

Article outline is loading...

JavaScript required for article outline



## Safety Science

Volume 50, Issue 3, March 2012, Pages 472– 477



## Characteristics of pilots who report deliberate versus inadvertent visual flight into Instrument Meteorological Conditions

Mark W. Wiggins<sup>a</sup>, David R. Hunter<sup>b</sup>, David O' Hare<sup>c</sup>, Monica Martinussen<sup>d</sup><sup>a</sup> Department of Psychology, Macquarie University, NSW 2109, Australia<sup>b</sup> Preoria, AZ, United States<sup>c</sup> Department of Psychology, University of Otago, New Zealand<sup>d</sup> Department of Psychology, University of Tromsø, Norway<http://dx.doi.org/10.1016/j.ssci.2011.10.010>, [How to Cite or Link Using DOI](#)[View full text](#)[Purchase \\$39.95](#)

### Abstract

Aircraft accidents and incidents associated with visual flight into instrument weather conditions continue to account for a significant proportion of fatalities involving general aviation aircraft. The aim of this study was to examine pilot recounts of flights involving inadvertent or deliberate flight into Instrument Meteorological Conditions (IMC). Of the 251 responses that were examined, 145 pilots indicated that they had entered IMC inadvertently during a visual flight, while 93 had done so deliberately. Amongst non-instrument-rated pilots, two cohorts were identified whereby pilots who deliberately entered instrument conditions tended to have experienced the conditions previously, possess a comparatively greater tolerance of risk, experienced less anxiety during the event recounted, and perceive the risks associated with the transition into instrument conditions as relatively lower than those pilots whose entry into instrument conditions was inadvertent. These results are interpreted as confirmation of the need to address the problem of visual flight into instrument conditions from a number of different perspectives, taking into account experience and individual differences in risk tolerance.

### Highlights

- ▶ Compared pilots who entered instrument conditions deliberately or inadvertently.
- ▶ Compared pilots on the basis of whether they held an instrument rating.
- ▶ Differences in risk perception, hazardous events, previous experience, and anxiety.
- ▶ We differentiated two different groups of non-instrument rated pilots.
- ▶ Preventing aircraft accidents associated with flight into IMC needs different interventions.

### Keywords

Risk perception; Weather decision-making; Hazard awareness; Aviation

### Figures and tables from this article:

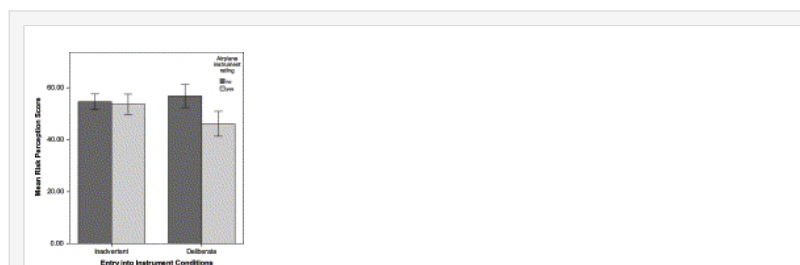


Fig. 1. Mean risk perception score for pilots who entered instrument conditions deliberately or inadvertently, distributed across instrument-rated and non-instrument-rated pilots.

Figure options

Table 1. Mean levels of anxiety during the event and perceptions of the risk after the event, of entry into instrument conditions.



[View Within Article](#)



Corresponding author. Tel.: +61 (0) 2 9850 9705; fax: +61 (0) 2 9850 8062.

Copyright ©2011 Elsevier Ltd. All rights reserved.