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Cognitive ability and job performance in a New Zealand service organisation

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Catherine Mann

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Abstract

This study investigated cognitive ability and job performance theoretically and empirically. A New Zealand government organisation tested job candidates' verbal, numeric and abstract abilities during their selection procedure and appraised employees' task, contextual and team performance as part of their performance management system. The service-based organisation provided scores on these variables for 43 recently hired employees. There was partial support for the hypothesis that cognitive abilities were related, as numeric reasoning scores correlated significantly with verbal reasoning ($r = .38, p = .018$) and abstract reasoning scores ($r = .36, p = .023$). Verbal reasoning scores did not correlate significantly with abstract reasoning scores ($r = .24, p = .128$), though this was probably due to low power. Individual task and contextual performance ratings correlated with each other as hypothesised ($r = .32, p = .036$), supporting the theory that some performance processes relate to both task and contextual performance. Team dynamics were expected to obscure simple linear relationships between team performance and individual-level variables and, as hypothesised, team performance did not correlate significantly with task or contextual performance, or cognitive abilities. Abstract reasoning did not show significant positive correlations with task or contextual performance, contrary to expectations, indicating that participants already had job-related experience. Numeric reasoning was not expected to relate to task or contextual performance as work was service based and not likely to require numeric ability, which was borne out in the non-significant correlations. Verbal ability scores correlated positively with task performance ratings ($r = .44; p < .001$), supporting the hypothesis that verbal ability would be associated with task performance in a service organisation. Verbal reasoning scores did not correlate with contextual performance ratings. Implications of these results for criterion-related validity, as well as cognitive ability and job performance theories are discussed along with limitations of the study and suggestions for future research.

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