

Abstract

Unresolved interpersonal tensions and intra crew conflicts represent a significant vulnerability for both safety culture and cockpit performance. A recent body of evidence confirms that these conflict dynamics are not episodic but structurally embedded in real world flight operations. In a safety critical environment such as aviation, these findings raise important questions regarding the predictive effectiveness of current selection models for cockpit personnel. This exploratory study examines the limitations of widely adopted aviation selection practices and highlights how, despite the integration of technical, cognitive, and relational assessments, they remain only partially effective in identifying behavioural risk factors that may later evolve into operational conflict. Emerging patterns suggest the presence of deeper professional dimensions—often overlooked within traditional assessment frameworks—that contribute to these dynamics and remain insufficiently evaluated in a predictive perspective. The analysis indicates that conflict prone behaviour frequently results from the interaction of several variables: incomplete interpretation of the systemic operational context, suboptimal management of hierarchical relationships, limited behavioural modulation under pressure, and insufficient alignment between individual motivations and organisational goals. Such factors represent one of the least explored and least assessed domains within current selection methodologies. Building on these findings, the paper proposes an evolution of the selection model toward a safety oriented approach grounded in the assessment of systemic compatibility between the candidate and the aviation environment. The proposed model translates recurrent patterns identified in the aviation safety literature and in internal training data into ex-ante organisational requirements, targeted assessment procedures, observable behavioural indicators, and explicit thresholds of acceptability aimed at enhancing the accuracy of selection decisions. By extending the traditional purpose of selection—focused primarily on assessing technical professional suitability—with a behavioural risk prediction capability, the model strengthens the identification of individuals capable of operating effectively within high reliability systems. This contributes to consolidating a more robust safety culture and supports a proactive approach to human factors management across aviation operations.