CQ Net
Learn what really matters

Workplace health and safety

How to create a safety climate through High Reliability Teams?

CQ Dossier | Evidence-based safety Mgmnt

The Author:

Dr. Annette Towler

Annette Towler was born in England and now lives in the United States. She has a PhD in Industrial and Organizational Psychology and has taught at several institutions. Annette has published in several journals, including Journal of Applied Psychology, Personnel Psychology, Human Resource Development Quarterly, and Organizational Research Methods. She worked in the public and private sector for many years, primarily as a management trainer.

CQ Net

Learn what really matters

CQ Net is the evidence-based management (EBM) team learning platform. Learn strategies & interventions that have been supported by scientific research. This CQ Dossier is part of the Evidence-Based Management Learning Team "What is an effective safety climate?".

Executive summary

This CQ Dossier focuses on the creation of an effective safety climate through High Reliability Teams (HRTs) in High Reliability Organizations (HROs). The dossier draws on theory and research on HRTs to provide a series of broad-based recommendations that will enable you to implement policies that support a strong safety climate in your organization.

Organizations should balance effectiveness and safety

Effective teams are those that balance effectiveness and safety despite the complexities of the environment and these teams are referred to as High Reliability Teams (Wilson, Burke, Priest & Salas, 2005). These types of teams are typically found in complex environments such as the nuclear industry, healthcare, and the oil industry. HRTs reflect the values of their organizations, whom show a commitment to excellence and safety.

HRTs must use closed loop communication

To promote shared situational awareness regarding safety issues, teams must use closed loop communication regarding internal and external factors that are pertinent for team performance (Wilson et al., 2005). Closed loop communication consists of the team's ability to exchange clear information, to acknowledge receipt of the information to confirm its understanding. For example, if a doctor prescribes medication for patients, it is important that the nurse acknowledges the request and verifies that the correct prescription is being obtained.

Train HRTs to use shared mental models

When HROs experience errors, the consequences can be damaging. One way to counteract errors is through greater collaboration in teams. Greater collaboration can be realized through shared mental models. Shared mental models reflects a team's ability to share compatible knowledge pertaining to individuals' roles in the team (Cannon-Bowers et al. 1995) which has also a positive impact on team performance

(DeChurch and Mesmer-Magnus 2010). This type of training is extremely important in teams that deal with major emergencies because they are expected to coordinate well within the team but also across teams (e.g., police, fire, ambulance teams). Extreme situations that require strict safety measures, such as weather events or a fire incident, require a multi-agency response (Power, 2018).

Focus training on teamwork skills

Many teams in complex environments undergo training that is focused on technical skills rather than on skills related to team work and decision making. However, in stressful and dangerous situations, this type of team work training is particularly crucial because it allows team members to coordinate behaviors. Coordination is an integral competence of HRTs because it allows for the balance of production and safety (Wilson et al., 2005). Crew Resource Management (CRM) (Kanki et al. 2010) is an example of an effective training program in the aviation industry that covers soft factors such as leadership, team dynamics, task management and communication beside pure technical and functional skills.

Build trust among HRT members

To create an effective safety climate it is important that team training focuses on the development of role-based trust. One of the characteristics of HRTs that excel in safety is that they value expertise rather the position of the person. In non-emergency HRTs, this affective trust builds over time yet is problematic in emergency teams. In teams that are reliant on 'swift' trust such as those in emergency situations, it is important that the teams understand the unique role of each team member (Power, 2018). When HRTs understand the role of each team member, this can lead to collective self-efficacy, which is the team's shared belief in its abilities to be effective. This increase in performance self-efficacy is balanced with safety. Training sessions such as team building and team training interventions can help teams to quickly learn about each other's roles and gain the required team competencies (Shuffler et al. 2011).

Train HRTs to understand culture and values of HROs

Teamwork training is also useful to build a shared sense of culture and values (Power, 2018). One of the characteristics of HRTs is that they reflect the culture and values of their organization and this is reflected in their attitude to safety (Wilson et al., 2005). Placing a value on safety is a universal value that can be transmitted through acquisition of knowledge and a commitment to the mission of the HRO.

Provide Feedback and Coaching to emphasize safety

One of the ways in which HRTs become effective safety advocates is through back up behavior. This is the capability of team members to give, seek and receive task feedback and aiding team members in performing their tasks. One way in which back-up behavior can be increased is through verbal feedback or coaching. Verbal feedback can take the form of constructive feedback whereby strengths and limitations of a person's performance are highlighted. Verbal feedback and coaching can also be useful for team cohesion and to enable team members to be faithful to the goals of effective and safe performance (Wilson et al., 2005).

Encourage error reporting in HRTs

One of the qualities of HROs is the acknowledgment of human error in the workplace. It is important that HRTs understand the nature and extend of error to change those conditions which lead to mistakes. An analysis can be conducted that allows for the development and implementation of training that helps decrease human errors (Wilson et al., 2005). Although human errors happen, well-trained HRTs provide constructive feedback to each other and team members seek feedback on their own and accept feedback from others. Team feedback is important after an event because the team can engage in debriefing sessions to discuss the positive and negative aspects of the event, particularly in terms of safety. An example is a surgical team who meet following a procedure to discuss ways to improve performance in the future (Cannon-Bowers et al.1995).

Use different types of training to ensure effective safety performance

There are several ways in which HRT members can gain safety expertise through training interventions. Cross-training is useful for team members to gain a clear understanding of how the team functions. Perceptual contrast training engages team members in active involvement in learning to create a deep understanding of the material. One useful type of training that focuses on safety is team self-correction training where team members learn to assess the effectiveness of their own behavior. This can be useful in ensuring that safety standards are met (Wilson et al., 2005).

This dossier provides recommendations that enable organizations to create an effective safety cliamte through the development of HRTs. Safety should be aligned with the mission of the organization and should be aligned with the values and culture of all incumbents from management to lower-level staff. Common HRM practices such as employee training and development initiatives enable acquisition of knowledge and skills that are relevant to the concern for safety.

Key take-aways

- Use closed loop communication
- Train HRTs to have shared mental models
- Build trust through appreciation of each team member's roles
- Use a variety of training methods, such as cross-training, to increase a commitment to safety
- Provide feedback and coaching to improve safety performance

References

Cannon-Bowers, J.A., Tannenbaum, S.I, Salas E, et al. (1995) Defining team competencies and establishing team training requirements. In: Guzzo R, Salas E, Associates, eds. *Team effectiveness and decision making in organizations*. San Francisco, CA: Jossey-Bass, 333–80.

DeChurch, Leslie A.; Mesmer-Magnus, Jessica R. (2010): Measuring shared team mental models. A meta-analysis. In: *Group Dynamics: Theory, Research, and Practice* 14 (1), S. 1–14. DOI: 10.1037/a0017455

Kanki, Barbara G.; Helmreich, Robert L.; Anca, José M. (Hg.) (2010): *Crew Resource Management*. 2nd ed. Amsterdam, Boston: Academic Press/Elsevier.

Power, N. (2018). Extreme teams: Toward a greater understanding of multiagency teamwork during major emergencies and disasters. *American Psychologist*, 73(4), 478-490.

Shuffler, Marissa L.; DiazGranados, Deborah; Salas, Eduardo (2011): There's a Science for That: Team Development Interventions in Organizations. In: *Curr Dir Psychol Sci* 20 (6), S. 365–372.

Wilson, K. A., Burke, C. S., Priest, H. A., & Salas, E. (2005). Promoting health care safety through training high reliability teams. *BMJ Quality & Safety*, 14, 303-309.

CQ Net
Learn what really matters

CQ Net - Cooperational Excellence
Innsbrucker Bundesstraße 27
5020 Salzburg, Austria
P: +43 662 231029 - 0
M: service@ckju.net
www.ckju.net

From speculation to impact. Learn how evidence-based management can make a difference for you and your organization.

Evidence-based

Our learning teams bridge the gap between social sciences and business such that evidence-based knowledge becomes accessible for managers and professionals.

Agile learning

Our agile team learning approach connects evidence-based knowledge with real life challenges. This increases learning transfer, is a great deal of fun.

100% online

We apply secure cutting edge Open Source Technology for time & space independent online collaboration.

Co-creation

The combination of evidence-based knowledge with the learning team members' individual experiences provides the perfect starting point for knowledge co-creation.

WHO WE ARE

CQ Net is the evidence-based management (EBM) team learning platform. Learn strategies & interventions that have been supported by scientific research.

Follow us on
Linkedin/Twitter/Facebook

WHY CHOOSE US

1. Learn what really counts based on cutting edge science.
2. Learn time & space independent in a safe online platform.
3. Learn from & with others in a team setting that motivates.
4. Learn about the most pressing “Human Factor” issues.