



Team Leadership Behaviors from the Viewpoints of Healthcare Team Members: A Qualitative Study

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ABSTRACT

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Team leadership in healthcare settings plays a fundamental role in ensuring that high-quality patient care is delivered. This study is the first to explore team leadership behaviors from the viewpoint of Iranian healthcare team members. This qualitative study was performed using directed content analysis. Face-to-face, semi-structured interviews were conducted with 15 healthcare team members between October 2019 and June 2020. After each interview, the transcripts and related notes were read several times, semantic units were identified, and related codes were labeled. The specified codes were organized into subcategories and categories based on a predetermined framework placed in three main categories: transition, action, and interpersonal skills. Behaviors extracted from the transcripts consisted of 83 codes placed in 21 subcategories, and nine categories were assigned to three main categories of the predetermined framework. In the transition processes, situational analysis, teambuilding, debriefing, and feedback-seeking were the most influential leadership behaviors on the success of teamwork from the participants' viewpoints, especially members of surgical and emergency teams. Clinical competency, resource management, and coordination were more important leadership behaviors in the action processes, particularly in the opinion of attending doctors and nurses. Most participants emphasized conflict management, stress management, speaking up, encouragement, and accountability in interpersonal processes. This study improves our understanding of the leadership behaviors that influence successful teamwork achievement in healthcare settings. The findings have implications for further research and the enhancement of team leadership in healthcare settings, the development of structured team leadership training programs, and reliable assessment tools.

Team leadership is fundamental to effective patient care in complex health care systems. This differs from the general leadership construct, which often refers to context expertise, program/project management, and mentoring or motivating skills. Though these general forms of leadership are crucial, they do not capture the critical functions of the leader in managing a single patient (e.g., code team leadership) or several patients (e.g., mass casualty incident leadership (Rosenman et al., 2016)). Practices in healthcare settings are essentially team-based, and people from different disciplines work together in a team to ensure patient safety (Al-Sawai, 2013; Crowe et al., 2017). This multidisciplinary nature of healthcare teams signifies the importance of team leadership processes that are critical determinants of team success and facilitate teamwork to achieve the team goals (Fernandez et al., 2020). Health care teams generally work in complex and dynamic situations under the supervision of a senior or junior doctor (Shamaeian Razavi et al., 2022). For effective team performance, team members must successfully integrate their activities. Although they have specific roles, each individual's performance contributes to collective success. Team failure can occur because of team members' incompetence and failure to coordinate their individual contributions (Morgeson et al., 2009). An example is the management of a patient with multi-trauma who arrives in the emergency department with cardiac arrest. This patient needs a group of skilled providers from different disciplines with an effective team leader who coordinates the team's actions.

There is evidence that successful action teams such as resuscitation exhibited more leadership behaviors (MANSER, 2008). Effective leadership behaviors in the health setting have been shown to lead to high-quality care and patient safety (Fernandez et al., 2020). Failure in team leadership has been associated with more than 50% of adverse events in emergency healthcare settings. Regarding the importance of leadership in healthcare settings, professional bodies such as CanMEDS¹ and ACGME² pay significant attention to the team leader's role in physicians. In 2015, RCPSC³ developed the CanMEDS framework by changing the role of physicians from manager to leader (Rosenman et al., 2016). The intention was to highlight the physician's role as a leader in improving patient care in the health care systems. Previous research showed an association between team leadership skills and quality of care in cardiac arrest simulation settings (Mo et al., 2019). Based on Coolen et al. (2015), leadership is a crucial competence for the healthcare team functioning and one of the main reasons for teams' failure or success. Team leadership is critical for the quality of patient care and safety and for establishing a shared mental model of the team members. In a study on factors that influence surgeons' intraoperative leadership, Parker et al. (2013) mentioned the importance of leadership behaviors on effective team behavior.

According to a systematic review by Rosenman et al. (2015), despite the general agreement that team leadership, especially in emergencies, is critical, identifying team leadership behaviors is still a significant challenge (Rosenman et al., 2015). Exploring team leadership behaviors is crucial for training interventions or leadership assessment (Leenstra et al., 2016;

¹ Canadian Medical Education Directions for Specialists

² Accreditation Council for Graduate Medical Education

³ Royal College of Physicians and Surgeons of Canada

Rosenman et al., 2015). In Stefan et al.'s (2011) study, 49% of internal medicine residents mentioned that their training was insufficient to lead a team and needed to learn leadership competency. Given the importance of team leadership for physicians, especially residents as frontline physicians, identifying leadership behaviors is necessary to integrate leadership training into residency training programs (Saravo et al., 2017; Sonnenberg et al., 2018).

In medical education literature, there is evidence regarding team leadership and its effectiveness in healthcare settings. Stone et al. (2017), regarding the importance of team leadership in surgical teams, identified seven surgeon leadership functions and related behaviors, including elucidator, tone setter, delegator, safe space maker, engagement facilitator, conductor, and human being, and suggested opportunities for improving team leadership behavior. In a mixed-methods study conducted by Mo et al. (2019), trauma team members completed DCE (Discrete Choice Experiment) questionnaire. Then, the authors reported the levels of leadership components included collaboration, organization, protocol, decisiveness, and communication. In another study conducted by Coolen et al. (2015), pediatric residents identified leadership styles such as supporting, delegating, coaching, and directive styles. Several reviews in healthcare settings have focused on task type (e.g., health care delivery), team composition (e.g., age, gender, discipline), task features (e.g., autonomy, guidelines), organizational context (e.g., structure, and resources) as affecting teamwork process. Another review emphasized conditions crucial to effective teamwork, such as precise goal setting, appropriate culture, effective leaders, appropriate members, and sufficient resources (Dinh et al., 2019). Crowe et al. (2017) identified eight essential components of team leadership in prehospital emergency services, including creating an action plan, reconciling incongruent information, communicating, being accountable for team actions and outcomes, assessing the situation and resources, taking charge, demonstrating confidence and compassion, and prioritizing information.

Many studies in leadership mainly concentrated on a narrow set of leadership behaviors or styles and used a checklist or questionnaire to identify leadership behaviors (Kozlowski & Ilgen, 2006; Mahramus et al., 2013; Parker et al., 2012; Zaccaro et al., 2001). Also, most leadership studies utilized "traditional" leadership models that neglected team processes. Zaccaro et al. (2001) emphasized that traditional models did not distinguish between interactions of leader-subordinate and leader-team. Moreover, leadership scholars claim that leadership is critically a context-based concept (Clarke & O'Donoghue, 2016; Freeman et al., 2019). Freeman et al. (2019) emphasized that leadership behaviors in highly protocolized settings are different from other settings. A recent systematized review showed that in the 13 reviewed studies, only three had an underlying theory or conceptual framework that focused more on different leadership styles than leadership behaviors. The most reported leadership behaviors were encouraging team members' input, monitoring the progress of the patient, (re)assessing the team's situation, managing resources, assisting team members as needed, confirming team members' understandings, coaching/supervising, closed-loop communication, and asking for help when needed. Most leadership studies have been conducted in the European and North American context (Shamaeian Razavi et al., 2022). Dinh et al. (2019), in a systematic review on the teamwork process in healthcare, mentioned that of all the disciplines, the medical field focused most on planning, strategizing, and debriefing.

Also, communication and collaboration are crucial to the team function of all frontline providers in and across the healthcare settings.

A robust body of team science literature presents team leadership conceptual models and behavioral sets. One of the frameworks of team effectiveness is based on the Input-Process-Output (I-P-O) model. In this framework, inputs refer to the team characteristics such as members' abilities, skills, and organizational resources. Processes are the behaviors that change inputs to outputs, which include team achievement of goals (Morgeson et al., 2009). Although this team leadership model presented a framework for understanding how leaders can influence team effectiveness, it could not clearly explain which leadership behaviors are most effective. Morgeson et al. (2009) explained a functional team leadership taxonomy based on transition behaviors, action behaviors, and interpersonal skills. Observational and review studies of healthcare leaders have explored components of this taxonomy that were important to healthcare team leadership, such as helping establish goals, developing team structure (transition behaviors), coordinating complex activities, and monitoring the team's progress (action behaviors), and build team cohesion (interpersonal skills) (Fernandez et al., 2008; Künzle et al., 2010; Parker et al., 2012). Based on Morgeson's taxonomy (Morgeson et al., 2009), Rosenman et al. (2015) developed a comprehensive theory-based framework for leadership in healthcare teams. This framework consists of three main categories: transition, action, and interpersonal skills. In transition processes, the team focuses on structure, planning, and performance to achieve its ultimate team goal. Action processes emphasize monitoring team, patient, and system coordination activities. Communication and interpersonal skills comprise the interpersonal processes. Based on Parker et al. (2013), those conceptual models are helpful that provide evidence for linking leadership behaviors and task accomplishment.

This study identified leadership behaviors in healthcare teams. We believe this study will contribute to the healthcare literature in four ways. First, many studies have explored leadership behaviors, the width of leadership concepts, and the variety of leadership behaviors created the need for categorized leadership behaviors. Second, we identified leadership behaviors in various settings, such as the ICU, CCU, operating room, and emergency room, which revealed different aspects of leadership behaviors in various situations. Third, considering the context-based nature of team leadership, this study provides insight into team leadership in developing countries. Fourth, we explored leadership behaviors based on leadership processes and interactions between leader teams.

Using Rosenman's framework, this study aimed to explore team leadership behaviors from the viewpoint of Iranian healthcare team members.

Method

Study Design and Setting

The present study was qualitative research using a directed content analysis method. Considering the complexity and multidimensionality of team leadership, it is crucial to utilize a qualitative methodology to gain an in-depth understanding of team leadership processes. The study was conducted at a teaching hospital affiliated with the Tehran University of Medical Sciences (TUMS) with around 350 attending physicians and 750 junior doctors, providing a comprehensive range of medical services.

Participants

Members of healthcare teams (attending physicians, junior doctors, and nurses) with more than four years of teamwork experience participated in the interviews. To limit professional bias, team leaders, junior doctors, and nurses from healthcare teams, including anesthesia, emergency medicine, cardiology, internal medicine, and surgery were selected by a purposeful criterion sampling strategy (Palinkas et al., 2013; Teddlie & Yu, 2007). They were requested to participate by invitations sent through messaging apps (WhatsApp, Telegram), in which the study purpose and the interview process were described. All invited individuals agreed to be interviewed. Based on the participants' suggestions, the interviews were arranged according to time and location. Participation was voluntary, and informed consent was obtained from all participants. Participants were assured of the confidentiality of their data and their right to refuse or withdraw from the study at any time for any reason.

Procedure

In this study, data were gathered through in-depth and semi-structured interviews. Fifteen face-to-face semi-structured interviews were conducted by the N.SH.R from October 2019 to June 2020. The first three interviews were conducted by another researcher (R. G.) to ensure that the lead interviewer covered all aspects of the topic. The participants were interviewed using the critical incident technique. The interview structure included three phases. In phase 1, we asked the participants to describe a routine day working in a healthcare team. In Phase 2, the participants were asked to describe critical incident scenarios concentrating on the team's functions and outcomes. In Phase 3, the participants discussed leadership behaviors that they thought were essential for team performance. The interview protocol comprised open-ended questions. Probing questions were used to elicit information. For instance, how did you manage this? What did you do in this situation? Explain more. We continued collecting data until no new code emerged and data saturation was achieved. The interviews lasted between 60 and 90 minutes. The interviewer also took notes as an additional data source for analysis. Interviews were audio-recorded and transcribed verbatim after each interview. Two researchers (N.SH.R and R.G) studied the text carefully to identify concepts and patterns based on the data in the text.

Data Analysis

A directed content analysis method was used to analyze the data. This method requires a more structured process than conventional methods. The qualitative directed content analysis method has three main phases: preparation, organization, and reporting. In the preparation phase, the researcher selects the unit of analysis, decides what to analyze, and selects a unit of meaning. In the analytical process, the researcher attempts to make sense of the data and capture a sense of the whole. In the organizing phase, the researcher developed a categorization matrix according to the model categories. Finally, in the reporting phase, the researcher explains the analysis process and produces a link between the results and data.

To achieve immersion in the data, after each interview, researchers (N.SH.R, R.G) listened to the recorded interviews and reviewed the transcript of the interview and related notes several times separately. Then, N.SH.R and R.G identified the semantic units and labeled the preliminary codes individually.

The transcript and initial analysis were checked by the researcher team (N. SH. R., R. G., M. J., A. J.) and then discussed in meetings between the researchers. The identified codes were organized into subcategories. Subsequently, subcategories were placed into categories and main categories based on the framework developed by Rosenman et al. (2015). In this study, we used several techniques to increase trustworthiness. The researchers performed peer checking to validate the findings, and member checking was performed by the participants to explore the credibility of the results. Moreover, participants were selected from different professions to ensure confirmability and sampling with maximum variation. In some cases, external experts were consulted regarding the coding process.

Ethical Considerations

In this study, participants were assured of data confidentiality, informed consent, and the right to refuse or withdraw from the study at any time for any reason. Presenting the findings to participants to obtain their approval was an ethical consideration in this study.

Results

The study participants (n = 15) were from surgery (three attending physicians and one nurse), internal medicine (two attending physicians, one junior doctor, and one nurse), emergency medicine (one attending physician, one junior doctor, and one nurse), cardiology (one attending physician and one nurse), and anesthesiology (one attending physician and one junior doctor). [Table 1](#) presents the characteristics of the participants. The results regarding team leadership behaviors from the viewpoints of healthcare team members are presented based on Rosenman's framework in three main categories, including transition, action, and interpersonal processes. The data analysis identified 83 codes, 21 subcategories, and nine categories. Transition processes contained two categories, six subcategories, and 20 codes. There are two categories, four subcategories, and 30 codes in action processes. Interpersonal processes consisted of five categories, 11 subcategories, and 33 codes ([Table 2](#)).

Table 1

Participants' Characteristics

Number	Age	Gender	Team	Interview Length (Minutes)
1	41	Male	Emergency medicine	70
2	35	Male	cardiology	75
3	44	male	anesthesiology	66
4	39	male	surgery	84
5	35	female	Emergency medicine	90
6	43	male	internal medicine	65
7	31	male	anesthesiology	73
8	67	male	surgery	66
9	50	male	internal medicine	77
10	49	female	cardiology	69
11	53	male	surgery	85
12	38	Female	Emergency medicine	75
13	30	Female	Internal medicine	64
14	45	female	Internal medicine	70
15	43	female	Surgery	85

Table 2*Data Analysis of Transition, Action, and Interpersonal Processes*

Main category	category	subcategories	Codes with frequency
transition processes	planning processes	Teambuilding	- Selecting team members based on required skills, abilities, and knowledge (15) - Establishing team rules (12) - Building trust (12) - Maintaining unity throughout teamwork (12)
		Goal setting	- Setting clear expectations for team members (11) - Clarifying roles for team members (10) - Sharing information (11)
		Situational analysis	- Assessing/reassessing situation (13) - Asking for team members suggestion (12) - Confirming team members understanding of situation (10)
		strategy development	- Assigning tasks (14) - Providing back- up plan (11) - Deciding what actions are required to reach goals (10) - Planning how to perform effectively (12) - Providing key decisions with the team members (11) - Brainstorming with team members (9)
	evaluation processes	reflection & debriefing	- Discussing what happened (12) - Post- activity structured debriefing (14)
		feedback	- Giving positive, constructive and specific feedback (15) - Feedback seeking (13)
Action processes	Monitoring processes	Patient monitoring	- Acting on a scholarly approach (13) - Having clinical competency (14) - Providing holistic care (13) - Monitoring progress of patients (9) - Noticing unexpected changes in patient condition (11) - Re-establishing team priorities based on patient condition (10)
		System monitoring	- Prioritizing activities (11) - Helping as needed (10) - Asking help as needed (11) - Managing system recourses (15) - Engaging in time management (8) - Remaining hands off if possible (9) - Assessing/reassessing progression on tasks (12) - Delegating tasks as needed (10) - Applying problem-solving skills in the face of challenges (11)
		Team monitoring	- Identifying errors (11) - Finding source of errors (9) - Fixing errors as possible (8) - Managing workload (12) - Providing backup behavior (10) - Encouraging help-seeking behavior (14) - Providing learning opportunities (12) - Being a role model (10) - Encouraging continuous learning (9) - Teaching to be a leader (11) - Monitoring team performance (10)
		Coordination processes	Dynamic coordination of activities
Interpersonal processes	Conflict management	Conflict prevention	- Focusing on interpersonal interaction (11) - Discussing about any decisions (9) - Delegating tasks fairly (10) - Providing interprofessional collaboration (11)
		Conflict resolution	- Clarifying problem (10)

		- Considering possible solutions (12) - Choosing the best solution (10)
Affect management	Stress management	- Coping with pressure (14) - Remaining calm (13) - Having positive attitude (12) - Being assertive not aggressive (11) - Being supportive (11)
	Emotional self- regulation	-Managing reactions to unpredictable event (10) - Remaining flexible and adapting to situations (9)
Motivation	Self- motivation encouragement	- Providing opportunities for self-development (9) - Seeking suggestions (8) - Setting clear goals (10) - Supporting new ideas (6)
	team member motivation	- Being confident on team members (10) - Empowering team members (11)
Efficient communication	Verbal Communication	- Speaking clearly (10) - Mutual Respecting (12)
	Nonverbal communication	- Listening (7) - Having eye contact (10) - Using body language (6) - Showing facial expression (4)
	Speaking- up encouragement	- Providing context for conversation (14) - Promoting a sense of meaningfulness (9) - Listening without judgment (8) -Building mutual trust (10)
Accountability	Self- accountability development	- Accepting responsibility of activities (14)
	personal responsibility development	- Providing clear reasoning for actions and decisions (11) - Providing opportunities for personal growth (10)

Transition Processes

Transition processes are defined as those that focus on team structure, work plan, and evaluation of the team's performance to achieve its goal. This main category consists of planning and evaluation. We identified 20 codes placed in six subcategories.

Planning Processes

The participants acknowledged that planning processes, such as assessing situations and teambuilding, are critical for team success, especially in emergencies. The team leader should assess the situation, share information with the team members, and keep them informed of any changes in the plan. Most surgical team members emphasized that identifying each member's capabilities helps the team leader use the most appropriate people aligned with specific situations. One attending physician revealed his experience in teambuilding (P6).

“I think I should be able to bring in people on my team who have the abilities that the team and the patient need. Many times, this is not practically possible, but my experience says that every time this happens, everything goes well. For example, if we were going to work on a cancer patient who has extensive intestinal adhesions and is so ill, my preference is to work with a junior doctor, a nurse, and a technician who know what to do with the patient. This way things go easier” (P6).

The participants mentioned that teamwork would be more successful if the team leader could select the team members. For example, one of the nurses said:

“When the team leader could select team members, coordination between team members is done well, the probability of medical errors is reduced, and the probability of team success is increased.”

Based on participants’ experience, assigning and prioritizing tasks are crucial activities of team leaders. This is especially important for healthcare teams that work under unpredictable conditions. For example, one of the nurses (P12) in the emergency team stated:

“When the team leader defines everyone's tasks, chaos is avoided and ultimately leads to patient safety” (P12).

Based on participants, especially surgical and emergency team members, situational analysis helps team leaders provide direction for team members and formulate team strategies. One of the attending physicians said:

“When we want to start a treatment plan for the patient, we first talk to junior doctors and team members about the patient's condition- of course, not in emergency cases- in other words, we analyze the situation, and then we determine the team strategy. In emergencies, we determine the strategy based on circumstances and experience, and at the same time, we review alternative plans” (P11).

Evaluation Processes

Debriefing and providing feedback were issues that the majority of participants, especially emergency team members, emphasized. The participants stressed that they could not develop professionally without continuous or constructive feedback. One junior doctor mentioned:

“Feedback must be done in the right way and continuously. Usually, in emergencies, we do not receive feedback, or we do not receive the right feedback ... we do not know which part of the procedure we did wrong ... the leader should give clear and explicit feedback ... not, for example by ignoring me in the next day... especially in emergencies, we need feedback” (P7).

In addition to providing feedback, team leaders should seek feedback from team members. One attending physician stated:

“I have a good experience receiving feedback from team members. One day I was telling the residents about the communication with the patient. One of the residents said: Why do you never introduce yourself to patients? Interestingly, I had not paid attention to this issue until then. Since then, I have asked my students to give me feedback, improving my performance (P9).

Action Processes

Action processes include all patient, system, team, and coordination activities. This main category includes monitoring and coordination. We identified 30 codes placed into four subcategories ([Table 2](#))

Monitoring Processes

Participants in this study, especially junior doctors and nurses, believed that experience, scholarly approach to clinical care, and diagnostic acuity were some of the essential characteristics of the team leader. One of the nurses mentioned the following:

“What can alleviate the concern of the emergency team when the emergency is critical?? An experienced leader who knows how to diagnose the disease quickly and has enough knowledge and experience” (P12).

Participants emphasized that all aspects of the physical, psychological, emotional, social, and economic conditions of patients should be considered in patient management. The focus should not be solely on treating the patient's problem. One of the attending physicians said:

“What’s serious to note is that if a patient has several health issues, the leader should notice their medical needs as a whole. We should have a holistic view of patients” (P6).

Most participants mentioned that managing resources, especially during crises, is critical for team leaders. The nurse in the surgical department stated:

“The lack of personnel and equipment happened many times in my work setting, and in this situation, we could hardly handle the situation. If the team leader is aware of the staff and equipment, especially during busy times, the result will definitely be better” (P15).

An interesting point in the interviews was the importance of help-seeking behavior for team monitoring. Some participants stated that they needed help in some cases but did not ask for help because they thought that asking for help could indicate insufficient expertise or experience. Encouraging team members to seek help is an important aspect of team monitoring. One of the attending physicians said:

“I told all team members that if they need help, they should ask for help. Asking for help from others is not embarrassing” (P3).

Coordination Processes

Most participants argued that team leaders are responsible for coordinating team members' activities in different team situations. One attending physician stated:

“We work in interprofessional teams with individuals from different specialties and knowledge. Coordination of activities is crucial. For example, when we are evaluating the patient's level of consciousness in a patient with multiple trauma, we must coordinate that orthopedic colleagues do not stimulate the patient painfully” (P4).

Interpersonal Processes

Interpersonal processes are crucial in both the transition and action processes. The main categories of interpersonal processes consisted of five: conflict management, affect

management, motivation, communication, and accountability, which contained 11 subcategories and 33 codes (Table 2).

Conflict Management

Most participants stated that team leaders must be mindful of team members and manage the situation to minimize the possibility of conflict. The head nurse said:

“Two nurses have a problem with each other, and everyone knows this. I never put these two nurses together in the work schedule” (P14).

Affect Management

Several participants believed that healthcare teams working in stressful situations are susceptible to emotional distress. One of the critical behaviors of a team leader is calmness and coping with pressure. One of the nurses stated,

“During surgery, when the junior doctor was removing the intestinal adhesion, the cardiac arrest happened. All team members were in a stressful situation. The team leader invited everyone to calm down and confidently managed the team” (P15).

Motivation

Participants argued that, in healthcare teams, motivation is one of the driving forces for team members to attain their goals. One of the attending physicians said,

“In this strange time when people face devastating economic problems, it isn't easy to motivate team members. My own strategy is more focused on appreciating and understanding their problems. This strategy has worked many times” (P3).

Efficient Communication

One of the team leader behaviors that creates a connection between the leader and team members is the speaking-up of team members. In other words, team members can share their expectations, opinions, and problems with others. One of the junior doctors said,

“We should be able to easily speak about the patient plan, the patient condition, ourself situation, team leader's performance, and everything. We should not be afraid to speak up. There should be conditions in which team members are encouraged to speak up. Now in some teams, this situation exists to some extent, and in some teams, it does not exist at all” (P5).

Accountability

Most attending physicians mentioned that one of the important behaviors of a team leader in the development of self-accountability among team members. Self-accountability occurs when team members are responsible for their actions and decisions. One of the nurses mentioned:

“Our team leader is accountable for his decisions and their consequences. Therefore, we have learned to take responsibility for the consequences of our actions. I sent the wrong blood sample to the lab, taking responsibility for it. (P14).

Discussion

This study explored the viewpoints of healthcare team members regarding team leadership behaviors. To our knowledge, this is the first study to qualitatively explore team leadership behavior in a healthcare setting in a developing country. The team leadership behaviors were categorized into three main categories: transition processes, action processes, and interpersonal skills.

Most participants, especially emergency and surgery team members, mentioned that team leaders' behaviors related to transition processes, such as teambuilding, assessing situations, assigning tasks, debriefing, and feedback-seeking play a crucial role in teamwork achievement. This is consistent with Dinh et al. (2019), who reported that the medical field focused on transition processes such as planning, strategy formulation, goal specification, and mission analysis more than other settings such as aviation and the military.

Most participants emphasized that teamwork was more successful when teambuilding was based on the team leader's choice. They believed that building a team based on the opinion of the team leader and according to individual abilities and characteristics could help the team reach its goals. Based on Morgeson et al. (2009), selecting members who provide the essential mix of knowledge, skills, and abilities enables the team to accomplish the tasks. According to the literature, team leaders can promote teamwork through proper team member selection, in which skilled people work collaboratively. Yun et al. (2005) reported more effective team leadership in skilled and experienced teams. Prior research provides robust evidence suggesting that team composition and teambuilding are essential determinants of team performance. Demographic diversity and team-level abilities have been linked to team processes such as team members' cohesion and helping behavior (Michael Holmes Jr. et al., 2021), team conflicts (Jones et al., 2019), communication (Deckers et al., 2020; Keller, 2001), and coordination (Dahlin, Weingart, & Hinds, 2005), team creativity (Pirola-Merlo & Mann, 2004; Taggar, 2002).

One of the leadership behaviors that participants mentioned was assigning tasks, especially in emergencies and unpredictable situations. We found that if the team leader fails to perform the task correctly, it leads to medical errors and disorganization in the team. The importance of assigning tasks within the team is emphasized across the team leadership literature. For example, in a study of the information systems field, Henderson and Lee (1992) reported that leader behavior such as assigning tasks was associated with more team efficacy and speed. Also, scholars have reported that leaders who assign and prioritize the team's tasks were associated with more team effectiveness (Kane et al., 2002) and higher ratings of team satisfaction (Crowe et al., 2017).

Based on participants, the team leader should assess/reassess situations such as resources, patient condition, and team climate for team success. Zaccaro et al. (2001) claimed that "what leaders should do" should be changed to "what needs to be done to perform effectively". This view of situational analysis distinct functional leadership perspectives from other models of interactions between leaders and team members. Crowe et al. (2017) reported that assessing situations and resources is one of team leadership's eight essential components.

Although this study revealed that debriefing and providing feedback were rarely performed after a critical event, team members emphasized that debriefing and constructive feedback

should always occur after critical events. Based on existing literature on team leadership, there are several reasons why providing feedback could promote team functioning. Feedback from team leaders facilitates interpersonal processes that lead to team creativity. Taggar (2002) reported that leaders who provided feedback provoked team members' interaction such as motivation, communication, and coordination, resulting in greater team creativity. Providing feedback and its psychological implications are interlinked. Sivunen (2006) found that constructive feedback could promote commitment among team members. A short review of emergency teams concluded that although there is no evidence that debriefing is effective in emergency teams, emergency team members tend to have debriefing sessions after critical accidents (Timms, 2019). More research is needed on the effectiveness of debriefing in emergency teams seems necessary. Interestingly, several participants mentioned the importance of leaders' feedback-seeking behavior. Little research has been conducted on feedback-seeking behaviors among healthcare team leaders. We found that this behavior plays a crucial role in team success. Edmondson (2003) reported that leaders could provide a safe environment for receiving feedback from team members.

This study revealed that technical knowledge and experience are the key elements of a leader's success. In line with our research, some studies indicated technical knowledge and the depth of technical experience as essential leader's competencies in healthcare settings (Andersen et al., 2010). Hjortdahl et al. (2009) also showed that technical and non-technical skills are closely interlocked, and a good leader should be competent in both of them. Yeung et al. (2012) found a strong association between leadership skills and complex technical skills such as cardiopulmonary resuscitation.

In this study, resource management has been mentioned as one of the main tasks of a team leader in action processes. Consistent with our study, Hunter et al. (2011) stated that proper management of time, equipment, and personnel, especially in crises, can positively affect teamwork and patient health. Also, Parker et al. (2013) reported that team leaders should be able to manage resources based on the situation and context effectively. We found that failure in personnel management could lead to workload and medical errors. Montgomery et al. (2007) identified that insufficient resource management and workload in the pediatric intensive care unit adversely affect physicians' and nurses' performance. Morgeson et al. (2009) emphasized a positive relationship between leader resource management and the team's transition, action, and interpersonal processes.

Our study revealed that interpersonal skills are critical in transition and action processes. The emergency medicine and surgery team members emphasized that interpersonal skills are more important in critical situations. Consistent with this study, Dinh et al. (2019), emphasized the importance of interpersonal skills in high-stress environments. In the present study, one crucial team leader's behaviors were encouraging team members to speak up about concerns, questions, decisions, and problems. Edmondson (2003) reported that most effective leaders would promote speaking up and team learning success in interdisciplinary action teams. Although speaking up, especially about patient safety, is very important, Ng et al. (2017) reported that junior doctors or nurses would be self-censor to prevent possible negative consequences. Also, as in the other studies, healthcare professionals prefer to be silent even if a patient undergoes a critical situation (Okuyama et al., 2014). More research should be conducted on facilitators and barriers to speaking up for healthcare team members. Streiff et

al. (2011) mentioned that a good team leader should have both leadership and effective communication skills. In one systematic review, Nagpal et al. (2010) emphasized that in surgery teams, failure in communication and information transfer often led to adverse events. They revealed that further research is needed to explore behaviors related to team leadership processes

Limitations

Because leadership is critically a context-based concept, the transferability of results should be considered with caution. Generally, using directed content analysis may be associated with a bias in finding evidence supporting the assumptions of the fundamental theory.

Implications

Our findings provide educators with categorized behaviors for designing leadership educational interventions. This study provided a starting point for developing reliable assessment tools for team leadership. By understanding leadership behaviors, it may be possible to develop standards for physicians to achieve team leadership competency.

Conclusion

This qualitative study identified healthcare team leaders' behaviors, which were categorized into transition processes, action processes, and interpersonal skills. This study revealed that team leadership behaviors in transition processes are more important for team success, especially in unpredictable situations. Our findings can be used to assess team leadership behaviors in healthcare settings. In addition, these behaviors should be considered when developing leadership training programs. Further research is needed to investigate the relationship between team leadership behavior and patient outcomes.

Contributors

N. SH. R., R. G., M. J., and A. J. designed the study. N.SH.R, R.G, and M.J conducted the interviews and analyzed and interpreted the data. N. SH. R. and R. G. drafted the manuscript. All authors read, edited, and approved the final manuscript. All authors had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

Declarations

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Disclosure Statement

No potential conflict of interest was reported by the authors.

Ethics Approval

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