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**EXPLORING A MODEL OF PSYCHOLOGICAL FITNESS FOR WORK: Are
individual difference variables relevant in a model of safety performance?**

Thesis submitted by

Lisa Michelle BRAND BPsych (Hons)

in August 2010

For the degree of Master of Philosophy

In the Department of Psychology

James Cook University

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Abstract

This research investigated the psychological factors that moderate the impact of psychological health and significant life events upon workplace safety behaviour and performance. Through the process of this research, the following key questions were addressed;

1. What is the relationship of individual difference variables to safety performance?
2. Can models of job performance be applied to the specific condition of individual differences and safety performance?

The research brings together individual difference theories including: cognitive models of emotion, personality and workplace performance in a framework that incorporates psychological theories of employee workplace performance and work/home interface. Subsequently, these were considered in the safety performance context. This research will make a significant contribution to current workplace health and safety practice, specifically enabling workplaces to target psychological fitness for work factors to enhance workplace safety performance.

A cross sectional survey design was employed to investigate the phenomena in the proposed models. The sample consisted of 172 males and 7 females, ranging in age from 18 to 65 years. The sample represented a cross section of a large Australian mining operation. Structural equation modeling was applied in the development of three structural models, exploring relationships amongst hypothesized latent variables. A

sequential approach was taken to the covariance modeling. Subsequent assessment of the respecified measurement model revealed an adequate fit to the data ($\chi^2(200) = 415.28$, $p \leq 0.001$, comparative fit index (CFI) = 0.95, root-mean-square error of approximation (RMSEA) = 0.08). Multivariate testing of the structural relationships revealed support for the application of the model of job performance to the specific context of safety. The structural models investigated the effects of psychological ill health on safety determinants, ($\chi^2(223) = 541.25$, $p \leq 0.001$, comparative fit index (CFI) = 0.93, root-mean-square error of approximation (RMSEA) = 0.09) and safety outcomes ($\chi^2(183) = 477.12$, $p \leq 0.001$, comparative fit index (CFI) = 0.93, root-mean-square error of approximation (RMSEA) = 0.10) in the context of moderation. The final model tested the moderation hypothesis in a mediation model, the impact of psychological ill health on safety outcomes was not mediated by safety determinants, ($\chi^2(244) = 566.88$, $p \leq 0.001$, comparative fit index (CFI) = 0.93, root-mean-square error of approximation (RMSEA) = 0.08). Cumulatively, the results were not supportive of the hypothesized relationships. The results were discussed in terms of their relevance for models of job performance and the subsequent application of these findings in the development of a model of psychological fitness for work.

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