

Psychological Safety in Crisis Preparedness and Management Training Context

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Crisis preparedness and management training is to a large degree about training for managing the unexpected. Psychological safety is a key aspect of creating an environment that upholds the criteria for optimizing mindful organizing. This provides a learning environment in which participants are not afraid of negative feedback and that is open and trustful – criteria important in creating shared situational awareness. Thus, our research question was, Is psychological safety established in simulated crisis preparedness and management training? In this study, we interviewed 10 informants and conducted a one-day observation of an exercise. Thematic analysis was used to analyse the data. We found that students, academic staff and facilitators, and mentors reported behaviour and a climate that were consistent with psychological safety but that elements such as more guidance and supervision and the evaluation of the roles of mentors were aspects for improvement.

Keywords: safety management, psychological safety, education, crisis management, mindful leadership, training, mindful organizing, managing the unexpected, simulation, preparedness

1. Introduction

Within management in high-risk contexts in which safety is a main concern, such as crisis preparedness and management, it is of utmost importance to train with relevant scenarios to be prepared for responses that need comprehensive coordinating competence. Rescue teams must cooperate and share information with each other, which requires effective communication and information sharing skills. During such training, simulation has been found to be a reliable option. Research on such simulated training revealed the learning-process wheel (Sætren et al., Forthcoming), which consists of preparation, psychological safety, mentors, learning objectives, context realism, and evaluations. In this study, we focus on the aspect of

psychological safety in the learning process.

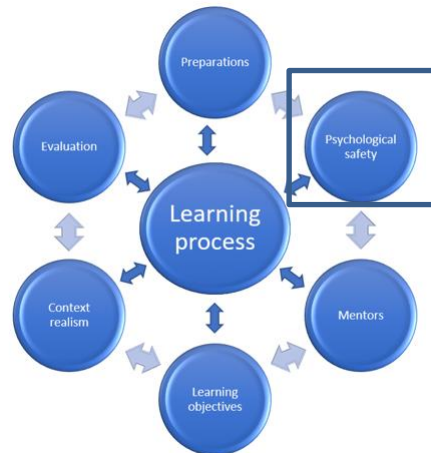


Figure 1: the pedagogical learning process wheel for NORDLAB. Use of model approved by authors

Psychological safety is an important aspect of learning. The concept relates to feeling safe and not fearing negative consequences when, for instance, asking questions or contributing to discussions (Edmondson and Lei 2014). Focus on team building and effective communication stimulates student participation, which again leads to advanced learning processes. Participants showing interest in each other's skills and competence, listening to each other, and not fearing rejection promotes effective learning within teams (Edmondson 1999; Edmondson, 2018). Further, participants feeling safe to interact with others with open and trustful communication based on good intentions creates a solid foundation for establishing shared situational awareness (Endsley, 1995), which is important in emergency management training. Thus, our research question was, Is psychological safety established in simulated crisis preparedness and management training?

Next, we present the theories of mindful organizing and psychological safety.

1.1. Organizational mindfulness and mindful organizing

Organizational mindfulness is a stable and enduring attribute of the organization, inherent in the organization's culture. Mindful organizing is a social, dynamic process based upon ongoing actions and continuous real-time communication. While the former is induced by upper management in a top-down manner and is strategic in nature, the latter is induced by front-line operators, in a bottom-up manner and is operational in nature. The middle management bridges organizational mindfulness and mindful organizing (Ray et al., 2011; Vogus & Sutcliffe, 2012). Organizational mindfulness strengthens organizations' ability to capture critical information related to the emerging crisis with the capacity to quickly respond with appropriate actions (Weick and Sutcliffe 2007). It is an organizational attribute developed from structures and practices of (a) regularly engaging in a dialogue about potential surprises or failures that might threaten reliability, (b) critically questioning the adequacy of assumptions about reliability for a nuanced and updated understanding, (c) integrating dialogue and critical thinking into an updated understanding of

the ongoing operations, (d) accepting and analysing setbacks for enhanced organizational learning, and (e) deferring to expertise above organizational structures (Vogus and Sutcliffe 2012; Weick and Sutcliffe, 2007). Organizational mindfulness shapes behaviour (Morgenson and Hofmann 1999) during crises for a more mindful organizing of emergency management and preparedness.

Mindful organizing during crises can thus be strengthened through training and simulations on what we think might go wrong and how we ought to properly respond when a crisis occurs. We believe such learning moments and methods increase organizational learning capabilities to prepare for and act in a real crisis because it strengthens students' meta-cognitive reflections and learning related to managing the unexpected (e.g., by enhancing their ability to draw novel distinctions, avoid biased perspectives and interpretations, and reduce mindlessly accepted truths and enhancing creativity and critical thinking).

Organizational mindfulness and mindful organizing are preconditions for creating psychological safety and are enhanced by it. Enabling dialogue about organizational vulnerability and critical questioning creates a safe environment in which to be curious and ask questions that can be discussed from various perspectives. Accepting variety in perceptions and interpretations and seeking to understand the broader picture through inclusive discussions creates an environment that accepts variety in mindsets and situational awareness.

1.2. Psychological safety

Psychological safety is found in a learning environment in which individuals feel comfortable to take risks without fear of negative consequences. The concept of psychological safety is closely linked to learning behaviour. First mentioned by Edmondson (1999), the concept has in the last decade been rediscovered, which has resulted in a large body of empirical research (e.g., Frazier et al. 2017; Newman et al. 2017). It has been found to be a powerful predictor of team performance (Duhigg, 2015; Edmondson, 2019).

Psychological safety is a concept of organizing for learning and involves three factors.

The first is setting the stage, which means creating a platform for asking questions, admitting errors, and discussing mistakes and how to participate proactively, achieved by, for instance, organizing meetings. The second is inviting. The teacher or the one responsible invites others to participate by asking questions with empathy. Thus, this factor refers to being inviting by how one asks questions. The third factor, responding respectfully, is linked to the second. If the question asked is, for instance, ‘Was everything as safe as you wanted it to be last week?’ and the person says no and elaborates about a concern, the response must be appropriate and address how that problem can be solved (Edmondson 2018).

2. Method

We chose a qualitative explorative design with interviews and observations for this study which is a part of a NORDLAB project on simulated safety management training in higher education, called SimSafe.

2.1. The researchers

The researchers have varied backgrounds ranging from psychology with specialization in human-machine interaction in high-risk industries and high-reliability organizations, pedagogy in high-hazard environments, simulation training in safety critical industries, e-learning, communication and management business administration and mindful leadership in high-achieving organizations, as well as expertise in qualitative methods.

2.2. Participants

The informants were students in the master’s Emergency Preparedness and Management programme, academic staff, facilitators, and mentors involved in simulated exercises at Nord University, NORDLAB.

2.3. Interviews and observation

For this study, 10 informants were interviewed in two group interviews and four individual interviews. The interviews were semistructured and conducted prior to the exercise during year two of the master programme. In addition, an exercise was observed during which the students

handled threats and were placed in different groups for different crisis management roles that required collaboration, including the police, county governor, municipality, and university crisis management teams.

2.4. Context

The master study programme, Master in Crisis Preparedness and Management, is an MBA for 70 students who are already working in safety critical industries. They are completing this master programme over a four-year period and studying part time. The exercise was conducted for the third-year students on the university campus site.

The observation was conducted during an one day exercise with hybrid threats where the objective was to train for conducting crisis management during the initial phases of an unexpected crisis. The actual incidents were a large unexpected demonstration at the university campus that got out of hand with people getting wounded, in addition to a threat at the main power station simultaneously resulting in lack of electricity. Cooperation and organization of the different organizational responsibilities and how to achieve shared situational awareness, were the main exercise moments to train for. The type of exercise was a role play divided in management groups from different organizations that took part in this scenario. Each group were assigned an experienced mentor from whom the students could seek advice during the play. The students were placed in groups where they were assigned roles as police, the crisis management at the local community, the crisis management at the University, and the crisis management at the County Governor.

Prior to the exercises the students were prepared for two weeks including lectures, panel debates, relevant crisis management documents from the different organizations they were representing, and had a thorough introduction on what is expected from them as well as answering any questions they might have had.

2.5. Analysis

The interviews and observation notes were analysed to explore in detail how psychological safety can be established in simulated exercises to optimize the learning context. Thematic analysis

was used to analyse the data (Braun and Clarke 2006).

2.6. Validity and ethics

There are several approaches to assuring quality in qualitative research (e.g., Kvale 1996; Yardley 2000). As a guide, we chose Yardley’s four principles: sensitivity to context, commitment and rigour, transparency and coherence, and impact and importance.

The project was ethically approved by NSD (now Sikt). All informants signed a research project information sheet, and thus had informed participation in the project.

3. Findings and discussion

The analysis revealed a focus on learning processes for the students from day one in the master’s programme at NORDLAB. This includes the simulated exercises and how they are prepared, run, and evaluated. The different groups had different experiences, as illustrated with explanations and quotations in Table 1.

Table 1. How groups experienced the learning context in relation to psychological safety and learning behaviour at NORDLAB during simulated exercises

Group	Description	Illustrative quotations
Students	The students were confident in speaking up and asking questions and reported that fruitful discussions were a good part of the education programme in general, including exercises. Some reported they would prefer more guidance, especially during exercises concerning behaviour and tasks.	<p>‘Yes, good communication in the group. I was not afraid to speak up.’</p> <p>‘We felt a little lack of control during the exercise. Like what is happening now? Have we done that? Has anything happened in relation to what we have decided?’</p>

Academic staff and facilitators	The academic staff and facilitators were conscious about creating an environment in which the participants know each other and have positive relationships outside the classroom. They encourage questions about and evaluations of the teaching methods as part of a continuous improvement process.	‘We work during the education for the students to get to know each other. We have meeting arenas outside educational ones [. . .] Facebook groups, [getting] together after class [. . .] eating dinner together in the evening while on assembly.’
Mentors	Mentors are not extensively included in preparations with the whole group and prefer the possibility to receive feedback on and discussion of their role. They are external and often busy.	‘The group of students were very pleased with mentor[ing], but I did never get proper feedback on how I played my role, and I miss that.’

To ensure safety managers prepare for the unexpected, psychological safety is a key concept that thrives from organizational mindfulness. Hence, creating psychological safety through simulation in the education context enhances crisis preparedness and management when the unexpected occurs. Creating a mindful and safe environment within the learning context is thus important in effective crisis preparedness and management training (Bunderson and Sutcliffe 2003, 2017; Vogus and Sutcliffe 2012). Therefore, mindfulness and safety should be embedded in the learning context at the team level and on an interpersonal level during education and should include all participants in the learning setting – academic staff, facilitators, mentors, and students. Consequently, we looked into psychological safety in the master programme of crisis preparedness and management training.

Vogus and Sutcliffe (2012) argue that practicing organizational mindfulness will lead to mindful organizing which in turn creates a feedback loop to organizational mindfulness. Therefore, we believe that the relationship should be viewed more in terms of a feedback loop cycle rather than linear and psychological safety could be seen as an important input into this loop. It enhances mindful organizing and is enhanced through organizational mindfulness.

According to our empirical analysis, the participants had slightly different experiences with and expectations of psychological safety. First, we found that the NORDLAB master's programme emphasizes psychological safety in simulation training (Sætren et al., Forthcoming). They create an open atmosphere for posing questions related to the simulation training and create an environment in which discussions about the educational methods is encouraged and invited to continuously improve. However, we believe that there is room for improvement and that mindfulness and safety in a learning context should be further evaluated and studied in future to improve research-based crisis preparedness and management training.

Teachers are responsible for creating a learning environment founded on psychological safety (Edmondson, 1999; Edmondson, 2018). Teachers should be good role models, setting the stage by asking questions with empathy, being truly invited and interested, and making students understand they really care, thus providing a mindful and safe learning environment that teaches behaviour that is useful for any teamwork (Edmondson 1999; Edmondson, 2018). This is also in line with mindful organizing (Morgenson and Hofmann 1999). Moreover, this enables students to learn how to facilitate a psychologically safe environment in their own work life, to enhance teamwork and learning processes. For the teacher to create a mindful and safe learning environment, they should articulate this concern to the students and engage them in reflection about improvements of the simulation training to enhance reflexivity for further developing the learning environment (Fiol and Lyles 1985; Hedberg 1981).

Second, all participants in the learning setting addressed psychological safety and regarded it as important. However, psychological safety (Edmondson, 1999; Edmondson, 2018) as a

concept was not explicitly used in the training or in the reflections about the training. About setting the stage, the students were encouraged to speak their minds and discuss the topic from their diverse backgrounds to invite multiple perspectives and interpretations for reflexivity (Vogus & Sutcliffe, 2012; Weick & Sutcliffe, 2015). The mentors, however, were concerned about and asked for an evaluation of their involvement in the training and missed a platform for discussing their role and their participation during exercises. The students further expressed that they would prefer more guidance from staff during exercises when they experienced confusion and insecurity. For instance, the students noted that when information was vague and they struggled to work out what to do, they would have preferred more hands-on guidance from and discussion with academic staff on how to approach and handle the complexity.

The findings also reveal concerns within the group of students who participated in the role-play about how to handle certain peers' behaviour. If one student's behaviour was not in accordance with expected learning behaviour or a student was domineering, the students would have preferred a staff member guiding that student more clearly, as such behaviour resulted in minimal reflection and discussion. This is closely connected to psychological safety and how mindful organizing during the exercises could provide a better learning environment for specific groups (Edmondson, 1999; Edmondson, 2018; Vogus & Sutcliffe, 2012). The findings also show that the participants were confused about group leadership. Sometimes participants were confused about who should intervene and provide behavioural guidance – the student group leader, the mentor, or the academic staff and facilitators who were available during the exercise. The outcome of the learning could have been better with a more open and empathetic group dynamic during role-play when such incidents occurred.

Finally, our analysis demonstrates that the academic staff and facilitators displayed great awareness of creating a mindful and safe learning environment (Edmondson, 1999; Edmondson, 2018) and emphasized the importance of students knowing each other outside the learning context. That could transfer into a more open environment for discussions during class. However, they were

not specifically working on mindfulness and psychological safety, nor had they established a proactive approach among themselves to work with this concept. The staff had meetings every six months to evaluate the master's programme. During these evaluation meetings, the academic staff and facilitators could focus on mindfulness and articulate among themselves how they work on creating psychological safety within the student group to optimize learning behaviour (Edmondson, 1999).

3.1. Impact and further research

This research could provide a deeper understanding of the importance of psychological safety and mindful leadership in simulated crisis management training. Other important outcomes are practical advice on how to achieve psychological safety and mindful leadership, and filling in the knowledge gaps.

Although crisis preparedness and management simulation training is founded on creating an effective learning environment, greater attention to and further studies on mindfulness and psychological safety are necessary to ensure such training is enhanced through research-based education. Investigating different exercises and courses will be beneficial for future research.

4. Conclusion

Psychological safety in the learning environment is achievable through mindful organizing. Both concepts are important for developing shared situational awareness and achieving effective learning in simulated crisis management training. The findings are probably transferable to other learning environments. Aspects such as arranging for students to get to know each other outside the classroom, asking questions with empathy in the learning context, and being interested in each other's experiences were found to be relevant to creating psychological safety. However, students requested elements such as more guidance on themes, tasks, and behaviour, and mentors requested more evaluation of their roles.

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