

Running Head: Job Demands, Job Resources, Safety and Burnout in Air Traffic Management
Technicians

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Job Demands, Job Resources, Safety Behaviours, and Burnout in Air Traffic Management

Technicians

The University of the Witwatersrand

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Declaration

I declare that this research project is my own, unaided work. It has not been submitted before for any other degree or examination at this or any other university.

Signature:

Date: 15/03/2017

Abstract

The aim of the present study was to utilise a mixed methods design as a means of investigating the relation between job demands, job resources, safety, and burnout in Air Traffic Management (ATM) technicians. It was also of interest to determine participants' perspectives on the job demands and resources that may be present in their occupational environment, their participation in safety behaviours, and their perceptions regarding their work and safety performance. Non-probability, convenience sampling was employed to acquire the participants of the present research study. Participants included 33 ATM technicians (50.77% response rate) who took part in the quantitative component of the research study and 14 ATM who took part in the interview process. Participants' ages ranged from 27 to 55 years ($M = 38.91$; $SD = 8.76$) and 90.1% were male ($n = 30$). Jackson and Rothmann's (2005) original Job Demands-Resources Scale was used for the assessment of the job demands and resources sixteen items were also added to the original JDRS scale. Sixteen items were added to incorporate the possible job resources and demands experienced by ATM technicians, which were separated into the following sub-scales: shifts, weather conditions, travel, and equipment. Schaufeli, Leiter, Maslach, and Jackson's (1996) Maslach Burnout Inventory-General Survey (MBI-GS) was used to assess ATM technicians' burnout. Safety behaviours were assessed through the integration of items found within two safety behaviour scales developed by Neal and Griffin (2006) and Hofmann and Morgeson (1999). A semi-structured interview process consisting of open-ended questions was used to discuss the following issues: job tasks, job demands, job resources, burnout, job safety, work-family spillover, and job performance. The findings depicted a weak, positive correlation between the perception of job demands and the experience of burnout ($r = .376$, $p < .05$) and a weak, negative correlation between the perception of job resources and the experience of burnout ($r = -.383$, $p < .05$). Job resources significantly predicted the experience of burnout ($\beta = -.494$, $p = .002$), as did job demands ($\beta = .489$, $p = .003$). A moderate, positive correlation between the perception of job resources and safety behaviours was obtained ($r = .514$, $p < .01$). The participants' perceptions of job resources explained 26.5% of the variance in safety behaviours, ($R^2 = .265$, $F(1, 31) = 11.16$, $p < 0.05$). ATM technicians took part in the following safety behaviours: they consistently communicated with both management and air traffic controllers as a way of knowing exactly what the problem is before they went to a site, they took part in training programs as a means of keeping up to date with the latest technological knowledge, attended safety meetings, always communicated with management on how to increase safety, and made sure that a first aid kit was always available. ATM technician's safety and performance appeared to be heavily influenced by their own personal understanding of the occupation's risks, the weather conditions that take place on each specific site, the safety equipment that is worn, the knowledge of the possible repercussions that may arise from making any mistakes, and their own individual mood or disposition.