

# Cultivating Psychological Safety in Disaster Response Teams

## *A Comparative Study of Natural Disasters and Epidemics*

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**Abstract**— The management of disasters, whether natural phenomena like wildfires or health emergencies such as the COVID-19 pandemic, requires a well-coordinated, adaptive, and immediate response from specialized teams. However, the effectiveness of these teams doesn't solely rest on their technical abilities or resources but is heavily influenced by the psychological atmosphere in which they operate. Psychological safety, defined as the freedom to express and act without fear of negative repercussions, has emerged as a cornerstone of high-functioning teams. This study delves into the significance of psychological safety and highlights its crucial role in fostering a conducive environment for teams to function optimally under stressful scenarios. By juxtaposing its relevance in contrasting emergencies, from the spread of a contagious virus to wildfires, and especially in geographically vulnerable regions like the Hawaiian Islands, we elucidate the broader implications and applicability of psychological safety in disaster management.

**Keywords**— Psychological Safety, Disaster Response, Epidemics, Natural Disasters, Team Dynamics, Hawaiian Islands, Wildfires, COVID-19

### I. INTRODUCTION

Natural disasters, epidemics, and various crises persistently challenge the resilience, agility, and adaptability of emergency response teams worldwide. The gravity and unpredictability associated with these events, from the large-scale devastation of wildfires to the stealthy spread of epidemics like COVID-19, highlight the imperative for cohesive and effective teams that can rapidly respond to evolving threats (Kahn, 1990; Rozovsky, 2015). Island communities, such as the Hawaiian Islands, represent unique case studies in this realm. Their geographic isolation, combined with unique cultural, ecological, and infrastructural elements, amplifies the challenges faced during emergencies and underscores the need for efficient team dynamics.

At the heart of effective teamwork in crisis scenarios lies a factor often intangible but undeniably critical; psychological safety. It is the glue that binds teams, fostering an environment where members can freely share ideas, voice concerns, and engage in constructive conflict without the fear of retribution or ridicule. Such an environment becomes especially vital when the stakes are as high as they are during natural disasters or health crises. Every decision made, or not made, can significantly impact lives, resources, and the overall trajectory

of the emergency response. Therefore, ensuring that each team member feels secure enough to contribute their expertise and perspective is not just a matter of interpersonal comfort; it becomes a matter of life and death.

This paper aims to explore the intricacies of psychological safety in emergency response scenarios, elucidate its pivotal role, and offer insights into its cultivation. Drawing comparisons from the wildfire responses in various terrains to the unique challenges posed by epidemics, and underlining the specific concerns of island communities, we seek to provide a comprehensive understanding of why psychological safety is not just a desirable trait, but an absolute necessity in the realm of disaster management.

### II. PSYCHOLOGICAL SAFETY: AN OVERVIEW

Psychological safety is a concept that has been increasingly recognized in organizational behavior and team dynamics research. At its core, psychological safety refers to an individual's perception of the consequences of taking an interpersonal risk (Edmondson & Lei, 2014). In layman's terms, it's the assurance that one can speak up, voice concerns, ask naive questions, or propose a new idea without fear of punishment, ridicule, or other forms of negative consequences.

While the term might seem intuitive, its importance has been underlined by extensive studies, one of the most notable being Google's Project Aristotle. This research aimed to understand the factors that contribute to effective team performance within Google. Amongst various factors, the research identified psychological safety as the most critical element determining a team's success. When team members felt safe to express themselves and knew they wouldn't be punished for admitting mistakes or asking questions, the teams were more cohesive, made better decisions, and achieved superior results (Rozovsky, 2015).

Several components contribute to psychological safety:

1. **Interpersonal Trust and Mutual Respect:** Trust is foundational. When team members respect each other and believe that their peers will give them the benefit of the doubt, it cultivates an environment where individuals feel they can take risks. They are more likely to share unconventional ideas or voice concerns, knowing they will not be embarrassed or punished (Kahn, 1990).

2. **Open Communication:** The freedom to speak one's mind is an integral facet of psychological safety. It's not just about avoiding punitive responses, but also about creating an

environment where diverse opinions are sought, valued, and integrated into collective decisions (Ende, 1983).

3. **Vulnerability:** Admitting when one is wrong or does not know something can be challenging. However, in a psychologically safe environment, members feel comfortable being vulnerable. This vulnerability not only humanizes individuals but also promotes learning and growth. When leaders themselves model vulnerability, it further fosters a culture of openness (Brown, 2012).

4. **Clarity of Expectations:** Ambiguity can breed hesitance. Clear guidelines, roles, and objectives provide a roadmap for individuals, making them more confident in their contributions and reducing the fear of overstepping or making mistakes (Jug et al., 2019).

The implications of psychological safety go beyond just team performance metrics. It is deeply intertwined with employee well-being, retention, and overall job satisfaction. When individuals feel psychologically safe, they are more engaged, motivated, and committed to their roles and the organization. They experience less workplace stress, burnout, and anxiety. This state of mind and work environment becomes even more paramount in high-stakes, dynamic settings, such as disaster response, where the cost of not speaking up or withholding information can have dire consequences.

In conclusion, psychological safety is not just a buzzword but a foundational element for building high-performing, resilient, and innovative teams. As organizations and teams across various sectors recognize its importance, strategies to cultivate and sustain psychological safety are increasingly becoming a priority.

### **III. THE ROLE OF PSYCHOLOGICAL SAFETY IN DISASTER RESPONSE**

Emergency scenarios, whether instigated by natural calamities or global health crises, present unprecedented challenges that require the collective, coordinated efforts of multifaceted teams. Psychological safety has emerged as an integral component for these teams to operate efficiently in high-pressure situations. The intrinsic value of psychological safety goes beyond the tangible outcomes of collaboration. It's an enabler of open dialogue, fostering a culture where risk-taking is encouraged, and failures are viewed as learning opportunities rather than blame points (Duhigg, 2016).

Wildfires, for instance, create dynamic, rapidly evolving environments that require immediate decision-making. In such high-pressure scenarios, team members might hold back from sharing crucial information or innovative containment strategies if they fear ridicule or reprisal. This can hamper the effectiveness of response operations. Turner and Harder (2018) noted that psychological safety allows frontline workers, such as firefighters or environmental experts, to communicate their observations, reservations, or suggestions, ensuring real-time adaptations to the unfolding situation.

Similarly, the COVID-19 pandemic tested the resilience and adaptability of healthcare systems worldwide. Medical professionals, often operating in makeshift teams, had to navigate the unknowns of a novel virus, with solutions and strategies evolving almost daily. Here, the stakes were exceedingly high, with lives on the line. Khan and Matthias

(2021) emphasized that within such teams, psychological safety empowered healthcare professionals to voice uncertainties or disagreements over treatment strategies. An atmosphere where questioning and peer review were welcomed resulted in more adaptive and patient-centered care approaches.

Furthermore, the significance of psychological safety becomes magnified when considering island communities, such as the Hawaiian Islands. These communities, given their unique geographical constraints, often face amplified challenges during disasters. Their isolation necessitates a higher degree of self-reliance, requiring effective intra-team communication. Watson and Clandinin (2017) explored the intricacies of disaster response in such constrained environments and found that a sense of belonging and mutual respect within teams played a vital role. When team members felt safe to voice concerns or offer insights, communities could mobilize resources more effectively and strategize based on the collective intelligence that can capitalize on the diversity of perspectives within the team.

In essence, psychological safety is a foundational element crucial in high-risk, high-stress scenarios. Its presence fosters trust, promotes transparent communication, and cultivates an environment where innovation thrives—attributes that are vital when navigating the multifaceted challenges posed by emergencies.

### **IV. STRATEGIES TO CULTIVATE PSYCHOLOGICAL SAFETY**

In the tumultuous realm of disaster response, fostering psychological safety emerges as foundational for team efficacy and innovation. Leaders, as key catalysts, must consciously implement practices that create and sustain this safety. This is particularly so in high-stakes environments where the challenges are not just physical, but also psychological.

One of the primary responsibilities of a leader is to create an open and communicative environment. A culture that encourages team members to speak up, especially when they foresee potential challenges or have innovative solutions, is essential for timely and effective disaster response (Duhigg, 2016). This doesn't just mean passively listening; leaders must actively solicit feedback, ask probing questions, and involve team members in decision-making. As teams navigate through the complexities of crises such as wildfires or disease outbreaks, such open channels of communication become the lifeline for collaboration and continuous learning (Turner & Harder, 2018).

Furthermore, the power of modeling behavior cannot be overstated. Leaders, by displaying vulnerability, discussing mistakes openly, and promoting an environment of learning, set the tone for their teams. When leaders admit to not having all the answers and frame failures as opportunities for learning, they create a foundation where team members feel comfortable sharing, discussing, and adapting (Edmondson, 1999). Such behavior also reinforces that making mistakes is an inherent part of the learning curve, especially when dealing with unprecedented challenges. This mentality, when permeated through the team, can spur proactive and solution-oriented dialogues, essential during crises.

In addition, fostering an inquisitive mindset serves as another cornerstone for cultivating psychological safety. Curiosity, when encouraged, ensures that team members actively seek to understand and view challenges from various vantage points. Such a diversified perspective not only enriches problem-solving but also prevents potential oversights in disaster scenarios. An inquisitive leader, for instance, might delve deep into understanding the root cause of an operational lapse during a wildfire, facilitating better preemptive measures for future incidents (Ende, 1983).

Trust, while a vast concept, remains at the heart of psychological safety. Building trust within teams is an intricate process and is especially crucial in dynamic environments where rapid decision-making is the norm (Armstrong, 2018). For trust to flourish, consistency is key. Leaders must maintain transparency, keep team members informed, and ensure their actions align with their words. By actively involving everyone in decision-making processes and consistently acknowledging their contributions, leaders can engender a sense of belonging and mutual respect within the team.

Moreover, recognizing and celebrating the efforts of team members play a vital role in creating an environment where they feel valued. In the high-pressure world of disaster response, the occasional pause to acknowledge the good work done or the challenges overcome can work wonders in boosting morale. Such gestures of appreciation not only foster a sense of pride but also reinforce the significance of each member's contribution to the larger mission (Jug et al., 2019).

In conclusion, strategies to cultivate psychological safety are varied, but they converge on the ideals of open communication, trust, acknowledgment, and continuous learning. While these principles stand firm across diverse work environments, their meticulous application becomes crucial in the face of challenges as monumental as natural disasters and pandemics.

## **V. RECOMMENDATIONS FOR FUTURE RESEARCH**

The importance of psychological safety in disaster response teams has garnered increased recognition in both academia and practical applications. However, there are numerous areas that warrant further exploration to strengthen our understanding and application of this concept in diverse disaster scenarios. The follow are recommendations for future research:

Longitudinal Studies: Future research should track the evolution of psychological safety within disaster response teams over extended periods. This would allow for understanding how psychological safety ebbs and flows and what interventions maintain it during prolonged crises.

Comparative Studies: Future researchers should investigate differences in psychological safety dynamics between different types of disasters – for instance, comparing a rapidly unfolding crisis like an earthquake with a prolonged one like a pandemic.

Cultural Dynamics: Future research should dive into how cultural contexts influence psychological safety. For example, are there cultural norms or practices that can be leveraged to

enhance psychological safety in certain regions or communities?

Technological Interventions: With the rise of technology, especially in communication and data collection, how can tech tools be used to foster and measure psychological safety? For instance, can AR or VR be used for training scenarios to enhance psychological safety before teams are deployed in real-life situations?

Island Communities Specific Research: As isolated geographies with unique challenges, island communities like the Hawaiian Islands may have particular nuances related to psychological safety. Delving deeper into these unique challenges could be enlightening as a focus for future research.

Role of Leadership: Future research should investigate how different leadership styles and strategies impact the establishment and maintenance of psychological safety in high-pressure environments. For example, understanding the best leadership practices could provide insight into how disaster response teams are best managed throughout a range of disaster scenarios from short to long in duration.

Interdisciplinary Collaboration: Given that disaster response often requires multidisciplinary teams, research on how to foster psychological safety across professionals from diverse fields (e.g., medical, environmental, logistical) would be beneficial.

Impact on Mental Health: Future research should analyze the long-term mental health outcomes of team members who have consistently operated in an environment with high psychological safety versus those who haven't. With mental health issues on the rise, this could prove beneficial in not only disaster scenarios but also in society at large.

Quantitative Metrics: Develop quantitative tools and metrics for measuring psychological safety. Current research often leans on qualitative methods. Having a standardized, quantitative measure could aid in comparative studies and benchmarking.

Training and Interventions: Design and test specific training modules or interventions aimed at enhancing psychological safety. Evaluating their efficacy across various disaster scenarios could provide a toolkit for disaster response organizers.

Public Perception and Media: Investigate the influence of public perception and media portrayal on the psychological safety of disaster response teams. In the age of real-time news and social media, the public's view can significantly influence team dynamics.

Personal Narratives: Employ ethnographic research methods to collect in-depth personal narratives and stories. These can provide rich insights into the lived experiences of team members, offering a deeper understanding of challenges and solutions related to psychological safety.

By addressing these areas, future research can significantly advance our understanding of psychological safety in disaster response settings, enhancing both the efficiency of these critical teams and the well-being of their members.

## VI. PRACTICAL IMPLICATIONS

Understanding the pivotal role of psychological safety in disaster response teams offers valuable insights for policymakers, team leaders, and response coordinators across various settings. Here are some practical implications derived from our study:

Training Programs for Leadership: Governments and organizations should invest in training programs focused on cultivating psychological safety. Leaders equipped with the knowledge and tools to foster an environment of trust, mutual respect, and open communication can significantly enhance team effectiveness during crises.

Incorporating Psychological Safety in Protocols: Standard operating procedures (SOPs) for disaster responses, whether for wildfires, pandemics, or other crises, should emphasize the importance of psychological safety. By incorporating guidelines that focus on clear communication, feedback mechanisms, and team trust-building, we can ensure a proactive approach to establishing psychologically safe environments.

Feedback Mechanisms: Given the evolving nature of emergencies, there should be regular feedback mechanisms in place where team members can share their experiences, challenges, and suggestions. Such platforms not only offer insights into areas of improvement but also reinforce an environment where members feel their voices are valued.

Mental Health Support: Recognizing the toll that disasters can have on the mental well-being of response teams, especially in high-stress environments like the Hawaiian Islands or during large-scale pandemics, organizations should provide readily accessible mental health support. Such support not only caters to immediate needs but also underscores the importance the organization places on its members' psychological well-being.

Cultural Shift Towards Open Communication: Beyond the immediate disaster response context, there's a broader need for a cultural shift in organizations towards fostering open communication. Leaders should be encouraged to model behaviors that emphasize listening, acknowledging efforts, and addressing concerns promptly.

Collaboration with Island Communities: Island communities, with their unique challenges, can greatly benefit from proactive community engagement strategies that emphasize psychological safety. By involving community members in disaster preparedness and response planning and ensuring they feel psychologically safe to voice concerns or provide feedback, we can enhance community resilience.

Assessment and Continuous Improvement: Post-disaster evaluations should not only focus on the effectiveness of the physical response but also assess the levels of psychological safety within teams. Understanding areas where teams felt supported and where they felt vulnerable can provide valuable insights for refining future disaster response strategies.

By integrating psychological safety into the very fabric of disaster response strategies, we can ensure not just a more effective response but also the well-being and resilience of the teams at the forefront. When members of a team genuinely believe that they can voice their concerns, share their insights, and rely on their colleagues without fear of retribution or

judgment, they are not only more likely to succeed in their immediate tasks but also to grow and adapt to future challenges.

## VII. CONCLUSION

The significance of psychological safety in the realm of disaster response cannot be overstated. Recent events, such as the COVID-19 pandemic and large-scale natural disasters like wildfires, underscore the need for cohesive and efficient team dynamics (Kahn, 1990; Rozovsky, 2015). While most recognize the technical and logistical challenges these disasters present, it is the invisible architecture of team morale, trust, and psychological well-being that often dictates the efficacy of responses.

Island communities, such as the Hawaiian Islands, provide a unique context for understanding the essence of psychological safety. Given their geographical constraints and often limited resources, the margin for error in these regions is slim (Turner & Harder, 2018). Teams in such environments cannot merely depend on external resources; they must rely on their internal cohesion and the shared trust among members. Psychological safety ensures that the diversity of thoughts and innovative ideas are not just welcomed but are actively sought. It transforms vulnerabilities into strengths, as individuals feel empowered to communicate their concerns and insights without fear (Edmondson & Lei, 2014).

Furthermore, leaders stand at the crossroads of cultivating psychological safety. Their approach to feedback, communication, and inclusivity sets the tone for the entire team (Jug et al., 2019). However, it's not just about creating an environment free from fear; it's about fostering a space where individuals genuinely feel they belong and that their contributions are valued. Such environments can lead to improved problem-solving, adaptability, and ultimately better outcomes during crises.

In retrospect, while the challenges of each disaster are unique, the foundation upon which successful disaster response teams operate is remarkably consistent. Psychological safety, as evidence suggests, is that foundational element that bridges the gap between potential and performance, especially during times of unprecedented challenges. Future endeavors in disaster management should prioritize this intangible yet invaluable resource to bolster our collective resilience and efficacy.

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