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BOOK OF ABSTRACTS

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Be mindful=be able to handle critical incidents: A mixed-method study among Italian air traffic controllers

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Research goals. Air traffic controllers (ATCOs) are among the most high-risk groups for critical incidents (CIs). Facing such incidents may hinder professional activity, undermine affected individuals' well-being and cause company financial losses. Shedding light on how and when ATCOs feel capable of managing CIs is crucial to formulate preventive measures that help companies reduce future incidents. This study aims to examine the mediating processes – i.e., problem-focused coping tendencies – and boundary conditions – i.e., previous experience with CIs and training on CI management – associated with the impact of mindfulness on self-efficacy in managing CIs.

Theoretical background. Mindfulness – the intentional and non-judgmental attention to present events (Brown et al., 2007) – is a personal resource for ATCOs (Kearney et al., 2016) as it enables them to make timely decisions (Li et al., 2018), be aware of and attentive to ICs (Li et al., 2014) to find solutions to address them (Liang et al., 2022). Although the link between mindfulness practices and self-efficacy has been proven (Charoensukmongkol, 2013), little is known about the factors enhancing self-efficacy in managing CIs among ATCOs. Based on the social cognitive theory (Bandura, 1989), prior experience with ICs and training in CI management are mastery experiences that can foster self-efficacy.

Design. A total of 168 Italian ATCOs completed questionnaires that measured mindfulness, self-efficacy in assessing and deciding about critical incidents, problem-focused coping tendencies, prior experience with CIs, training on CI management, and COVID-19-related experience variables. Descriptive statistics and moderated mediation analyses were performed. To deepen the quantitative results, ten semi-structured interviews were conducted and analysed using thematic analysis.

Results. High-mindful ATCOs were more problem-oriented and then self-confident about their ability to manage CIs, especially when they had prior experience with CIs and received training on CI management. Three core themes were identified from the interviews: decision-making as a core job aspect; environmental facilitators (training, social support); personal resources (prior experience, coping strategies, situational awareness).

Limitations. This cross-sectional study merely relied on self-report measurements.

Research/practical implications. This study moves a step forward in both the air traffic management and mindfulness literature, as it is the first to clarify how and when mindfulness can promote self-efficacy in managing CIs in the understudied population of ATCOs during the pandemic. ATCOs could benefit from on-the-spot mindfulness interventions, CI management, and problem-focused coping strategies training. Mentoring and sharing sessions could also help less experienced aviation personnel build skills.

Relevance to the Congress Theme. This study sheds new light on the personal and environmental factors that promote ATCOs' beliefs in their ability to manage ICs. This has implications for ATCOs' and air passengers' well-being and security.

Relevant UN SDGs . Good health and well-being.

Keywords: Air traffic controller, mindfulness, critical incident management