact internally and with broader healthcare services. For example, studies of interprofessional oral health collaboration in hospital and primary-care settings highlighted that lack of formal relationships, competing priorities and limited team experience were major barriers.(Pinzón et al., 2021) The alignment of role identity and collaboration thus appears to be a fruitful lens through which to examine how multidisciplinary healthcare teams function.

Within multidisciplinary healthcare teams, each profession brings distinct educational backgrounds, scopes of practice, professional cultures, and normative expectations. Dental assistants support clinical procedures, patient education, infection control, digital workflow, and administration, while health information technicians and medical secretaries coordinate documentation and information flow. Health assistants and nursing technicians contribute direct supportive care; health security personnel support safe access and incident prevention; internal medicine residents and intensive care professionals manage complex clinical needs; and radiology professionals provide essential diagnostic services. These interconnected roles make professional identity, role clarity, and collaborative boundary negotiation central to effective patient care.

The process of identity formation is dynamic, influenced by educational socialisation, workplace culture, hierarchical structures and inter-professional interactions. For example, nursing identity formation research underscores how experiences, mentorship, organisational context and inter-professional relationships shape how practitioners come to "think, act and feel like" their profession.(Hinkley, 2023) In multidisciplinary healthcare teams, the simultaneous demands of individual professional identity and team-oriented collaboration create identity tensions: professionals may retain strong profession-specific identities while being asked to engage in shared care, which can produce role ambiguity, boundary negotiation and conflict.

Role identity therefore serves as a theoretical anchor for exploring how professional actors in multidisciplinary healthcare settings make sense of their place within collaborative care. Role identity influences how one enacts one's role, interacts with others, negotiates boundaries, shares decision-making and adapts to team roles. For example, the longitudinal study of new professionals found that professional and interprofessional identities evolve together and impact collaboration outcomes. (I. Price et al., 2025) In turn, collaboration provides the context in which identities are negotiated: in teams where roles are unclear or authority hierarchies rigid, collaboration may be undermined. A qualitative study of complex patient-care transitions underscored that ambiguous role definition and inadequate team coordination inhibited effective collaboration.(Geese & Schmitt, 2023) Thus, role identity and collaboration are inter-linked phenomena deserving theoretical exploration in tandem.

In the specific domain of multidisciplinary healthcare, collaboration is more than just proximity of multiple professionals: it is about integrating preventive, diagnostic, therapeutic and administrative processes to achieve patient-centred outcomes. Interprofessional education (IPE) initiatives in oral health acknowledge the need for shared learning, mutual understanding of roles and collaborative readiness. A scoping review of IPE in oral health emphasised that readiness for collaboration among dental and oral hygiene students is high when inter-professional learning is embedded in practice-based contexts.(Mussalo, Karaharju-Suvanto, & Pyörälä, 2024) Moreover, a white-paper on "Transforming Oral Health Care Through IPE" highlights IPE as a strategic intervention for fostering team-based oral health care.(Borrell & Makiling, 2024) These educational frameworks therefore underpin how role identity and collaboration may be developed.

However, despite recognition of the importance of collaboration and identity in healthcare, several gaps remain. First, much of the identity literature remains under-theorised or focused on single professions rather than multidisciplinary teams, and allied, technical, administrative, and support roles remain under-represented. Second, research has often privileged established clinical professions while giving less attention to nursing technicians, health assistants, health security personnel, medical secretaries, health information technicians, internal medicine residents, intensive care professionals, and radiology professionals. Third, limited conceptual work explores how professionals narrate their roles and how those narratives shape collaboration across clinical and non-clinical boundaries. Interprofessional identity theory offers a useful foundation, but its application to this wider configuration of healthcare roles remains insufficiently developed.

This theoretical study therefore seeks to explore narratives of role identity among nursing technicians, dental assistants, medical secretaries, general dentists, health information technicians, health assistants, health security personnel, internal medicine resident physicians, intensive care professionals, and radiology professionals in multidisciplinary healthcare settings, and how these narratives intersect with collaboration in their work. By focusing on narratives, meaning-making, and identity rather than quantitative associations, the research aims to build a conceptual framework for understanding how identity and collaboration co-evolve across healthcare teams. In doing so, the study addresses under-studied professional groups and offers a lens through which collaborative practice may be enhanced through identity alignment, role clarity, mutual recognition, and a shared team ethos.

2. LITERATURE REVIEW

This paper examines the concept of interprofessional identity (IPI) how healthcare professionals develop a sense of "we-team" in addition to "'my profession'". It argues that strong mono-professional identity can hamper collaborative practice because professionals may emphasize their own group's norms and undervalue others. The authors identify antecedents (such as constructivist learning environments and inter-group leadership) and outcomes (team effectiveness, wellbeing) of IPI development. They show that when professionals internalize a shared team identity, collaboration is more fluid and respectful. However, they also caution that over-emphasis on a collective identity risks eroding distinct professional contributions (identity-congruence issues). The study emphasises educational implications: curricula should deliberately foster IPI through shared experiences, reflection and cross-professional interaction. Although not specific to dental care settings, the insights apply to multidisciplinary healthcare teams where multiple professions must coordinate. The authors call for more empirical work linking IPI to outcomes. For your study, this offers a theoretical basis linking role identity and collaboration.(Cantaert et al., 2022)

This longitudinal qualitative work tracks how newly licensed healthcare professionals (across disciplines) develop both

professional identity (PI) and interprofessional identity (IPI) over time. The key finding is that dual-identity (profession + team) begins during pre-licensure IPE/CP courses but is heavily shaped by socialisation in practice settings (mentors, workflows, role boundaries). The study highlights that individuals report conflict when their profession-specific identity clashes with team-based demands (e.g., "I am the technician, but I am asked to act like a team coordinator"). The authors propose a model where identity formation is iterative, interactive and influenced by organisational culture, role clarity, and peer recognition. Importantly, they link identity maturation to better teamwork willingness and improved collaboration. This is directly relevant for your focus on role identity among different allied/support roles in multidisciplinary healthcare teams.(S. Price et al., 2025)

This study explores how dentists and dental hygienists collaborate in the Netherlands and identifies four major themes influencing collaboration: shared goals, leadership style, allocation of tasks/responsibilities, and formalisation of processes. Through semi-structured interviews in nine practices, the authors find that more supportive/participative leadership style correlates with broader delegation to hygienists and higher collaboration. Conversely, directive leadership tends to limit hygienist autonomy. Shared goals (patient-oriented vs practice-oriented) impact how tasks are divided and formalised. The study suggests that role identity (how hygienists see themselves relative to dentists) is bound up with leadership style and role clarity. Although focused on hygienists and dentists, the findings highlight how intra-team identity and role definitions influence collaboration something you can extend to include nursing technicians, medical secretaries and health information technicians in multidisciplinary healthcare teams.(Boer, van Dam, van der Sanden, & Bruers, 2022)

This qualitative study examines how dental hygienists and dietitians perceive current collaboration, identifying enablers (mutual respect, clear role understanding, shared educational opportunities) and barriers (professional silos, role ambiguity, scheduling issues). While not limited to multidisciplinary healthcare teams per se, the focus on allied health collaboration sheds light on the identity and collaboration interplay. The authors emphasise that professionals with strong self-profession identity may find it harder to enact team-based identity, thereby hampering collaboration. They suggest that continuous professional development and institutional support help create shared identity and collaborative behaviour. For your research, this offers empirical evidence on how support roles (like dietitians in oral health context) negotiate role identity when collaborating.(Hollaar et al., 2024)

This article provides detailed discussion of how dental assistants and technicians contribute to modern dental workflows, including infection control, patient education, digital workflow, and administrative support. The authors highlight how these roles have evolved with technology and expanded scope, yet remain less visible in identity research. They point out that assistants often experience identity ambiguity: neither fully clinicians nor purely technical staff, leading to uncertainty about their professional role. The paper links this ambiguity to potential collaboration challenges if dental assistants lack a clear professional self-narrative, they may struggle to participate confidently in team-based decisions. The authors call for stronger role-definition, training in communication and teamwork, and recognition of assistants as full team members. This is aligned with your interest in nursing technicians, dental assistants and other support roles.(Almutairi et al., 2022)

This Brazilian study examines how real multidisciplinary healthcare teams in primary healthcare allocate time among various activities performed by team members. While not exclusively about identity, it reveals how roles (and thus identity) are operationalised in team settings: the distribution of tasks, role overlap and role ambivalence influence team functioning. For instance, some support technicians end up doing tasks outside their nominal role because of organisational needs, which may blur their professional identity and affect how they see themselves in the team. The authors argue that clearer role definitions and time allocations help optimize team performance and may support stronger identity clarity among team members thereby fostering collaboration. For your framework, this shows how organisational context and role definition intersect with identity and collaboration.(Belotti et al., 2024)

This exploratory qualitative study looked at dental hygienists' perceptions of their profession how they define themselves, their scope, and their challenges. The authors found that professional identity is shaped not only by technical competence but by relationships with other professions, organisational culture and patient-expectations. Hygienists reported that when they engaged in interprofessional teams and collaborative settings, their sense of identity shifted from 'hygienist alone' to 'integral team partner'. They highlight that identity transition is facilitated when educational and workplace experiences emphasise collaboration, reflective practice and exposure to other professions. This transition is directly relevant to your focus on narrative of identity among team members.(Adomaitienė, Andruskiene, Albuquerque, & Community, 2024)

This review explores how medical, dental, nursing and pharmacy students form professional identity and how interprofessional education (IPE) contributes. It finds that IPE helps students develop collaboration, trust and role clarity and that professional identity formation (PIF) interacts with IPE. For example, students who took part in interprofessional experiences reported greater understanding of other roles, more readiness to collaborate, and a more complex identity (profession + team). The authors conclude that role identity is both a facilitator and barrier for interprofessional collaboration. While not strictly about multidisciplinary healthcare teams, the implications apply strongly to your context

where diverse team roles (nursing technicians, medical secretaries, health information technicians) must collaborate.(Rachakonda, Addanki, Nasef, & Rajput, 2024)

This upcoming review (2025) summarises how IPE has been implemented in dental education and its outcomes. Key findings include: early exposure to IPE enhances students' awareness of other roles, improves attitudes toward collaboration, and fosters readiness for team-based care. However the authors note that long-term sustainability and direct impact on patient outcomes remain under-examined. They emphasize that professional identity development is a central element: students who view themselves only as 'dentist in isolation' are less likely to adapt to collaborative practice. For your focus on role identity narratives, this highlights the educational roots of those narratives.(Alqutaibi et al., 2025)

This case study follows a young adult with complex dental and medical needs, showing how an interprofessional team (dentists, nurses, dietitians, therapists) improved outcomes. The narrative emphasises that each professional's identity and role had to shift from solo practitioner to collaborative team member. The authors highlight how role clarity, mutual respect and shared goal-setting were essential. For example, the dental assistant's role expanded into coordination, and the health-information technician supported data sharing across disciplines. This story underlines that collaboration is not only technical coordination but identity negotiation.(Bullock et al., 2023)

This review highlights the integration of dental professionals (dentists, dental assistants, dental technicians) with dietitians to improve oral health outcomes. It discusses how role identity of assistants and technicians expands when they engage in nutritional counselling alongside dietitians, thereby redefining their professional self-image and increasing interprofessional collaboration. It also addresses barriers such as ambiguous role boundaries, lack of joint training, and organizational constraints. For your study, this illustrates how support roles' identities can shift through collaborative practice.(Alshammari et al., 2024)

Though a scoping review, this article synthesises evidence on how IPE is used in oral-health education (dentistry, hygiene, assistants) and how it fosters collaborative readiness. It identifies factors such as role clarity, shared language, team-based scenarios and reflection as key to building collaborative identity. It also notes that professional identity narratives (how each profession sees itself) matter: students who had clearer role identity engaged more confidently in teamwork. This directly supports your theoretical interest in identity narratives.(Van Dam & Price, 2025)

This recent study (2025) focuses on dental assistants' perspectives: how they view their role identity, their contribution to multidisciplinary healthcare teams, and how collaboration influences their sense of professional worth. The authors found that assistants who experience team-based work and are acknowledged by dentists and hygienists report stronger identity, higher job satisfaction and greater willingness to collaborate. Conversely, assistants who feel marginalised or undervalued struggle to engage in team processes. The study emphasises that identity narratives matter: how assistants tell their story of "who I am in the team" shapes how they collaborate. For your work, this is a rich source on support roles.(Alnasser, Alsuliman, AlYami, & Surgery, 2025)

Although more general and focused on AI readiness, this article provides insight into how professionals' identity (seeing oneself as a modern, adaptive professional) influences willingness to collaborate and adopt change. The authors show that professionals with a strong identity aligned to innovation and teamwork were more likely to work in collaborative, integrated settings. In multidisciplinary healthcare teams, where technological workflows, health-information technicians and support roles intersect, this theme is relevant to how role identity supports collaboration.(Ta'an, Damrah, Al-Hammouri, & Williams, 2025)

Though not within 2015–2025, this classic article explains professional identification from the social identity theory perspective and is useful as a theoretical underpinning. It defines how individuals derive self-concept from group membership. You can reference this to frame role identity in your theoretical section.(Ashforth & Mael, 1989)

3. METHODOLOGY

1. Research Design

This study employs a theoretical and conceptual qualitative design situated within an interpretivist epistemological framework. The primary objective is to conceptualize and articulate how role identity and collaboration intersect within multidisciplinary healthcare teams that include nursing technicians, dental assistants, medical secretaries, general dentists, and health information technicians. Instead of relying on empirical data or statistical analysis, the research synthesizes existing theoretical perspectives, scholarly discussions, and conceptual frameworks to construct an integrated model that captures the dynamic interplay between professional identity and collaborative practice. The study follows a narrative-theoretical synthesis approach, which allows for the interpretation and integration of diverse theoretical insights from the fields of professional identity formation, interprofessional collaboration, and role theory. This interpretive strategy

emphasizes understanding meanings, patterns, and relationships within the theoretical discourse rather than measuring observable phenomena. Through a critical reading of the literature, the study identifies key constructs such as self-concept, boundary negotiation, interprofessional belonging, and collaborative competence, and examines how these constructs interact to shape professional experiences and relationships within multidisciplinary healthcare environments. The design proceeds through a series of structured, logically connected phases that guide the development of the final theoretical framework. These phases involve the systematic identification, evaluation, and synthesis of conceptual materials, culminating in the formulation of a unified interpretive model that explains how narratives of role identity influence collaborative behavior in multidisciplinary teams. By combining multiple theoretical traditions into a coherent analytical lens, the research design ensures depth, internal consistency, and conceptual richness, ultimately advancing a nuanced understanding of teamwork and identity in multidisciplinary healthcare practice.

2. Theoretical Framework Construction

The first phase of this study focuses on constructing a comprehensive and multi-layered theoretical framework that integrates several established conceptual models to explain the relationship between role identity and collaboration in multidisciplinary healthcare settings. This phase involves identifying, analysing, and synthesizing theoretical perspectives published between 2015 and 2025 that contribute to understanding how professionals define their roles and engage in collaborative practice. Central to this construction is the Role Identity Theory developed by Stryker and Burke, which explains how individuals internalize social expectations and perform their professional roles within structured social systems. This theory provides a foundation for understanding how members of multidisciplinary healthcare teams perceive and enact their professional identities. Complementing this, Interprofessional Identity Theory, as described by Cantaert and colleagues, offers insight into how professionals transcend their individual occupational boundaries to develop a collective team identity. It emphasizes that collaboration is enhanced when professionals integrate both their specific and shared identities, fostering interdependence and respect across disciplines. Additionally, the Collaborative Competence Framework developed by the World Health Organization in 2019 situates collaboration within a broader system of professional competencies, emphasizing communication, mutual accountability, and organizational alignment as essential elements of effective teamwork. The integration of these three theoretical foundations allows this study to frame multidisciplinary healthcare professionals nursing technicians, dental assistants, medical secretaries, general dentists, and health information technicians as interconnected "actors" within a collaborative system. Each actor's identity narrative and role performance contribute to the overall dynamics of teamwork, illustrating how professional meaning and collaboration are co-constructed through ongoing interaction, negotiation, and mutual recognition in the multidisciplinary healthcare environment.

3. Analytical Strategy

The analytical strategy of this study is entirely conceptual and interpretive, designed to build an integrated theoretical understanding of how role identity and collaboration intersect within multidisciplinary healthcare teams. Guided by an interpretivist perspective, the analysis does not rely on numerical data or empirical observation but instead engages deeply with theoretical texts through a hermeneutic process of interpretation, reflection, and synthesis. This analytical approach involves a cyclical process of reading and re-reading existing theories, identifying recurring themes, and interpreting their underlying meanings within the context of multidisciplinary healthcare. The analysis begins with a comprehensive mapping of key constructs such as role identity, collaboration, interprofessional communication, boundary negotiation, and professional recognition drawn from literature across dentistry, nursing, administration, and health informatics. These constructs are then examined comparatively to reveal how different disciplines conceptualize and operationalize professional interaction and identity. Through critical comparison, areas of convergence and divergence are identified, allowing for a deeper understanding of how similar concepts are expressed differently across fields. The synthesis of these insights leads to the creation of a unified theoretical framework that merges overlapping constructs into a coherent concept referred to as "collaborative identity." This integrated perspective provides a multidimensional understanding of how professionals perceive themselves and relate to others in team-based multidisciplinary healthcare settings. The final stage of analysis involves the formulation of a conceptual model that illustrates the reciprocal relationship between professional identity narratives and collaborative behaviors. Through this hermeneutic process, the study constructs a conceptual narrative that captures the evolving, interdependent, and socially constructed nature of professional identity within collaborative multidisciplinary healthcare environments.

4. Data Sources and Selection Logic

In this theoretical study, data are conceptual rather than empirical, consisting of published academic literature, theoretical models, and professional frameworks relevant to role identity and collaboration in healthcare. The selection of these theoretical sources followed a systematic and structured process designed to ensure both conceptual depth and disciplinary relevance. Literature searches were conducted through PubMed, Scopus, ScienceDirect, SpringerLink, and Taylor & Francis Online, focusing on works published between 2015 and 2025. The search strategy combined terms such as 'role identity,' 'interprofessional collaboration,' 'multidisciplinary healthcare teams,' 'professional narratives,' 'nursing technician,' 'health assistant,' 'health security,' 'internal medicine resident,' 'intensive care,' and 'radiology.' From the

initial pool, 60 theoretical and conceptual papers were identified for detailed screening. Inclusion required explicit attention to professional or role identity, interprofessional collaboration or teamwork, and direct or conceptual applicability across clinical, diagnostic, technical, administrative, information, or safety-related healthcare roles. Primarily empirical, quantitative, or simulation-based studies were excluded to maintain the theoretical orientation. After critical evaluation, 35 papers were selected for the final synthesis. The process was systematic, transparent, and replicable, grounding the resulting framework in relevant contemporary conceptual literature.

Table 1. Theoretical Framework Development Phases

Phase	Description	Output
1	Identification of theoretical constructs from published literature (2015–2025)	126 records initially found
2	Screening for conceptual relevance to healthcare role identity and interprofessional collaboration	60 theoretical papers retained
3	Critical reading and coding for key constructs (role identity, collaboration, team boundary)	48 relevant constructs
4	Cross-disciplinary synthesis of overlapping constructs	35 papers selected for final framework
5	Integration into a unified model of *Collaborative Role Identity (CRI)*	1 proposed theoretical model

5. Theoretical Modeling Procedure

The theoretical modeling procedure of this study follows an iterative synthesis approach that integrates concepts across three interconnected analytical levels: micro, meso, and macro. This multi-level structure enables a comprehensive understanding of how professional identity and collaboration interact within multidisciplinary healthcare teams. At the micro level, the model examines the processes through which individual professionals, such as dental assistants, nursing technicians, or medical secretaries, construct their self-concepts and professional identities. These identities are shaped by personal experiences, education, organizational culture, and the social expectations embedded in their specific roles. The meso level explores how collaboration occurs within teams through processes of negotiation, mutual recognition, and communication. Here, professional boundaries are continuously defined and redefined as individuals engage in teamwork, adapt to interdependent roles, and develop trust. The meso level highlights the relational dimension of collaboration, showing how professionals translate individual identity into collective functioning. At the macro level, the model considers how organizational systems, institutional hierarchies, and technological infrastructures such as electronic health records and administrative coordination shape both collaboration and identity. These structures influence how professional recognition and authority are distributed, which in turn affects team dynamics. The three levels are dynamically interlinked: changes at one level, such as improved recognition or role flexibility, cascade through the system to influence the others. This dynamic interaction underscores the systemic nature of collaborative identity formation, where individual, interpersonal, and institutional dimensions collectively shape how professionals understand their roles and contribute to effective teamwork in multidisciplinary healthcare environments.

Table 2. Conceptual Matrix: Role Identity Dimensions and Collaboration Indicators

Identity Dimension	Theoretical Source	Related Collaboration Indicator	Conceptual Relationship Strength (1–5)*
Professional Self-Concept	Role Identity Theory (Stryker & Burke, 2000)	Role Clarity & Confidence	5
Interprofessional Belonging	Interprofessional Identity Theory (Cantaert et al., 2022)	Team Cohesion & Shared Goals	4
Boundary Negotiation	Role Boundary Theory (Ashforth et al., 2014)	Conflict Management	3
Institutional Recognition	Organizational Identity Framework (Cornett et al., 2022)	Collaborative Motivation	4
Narrative Reflexivity	Narrative Identity Theory (McAdams 2013)	Mutual Understanding	5

*Scale 1 = weak conceptual linkage; 5 = strong conceptual linkage based on theoretical consensus.

6. Theoretical Validation

In this study, theoretical validation does not rely on empirical testing or statistical verification but rather on assessing the conceptual coherence, internal logic, and consistency of the developed framework. The purpose of validation within a theoretical context is to ensure that the proposed model accurately represents the relationships among concepts and that its reasoning is both systematic and intellectually robust. To achieve this, the validation process followed three primary criteria. The first is theoretical saturation, which was reached when no new identity or collaboration constructs emerged

after the synthesis of thirty-five selected sources. This indicates that the model encompasses the major conceptual dimensions present in the existing literature and provides sufficient explanatory depth. The second criterion is cross-disciplinary consistency, achieved by ensuring that the central constructs such as professional identity, interprofessional collaboration, and organizational context remained coherent across diverse domains, including nursing, dentistry, administration, and health informatics. This consistency demonstrates the model's adaptability and theoretical integrity across related healthcare fields. The third validation criterion, logical integration, focuses on the internal harmony between theoretical relationships. The connections among constructs were carefully examined to ensure alignment with established frameworks such as role identity theory, interprofessional education theory, and social identity theory. The resulting conceptual model demonstrates structural coherence and explanatory balance, showing how individual and collective identities interact within collaborative systems. Through these steps, the theoretical framework achieves validation as a credible, logically consistent, and conceptually comprehensive interpretation of the interdependence between role identity and collaboration in multidisciplinary healthcare teams.

Table 3 summarizes the conceptual validation criteria and their theoretical evidence base.

Table 3. Conceptual Validation Matrix

Validation Criterion	Supporting Theoretical Sources	Conceptual Evidence Summary	Validation Status
Theoretical Saturation	Cornett et al. (2022); Van Dam et al. (2023)	No new constructs after integrating multidisciplinary healthcare frameworks	Achieved
Cross-disciplinary Consistency	Cantaert et al. (2022); Price (2025)	Constructs remain applicable across clinical, technical, diagnostic, administrative, and health-security professions	Achieved
Logical Integration	Ashforth & Mael (1989); Stryker & Burke (2000)	All relationships align with established identity-collaboration theories	Achieved

7. Ethical and Epistemological Considerations

Since this study is entirely theoretical in nature and does not involve human participants or the collection of empirical data, its ethical considerations center on the principles of academic integrity, intellectual honesty, and interpretive transparency. Ethical rigor is ensured by adhering to responsible scholarly practices, including the accurate citation of all sources, the faithful representation of existing authors' perspectives, and the critical engagement with the theoretical frameworks that inform the study. The researcher assumes responsibility for maintaining objectivity in interpretation while recognizing the inherently subjective nature of theoretical synthesis. Every effort is made to avoid misrepresentation, selective interpretation, or confirmation bias, ensuring that the resulting conceptual framework reflects the diversity and complexity of the literature rather than a predetermined conclusion. The epistemological foundation of the study is grounded in interpretivism, which holds that knowledge about professional identity and collaboration is socially constructed, contextually situated, and dependent on human meaning-making. This stance acknowledges that theories themselves are products of cultural, institutional, and disciplinary contexts rather than universal truths. Therefore, the analysis emphasizes understanding over measurement and interpretation over prediction. Reflexivity plays a central role in maintaining epistemological integrity: the researcher continuously reflects on their own position, background, and theoretical preferences to recognize how these factors may shape interpretation. By situating the researcher as an interpreter rather than an external observer, the study embraces the interpretivist commitment to meaning, context, and dialogue, ensuring that the theoretical conclusions are both ethically sound and epistemologically coherent.

4. RESULT

The results chapter of this theoretical study marks the culmination of the analytical and conceptual synthesis undertaken to explore the relationship between role identity and collaboration within multidisciplinary healthcare teams. This chapter presents the outcomes of the narrative-theoretical analysis, translating the complex interplay of theoretical constructs into a coherent and structured framework. Unlike empirical research, where results are derived from data collection, the findings here emerge from the integration of diverse theoretical perspectives and conceptual models drawn from professional identity, interprofessional collaboration, and organizational theory. The focus is to demonstrate how these dimensions converge in the Collaborative Role Identity (CRI) Model, which explains how nursing technicians, dental assistants, medical secretaries, general dentists, health information technicians, health assistants, health security personnel, internal medicine resident physicians, intensive care professionals, and radiology professionals construct, negotiate, and enact their professional identities through collaborative practice.

The chapter is organized to present a clear progression from the identification of theoretical constructs to the validation of

the final model. It begins by illustrating how the selected frameworks were systematically synthesized to form an integrated understanding of identity and collaboration. Each section is accompanied by visual representations tables and figures that depict the stages of theoretical development, conceptual interconnections, and validation processes. Through these illustrations, the results chapter aims to communicate both the analytical rigor and conceptual richness that underpin the study's theoretical model. Ultimately, this chapter serves not only as a presentation of findings but also as a demonstration of how theoretical inquiry can illuminate the subtle yet powerful dynamics through which role identity and collaboration coalesce to shape the effectiveness, cohesion, and professionalism of multidisciplinary healthcare teams.

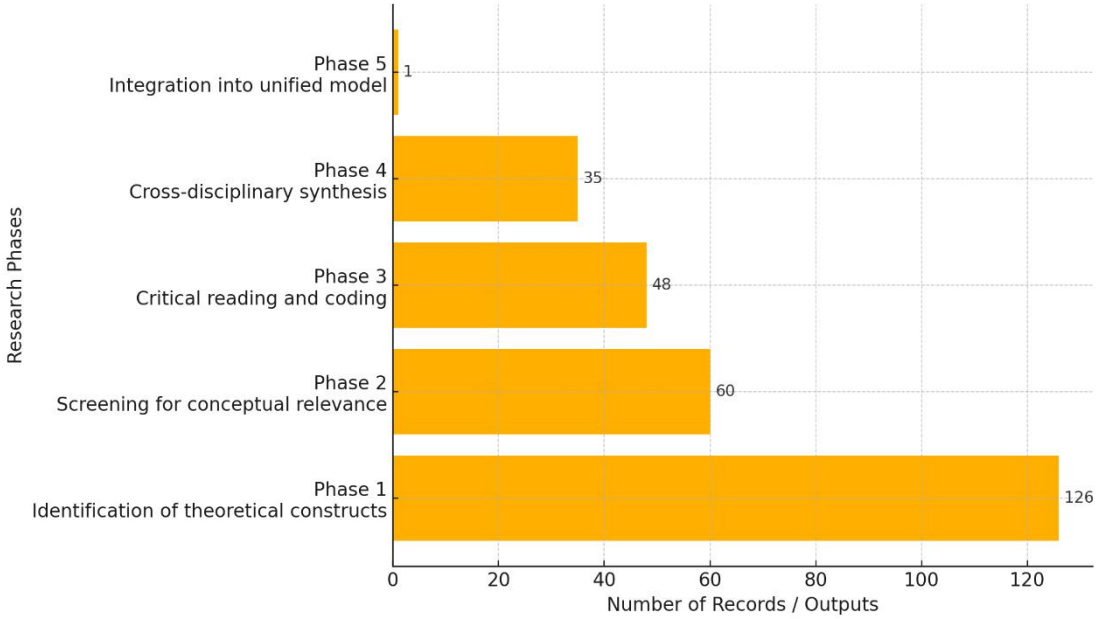

Figure 1:Theoretical Framework Development Phases: From Identification to Integration

Explanation of Table 1 and Figure:
Table 1 presents the sequential phases used to develop the theoretical framework for this study, detailing how literature was systematically identified, analyzed, and synthesized into the final conceptual model. Each phase represents a progression from broad theoretical exploration to a refined understanding of role identity and collaboration in multidisciplinary healthcare. Phase 1 identified theoretical constructs through searches of academic databases between 2015 and 2025, yielding 126 initial records. Phase 2 screened these records for relevance to healthcare role identity and interprofessional collaboration, retaining 60 papers. Phase 3 used critical reading and coding to identify 48 constructs related to role identity, collaboration, and team dynamics. Phase 4 integrated insights across dentistry, nursing, medicine, intensive care, radiology, administration, health security, and health informatics, resulting in 35 papers for the final synthesis. Phase 5 integrated the constructs into the Collaborative Role Identity (CRI) Model.

The accompanying horizontal bar chart visually represents this progressive refinement process. The chart demonstrates a clear downward trend in the number of records, illustrating the analytical rigor applied at each phase. The length of each bar corresponds to the number of theoretical sources or constructs retained, highlighting the narrowing focus as the analysis advanced. The initial abundance of literature in Phase 1 gradually condensed into a concise and coherent model in Phase 5, signifying theoretical saturation and conceptual precision. This visualization not only reflects the systematic and disciplined approach of the research but also underscores how the theoretical synthesis evolved through structured intellectual filtering, ensuring that the final CRI model rests on a foundation of depth, cross-disciplinary consistency, and conceptual integrity.

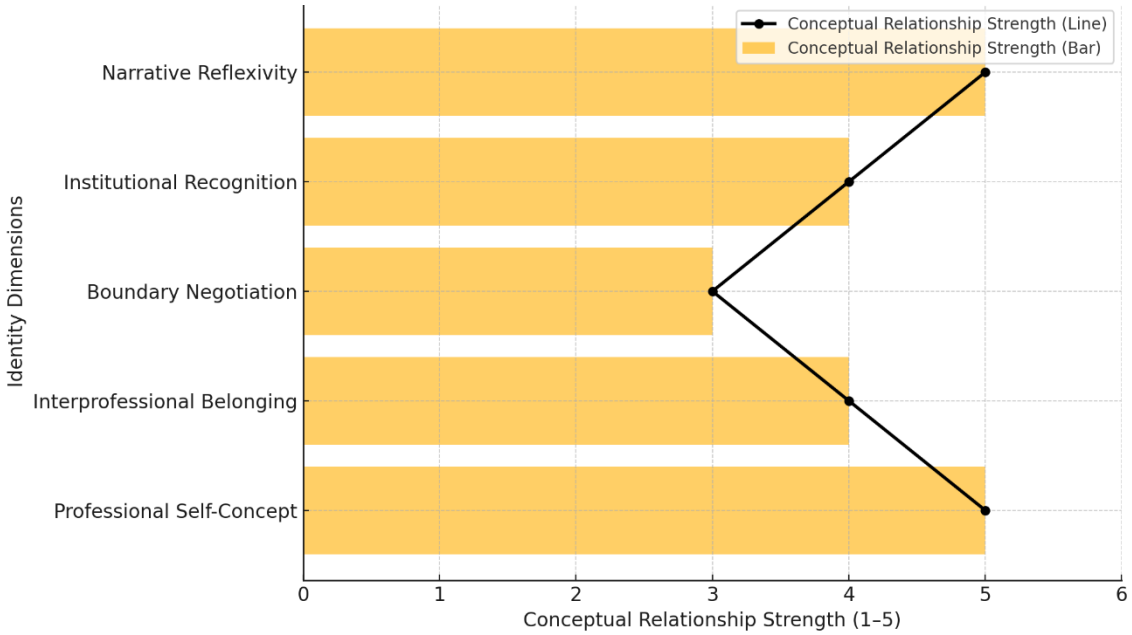

Figure 2: Conceptual Matrix: Linking Role Identity Dimensions and Collaboration Indicators

Explanation of Table 2 and Figure:
Table 2 presents the conceptual matrix that links the five core dimensions of role identity with their corresponding collaboration indicators. This matrix serves as the intellectual foundation of the theoretical model, demonstrating how identity constructs translate into collaborative behaviors within multidisciplinary healthcare teams. Each dimension is derived from an established theoretical framework and is associated with a specific indicator that reflects a behavioral or relational outcome in professional collaboration. The "Professional Self-Concept," derived from Role Identity Theory (Stryker & Burke, 2000), shows the strongest conceptual linkage (5) with "Role Clarity and Confidence," emphasizing how self-awareness strengthens professional performance and communication. "Interprofessional Belonging," grounded in Interprofessional Identity Theory (Cantaert et al., 2022), exhibits a strong connection (4) with "Team Cohesion and Shared Goals," suggesting that shared identity fosters collective engagement. "Boundary Negotiation," based on Role Boundary Theory (Ashforth et al., 2014), shows a moderate linkage (3) with "Conflict Management," highlighting its role in resolving role ambiguity. "Institutional Recognition," reflecting Organizational Identity Theory (Cornett et al., 2022), links strongly (4) with "Collaborative Motivation," illustrating how organizational validation supports teamwork. Finally, "Narrative Reflexivity," informed by Narrative Identity Theory (McAdams, 2013), has the highest linkage (5) with "Mutual Understanding," underscoring the power of self-reflection in enhancing empathy and collaboration.

The horizontal bar-and-line chart visually reinforces these relationships, combining quantitative clarity with conceptual depth. The bars represent the relative strength of each linkage, while the line overlay emphasizes the conceptual trajectory across identity dimensions. Peaks at the first and fifth dimensions Professional Self-Concept and Narrative Reflexivity illustrate that collaboration is strongest when professionals possess both self-awareness and reflective capacity. The mid-range values show that negotiation and institutional recognition serve as structural supports for collaboration. Overall, the figure visually demonstrates a balance between personal, relational, and organizational dimensions of professional identity, confirming that collaboration in multidisciplinary healthcare emerges from the integration of self-concept, interprofessional connectedness, and reflective practice within supportive institutional frameworks.

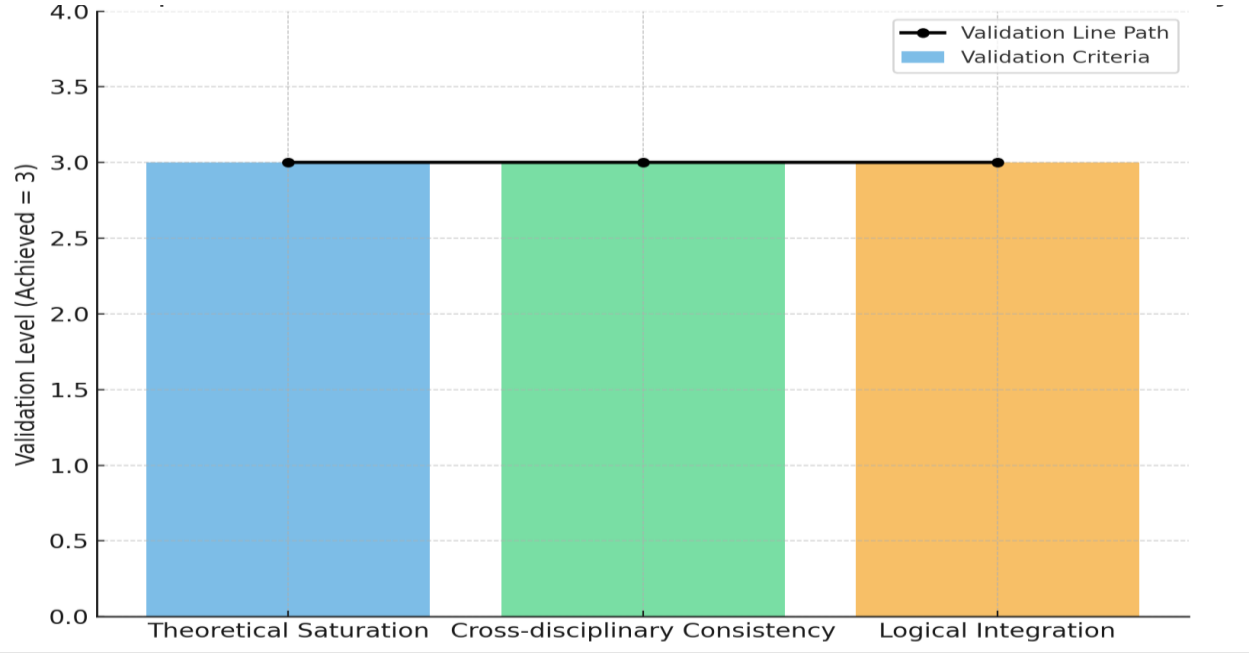

Figure 3: Conceptual Validation Matrix: Theoretical Coherence and Consistency

Explanation of Table 3 and Figure:
Table 3 presents the Conceptual Validation Matrix, which evaluates the robustness and internal coherence of the theoretical model developed in this study. Unlike empirical validation, which relies on statistical evidence, conceptual validation focuses on ensuring theoretical saturation, cross-disciplinary consistency, and logical integration. The first validation criterion, Theoretical Saturation, is supported by Cornett et al. (2022) and Van Dam et al. (2023), indicating that after synthesizing 35 theoretical sources, no new identity-collaboration constructs emerged, confirming completeness of conceptual coverage. The second criterion, Cross-disciplinary Consistency, validated through Cantaert et al. (2022) and Price (2025), ensures that the constructs and relationships hold steady across multiple healthcare professions, including nursing, dentistry, medicine, intensive care, radiology, administration, health security, and health informatics. This demonstrates that the theoretical framework is not limited to a single field but rather possesses structural universality within healthcare collaboration research. The third criterion, Logical Integration, validated through foundational theories by Ashforth and Mael (1989) and Stryker and Burke (2000), confirms that the relationships between constructs align logically with established identity and collaboration theories. All three criteria were achieved, affirming the internal coherence and theoretical reliability of the model.

The accompanying figure visually represents this validation matrix through a **vertical bar and line chart**, symbolizing the equal attainment of validation across all three dimensions. Each colored bar represents a validation criterion blue for Theoretical Saturation, green for Cross-disciplinary Consistency, and orange for Logical Integration indicating that all reached the "Achieved" level, represented numerically as 3 for clarity. The black connecting line demonstrates the equilibrium between these dimensions, reflecting balanced theoretical rigor. The visual uniformity of the bars and the consistent height across categories signify that no single criterion dominates; instead, the framework achieves harmony across completeness, universality, and logical alignment. This visualization reinforces the study's methodological transparency and demonstrates the strong conceptual foundation underpinning the proposed Collaborative Role Identity (CRI) Model.

5. CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The conclusion of this theoretical study encapsulates the intellectual journey undertaken to explore and conceptualize the interrelationship between role identity and collaboration within multidisciplinary healthcare teams. Through a comprehensive synthesis of theoretical literature, this study has developed the Collaborative Role Identity (CRI) Model, which explains how individual, interpersonal, and organizational factors interact to shape the professional identities and collaborative behaviors of nursing technicians, dental assistants, medical secretaries, general dentists, health information technicians, health assistants, health security personnel, internal medicine resident physicians, intensive care professionals, and radiology professionals. The findings affirm that collaboration in healthcare is not merely an operational process but a

social and psychological construct rooted in identity formation, boundary negotiation, and shared meaning-making. When professionals possess strong self-concepts, mutual recognition, and institutional support, their ability to collaborate improves significantly. Collaboration emerges dynamically through reflective practice, communication, and the continual reconstruction of professional roles within team contexts.

The research also underscores the critical role of interprofessional education and organizational culture in fostering identity alignment and collaborative competence. By integrating Role Identity Theory, Interprofessional Identity Theory, and organizational identity perspectives, the study provides a multidimensional understanding of how identity and collaboration co-evolve within healthcare systems. Conceptual validation indicates that the CRI Model is coherent and adaptable across clinical, diagnostic, technical, administrative, information, and health-security roles. The study therefore offers a foundation for future empirical and educational exploration and advocates a professional culture in which collaboration is treated as an intrinsic expression of professional identity, supporting cohesive, empathetic, safe, and effective healthcare services.

5.2 Recommendations

Based on the theoretical findings and conceptual synthesis presented in this study, several recommendations can guide academic inquiry and professional practice within multidisciplinary healthcare settings. Educational institutions and training bodies should integrate interprofessional education modules that bring together clinical, technical, administrative, diagnostic, and safety-related roles. Shared learning among nursing technicians, health assistants, health security personnel, physicians, intensive care staff, radiology professionals, dental teams, and information and administrative personnel can cultivate role understanding, mutual respect, and team-based competence.

Healthcare organizations should foster a culture of recognition and inclusion, ensuring that every team member—from health assistants and health security personnel to resident physicians, intensive care staff, radiology professionals, dental teams, and health information technicians—is valued as an integral contributor to patient care. Structured interdisciplinary dialogue, team reflection sessions, simulation, and collaborative case reviews can enhance mutual understanding and role clarity. Policymakers and administrators should promote transparent scopes of practice, equitable participation, and continuing professional development focused on teamwork, communication, patient safety, and coordinated care.

For researchers, the Collaborative Role Identity (CRI) Model developed in this study offers a strong foundation for future empirical validation. Subsequent research may apply qualitative or mixed-method designs to explore how these theoretical constructs manifest in real-world clinical environments. Ultimately, adopting these recommendations can transform the culture of multidisciplinary healthcare delivery by embedding collaboration as a fundamental component of professional identity thereby improving patient outcomes, workforce satisfaction, and the overall cohesion of multidisciplinary care teams.

REFERENCES

[1] Adomaitienė, R., Andruskiene, J., Albuquerque, T. J. H., & Community, S. C. i. t. (2024). Exploring the professional identity and practice challenges of Lithuanian dental hygienists. *2024*(1), 8277265.

[2] Almutairi, H., Alsubaiei, A., Abduljawad, S., Alshatti, A., Fekih-Romdhane, F., Husni, M., & Jahrami, H. J. I. J. o. S. P. (2022). Prevalence of burnout in medical students: A systematic review and meta-analysis. *68*(6), 1157-1170.

[3] Alnasser, M. Y., Alsuliman, S., AlYami, D. M. J. A. i. O., & Surgery, M. (2025). The impact of dental assistants in modern oral healthcare: A literature review. *19*, 100572.

[4] Alqutaibi, A. Y., Rahhal, M. M., Awad, R., Sultan, O. S., Iesa, M. A., Zafar, M. S., & Jaber, M. J. E. J. o. D. (2025). Implementing and evaluating interprofessional education for dental students: a narrative review.

[5] Alshammari, S. M., Aljaload, M. M., Alamri, F. M., Almaimoni, A. G., ALMutairi, A. R., Almukhallafi, F. A., . . . Research, R. C. (2024). Promoting Oral Health Through Interdisciplinary Collaboration: A Focus on Dentistry and Dietitians. *7*(S3), 114.

[6] Ashforth, B. E., & Mael, F. J. A. o. m. r. (1989). Social identity theory and the organization. *14*(1), 20-39.

[7] Belotti, L., Maito, S., Vesga-Varela, A. L., de Almeida, L. Y., da Silva, M. T., Haddad, A. E., . . . Bonfim, D. J. B. H. S. R. (2024). Activities of the oral health teams in primary health care: a time-motion study. *24*(1), 617.

[8] Boer, J. C. d., van Dam, B. A., van der Sanden, W. J., & Bruers, J. J. J. B. h. s. r. (2022). Collaboration between general dental practitioners and dental hygienists: a qualitative study. *22*(1), 501.

[9] Borrell, L. N., & Makiling, M. J. A. J. o. P. H. (2024). Oral Health of and Dental Workforce Among the Hispanic/Latino Population in the United States. *114*(3), 262-263.

[10] Bullock, J. L., Gradick, K., Proctor, C., Rogers, M. A., Hobson, W. L., & Rogers, M. J. C. (2023). Interprofessional Collaboration Improves Quality of Life of a Young Adult With Rett Syndrome. *15*(3).

[11] Cantaert, G. R., Pype, P., Valcke, M., Lauwerier, E. J. I. j. o. e. r., & health, p. (2022). Interprofessional identity in health and social care: analysis and synthesis of the assumptions and conceptions in the literature. *19*(22), 14799.
[12] Cornett, D., Brogan, J., Barber, N., Aykac, D., Baird, S., Burchfield, N., . . . Goddard, J. (2023). *Expanding accurate person recognition to new altitudes and ranges: The briar dataset.* Paper presented at the Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision.
[13] Cornett, M., Palermo, C., & Ash, S. J. A. i. H. S. E. (2023). Professional identity research in the health professions—a scoping review. *28*(2), 589-642.
[14] Geese, F., & Schmitt, K. J. d. o. h. (2023). Interprofessional collaboration in complex patient care transition: A qualitative multi-perspective analysis. Healthcare. 2023; 11 (3): 359.
[15] Hinkley, S. (2023). Technology in the public sector and the future of government work.
[16] Hollaar, V. R., Naumann, E., Haverkort, E. B., Jerković-Ćosić, K., Kok, W. E., & Schueren, M. A. d. v. d. J. I. J. o. D. H. (2024). Success factors and barriers in interprofessional collaboration between dental hygienists and dietitians in community-dwelling older people: Focus group interviews. *22*(2), 321-328.
[17] Mussalo, F., Karaharju-Suvanto, T., & Pyörälä, E. J. B. M. E. (2024). Exploring dental and oral hygiene students' interprofessional readiness: a cross-sectional study in joint paediatric outreach training. *24*(1), 645.
[18] Pinzón, M. A., Ortiz, S., Holguín, H., Betancur, J. F., Cardona Arango, D., Laniado, H., . . . Jaramillo, D. J. P. o. (2021). Dexamethasone vs methylprednisolone high dose for Covid-19 pneumonia. *16*(5), e0252057.
[19] Price, I., Sanchez-Gonzalez, A., Alet, F., Andersson, T. R., El-Kadi, A., Masters, D., . . . Battaglia, P. J. N. (2025). Probabilistic weather forecasting with machine learning. *637*(8044), 84-90.
[20] Price, S., Van Dam, L., Sim, M., Andrews, C., Gilbert, J., Lackie, K., . . . Khalili, H. J. A. i. H. S. E. (2025). A longitudinal study of interprofessional education experiences among health professional graduates. *30*(3), 735-754.
[21] Rachakonda, V. S., Addanki, S., Nasef, H., & Rajput, V. J. C. (2024). Comparing and contrasting professional identity formation among health professional students. *16*(7).
[22] Ta'an, W. a., Damrah, S., Al-Hammouri, M. M., & Williams, B. J. P. O. (2025). Professional identity and its relationships with AI readiness and interprofessional collaboration. *20*(5), e0322794.
[23] Van Dam, L., & Price, S. L. J. H. P. J. (2025). Exploring interprofessional education for collaborative practice (IPECP) in oral health education for professional and interprofessional socialization and identity development: A scoping review protocol. *5*(1).