THE ROLE OF FLIGHT EXPERIENCE, SITUATION ASSESSMENT AND DISTANCE TRAVELED ON PILOTS' DECISIONS TO CONTINUE FLIGHT INTO ADVERSE WEATHER

Juliana Joo-Hong Goh, B.S.S.
Department of Psychology
University of Illinois, Urbana-Champaign, 2002
Douglas A. Wiegmann, Advisor

Visual Flight Rules (VFR) flight into Instrument Meteorological Conditions (IMC) remains a major safety hazard in General Aviation. This study examined the effects of weather location, pilots' situation assessment capabilities, and the role of flight experience in pilots' decisions to either continue or divert from a flight into adverse weather. The amount of time and distance traveled into the adverse weather conditions was recorded. The results indicated that pilots who encountered the weather early in flight flew further and longer into the adverse weather before deciding to divert, and had more positive estimates of weather conditions, compared to pilots who encountered the weather later in the flight. Flight experience was also negatively correlated with the time and distance traveled. Flight experience was positively correlated with pilots' self-ratings of various aspects of decision making ability, but the results did not suggest that more experienced pilots were better at assessing weather conditions. These findings suggest that pilots engage in VFR flight into IMC partly because of poor situation assessment and lack of flight experience, rather than motivational factors that encourage risk-taking behavior. Interventions to reduce the occurrence of VFR flight into IMC should therefore focus on improving pilots' weather evaluation skills either through training or aircraft technology.