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The Dynamics of Multidisciplinary Teams in Intensive Care Unit Settings: Implications for Patient Mortality and Staff Burnout During and Beyond the Covid-19 Pandemic

[1-] Abdullah Sunetan Sunhat Almoteri,[2-]Faiz Mohamed Almutairi,[3-] Abdullah Saeed Abdullah Moraya,[4-]Yasir Sammar Almutairi,[5-]Nadiyah Eidan Ahmed Alshamrani,[6-] Sameer Saleh Alzaidi,[7-]Abdullah Saif Abdullah Alsahli,[8-]Ali Saeed Alahmari,[9-]Fahed Ahmed Hussain Qadi,[10-]Aliyah Mohammed K Alotaibi,[11-]Alghadhiyyah, Amro Abdulrahman,[12-]Mishal Abdullah Abaad Alotibi,[13-]Khalaf Abdullah Matar Al-Otaibi,[14-]Latifah MobarakMagaram Alghamdi,[15-]Abdulhadi Jafar Ali Al-Qahhtani

[1] KSA, Ministry Of Health, Prince Sultan Military Medical City
[2] KSA, Ministry Of Health, Rumah Hospital
[3] KSA, Ministry Of Health, Riyadh First Health Cluster
[4] KSA, Ministry Of Health, Health Informatics Technician
[5] KSA, Ministry Of Health, Health Informatics Technician
[6] KSA, Ministry Of Health
[7] KSA, Ministry Of Health, Ruwaydah Alarm General Hospital
[8] KSA, Ministry Of Health, Prince Sultan Military Medical City
[9] KSA, Ministry Of Health, Sabya General Hospital
[10]KSA, Ministry Of Health, Shaqra General Hospital
[11]KSA, Ministry Of Health, National Guard Health Affaris
[12]KSA, Ministry Of Health
[13]Ministry OfHealth, Al-Bajadiya Hospital,
[14]KSA, Ministry Of Health, Prince Mohammed Bin Abdulaziz Hospital
[15]KSA, Ministry Of Health, Al-Quwayiyah
[16]16-Maream Jubran Jaber Mahnshi
[17]KSA, Ministry Of Health, Jazan Health Complex

Abstract

Background: The COVID-19 pandemic has fundamentally altered healthcare delivery, necessitating rapid adaptations in intensive care unit (ICU) settings. The formation of multidisciplinary teams during this crisis has raised questions about their effectiveness, particularly concerning patient outcomes and staff well-being. Understanding the dynamics of these teams is essential for improving both patient care and workforce sustainability.

Methods: This review synthesizes existing literature on the dynamics of multidisciplinary teams in ICU settings, focusing on their impacts on patient mortality and staff burnout. A systematic search was conducted across databases such as PubMed, CINAHL, and Scopus, identifying studies published from 2020 to 2023. The analysis included thematic coding and graphical network visualization to elucidate key themes and relationships.

Results: Findings highlight that effective teamwork within ICU settings correlates with improved patient outcomes, including reduced mortality rates and shorter hospital stays. Conversely, poor team dynamics contribute to increased staff burnout and turnover. Key factors influencing team effectiveness include communication, leadership, and the psychosocial climate of the workplace. Notably, teams that fostered

positive interpersonal relationships and demonstrated shared leadership showed enhanced collaboration and resilience.

Conclusion: The study underscores the critical importance of fostering effective multidisciplinary team dynamics in ICU settings to enhance patient care and minimize staff burnout. As healthcare systems prepare for future crises, targeted strategies to improve team cohesion, communication, and leadership are imperative. Further research is needed to explore the long-term impacts of these dynamics on both patient outcomes and healthcare personnel well-being.

Keywords: Multidisciplinary teams, ICU, patient outcomes, staff burnout, healthcare dynamics.

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1. Introduction

Throughout the COVID-19 pandemic, several hospitals worldwide were compelled to swiftly augment their acute and critical care capacities because to an unparalleled demand for various medical specializations. The swift augmentation of capacity in Intensive Care, Infectious illness, and High Dependency Units necessitated an immediate demand for proficient personnel, compounded by staff shortages resulting from infections and shielding, leading to the re-deployment of nurses, physicians, and allied healthcare workers from non-intensive, crisis, or critical care experiences [1–5]. Numerous COVID units were therefore characterized by swiftly assembled, adaptable, inter-professional groups, with many personnel without prior preparation or training for high-risk environments.

Recent studies on COVID-19 mobilized workers have focused on the health consequences of healthcare workers during the global epidemic, as well as organizational solutions designed to reduce hazards to healthcare workers [6–12]. Consequently, less study has been dedicated to examining the influence of COVID-19 deployment on teams' capacities to collaborate successfully and cultivate cooperative communication processes, given the heightened stresses in their place of employment [2, 13–15]. The predominant emphasis on studies on inter-professional teams—formed to provide integrated care, minimize expenses, or enhance patient outcomes—has mostly been on regular or semi-permanent teams. This study indicates that effective inter-professional or multi-disciplinary groups enhance patient satisfaction, reduce mortality rates, shorten inpatient stays, and decrease clinical mistake rates [20–26]. However, in contrast to the COVID disaster, such teams often have undergone some type of standardized instruction or preparation and generally have collaborated for extended durations.

The formation of clinical teams during a crisis is a critical consideration in emergency healthcare planning, as essential elements of effective teamwork—such as uniform training, cohesive communication, and leadership—may be unattainable in emergency situations. Studies on inter-professional, task-organized military personnel indicate that successful collaboration relies not only on team organization and expert composition but also on operational demands [27–29]. Diverse degrees of vocational background, experience, and training, compounded by the hazardous environment, social distance, and personal protection equipment (PPE), may hinder communication and acquaintance with coworkers.

Dynamic and swiftly evolving team configurations might hinder the establishment of protocols and services, while insufficient resources and equipment may heighten concerns over personal safety and the capacity to provide patient care. Although these characteristics may elevate risks to patient outcomes, care delivery, individual resilience, and staff mental health and retention, they may have significantly more lasting impacts on personnel who are least equipped or experienced in critical care and infectious disease settings. It is essential to evaluate how individuals from diverse backgrounds collaborate within ad-hoc, dynamic, inter-professional teams to foster cooperation.

This comprehensive examination of reviews aims to evaluate the existing evidence regarding teamwork in swiftly assembled interprofessional teams within intensive as well as acute care environments, with the intention of guiding the subsequent use and support for these clinical teams, as well as identifying

knowledge gaps and promising areas for future research. This will be accomplished by theme analysis and coding of systematic assessments of empirical research. This will be augmented by a graphical network evaluation utilizing the Gephi software package, facilitating enhanced transparency in theme selection, visualization of the topics identified from the literature reviewed, and the discernment of underlying factors that structure these themes (for instance, internal team processes and dynamics, interpersonal procedures, extrinsic organizational and team influences, and ultimately patient and staff outcomes) [30]. Building on prior research about team nomenclature (e.g., multi- or inter-disciplinary, multi- or inter-professional), the authors have opted to classify teams according to the conceptual distinctions between the words "profession" and "discipline" [31,32].

2. Search methodology

In 2023, exploratory literature searches were performed using MEDLINE, Global Health, CINAHL, and APA PsycINFO to evaluate various search keywords.

3. Internal processes and dynamics of the team

The thematic analysis revealed many themes that are represented in the graphical network diagram as a single component associated with internal team procedures and dynamics, namely those elements most influenced by intra-team connections, interactions, choices, and processes.

Although several team-intrinsic characteristics examined in the reviewed publications are characterized as inter-personal, only five research connected psycho-social qualities and personality to collaboration [18, 33–36]. The examined literature revealed various individual traits influencing teamwork, such as psychological intelligence, trust, expertise, fatigue, and rudeness; however, these traits cannot be entirely separated from intra-team interactions as well as the structural and organizational elements of teamwork. Personal variables (such as psychological intelligence, self-reflectiveness, trust, interaction manner), psychological variables influenced by collaboration (e.g., reliability, dedication, values, optimism), and socioeconomic variables (e.g., schooling, society) were identified as influences on individuals' attitudes and behaviors towards colleagues, thereby affecting the work environment conducive to teamwork [35–38]. This implies that an individual's personality and psychosocial characteristics affect collaboration mostly in an indirect manner by shaping the work atmosphere or team environment. The analysis indicated that psycho-social characteristics and character are closely associated with interpersonal conflicts and leadership, as demonstrated in the network visualization, indicating that the character traits and psycho-social competencies of leaders and colleagues influence the 'social climate' within inter-professional teams.

Nine of the evaluations examined the influence of interpersonal disputes and connections on inter-professional or interdisciplinary teams, with different outcomes [18, 33, 35, 36, 38–41]. Although several reviewed studies acknowledge the significance of interpersonal relationships, such as friendships among colleagues [37, 39, 40], a few papers have systematically assessed these factors, with the majority focusing on the existence of conflict or incivility within the medical staff environment. The analyzed evidence indicates that incivilities and disputes are more prevalent among individuals from comparable professional backgrounds, with certain medical fields or professional categories exhibiting a higher propensity for amenities (such as nurses were identified as the most frequent source of incivilities towards fellow nurses). Likewise, less experienced and younger female professionals were more likely to face incivilities [42]. Colleague interactions across diverse occupational backgrounds were mostly governed by inter-professional inequalities or power dynamics and shaped by factors related to communication habits, management, or cohesiveness [18, 38-40]. This indicates that the effect of interpersonal elements on collaboration is challenging to differentiate from the effects of interprofessional dynamics and established professional duties and obligations [34, 36, 43].

Ten studies indicated that a socially supporting and coherent team is essential in mitigating conflict among work teams [18, 33–37, 43–46]. Nevertheless, a limited number provided comprehensive data about the influence of cohesiveness and social assistance on inter-professional collaboration. The findings

on the influence of cohesiveness and social support on teamwork within inter-professional teams were inconclusive, since several research focused solely on cohesion in the context of existing teams and its relation to team-building activities. Results mostly derived from mono-disciplinary teams indicated that consistent ward presence, prolonged collaboration, and the cultivation of commitment to a unit were correlated with cohesiveness [37, 43, 45]. Moreover, data suggests that spatial-temporal separation among team members—frequently seen among therapists, nurses, or physicians (e.g., distinct break rooms, varying work hours)—can result in diminished cohesiveness within these teams [33, 43]. Conflicting research indicates that professional independence, while it may impede inter-professional cooperation, might yet facilitate collaboration under pressure among inter-professional teams that are unacquainted with one another [35]. The examined literature suggests that social support is more robust when provided by peers than by leaders [34]. This indicates that fostering a cohesive team atmosphere is essential for enhancing collaboration and performance, as well as creating an environment where team members may assist one another in addressing issues, managing needs, and dealing with stress.

Nine of the analyzed studies examined the influence of management on medical teams [16, 18, 33, 36–38, 44–46]. The documents enumerate many leadership behaviors, including injustices, disregard for subordinate feedback, and reporting to numerous managers, which correlate with inadequate communication, diminished trust, and insufficient social support [33, 36, 37]. A variety of behaviors were associated with successful leadership, including the use of inclusive language, maintaining composure, disseminating information, reducing structures, permitting members to seek advice, including them in decision-making, and fostering a collective understanding [18, 33]. Leadership was ultimately characterized in many studies as positively influencing the development of shared mental models, fostering psychological security among teammates, and diminishing incivility and conflict within acute healthcare teams [18, 37, 38]. Nevertheless, a limited number of the examined publications offered a nuanced perspective on leadership within mono-professional, interdisciplinary, or inter-professional clinical groups. The limited evidence indicates that management throughout inter-professional limits encounters various issues related to professional requirements and job expectations, potentially heightening the risk of leadership devolving into hierarchies due to professional disparities among doctors, nurses, and therapists. Certain leadership styles, including dominant, passive, transactional, and authoritative, have been shown to adversely affect teamwork and communication. Conversely, collaborative and supportive styles, such as shared leadership and transformational leadership, have proven to enhance inter-disciplinary teamwork and team cohesion. Intra-disciplinary leadership correlated with enhanced information interchange and well-defined shared mental models, but inter-professional management and collaborative management were associated with improved team performance and a more favorable team atmosphere [18, 36, 38].

Ten of the analyzed papers addressed corporate culture or support frameworks, focusing on the influence of organizational culture on team dynamics, professional educational advancement, leadership, or team training initiatives [33–37, 40–44]. Although numerous studies have highlighted the significance of organizational or institutional factors—shaped by healthcare and medical facilities and regulations—for successful collaboration and teamwork in collaborative or interdisciplinary groups, only a limited number have explicitly incorporated organizational elements into their synthesis [33, 38, 43]. The majority of the evaluations focused on the effects of organizationally required collaboration treatments aimed at enhancing cooperation processes in acute contexts, such as simulation or leadership education interventions [16, 40, 44, 45]. Nonetheless, elements of organizational culture were recognized to elucidate essential traits of teamwork and their influence on efficient collaboration [34, 40, 41, 46]. The findings indicate that a supportive corporate culture, which promotes cooperation and diversity, correlates with reduced incivility levels [34, 35, 37] and may affect team performance by shaping team procedures, norms, and task design [43]. The propensity of people to engage in discussions about patient safety, such as daily safety huddles, was influenced by the overarching safety culture and the degree to which individuals felt secure in sharing information and addressing patient safety concerns [38]. Moreover, the organization's educational interventions and dedication to professional growth and training were posited to improve communication, whereas cultural norms and structures within distinct

departments may hinder the effectiveness of professional teams due to insufficient role comprehension and education [33, 36, 39, 42].

4. Communication procedures

The second aspect found in the graphical network visualization included communication and the formation of common mental models within the team. Repeated modular computation indicated that formal communication processes, although related to communication, were excluded from this cluster. This implies that such formalized processes—identified through specific activities (e.g., bedside rounds, meetings) and written protocols (e.g., health records, whiteboards)—differ from informal communicative practices within teams.

The pivotal aspect of the aforementioned criteria was the significance of communication between inter-professional as well as inter-disciplinary groups in critical and acute care settings [16, 18, 33–38, 41, 42, 46]. The papers indicated a general consensus on the significance of communication; however, they varied in their analytical levels and the function of communication, presenting a multifaceted view of its impact on patient outcomes, the establishment of commonality, and the explanation of the roles and duties involved. In inter-professional teams whose members are unfamiliar with one another prior to assignment, the coordination of activities is especially vital for effective collaboration [35, 40]. Consequently, inter-professional teams may experience the natural dominance of certain professional groups, such as physicians, resulting in diminished interaction across academic or hierarchical borders. To overcome interpersonal obstacles in inter-professional groups, [40] proposed a model for effective communication and collaboration, asserting that successful communication depends on team members' collective recognition of the necessity and advantages of information sharing, their capabilities (e.g., time, mutual understanding), and the availability of opportunities for information exchange (e.g., environment, documentation).

Eight of the analyzed publications addressed communication about cognitive impacts on interprofessional teams, by fostering a collective comprehension and knowledge foundation of responsibilities terminology, task facilitation, and achievement [18, 33, 35, 39, 40, 45, 46]. The establishment of "shared mental models" is deemed essential for effective teamwork and optimal performance in healthcare teams, facilitating enhanced recognition of common issues, understanding of team members' duties and responsibilities, and excitement of colleagues' needs [35, 38, 39, 45]. Although the majority of research about shared mental models pertains to mono-professional healthcare teams, some evaluated studies highlighted significant factors for the cultivation of shared mental models within inter-professional or multidisciplinary teams. Aufegger et al. shown that inter-professional teams gain advantages from regular information interchange, collaborative responsibility frameworks, and coordinated processes and equipment, hence enhancing information processing, planning, and decision-making among team members [18]. Another evaluation emphasized the effectiveness of collaborative inter-professional vision statements in promoting a unified identity and team values [33]. In teams with variable or sporadic participation in formal communication activities, common mental models were identified as crucial for efficient collaboration [34, 41].

5. External teamwork vocational and organizational effects

Thirteen of the analyzed studies addressed inter-professional dynamics, focusing on power dynamics, either traditional or informal structures, and professional competitions as significant issues within inter-professional teams [18, 33–37, 39–42, 44–46]. The experiences and perspectives of health professionals regarding interprofessional collaboration seem to influence their involvement in clinical decision-making and the establishment of ward processes, with the assignment of power throughout healthcare organizations being closely linked to individual professional experience, roles, and power dynamics within the teams. The importance of power dynamics in team cooperation, sometimes shaped by regulatory and professional requirements, is extensively analyzed in the literature regarding power

imbalances in healthcare organizations and their effects on collaboration and team atmosphere [33, 34, 36, 40]. Evidence indicates that doctors' perceived superiority, stemming from extended training trajectories, together with the belief that emotional components of care are less clinically significant—tasks often associated with nursing teams—can hinder inter-professional collaboration. Likewise, team members seen as lower in the hierarchy (such as junior personnel or nurses in relation to physicians) may be deterred from voicing their opinions during meetings [38]. Such preconceptions might diminish the influence of nurses, health care providers, and social workers within their teams, resulting in decreased responsibility and restricted involvement in medical decision-making [33, 34, 36]. Significantly, interprofessional power dynamics may disrupt team cohesion, which relies on the quality of interpersonal connections and the degree of trust among team members [18, 34, 36, 37].

Considering the significance of diverse occupational backgrounds for interdisciplinary and interprofessional teams, numerous reviews examine how the professional positions, duties, and requirements for team members can influence the quality of interprofessional collaboration. Distinctive role characteristics, such as nurses' constant presence in wards, medication rounds, and patient care obligations, along with time constraints, can significantly restrict physical attendance at meetings or consistent involvement in interdisciplinary collaborations. Therapists, in contrast to nurses, often possess more explicitly defined professional responsibilities but may face constraints due to varying working hours, fluctuating group membership, and physical distance, which can hinder effective team collaboration and obscure comprehension of duties and obligations [33, 40]. The thematic analysis revealed that role ambiguity, unequal expectations, absence of common objectives, the transactional character of interdisciplinary collaboration, and related accountability challenges were frequently mentioned as sources of conflict, resulting in diminished unit morale, disrupted communication, and limited team identification. Occupational features, including stress and recruitment, were often cited as influencing inter-professional interaction [36]. Such dynamics may lead team members to underutilize inter-professional colleagues in favor of their own professional group and restrict familiarity with team members, potentially affecting the growth of connections with teammates and influencing decision-making both formally and informally.

Team makeup and spatial-temporal aspects of team structures were examined in 12 of the analyzed publications, indicating that optimum teamwork and cooperation may vary across diverse environments and team types [16, 33–36, 40–42, 44–46]. Collaboration within mono-professional teams may be less complex than cooperation in inter-professional as well as multidisciplinary teams, where members originate from diverse professional backgrounds and may adhere to varying procedures and organizational structures. In this context, the stability of the team and the closeness of its members were identified as crucial to comprehending inter-professional team dynamics and their potential effects on collaboration. Physical space and limits may influence the quality of relationships within teams [40], whereas physical isolation, irregular job schedules, and resultant restricted connection might hinder team cohesiveness and information exchange [33, 42]. Regrettably, the majority of the examined studies concentrated on teams with consistent membership, with only a single study pertaining to members of acute teams, who were characterized as functioning more independently than their counterparts in non-acute environments due to their rare close collaboration outside of "crisis periods" [33]. The characterization of these acute teams as distinct social units capable of engaging in highly collaborative efforts during crises enables them to demonstrate efficient and rapid responses to urgent medical conditions within a complex multidisciplinary framework [16, 18, 44]. The efficacy of emergency response teams relies on hospitals' staffing choices, suitable team composition (e.g., an outreach nurse collaborating with critical care), frequent system utilization, and ongoing education and adaptation of team members to necessary procedures [43, 47].

Numerous research examined formal communication methods established within interprofessional teams. This included several communication procedures characterized by differing forms, lengths, and modalities, such as multidisciplinary ward rounds, meetings, case seminars, transitions, debriefings, casual bedside discussions, documentation, reports, and inspections [36, 38, 40, 44, 45]. Nonetheless,

despite substantial data supporting the effectiveness of these communication procedures, many assessments have shown that varying interprofessional roles and duties hinder successful communication. Distinctive organizational needs, varying schedules, time constraints, and multiple duties (such as medical attention or medication rounds) hinder workers from attending both official and informal conferences [38, 40], hence reducing the beneficial impact of these procedures. Likewise, effective execution of interprofessional activities, including multidisciplinary bed rounds, requires a culture that fosters and values contributions from all multidisciplinary team members [45]. Buljac-Samardzic et al. [43] propose that basic instruments like checklists, goal sheets, and case analyses may enhance communication, information sharing, transparency, and patient care.

6. Team results

The majority of studies evaluating patient outcomes concentrated on the influence of particular processes, such as multidisciplinary bedside phases, meetings, teamwork, or leadership instruction, with limited exploration of the effect of interdisciplinary or inter-professional team structure on patient results [16, 18, 33, 34, 37–40, 42, 44–46]. Preliminary findings indicated that team as well as leadership development might positively influence patient outcomes; however, the studies revealed inconsistent results for the enhancement of patient satisfaction in acute medical facilities [16, 39]. Nonetheless, several data suggest that multi-professional teams may significantly impact patient outcomes and foster quality and safety cultures in healthcare environments [18, 33, 46]. Spatial-temporal design, organizational hierarchies, and management were observed to influence patient care and collaboration. The integration of pharmacists into inter-professional critical care groups has shown enhancements in ICU care, as well as decreases in mortality, duration of stay, and adverse medication events [46]. Likewise, interdisciplinary or multidisciplinary team structures reduced hospitalizations and readmissions, enhanced patient satisfaction, and facilitated the integration of patient care. In surgical settings, these structures may also improve hospital survival rates and decrease instances of cardiac arrest [35, 47].

Collegiality, dedication to one’s position, role clarity, team communication, empowerment, and relational coordination are linked to favorable staff outcomes, including collaboration experiences, advantageous workplace results, and good markers of occupational well-being [18, 34, 41, 45]. Effective communication within healthcare teams correlates with patient outcomes, including enhanced care coordination, patient satisfaction, safety culture, shared decision-making, and reduced hospitalization costs, length of stay, medical errors, and readmission rates [38, 40, 41, 44, 455]. The implicit results of communication were associated with the enhancement of team identity, the improvement of trust, the reduction of conflict, and the increase of collaboration and team performance [34, 36]. Likewise, social support was identified as facilitating collaborative efforts among team members, fostering a collective feeling of responsibility and comprehension of objectives and duties, enhancing psychological safety, and establishing a good work environment [18, 36]. Assistance from peers and managers within nursing teams was found to enhance job fulfillment [34], while shared concern for colleagues' well-being and resilience was deemed crucial for recovery from traumatic experiences, surpassing the importance of organizational and supervisory support [18, 34]. The lowering of conflict correlated with enhanced worker happiness and efficiency [34, 41]. Significantly for this research, staff turnover was shown to link with internal disagreements [34], indicating that leaders must recognize such risks.

Schmutz et al. [42] emphasized that teams participating in collaborative procedures are twofold more inclined to attain high performance compared to those who do not, and that healthcare organizations of all sizes and acuity levels may benefit from such processes. Moreover, comprehending the attributes of efficient collaboration processes is crucial, as the collaborative efforts of interdisciplinary and multidisciplinary groups significantly impact patient security and the incidence of medical mistakes [36]. Team makeup, particularly team size, knowledge with processes, and a blend of technical abilities, significantly influences team performance [36]. Relational and structural aspects of teamwork, including interpersonal relationships, power dynamics, team proximity, and job role attributes, seem to influence the quality of collaboration and greatly impact team communication, coherence, efficiency, and staff wellbeing. Correlations between doctors' positive indicators of collaboration and both positive and

negative indications of occupational well-being (e.g., job engagement and burnout) indicated that those who evaluated superior teamwork quality also reported enhanced occupational well-being or reduced strain [41].

7. Discussion

The thematic review of the chosen systematic studies revealed 13 topics pertaining to cooperation in swiftly assembled interprofessional teams within critical and acute care environments, which may be categorized into four elements. The first element, focusing on internal team dynamics, including issues related to the influence of psycho-social characteristics on the work setting and cooperative climate, the significance of interpersonal relationships and conflict, team cohesiveness and social support, in addition to leadership. The literature indicates that personality indirectly affects teamwork by shaping an individual's attitude and behavior towards colleagues. The thematic analysis further suggests that psycho-social characteristics and personality are closely associated with interpersonal conflicts and leadership, implying that the character traits and psycho-social competencies of leaders and colleagues influence the climate within inter-professional teams. Conflict within inter-professional or multidisciplinary teams generally results in a reduction of overt incivilities or discourteous behavior compared to teams comprised of similar professions, suggesting that such conflict is often interpreted through the frameworks of professional opinions, medical structures, and power dynamics associated with occupational subdivisions. Finally, teamwork and cohesion are purportedly enhanced by ongoing ward presence and shared office space, while social support from immediate peers and managers fosters an environment where team members can assist fellow teammates in addressing issues, managing needs, and coping with stress.

The second factor related to communicative processes, indicating that insufficient opportunities for both informal and formal sharing data can impede activity coordination and the cultivation of shared responsibility among inter-professional teams, thereby restricting the formation of discussed conceptual frameworks, which are crucial for effective teamwork. Consequently, team-wide interaction during handovers or breaks is essential for members to cultivate professional and personal rapport, identify common challenges, and anticipate each other's requirements. Effective communication influences enhanced collaboration and facilitating of care, client happiness, decreased medical errors, and reduced rates of readmission. Additionally, a broader incorporation of skill-mix can lower mortality, enhance survival and heart attack rates, shorten hospital stays, and diminish adverse drug reactions [18, 36].

The third factor consisted of external team influences arising from various professional duties and occupational requests, alongside organizational frameworks and procedures pertinent to health and safety procedures, workforce distribution designs, or departmental configurations, which affect team performance [18, 33–38, 40–42, 44, 45–47]. Divergences in the perceptions of patient care and engagement in clinical decision-making among doctors, therapists, and nurses may lead to complaints and conflicts within inter-professional teams [18]. Implicit stereotypes regarding occupational role expectations, which designate health care personnel as solely accountable for particular facets of care (e.g., emotional support, patient assistance, family liaison, or rehabilitation), obstruct the formation of a shared identity and cohesion, thereby undermining inter-professional collaboration. Ambiguity, disparate expectations, absence of common objectives, transactional inter-disciplinary cooperation, and misalignment of responsibility seem to adversely affect unit morale, disrupt communication, and hinder team cohesion [35, 36, 45]. It is proposed that rapidly used multidisciplinary groups in intensive and acute care can enhance role clarity and collaboration through communicative setups, including checklists, programs, health records, multidisciplinary bedside rounds, and informal information exchange [40, 45]. Rapid employee turnover, departmental segregation, and asynchronous work schedules may simultaneously restrict contacts among team members, hindering team cohesiveness and chances for information exchange [33, 40].

These results provide a framework for analyzing and interpreting significant lessons derived from the experiences of multidisciplinary groups in a COVID context. This situation is expected to be more

complicated, since inter-professional team members may find it challenging to establish cohesive relationships owing to their brief tenure within the teams, and such cohesiveness may be undermined in both the teams to which persons are assigned and the teams from which personnel are reassigned. Considering that much intra-team disagreement among individuals from diverse vocational backgrounds is seen through the prism of established professional identities, executives and managers in these teams must mitigate ostracization and division based on occupational affiliation. The examined literature indicates that inherent power dynamics may be alleviated by delineating the roles and duties of team members and highlighting the specific contributions and abilities of each person within the team. Managers and leaders in crisis scenarios could use and highlight the professional competencies of their inter-professional employees to enhance cohesiveness during crises like the COVID-19 deployment. The literature suggests that inter-professional teams can cultivate shared mental models through increased meetings and improved information exchange, employing both verbal as well as technological communication. Clearly defined formal communication procedures, such as whiteboards, checklists, and health records, may enhance clarified roles, cooperation, information return, responsibility, and patient care [40, 45]. The review indicates that organizational decisions regarding workforce distribution, physical space, team structure, team size, and the skill mix of inter-professional team members can influence teamwork and cohesion in inter-professional COVID wards, considering the challenges related to the spatio-temporal positioning of fluid team members.

8. Summary

This study presents an overview of many problems and obstacles to successful cooperation in inter-professional medical professionals that must be swiftly assembled for operations in an acute environment. The review offers a significant summary of 18 distinct evaluations, culminating in four criteria and 13 themes extracted from the literature. This may inform the subsequent study of multidisciplinary teams in crisis and emergency deployment. Numerous themes have been identified as influencing both staff and patient results, where insufficient inter-professional as well as inter-disciplinary collaboration and coordination not only diminishes patient care and safety but also exacerbates stress and conflict among inter-professional team members. Collegiality, commitment to roles, clarity of roles, team communication, empowerment, and relational coordination are associated with enhanced well-being and a more optimistic team climate. Additionally, heightened interpersonal interactions, communication, and proximity among team members positively affect teamwork quality, bolster cohesion and trust, and enhance team effectiveness and shared identity. The implementation of a comprehensive narrative review process, employing thematic coding alongside graphical network analysis, was highly advantageous. It enhanced the transparency of the theme selection process, facilitated the detection of fundamental variables in research on inter-professional teams, and enabled a graphical representation of themes within the literature. The use of this technique is advised for forthcoming systematic reviews.

The findings suggest that managers and team leaders in dynamic, ad-hoc inter-professional healthcare teams within intensive care settings must focus on reducing pre-existing professional opinions and power dynamics by prioritizing skill diversity, creating collaboration spaces and break regions, clarifying roles and responsibilities, facilitating formal information exchange, and fostering informal communication opportunities. However, the absence of evidence regarding ad-hoc, fluid groups in crisis situations, such as COVID-19, indicates a necessity for further research to empirically investigate the factors outlined in the current paper and to thoroughly explore how rapidly established teams cultivate effective teamwork and navigate obstacles to effective patient care in exceptionally stressful conditions. This study will assist healthcare systems in managing the present pandemic and facilitate the effective establishment of hastily assembled teams in future crises.

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ديناميكيات الفرق متعددة التخصصات في وحدات العناية المركزة: تأثيراتها على وفيات المرضى وإرهاق الموظفين خلال جائحة كوفيد-19 وما بعدها

الملخص

الخلفية :أحدثت جائحة كوفيد-19 تغييرات جذرية في تقديم الرعاية الصحية، مما استلزم تكيفات سريعة في وحدات العناية المركزة .(ICU) أثارت تشكيل الفرق متعددة التخصصات خلال هذه الأزمة تساؤلات حول فعاليتها، لا سيما فيما يتعلق بنتائج المرضى ورفاهية العاملين في القطاع الصحي. يُعد فهم ديناميكيات هذه الفرق أمرًا ضروريًا لتحسين رعاية المرضى واستدامة القوى العاملة.

الطرق :تقوم هذه المراجعة بتجميع الأدبيات الحالية حول ديناميكيات الفرق متعددة التخصصات في وحدات العناية المركزة، مع التركيز على تأثيرها على معدلات وفيات المرضى وإرهاق الموظفين. تم إجراء بحث منهجي في قواعد بيانات مثل "PubMed" ، و "CINAHL"، و"Scopus"، لتحديد الدراسات المنشورة بين عامي 2020 و2023. شملت التحليلات الترميز الموضوعي وتصور الشبكات الرسومية لتوضيح الموضوعات والعلاقات الرئيسية.

النتائج :تشير النتائج إلى أن العمل الجماعي الفعّال في وحدات العناية المركزة يرتبط بتحسين نتائج المرضى، بما في ذلك تقليل معدلات الوفيات وتقليل مدة الإقامة في المستشفى. في المقابل، تسهم ديناميكيات الفريق الضعيفة في زيادة إرهاق الموظفين ومعدلات دورانهم. تشمل العوامل الرئيسية التي تؤثر على فعالية الفريق التواصل، القيادة، والمناخ النفسي والاجتماعي في مكان العمل. ولاحظت الدراسة أن الفرق التي شجعت العلاقات الشخصية الإيجابية وأظهرت قيادة مشتركة أظهرت تعاونًا أكبر ومرونة محسّنة.

الخلاصة :تؤكد الدراسة على الأهمية الحاسمة لتعزيز ديناميكيات الفرق متعددة التخصصات في وحدات العناية المركزة لتحسين رعاية المرضى وتقليل إرهاق الموظفين. مع استعداد أنظمة الرعاية الصحية لأزمات مستقبلية، تُعد الاستراتيجيات المستهدفة لتحسين التماسك بين الفريق، والتواصل، والقيادة أمرًا بالغ الأهمية. هناك حاجة إلى مزيد من البحث لاستكشاف الآثار طويلة المدى لهذه الديناميكيات على نتائج المرضى ورفاهية العاملين في مجال الرعاية الصحية.

الكلمات المفتاحية :الفرق متعددة التخصصات، وحدات العناية المركزة، نتائج المرضى، إرهاق الموظفين، ديناميكيات الرعاية الصحية.