

## **Factors Associated with Fatal and Non-Fatal Accidents of Commercial Aviation Fixed-Wing Aircraft in Indonesia (2007-2018)**

**Authors :** Adre Dwi Wiratama, Budi Sampurna, Syougie Ali, Djunadi

**Abstract :** Background: Even though safety is a priority in Commercial Aviation (CA) operations, fatal fixed-wing aircraft accidents still occur frequently in Indonesia. Objective: This research aims to determine factors associated with fatal and non-fatal CA fixed-wing aircraft accidents in Indonesia. Methods: The research used a cross-sectional design, which was carried out in July 2023. It included all final reports on fixed-wing aircraft accidents published by the Indonesian National Transportation Safety Committee (KNKT). Analysis was conducted using chi-square and Fisher's exact test methods using IBM SPSS software version 29.0. Results: Out of 52 final reports, 25 were fatal. The study found that factors associated with a higher risk of fatal accidents are pilots in command with CPL, unpressurized aircraft, single-engine aircraft, aircraft with MTOW less than 5,700kg, accidents occurring at weekends, accidents occurring outside of airport premises, CFIT occurrences, and the cruise phase of flight. The factor associated with non-fatal accidents is the landing phase. Conclusion: Efforts such as enhancing pilot training and certification processes, implementing stricter safety regulations for small, unpressurized, single-engine aircraft, and increasing safety measures during weekends and specific phases of flight can reduce future fatal accidents.

**Keywords :** fatal accident, fixed-wing aircraft, commercial aviation

**Conference Title :** ICOSHS 2024 : International Conference on Occupational Safety and Health Studies

**Conference Location :** Kuala Lumpur, Malaysia

**Conference Dates :** December 09-10, 2024