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Stress Management in High Pressure Scenarios in Aviation

CONFERENCE ABSTRACT

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Abstract

Aviation safety is primarily focused on technology-based systems, standard operating procedures, and rigorous training programs. Despite this, there is growing recognition of the importance of human performance, especially in how pilots manage stress under extreme pressure and time constraints. Research has investigated decision-making, workload, and CRM; however, there has been limited focus on the personal experience of pilots who experience stress during operational events (Casner et al., 2013). The purpose of this study was to fill this gap by examining the experiences of three commercial airline pilots from American Airlines, Gol Linhas Aereas, and Air France who all fly narrow-body aircraft. The three pilots reported having approximately 18,000 total flight hours. Semi-structured interviews using a qualitative, phenomenological design method were used to investigate how pilots experienced and regulated stress during abnormal and emergency flight situations. Three primary themes emerged from the data analysis process. These were: training/procedure discipline, time pressures/decision making, and communication via CRM. The three pilots consistently stated that their job required them to be constantly working under pressure. To mitigate the effects of stress, the pilots relied heavily

on the structured nature of routine work, checklists, and team-based decision making to maintain control over flights. The pilots also reported that instead of completely removing stress from their jobs, they learned to effectively manage their stress levels through preparation, prioritizing tasks, and coordinating efforts among crew members in the cockpit. These results emphasize the need for understanding both technical proficiency and psychological performance in the field of aviation. Additionally, these findings provide insights into developing training programs that can better prepare pilots to deal with stressful operational events, thereby promoting greater safety and more efficient flight operations.

Keywords: aviation, pilots, training,

References

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