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INVESTIGATING THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND INCIDENT RECOVERY IN HIGH-RISK TEAMS

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Abstract
High-risk, high-pressure team environments in aviation, emergency medicine, and cybersecurity operate at a fast pace with an emphasis on quick, interdependent response styles. Though many have successful procedural protocols, these teams can often experience failure in the recovery from significant incidents, not only due to poor technical performance, but also dysregulation of psychology. This paper investigates Emotional Intelligence (EI) as an important, although often overlooked, consideration for improving post-incident recovery in these high-stress situations. Grounded in established psychological theories, including Mayer and Salovey's EI model and crisis response theories, this paper conceptualizes how EI abilities (self-awareness, emotional regulation, empathy, and social skills) at the individual, team, and organization levels impact recovery effectiveness, team cohesion, and adaptive communication after a crisis. Using a literature synthesis approach, the paper first integrates knowledge from across the disciplines of organizational psychology, safety science, and human factors engineering before presenting a conceptual framework for the intersection of EI and the phases of crisis recovery. Examples derived from case studies and past empirical studies demonstrate the advantages of emotionally intelligent teams, as they show improved resilience, reduced conflict, and an enhanced ability to learn after adverse events. In summary, there is a need to embed EI assessments and training into team development programs, so that they will achieve successful risk management outcomes and maintain safety across the lifecycle of operations. A shift in thinking of recovery from just a procedural task to a situational task is needed.

Keywords: Emotional Intelligence, Incident Recovery, High-Risk Teams, Crisis Psychology, Team Resilience, Emotional Regulation, Human Factors, Organizational Psychology, Emergency Response, Cognitive Readiness.

INTRODUCTION

High-risk teams work in settings where the consequences of failure can be catastrophic and require the capacity to make rapid decisions, coordinate with others, and recover. High-risk teams operate in many contexts, such as emergency services, military operations, aviation, and healthcare, in which high performance is necessary under serious pressure and leaves little room for error [5][6]. These situations entail that many of these areas rely on extensive procedural protocols and technical training, while systematic ways of managing recovery from incidents - regrouping, responding, and restoring (normal service delivery after a critical incident) - are less well understood [13]. It is important to note, recovery errors are often a consequence of psychological breakdowns rather than operational errors, including emotional dysregulation, interpersonal tension, and cognitive overload.
In these time- and resource-poor contexts, Emotional Intelligence (EI) provides a valuable psychological resource [3]. Emotional Intelligence is the ability to accurately perceive, evaluate, and manage emotions and is required for an adaptive response to 'stress', facilitates improved team communication, and helps promote mutual trust and confidence in a team, trusting collaboration, which is critical for coordinated recovery from a critical incident

[1][4][7]. EI operates differently from technical skills, as EI affects how people interpret what occurs, how they manage their own emotions under pressure, and whether they are in a position to support recovery with their team. The current paper will argue that emotional intelligence Moderator of recovery performance within high-risk teams, that is framed by the principal research question of: "In what ways does emotional intelligence influence or moderate recovery processes in high-risk teams?" This inquiry seeks to bridge a critical gap in crisis management research [2][8].

Emotional Intelligence and Psychology of Crisis Response

1.1. Models of Emotional Intelligence in High-Risk Contexts

Emotional Intelligence (EI) refers broadly to the ability to perceive, use, understand, and manage emotions in oneself and others, to direct thinking and behaviour. The original framework from Mayer and Salovey (1997) proposed EI as a model of four connected mental abilities: perceiving emotion; using emotion to facilitate thinking; understanding emotion; and managing emotions [11]. At the same time, Daniel Goleman created an applied EI model (1995) that classified EI into five areas: self-awareness, self-regulation, motivation, empathy, and social skills,which are all especially relevant to leadership and teamwork [12].

1.2. Emotion Processing in Team Environments

Whereas self-awareness allows individuals to recognize indicators of stress, self-regulation allows individuals to remain calm and focused when stressed. Empathy enables team coordination and trust. Social skills allow effective communication when resolving conflict - particularly valuable to incident response and recovery efforts.

1.3. Psychological Theories Linking EI to Stress and Crisis

An EI psych framework can fit into a wider range of psychological theories. Affective Events Theory (Weiss & Cropanzano, 1996) discusses how an individual's emotional responses to events happening in the workplace are related to their performance and behavior [9][10]. This is a critical framework in a post-incident context. Additionally, the Transactional Model of Stress (Lazarus & Folkman, 1984) situates EI as a moderator of the appraisal and coping process and the potential to assist with emotional adjustment following adversity [14].

EI's relationship with cognitive constructs related to teamwork (Wilks & Dyer, 1992), related to collective emotional regulation abilities and situational awareness capabilities,is our important construct in teamwork at high-stakes levels where shared mental models exist, and emotional re-orientation occurs rapidly, leading to recovery outcomes [15]. In this way, emotional intelligence can be viewed more as a shared vs. individual resource, where it contributes better to an intact psychological infrastructure in resilient high-risk teams.

Psychological Dimensions of Incident Recovery in High-Risk Teams

1.4. Emotional Barriers to Effective Recovery

Incident recovery in high-risk teams involves much more than using operational checklists and regularly recited protocols; the psychological features of an incident, particularly team morale, levels of trust between the team members, emotional regulation, and the overall quality of communication, often contribute to the success or failure of recovery efforts. Individuals involved in a critical incident may experience cognitive overload, emotional exhaustion, or blame aversion issues that prevent the team from regrouping effectively or resolving the situation.

1.5. The Role of Team Trust and Psychological Safety

Some of the most common failures during incident recovery are due to psychological disruptions. Elements such as panic reactions, emotional contagion, communication breaks, or avoidance of conflict create fragmentation in team coordination. As an example, air traffic controllers let me emphasize again, air traffic controllers responding to a near-miss must not only restore procedural precision, but they also must maintain control of themselves and their trust in team members. This situation is analogous to trauma care units, which have found that team members possessing emotional intelligence over and above the incident exposure and/or event experience can lead to lower error rates and enhancements of post-event adaptability. Building on emotion, firefighting teams established the importance of team members having some level of shared empathy to regulate their emotions effectively and re-integrate their focus and attention following a high-fatality call.

1.6. Leadership and Collective Regulation in Recovery

There are a number of sub-themes that run through this psychological recovery. Shared mental models,the common understanding of work, and the roles within the teamcan aid recovery performance initially. Leadership emotional intelligence can stabilize team affect and morale quickly. Collective emotional regulation, whereby teams process group affect through norms or rituals, fosters resilience. In addition, structured critical incident debriefings can assist in reframing emotional processing, reinforcing learning, or limiting the trauma of psychological scarring. Collectively, these conceptual and practical moments are indicative of the notion that recovery is not simply a procedural recovery from the event, but a process of psychological recovery that is mediated by social agents whose emotional intelligence is deeply embedded in the team culture and leadership.

Analytic Consideration: EI Related to Incident Recovery Performance

This investigative paper provides a proposition for understanding the connection between Emotional Intelligence (EI) and incident recovery performance, a four-phase recovery model

1.7. Four-phase Recovery model

The model represents EI as a moderating psychological factor in the four phases of recognition, response, recovery, and learning.

1.7.1. Recognition Phase

In this phase, high-EI individuals and performing teams are more capable of recognizing emotional and situational cues early, providing both awareness of the crisis quickly and stopping an excessive early reaction or overreaction. If individuals and teams are emotionally aware, they are also more aware of their situational accuracy, and they can avoid escalating the crisis through unconscious pre-emptive blame or denial.

1.7.2. Response Phase

Emotional intelligence serves an important function in self-regulation of emotions and interpersonal SDL coordination. High-EI teams are effective in communicating in last-minute challenge situations and can think clearly and avoid regretful decisions through reactivity. Most importantly, memory of team trust and emotional calabrese is very important in these moments.

1.7.3. Recovery Phase

Emotional labour, like managing fear or maintaining corporeal composure, is less taxing within teams exhibiting high EIinternal work versus external work. High EI leaders can create a safe-to-access emotional climate, minimize the psychological fallout from the incident, and enable the cognitive process of recovery.

1.7.4. Learning Phase

The EI prompted processes of reflection, empathy, and psychological openness allow high-quality shared learning to be retained. This is particularly important in post-incident debriefs to capture learning documents, lessons learned, and prevent emotional residue from constraining future performance.

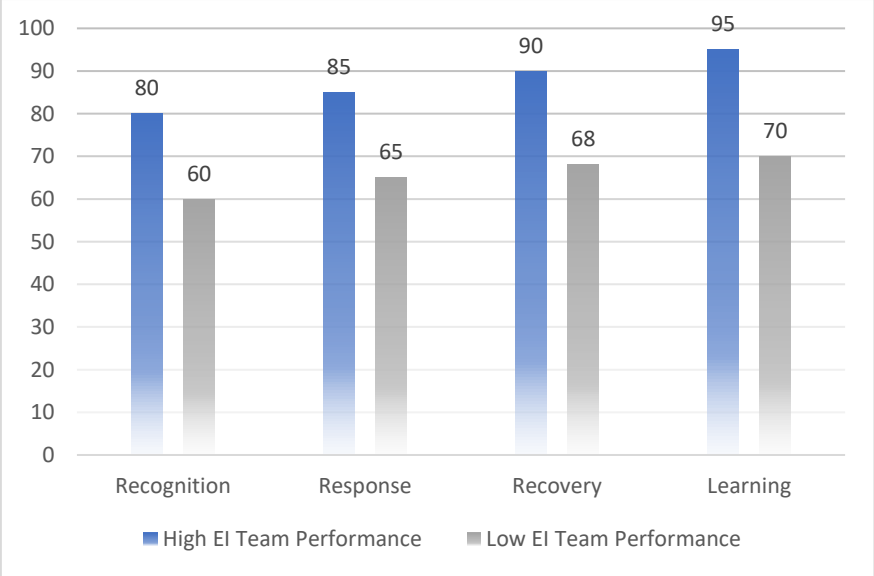

Figure 1: Impact of Emotional Intelligence on Recovery Performance Over Crisis Phases

Figure 1 compares the performance of high and low Emotional Intelligence (EI) teams in four crisis recovery phases: Recognition, Response, Recovery, and Learning. High EI teams show a consistent positive trajectory of recovery efficiency, while low EI teams show a flatter and ultimately less efficient performance pattern. The graph illustrates compared to low EI teams how EI substantially improved adaptive recovery in high-risk contexts.

Table 1: Emotional Intelligence–Recovery Readiness Self-Assessment

EI Dimension	Recovery Phase Alignment	Key Behaviours	Score (1–5)
Self-Awareness	Recognition	Recognizes stress signals, acknowledges limitations	4
Self-Regulation	Response	Manages emotional reactions under pressure	5
Empathy	Recovery	Senses team members' distress, shows emotional support	3
Social Skills	Response & Recovery	Communicates clearly, de-escalates tension	5
Collective Reflection	Learning	Participates openly in debriefing, integrates lessons	

Trust Behavior	All Phases	Maintains reliability and openness during uncertainty	

Table 1 provides a structured, self-assessment tool to help individuals and high-risk teams evaluate their emotional intelligence relative to the critical phases of the incident recovery process. The framework links key components of EI (e.g., self-awareness, self-regulation, empathy) to distinct recovery phases (Recognition, Response, Recovery, and Learning). Each behavior can be rated on a 5-point scale to yield a total score that reflects the team's readiness to manage and recover from high-stress incidents. This framework can be applied at various points - during the pre-incident evaluation and planning phase, post-incident reflection, or in continuing development practices for a functioning team. This framework links theoretical knowledge with actionable psychological evaluation to assist with building emotionally intelligent teams in high-risk situations.
The suggested conceptual model (see Figure 1) demonstrates how EI acts as a buffer against disruptions from stress while also facilitating adaptive regulation as part of the crisis recovery cycle. Important factors include the assurance of clarity in communication as a team, cognitive recovery capacity (calm systems vs. anxiety systems), emotional resilience, and psychological safety. All four factors enhance team capacity to not only recover but to grow from adverse conditions.

CONCLUSION

Traditional incident recovery models in high-risk sectors have predominantly focused on procedural fidelity, systems engineering, and operational discipline. Often, these models explore technical effects and considerations while neglecting the psychological and emotional factors that greatly influence team performance during and following incidents. This paper has presented the case for emotional intelligence (EI) as a vital hedged resource for maximizing recovery effectiveness, trust, and resilience in high-stress environments. To make progress towards improved recovery functionality, there is a crucial need to incorporate EI in crisis team training and selection and incident post-incident protocols. EI-based interventions: emotion regulation training, empathy training workshops, and EI leadership programs, for example, can be effective in increasing communication and emotional alignment throughout the stress-inducing episodes. There seems to be potential for EI screening to build a stronger baseline of team behaviour in the face of uncertainty and disaster (while selecting candidates for a competent team requiring effective collective recovery). Future research should develop beyond theory and include experimental and longitudinal approaches to quantify the impact of EI on team recovery metrics. Interdisciplinary research will be vital (e.g., psychology, engineering, organizational behaviour) for developing scalable interventions and tools for embedding EI into crisis systems operating in the real world. We will move away from managing in crises and closer to managing crises successfully.

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