

https://dspace.org/

Factors underlying human errors in air traffic control

De Reuck, Samantha

2015-02-13
http://hdl.handle.net/10539/16984

Downloaded from a DSpace repository. https://dspace.org/

Abstract

The main objective of Air Traffic Control is to ensure the safe and orderly movement of aircraft through airspace. The primary aim of this study was to explore and identify the factors underlying human error in Air Traffic Control, based on safety event reports from the years 2010 to 2012. A total of 84 incident reports were analysed from airports spanning South Africa. Core factors that were explored included human factors, demographic factors, external factors, shift variables, risk factors and stated causal factors. This was done through the use of content analysis, cluster analyses and logistic regressions. The main results showed that errors in information processing factors, physical workplace designs, poor co-ordination standards and lack of memory cues are predictors of safety events. It was also established that lapses are predictors of poor information processing in controllers whilst poor workplace designs are a predictor of lapses. Finally, a lapse in itself is a predictor of safety events. These finding may direct future research into the possibility of lapses as a mediating variable between poor workplace designs and information processing errors.

Acknowledgements

I would like to express my great appreciation to Dr. Fiona Donald, for her guidance and supervision. Advice and assistance given by both Ian Siemers and Professor Andrew Thatcher was a great help in the statistical analyses used. I would like to thank the Air Navigation Service Provider for their assistance in the data processing. Lastly, I would like to thank my friends and family for their unrelenting support and patience throughout my studies.