

The effects of psychological safety and employee voice behavior on flight attendants' mindful safety practices adoption

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Executive Summary

This study investigates how psychological safety influences flight attendants' adoption of mindful safety practices, with employee voice behavior as a mediating mechanism, and ethical leadership and traditionality as moderating variables. The authors argue that psychological safety is an antecedent of voice participation, which in turn promotes proactive safety behavior among cabin crew. Data were collected via a two-wave self-reported questionnaire from 621 flight attendants across four Chinese private commercial airlines, analyzed using PLS-SEM. Results confirmed that in-flight safety communication and pro-social safety voice mediate the relationship between psychological safety and mindful safety practices, while upward safety communication did not demonstrate a significant mediating effect. Ethical leadership strengthened the link between psychological safety and in-flight safety communication only, not the other two voice behaviors. Traditionality was found to weaken the positive effects of upward safety communication and pro-social safety voice on mindful safety practices. The study concludes that cultural factors and leadership style interact with psychological safety in shaping aviation safety behavior, with implications for crew resource management and organizational safety culture in Chinese commercial aviation.

Key Insights

1. Psychological safety positively predicts in-flight safety communication and pro-social safety voice among flight attendants, but was negatively associated with upward safety communication, suggesting hierarchical communication norms constrain vertical voice behavior in the Chinese aviation context.
2. In-flight safety communication and pro-social safety voice serve as significant mediators between psychological safety and mindful safety practices, while upward safety communication does not, indicating that peer-level and organizationally-motivated voice channels are more proximal drivers of proactive cabin safety behavior.
3. Traditionality as a cultural moderator weakens the impact of upward safety communication and pro-social safety voice on mindful safety practices adoption, suggesting that high-traditionality organizational cultures suppress the translation of voice behavior into safety action, whereas in-flight safety communication remains unaffected — interpreted by the authors as a life-and-death imperative overriding cultural constraints.

Practical Takeaways

- Ethical leadership moderates the relationship between psychological safety and in-flight safety communication, indicating that leadership style functions as a contextual amplifier for certain types of safety voice behavior in high-risk aviation environments.
- The study identifies crew resource management (CRM) training as a mechanism referenced within the aviation industry for improving teamwork and communication between flight attendants and pilots, particularly in addressing barriers to intra-aircraft communication.

Frameworks Mentioned

Conservation of Resources (COR) Theory — A motivational theory used to explain how personal resources (psychological safety) and condition resources (ethical leadership) interact to drive employee behavior, framing ethical leadership as a condition resource that amplifies psychological safety's effect on voice participation.

Social Exchange Theory (SET) — A theoretical framework positing that perceived ethical, caring, and supportive leadership generates reciprocal positive behaviors from employees, used here to explain why flight attendants engage in voice behavior when they perceive their leaders as trustworthy and moral.

Critical Analysis

Strengths: The two-wave data collection design reduces common method variance risk; the sample size of 621 exceeds minimum requirements; PLS-SEM is appropriate for the complex mediated-moderated model; Harman's single-factor test and HTMT ratios are reported, with bootstrap confidence intervals used to address discriminant validity concerns. The study addresses a genuinely under-researched population.

Limitations: The sample is restricted to Chinese private commercial airlines, limiting cross-cultural and cross-industry generalizability. The negative relationship found between psychological safety and upward safety communication (H2 rejected with a negative beta) is an anomalous and theoretically counterintuitive finding that receives insufficient explanation. The HTMT value between upward safety communication and pro-social safety voice exceeds the liberal 0.90 threshold, raising residual discriminant validity concerns despite bootstrap remediation. All measures are self-reported, introducing social desirability bias despite procedural controls. The study is cross-sectional in the structural model, limiting causal inference. The explained variance added by the moderators (3.8% for mindful safety practices) is modest, suggesting limited practical magnitude of the cultural and leadership moderation effects. The qualitative post-hoc interpretations based on interviews with flight attendants from two companies are informal and not systematically integrated into the research design.

Organizational Practice

Four Chinese private commercial airline companies participated in data collection. Flight attendants, deputy pursers, and chief pursers completed a two-wave online questionnaire distributed via internal WeChat work groups. The study describes organizational practices including safety reporting cultures, crew communication hierarchies, supervisory oversight of flight attendants by pursers, and crew resource management (CRM) training programs as mechanisms for improving intra-crew communication and teamwork.

Strategic Implications

The findings indicate that psychological safety operates indirectly on proactive safety performance through voice channels, suggesting that performance management systems in high-risk industries may need to account for cultural moderators such as traditionality when designing safety reporting and communication frameworks. The differential effectiveness of voice types (peer-level versus upward) across cultural contexts points to variability in how organizational hierarchy shapes safety behavior, with implications for how aviation organizations in high-traditionality cultures structure safety feedback mechanisms. The modest variance explained by moderators (3.8% for the outcome variable) suggests that cultural and leadership variables, while statistically significant, contribute limited incremental predictive power to safety outcomes beyond psychological safety and voice behavior alone.

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