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Job demands and resources: Flourishing and job performance in South African universities of technology settings

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We investigated the extent to which perceived job demands and resources influenced work-related flourishing and job performance among academic staff in South African universities of technology. Participants were 339 lecturers from three universities of technology (female = 53.8%; junior lecturers = 15.7%; mean age = 45 years, SD = 10 years; job tenure = 77.3% more than five years). Lecturers completed job demands, job resources, flourishing at work, and job performance measures. We utilised latent variable modelling to predict flourishing at work and job performance scores from job demands and resources scores. The results indicated job resources (specifically role clarity, advancement, and remuneration) to predict flourishing at work. Role clarity and flourishing at work predicted job performance. In line with job demands theory, the availability of resources was positively associated with flourishing at work and job performance of academic employees.

Keywords: advancement, flourishing, performance, remuneration, role clarity, work overload

Introduction

Perceived and actual job demands and resources influence employees' quality of work-life and work performance (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). Job demands refer to those physical, psychological, social, or organisational aspects of a job that require sustained cognitive and emotional effort or skills and are associated with physiological and psychological costs (Bakker, Demerouti, & Sanz-Vergel, 2014; Demerouti & Bakker, 2011). Job resources refer to those physical, psychological, social, or organisational aspects important to work performance (Rothmann & Jordaan, 2006). Job performance refers to what an individual achieves in the job setting (Awang et al., 2015). The availability of job resources diminishes work participation related to physiological and psychological costs, stimulating personal growth, learning and development (Demerouti & Bakker, 2011; Salmela-Aro & Upadyaya, 2014). Barkhuizen, Rothmann, and Van de Vijver (2014) reported job demands and a lack of job resources as contributing to burnout, whereas job resources contributed to work engagement. Employees who know what their organisation expects of them can engage in the expected behaviour and are more likely to experience meaning at work and a purpose within the organisation (Steger, Littman-Ovadia, Miller, Menger, & Rothmann, 2013). This study aimed to investigate job demands and resources as antecedents of flourishing at work and job performance in a South African higher education setting.

Perceived job demands and resources achieve their effect on quality of work-life and performance through work engagement, learning, and commitment (Bakker & Demerouti, 2012). Work engagement, learning, and commitment are key characteristics of work-related flourishing (Keyes, 2002; Rautenbach, 2015). Flourishing at work refers to employee well-being from positive workplace experiences. By contrast, work-role languishing is associated with ill-being from negative work experiences. Flourishing at work is associated with superior work performance, while the converse is true for languishing at work (Demerouti, Bakker, & Gevers, 2015; Rothmann, 2014, 2015). Two studies (Diedericks & Rothmann, 2014; Swart & Rothmann, 2012) found that fewer individuals were languishing (3% and 3.9% respectively), a higher percentage was flourishing (48.5% and 37.6% respectively), while most would be neither flourishing nor languishing (48.5% and 58.5% respectively).

Job demands and resources in context

The context (job demands and resources) in which employees find themselves at work influences their flourishing at work (e.g., employee experiences of job satisfaction, autonomy, purpose, engagement, and meaningful work), and job performance. Conservation of Resources (COR) theory (Hobfoll, 2002) proposes that resource depletion is psychologically damaging and results in reduced levels of well-being, while the availability of resources contributes to mental health. An increase in the workload of educators leads to a decline in job satisfaction, which adversely influences their job performance (Khan, Rosman, Yusoff, & Khan, 2014).

In the higher education setting, superior job performance has been attributed to availability of academic development opportunities (Awang et al., 2015; Wärnich, Carrell, Elbert, & Hatfield, 2015), while a lack of such a professional development job resource may have the opposite effect (Pienaar & Bester,2009). Few studies have examined the extent to which job demands and resources explain elements of flourishing at work and self-rated job performance in higher education. For instance, Rautenbach (2015) and Awang and colleagues (2015) reported healthy job demands and job resources to explain work-role flourishing among academic staff. Rothmann and Jordaan

(2006) focused on the increased work engagement of academics in higher education institutions; namely growth opportunities in the job, organisational support, and advancement opportunities. Bezuidenhout and Cilliers (2010) found high workload among academic staff to be aggravated by unclear roles and responsibilities, which can be linked to role clarity (a job resource).

The South African universities setting

Universities in sub-Saharan Africa continue to operate under conditions that are under-resourced, with academic staff experiencing high workloads that negatively affect their well-being and performance (Higher Education South African; HESA, 2011). Several studies (see for example Barkhuizen & Rothmann, 2008; Barkhuizen, Roodt, & Schutte, 2014; Barkhuizen, Rothmann, & Van de Vijver, 2014; Bezuidenhout & Cilliers, 2010; Pienaar & Bester, 2009, Rothmann & Jordaan, 2006, Van Tonder & Fourie, 2015) reviewed aspects of job demands and resources and their implications in a Southern African higher education setting.

However, few studies focused on universities of technology. Academic staff at universities of technology experience the university setting differently than traditional universities (Leibowitz, 2014). Research by Leibowitz (2014) showed that universities of technology often attract students from disadvantaged schools. These students have lower levels of literacy skills than the average university student has, and are viewed as a so-called under-prepared student at university level (Singh, 2015). Academics in higher education institutions increasingly deal with a "publish or perish" culture (Cameron & Woods, 2016). Historically technikons, now known as universities of technology, did not focus on research capacity building and publications. These institutions facilitated the acquisition of technology-based qualifications, while research-intensive universities enjoy the highest level of resourcing and outputs (Leibowitz, 2014). These scenarios elicit additional challenges for university of technology lecturers that may affect their resources, flourishing, and performance.

Goal of the study

This study sought to predict flourishing at work and job performance from self-reported job demands and resources by university lecturers. It addresses the following question: To what extent do perceived job demand (work overload) and resources (role clarity, remuneration, and advancement) explain flourishing at work and job performance indicators among academic staff at universities of technology?

Understanding the determinants of academic employees' role behaviour at work would allow higher education institutions to best support their employees in their job performance, which in turn would enhance employees' job satisfaction and work motivation.

Method

Participants

Three hundred and thirty-nine employees from the Vaal University of Technology (28.9%), the Tshwane University of Technology (46.9%), and the Central University of Technology (24.2%) in the Free State and Gauteng provinces in South Africa, participated in the study. The response rate was 23% (n = 339). Table 1 presents the sample demographics.

Table 1. Characteristics of the participants (n = 339)

Item	Category	Frequency	Percentage
Gender	Male	156	46.2
	Female	182	53.8
Age	24 to 35 years	69	20.4
	36 to 45 years	115	33.9
	46 to 55 years	92	27.1
	56 to 65 years	56	16.5
	66 to 74 years	7	2.1
Home language	Afrikaans	191	56.3
	English	65	19.2
	African language	83	24.5
Highest qualification	Diploma	4	1.2
	Postgraduate diploma	8	2.4
	Degree	44	13.0
	Honours degree	27	8.0
	Master's degree	148	43.6
	Doctoral degree	108	31.8
Tenure	Less than 5 years	111	32.7
	5 to 10 years	99	29.2
	11 to 15 years	66	19.4
	16 to 20 years	37	11
	21 to 25 years	20	5.9
	More than 25 years	6	1.8
Position	Junior lecturer	53	15.7
	Lecturer	172	50.9
	Senior lecturer	84	24.8
	Professor/Associate professor	12	3.6
	Head of department	17	5.0

Measures

Participants responded to the Flourishing-at-Work Scale-Short Form (FAWS-SF: Rautenbach, 2015), Job Demand-Resources Scale (JDRS: Rothmann, Mostert, & Strydom, 2006), and the Job Performance Scale (JPS: Goodman & Svyantek, 1999). Additionally, they self-reported their demographics.

Flourishing-at-Work Scale-Short Form

The FAWS-SF is a 17-item measure of work-related emotional well-being, psychological well-being, and social well-being. Responses are scored on a six-point scale ranging from 1 (never), to 6 (every day). To be classified as flourishing, individuals must experience at least one of the three symptoms of emotional well-being and at least eight of the 14 signs of positive functioning (psychological well-being and social well-being) "every day" or "almost every day". To be classified as languishing, individuals must "never" or "once or twice" during the last month have experienced at least one sign of emotional well-being and at least eight of the symptoms of psychological and social well-being. Individuals who experience moderate well-being are those who are neither flourishing nor languishing. In the present study, internal consistencies of scores from the FAWS-SF ranged from 0.82 to 0.93.

Job Demand-Resources Scale

The JDRS comprises 12 items to measure overload, role clarity, remuneration, and advancement. Items are scored on a scale ranging from 1 (never), to 6 (every day). In the present study, internal consistencies of scores from the JDRS ranged from 0.76 to 0.92.

Job Performance Scale

The JPS is a 7-item measure of self-perceptions regarding "in-role" job performance. Items are scored on a Likert-type scale varying from 1 (low), to 10 (high). In the present study, internal consistency for scores from the JPS was 0.81.

Procedure

Ethical clearance for the study was granted by the North-West University (ethics number: NWU-HS-2014-0126). Participants were provided with a cover letter explaining the purpose of the study, the confidentiality of the data, and their right to withdraw from the project at any time without penalty. Participants individually consented to take part in the study. Participants completed an online questionnaire from the end of August until mid-October 2015. An Excel spreadsheet was used to capture the responses to the items, whereafter it was converted to an SPSS dataset for analysis.

Data analysis

Data were analysed using latent variable modelling in Mplus 7.4 (Muthén & Muthén, 1998-2016) and SPSS23 (IBM Corp, 2016). The robust maximum likelihood estimator (MLR) was used to test the measurement and structural models. The following indices were used to assess model fit: (i) absolute fit indices, including the chi-square statistic (the test of absolute fit of the model), standardised root mean square residual (SRMR), root mean square error of approximation (RMSEA), and (ii) incremental fit indices, including Tucker-Lewis index (TLI) and comparative fit index (CFI) (West, Taylor, & Wu, 2012). For acceptability, TLI and CFI values should be higher than 0.90 (West et al., 2012). RMSEA values lower than 0.08 indicate a close fit between the model and the data (West et al., 2012). Mplus 7.4 (Muthén & Muthén, 1998-2016) was used to compute a confirmatory factor analysis-based estimate of scale reliability (ρ) for each scale (Raykov, 2009). The practical significance of correlations and percentages of variance explained were assessed by using the guidelines developed by Cohen (1988). A correlation of 0.50 is large, 0.30 is moderate, and 0.10 is small. Cohen (1988) provides the following guidelines regarding the practical significance of R^2: 0.25 – large effect; 0.09 – 0.24 medium effect, and < 0.09 – small effect.

Results

Descriptive statistics of flourishing in universities of technology

Figure 1 shows the mean scores on the 17 items of the FAWS-SF. The lowest scores were obtained on social well-being. Frequency analysis indicated that 12.4% of academics were languishing, 43.1% were flourishing, and 44.5% were experiencing moderate mental health at work.

Testing the measurement model

The measurement model consisted of three latent variables; namely (i) job resources and demands, (ii) flourishing at work, (iii) and individual performance. Job resources and demands consisted of four first-order latent variables; namely role-clarity (measured by three items), remuneration (measured by three items), advancement (measured by three items), and overload (measured by three items). Flourishing at work consisted of three first-order latent variables; namely emotional well-being (measured by three items), psychological well-being (measured by nine items), and social well-being (measured by five items). Six items measured individual performance.

The abovementioned measurement model showed unacceptable fit to the data: $\chi^2 = 1349.16$, $df = 576$; $p < 0.001$; TLI = 0.87; CFI = 0.88; RMSEA = 0.06 [90% CI 0.059, 0.067, $p = 0.001$]; SRMR = 0.08. One item of the FAWS-SF ("Feel you had something important to contribute to your organisation") and two items of the JPS ("Achieve the objectives of the job" and "Perform well in your job") were removed to improve model fit. Furthermore, two sets of items on the FAWS-SF ("Feel your work is meaningful" and "Feel that the work you do serves a greater purpose" as well as "Get excited when you perform well on your job" and "Feel energised when you work") showed high error covariances. The measurement model was respecified without the three items and two error covariances. The final measurement model showed acceptable fit statistics on most of the fit indices: $\chi^2 = 879.32$, $df = 444$; $p < 0.001$; TLI = 0.91; CFI = 0.92; RMSEA = 0.05 [90% CI 0.049, 0.059, $p = 0.115$]; SRMR = 0.06. Therefore, the items included in the measures correlated with the hypothesised latent variables.

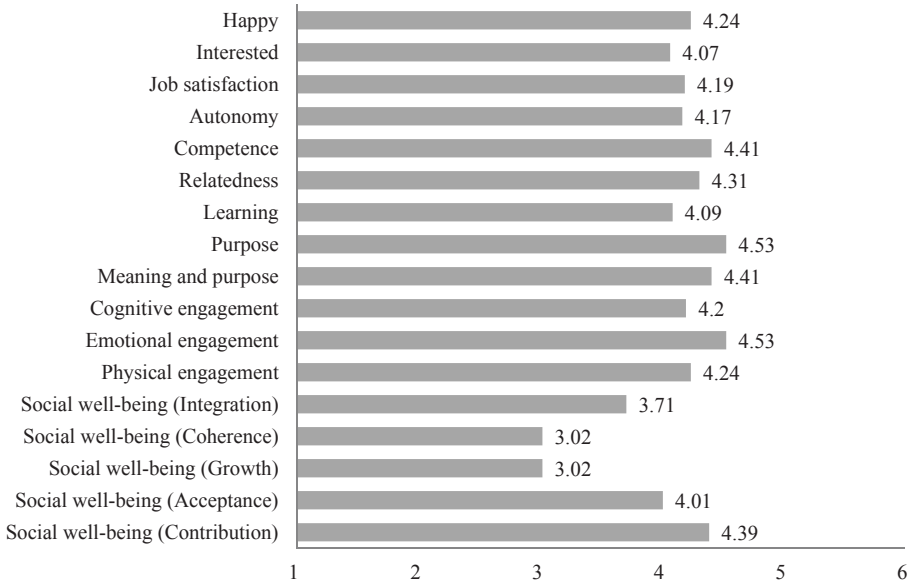

Figure 1. Mean scores on 17 items of flourishing at work

Table 2. Descriptive statistics, reliability coefficients and correlations of the scales (n = 339)

Variable	ρ	Mean	SD	1	2	3	4	5	6	7	8
Overload	0.88	3.68	1.29	–	–	–	–	–	–	–	–
Role clarity	0.73	4.46	1.11	−0.03	–	–	–	–	–	–	–
Remuneration	0.90	3.54	1.64	−0.12	0.19**	–	–	–	–	–	–
Advancement	0.81	3.12	1.38	−0.11	0.30**	0.62**	–	–	–	–	–
Emotional well-being	0.82	4.17	1.08	−0.02	0.51**	0.26**	0.50**	–	–	–	–
Psychological well-being	0.90	3.44	1.30	−0.03	0.53**	0.27**	0.52**	0.91**	–	–	–
Social well-being	0.90	4.32	1.00	−0.02	0.45**	0.23**	0.44**	0.77**	0.80**	–	–
Flourishing	0.93	4.07	1.00	−0.03	0.54**	0.28**	0.54**	0.93**	0.98**	0.82**	–
Performance	0.81	8.29	1.25	−0.07	0.38**	−0.05	−0.06	0.31**	0.32**	0.27**	0.33**

** Correlation is significant at the 0.01 level (2-tailed)

Table 3. Standardised regression coefficients for job demands and resources on flourishing and performance

Variable	Estimate	SE	Estimate/SE	p
Flourishing ON				
Overload	0.03	0.06	0.52	0.607
Role clarity	0.42	0.08	5.56	< 0.000**
Advancement	0.47	0.13	3.49	< 0.000**
Remuneration	0.09	0.11	0.77	0.440
Performance ON				
Flourishing	0.25	0.09	2.75	0.006**
Overload	0.06	0.06	1.04	0.298
Role clarity	0.29	0.08	3.55	< 0.000**
Advancement	−0.09	0.14	−0.64	< 0.522
Remuneration	−0.11	0.09	−1.22	< 0.222

**$p < 0.01$

The descriptive statistics (means and standard deviations) and reliability are reported in Table 2. The results showed high scores on role clarity (mean = 4.46; SD = 1.11) which reflects a perception that individuals feel that they are certain about what is expected of them in their jobs. Lower ratings were found for overload (mean = 3.68; SD = 1.29), remuneration (mean = 3.54; SD = 1.64), and advancement (mean = 3.12; SD = 1.38). This gives an indication that academic staff do feel overloaded with tasks, feel that remuneration is not sufficient, and that there are not enough advancement opportunities. Correlations between the flourishing subscales ranged from 0.44 to 0.91. Emotional, psychological, and social well-being were not statistically significantly related to overload. Furthermore, overload, remuneration, and advancement were not statistically significantly related to job performance.

Emotional well-being (i.e. job satisfaction and positive affect), psychological well-being (autonomy, relatedness,

competence, engagement, learning, meaning, and purpose), and social well-being (i.e. social contribution, social acceptance, social growth, social coherence, and social integration) were statistically significantly and positively related to role clarity (practically significant, large effect), and advancement (practically significant, medium effect). The flourishing dimensions of emotional, psychological, and social well-being were statistically significantly and positively related (practically significant, medium effect) to individual performance. Individual performance was statistically significantly and positively related to role clarity (practically significant, medium effect).

Predicting flourishing at work and job performance from job demands and resources

The structural model was tested based on the measurement model. The fit statistics of the structural model show a good fit to the data on most fit indices: $\chi^2 = 879.32$, $df = 444$, $p < 0.0001$; CFI = 0.92; TLI = 0.91; RMSEA = 0.05 [0.076, 0.084], $p = 0.115$; SRMR = 0.06. No difference was found between the measurement and structural models, which provides support for the specified structural model. Table 3 indicates the standardised regression coefficients when flourishing and performance were considered as dependent variables.

Furthermore, Table 3 shows that overload did not statistically significantly predict flourishing and job performance. Role clarity ($\beta = 0.42$, $p < 0.0001$) and advancement ($\beta = 0.47$, $p < 0.0001$) had statistically significant effects on flourishing.

Flourishing had a significant effect on individual performance ($\beta = 0.25$, $p < 0.01$). The regression coefficient was statistically significant and had the expected sign. Role clarity had a significant effect on individual performance ($\beta = 0.29$, $p < 0.0001$). Overload, role clarity, and advancement had no statistically significant relations with job performance. Job resources explained 45.6% of the variance in flourishing, which confirms that job resources have a large positive effect on flourishing at work. Flourishing and role clarity explained 19.6% of the variance in individual job performance.

Discussion

The results of this study showed that 43.1% of academics were flourishing, 44.5% were experiencing moderate levels of flourishing, and 12.4% were languishing. Higher education employees may be self-reporting with more flourishing than languishing from the meaningfulness of their work, meeting new instructional challenges and taking knowledge development to new heights (Leibowitz, 2014; Leibowitz, Bozalek, Van Schalkwyk, & Winberg, 2015; Singh, 2015). For instance, academic employees are continuously innovating regarding how to teach large classes, Information and Communication Technology-enabled learning, online learning, regulations and reporting, employment-linked and market- demand academic programmes, and strategic priorities. This is done within the context of increasingly diminishing infrastructure support and asset optimisation (Deloitte & Touche, 2011). The demands for increased postgraduate completions by higher education institutions and adoption of a business model towards research supervision, publications, and staff qualifications may cause languishing among some of the academic staff (Singh, 2015).

Work overload had no statistically significant effect on employees' flourishing at work. In fact, work overload had no statistical significant relation with any of the variables included in this study. One possible reason for this finding might be that employees who find their job full of meaning and purpose are often willing to deal with overload (Wrzesniewski, 2012; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Meaningfulness of work is associated with workplace well-being, irrespective of workload or or financial reward (Wrzesniewski, 2012; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Another explanation may be that workload is associated with exhaustion and ill health rather than well-being (see Barkhuizen et al., 2014).

The results showed that the two job resources of role clarity and advancement predicted flourishing at work. Employees who experience role clarity have a clear sense of what is expected of them and engage in positive behaviour such as flourishing (Rothmann, 2015). By contrast, employees who lack role clarity may experience a lack of control in their jobs, which can contribute to languishing at work and poor performance (Barkhuizen et al., 2014; Pfeffer, 2018). Advancement opportunies for academic staff were related to their work flourishing. The positive effects of advancement on work flourishing may follow from the related benefits such as competence, career progression, better performance, growth and autonomy (Anitha, 2014; Bagraim, 2011; De Gieter & Hofmans, 2015; Mowday, Porter, & Steers, 2013; Rothmann, 2014; Wärnich et al., 2015; Youssef & Luthans, 2012). Satisfactory compensation stimulates desirable employee behaviours and attitudes such as performance, competence, engagement and job satisfaction (Anitha, 2014; De Gieter & Hofmans, 2015; Mowday, Porter, & Steers, 2013). Remuneration did not predict flourishing or languishing in the structural regression model, most likely because its effects were neutralised by the correlations between remuneration and other job resources (e.g., advancement and role clarity).

Implications for workplace flourishing practices

Senior management at higher education institutions need to recognise the critical role that flourishing can play in the workplace. In doing so, they should invest in the holistic promotion of flourishing of individuals by implementing organisational interventions that focus on increasing job resources, such as an orientation and coaching programme for early career academics. Flourishing of academics and effective performance partly depend on their understanding of what is expected of them at work (Rothmann, 2015; Taris & Schaufeli, 2015).

Unfortunately, academics might not receive information that is necessary for adequate well-being and task performance. Senior management in higher education should provide for assessment and evaluation of employees through a performance feedback system based on up-to-date job descriptions. Engaging academic staff in career conversations, participation in large group meetings,

job redesign, job-related training, employee empowerment, career development, interaction with co-workers, and job crafting (Bakker et al., 2014; Diedericks & Rothmann, 2014; Rothmann, 2014, 2015; Wärnich et al., 2015) would likely enhance their job performance. As an example, job crafting training teaches employees how to proactively change their own work environment and is a useful tool for coping with organisational stress and other work pressures (Wrzesniewski, 2012). By focusing on such interventions, flourishing at work could be increased which would also increase individual performance in the long term.

Limitations of the study and suggestions for further research

Limitations of the study include the sole reliance on self-report data and a convenience study sample restricted to three universities of technology. Self-report measures have the limitation of causing inflated results. Convenience sampling limits the external generalisation of findings and given the cross-sectional design of the study, it was not possible to study the stability of flourishing over time. Lastly, only a small number of resources and demands were measured in this study. Future studies should engage in longitudinal studies to determine the lasting effects of job demands and resources of flourishing across types of higher education institutions.

Conclusion

Our results showed that the two job resources of role clarity and advancement predicted flourishing at work. Furthermore, flourishing at work and role clarity contributed to self-ratings of individual job performance. Work overload did not affect flourishing at work and job performance, whilst flourishing at work and role clarity contributed to self-ratings of individual job performance. Our findings support a model in which job resources were strong positive predictors of flourishing at work. From these findings, we suggest that universities of technology provide for job resources to promote the flourishing and performance of academics. Academic staff with job resources would likely provide quality support to their students.

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References

Anitha, J. (2014). Determinants of employee engagement and their impact on employee performance. *International Journal of Productivity and Performance Management, 63*(3), 308–323. https://doi.org/10.1108/IJPPM-01-2013-0008

Awang, A., Ibrahim, I. I., Nor, M. N. M., Razali, M. F. M., Arof, Z. M., & Rahman, A. R. A. (2015). Academic factors and turnover intention: Impact of organization factors. *Higher Education Studies, 5*(3), 24–44. https://doi.org/10.5539/hes.v5n3p24

Bagraim, J. (2011). Motivating the South African workforce. In A. Werner (Ed.), *Organisational behaviour: A contemporary South African perspective* (3rd ed., pp. 81–114). Pretoria, South Africa: Van Schaik.

Bakker, A. B., & Demerouti, E. (2012). *Job Demands-Resources theory. Well-being: A complete reference guide*. Chichester, United Kingdom: Wiley-Blackwell.

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. I. (2014). Burnout and work engagement: The JD–R approach. *Annual Review of Organizational Psychology and Organizational Behavior, 1*(1), 389–411. https://doi.org/10.1146/annurev-orgpsych-031413-091235

Barkhuizen, N., Roodt, E., & Schutte, N. (2014). Talent management of academics: Balancing job demands and job resources. *Mediterranean Journal of Social Sciences, 5*, 2033–2038.

Barkhuizen, E. N., & Rothmann, S. (2008). Occupational stress of academics in South African higher education institutions. *South African Journal of Psychology. Suid-Afrikaanse Tydskrif vir Sielkunde, 38*(2), 321–336. https://doi.org/10.1177/008124630803800205

Barkhuizen, N., Rothmann, S., & Van de Vijver, F. J. R. (2014). Burnout and work engagement of academics in higher education institutions: Effects of dispositional optimism. *Stress and Health, 30*(4), 322–332. https://doi.org/10.1002/smi.2520

Bezuidenhout, E., & Cilliers, F. V. N. (2010). Burnout, work engagement and sense of coherence in female academics in higher-education institutions in South Africa. *SA Journal of Industrial Psychology, 36*(1), 1–11. https://doi.org/10.4102/sajip.v36i1.872

Cameron, A., & Woods, C. (2016). A proposed 'ladder of learning' for academics' professional development in teaching. *South African. The Journal of Higher Education, 30*(6), 176–190.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

De Gieter, S., & Hofmans, J. (2015). How reward satisfaction affects employees' turnover intentions and performance: An individual differences approach. *Human Resource Management Journal, 25*(2), 200–216. https://doi.org/10.1111/1748-8583.12072

Deloitte & Touche. (2011). *Making the grade 2011: A study of the top 10 issues facing higher education institutions*. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/ie/Documents/PublicSector/2011_makign_the_grade_deloitte_ireland.pdf

Demerouti, E., & Bakker, A. B. (2011). The Job Demands-Resources model: Challenges for future research. *SA Journal of Industrial Psychology, 37*(2), 1–9. https://doi.org/10.4102/sajip.v37i2.974

Demerouti, E., Bakker, A. B., & Gevers, J. M. P. (2015). Job crafting and extra-role behavior: The role of work engagement and flourishing. *Journal of Vocational Behavior, 91*, 87–96. https://doi.org/10.1016/j.jvb.2015.09.001

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands resources model of burnout. *The Journal of Applied Psychology, 86*(3), 499–512. https://doi.org/10.1037/0021-9010.86.3.499

Diedericks, E., & Rothmann, S. (2014). Flourishing of information technology professionals: Effects on individual and organisational outcomes. *South African Journal of Business Management, 45*(1), 27–41. https://doi.org/10.4102/sajbm.v45i1.115

Goodman, S. A., & Svyantek, D. J. (1999). Person-organization fit and contextual performance: Do shared values matter? *Journal of Vocational Behavior, 55*(2), 254–275. https://doi.org/10.1006/jvbe.1998.1682

Griffin, M. A., Neal, A., & Parker, S. K. (2007). A new model of work role performance: Positive behaviour in uncertain and interdependence contexts. *Academy of Management Journal, 50*(2), 327–347. https://doi.org/10.5465/amj.2007.24634438

Higher Education South Africa (HESA). (2011). *A generation of growth: Proposal for a national programme to develop the next generation of academics for South African higher education*. Pretoria, South Africa: University of South Africa.

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology, 6*(4), 307–324. https://doi.org/10.1037/1089-2680.6.4.307

IBM Corp. (2016). *IBM SPSS statistics: Version 23*. Chicago, IL: IBM Corporation.

Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*(2), 207–222. https://doi.org/10.2307/3090197

Khan, F. I., Rosman, M. D., Yusoff, I., & Khan, A. (2014). Job demands, burnout and resources in teaching a conceptual review. *World Applied Sciences Journal, 30*(1), 20–28.

Kogan, M., & Teichler, U. (2007). Key challenges to the academic profession and its interface with management: Some introductory thoughts. In M. Kogan & U. Teichler (Eds.), *Key challenges to academic profession* (pp. 9–15). Kassel, Germany: Jenior.

Leibowitz, B. (2014). Conducive environments for the promotion of quality teaching in higher education in South Africa. *Critical Studies in Teaching and Learning, 2*(1), 49–73. doi: 10.14426/cristal.v2i1.27

Leibowitz, B., Bozalek, V., Van Schalkwyk, S., & Winberg, C. (2015). Institutional context matters: The professional development of academics as teachers in South African higher education. *The Higher Education, 69*(2), 315–330.

Mowday, R. T., Porter, L. W., & Steers, R. M. (2013). *Employee-organization linkages: The psychology of commitment, absenteeism, and turnover*. New York, NY: Academic Press.

Muthén, L. K., & Muthén, B. O. (1998–2016). *Mplus users' guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.

Pfeffer, J. (2018). *Dying for a paycheck: How modern management harms employee health and company performance – and what to do about it*. Toronto, Canada: Harper Business.

Pienaar, C., & Bester, C. (2009). Addressing career obstacles within a changing higher education environment: Perspectives of academics. *South African Journal of Psychology. Suid-Afrikaanse Tydskrif vir Sielkunde, 39*(3), 376–385. https://doi.org/10.1177/008124630903900311

Rautenbach, C. (2015). *Flourishing of employees in a fast moving consumable goods environment* (Unpublished Doctoral Dissertation). North-West University, Vanderbijlpark, South Africa.

Raykov, T. (2009). Interval estimation of revision effect on scale reliability via covariance structure analysis. *Structural Equation Modeling, 16*(3), 539–555. https://doi.org/10.1080/10705510903008337

Rizzo, J., House, R., & Lirtzman, S. (1970). Role conflict and ambiguity in complex organizations. *Administrative Science Quarterly, 15*(2), 150–163. https://doi.org/10.2307/2391486

Rothmann, S. (2014). Flourishing in work and careers. In M. Coetzee (Ed.), *Psycho-social career meta-capacities: Dynamics of contemporary career development* (pp. 203–220). Dordrecht, The Netherlands: Springer. https://doi.org/10.1007/978-3-319-00645-1_11

Rothmann, S. (2015). Career experiences. In A. M. G. Schreuder & M. Coetzee (Eds.), *Career psychology* (pp. 351–399). Johannesburg, South Africa: Van Schaik.

Rothmann, S., & Jordaan, G. M. E. (2006). Job demands, job resources and work engagement of academic staff in South African higher education institutions. *SA Journal of Industrial Psychology, 32*(4), 87–96. https://doi.org/10.4102/sajip.v32i4.247

Rothmann, S., Mostert, K., & Strydom, M. (2006). A psychometric evaluation of the Job Demands-Resources scale in South Arica. *SA Journal of Industrial Psychology, 32*(4), 76–86. https://doi.org/10.4102/sajip.v32i4.239

Salmela-Aro, K. S., & Upadyaya, K. (2014). School burnout and engagement in the contexts of demands-resources model. *The British Journal of Educational Psychology, 84*(1), 137–151. https://doi.org/10.1111/bjep.12018

Singh, R. (2015). Current trends and challenges in South African higher education. *South African Journal of Higher Education, 29*(3), 1–7. http://dx.doi.org/10.20853/29-3-494

Steger, M. F., Littman-Ovadia, H., Miller, M., Menger, L., & Rothmann, S. (2013). Engaging in work even when it is meaningless: Positive affective disposition and meaningful work interact in relation to work-engagement. *Journal of Career Assessment, 21*(2), 348–361. https://doi.org/10.1177/1069072712471517

Swart, J., & Rothmann, S. (2012). Authentic happiness of managers, and individual and organisational outcomes. *South African Journal of Psychology. Suid-Afrikaanse Tydskrif vir Sielkunde, 42*(4), 492–508. https://doi.org/10.1177/008124631204200404

Taris, T. W., & Schaufeli, W. B. (2015). Individual well-being and performance at work. In M. van Veldhoven & R. Peccei (Eds.), *Well-being and performance at work* (pp. 15–34). New York, NY: Psychology Press.

Van Tonder, D., & Fourie, E. (2015). The effect of job demands and a lack of job resources on South African educators' mental and physical resources. *Journal of Social Sciences, 42*(1), 65–77. https://doi.org/10.1080/09718923.2015.1189 3395

Wärnich, S., Carrell, M. R., Elbert, N. F., & Hatfield, R. D. (2015). *Human resource management in South Africa* (5th ed.). Hampshire, United Kingdom: Cengage Learning.

West, S. G., Taylor, A. B., & Wu, W. (2012). Model fit and model selection in structural equation modeling. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 209–231). New York, NY: The Guilford Press.

Wrzesniewski, A. (2012). Callings. In K. S. Cameron & G. M. Spreitzer (Eds.), *The Oxford handbook of positive organizational scholarship* (pp. 45–55). New York, NY: Oxford University Press.

Wrzesniewski, A., McCauley, C., Rozin, P., & Schwartz, B. (1997). Jobs, careers, and callings: People's relations to their work. *Journal of Research in Personality, 31*(1), 21–33. https://doi.org/10.1006/jrpe.1997.2162

Youssef, C. M., & Luthans, F. (2012). Positive global leadership. *Journal of World Business, 47*(4), 539–547. https://doi.org/10.1016/j.jwb.2012.01.007