

Stressors and Emotional Exhaustion Among Academic Staff in Higher Education

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Abstract

This cross-sectional study examines the impact of workplace stressors on emotional exhaustion (EE) among academic staff working in higher education institutions. The study aimed to identify key workplace stressors associated with EE in order to inform targeted preventive interventions. Data were collected using a self-developed workplace stressor survey together with the Maslach Burnout Inventory–Educators Survey (MBI–ES). Correlation and regression analyses were conducted to examine associations between workplace stressors and EE. Seven of the 21 stressors examined showed practically significant correlations with EE, while five stressors made independent and unique contributions to the variance in EE in the regression analyses. Although causal relationships cannot be inferred due to the study design, the findings identify priority areas for organisational intervention and provide guidance for developing strategies to reduce stress-related EE among academic staff in higher education.

Keywords: Higher education; stress; emotional exhaustion; burnout; academic staff

1. Introduction

The higher education sector has undergone substantial transformation since the COVID-19 pandemic, including shifts in teaching modalities (OECD, 2021), expanded use of e-teaching (Morris et al., 2020), and increased remote working (Gross, 2024; Steinfeld, 2025). These changes have introduced additional job demands (Demerouti et al., 2001), which may adversely affect academic well-being.

This study focuses on identifying contemporary sources of stress among academics and examining the stressors that most fundamentally shape their well-being. Drawing on the Job Demands–Resources (JD–R) model (Demerouti et al., 2001), the study assumes that increased job demands are likely to lead to stress when they are not adequately offset by available resources. Maslach et al.'s (2001) theory of burnout aligns closely with the JD–R framework, as both emphasise the balance between demands and resources. Prolonged exposure to

workplace stressors – such as heavy workloads, limited control, and insufficient resources – is therefore proposed to result in burnout (Maslach et al., 2001).

The study aims to address burnout in the academic context by examining whether certain workplace stressors are particularly potent in producing negative outcomes, specifically emotional exhaustion (EE). One hypothesis is proposed: all identified stressors exert an equal influence on EE among academics. The aim was to test and potentially reject this hypothesis, in order to identify specific stressors. Gaining deeper insight into the stressors that negatively affect academics (Cao et al., 2024; Dlamini & Dlamini, 2024; Naidoo-Chetty & Du Plessis, 2021) may provide higher education institutions with evidence-based guidance to better balance job demands with resources and to target well-being interventions more effectively.

2. Literature review

The JD–R model (Demerouti et al., 2001) provides a useful framework for understanding workplace stress and burnout by distinguishing between job demands and job resources. Job demands – such as workload, emotional demands, time pressure, role ambiguity, and role conflict – require sustained effort and may result in physical or psychological strain when they exceed an individual's capacity to cope. In contrast, job resources, including social support, feedback, autonomy, skill variety, and opportunities for career development, help employees achieve work goals, mitigate job demands, and foster personal growth. The JD–R model emphasises balance between demands and resources, as excessive demands in the absence of adequate resources are associated with burnout and reduced job satisfaction, whereas sufficient resources promote engagement, satisfaction, and productivity. This framework has been successfully applied in university contexts (Barkhuizen et al., 2014; Salanova et al., 2010).

Within higher education, stress is widely reported among academic staff. Palafox Carvajal and Domínguez Guedea (2021) found that approximately 20% of academics experience stress, while Blix et al. (1994) reported that nearly two-thirds of university teachers experience work-related stress at least half of the time. From a JD–R perspective (Demerouti et al., 2001), stressors in academic work include workload and emotional demands, time pressure, role ambiguity, and role conflict. Academic staff face increasing demands related to online teaching, research productivity, publication expectations, and administrative responsibilities, often accompanied by limited control due to insufficient resources. This imbalance contributes substantially to burnout (Avargues & Borda, 2010), with work overload consistently identified as a primary source of stress in university settings (Gillespie et al., 2001).

Research on burnout among university staff similarly indicates widespread prevalence, although reported rates vary. Lackritz (2004) found that approximately 20% of university professors reported high levels of burnout, while Amir (2020) reported rates as high as 40%. A systematic review by Watt and Robertson (2011) supports the widespread presence of burnout in higher

education. In contrast, lower prevalence rates have been reported by Herranz-Bellido et al. (2006) and Palmer et al. (2016). Regarding burnout dimensions, several studies identify EE and depersonalisation as core components (Avargues et al., 2010), while others emphasise reduced personal accomplishment as the dominant manifestation among academics, with depersonalisation contributing least (Ardıç & Polatci, 2008; Marengo-Escuderos & Avila-Toscano, 2016).

3. Method

A cross-sectional survey design was employed, with data collected via an online questionnaire. The target population comprised all academic staff at the university, with institutional email addresses serving as the sampling frame, as the aim was to conduct a census.

Data were collected on six demographic variables – job type, job level, work arrangements, sex, age, and tenure – using the Academic Job Demands Questionnaire (AJDQ) and the Maslach Burnout Inventory–Educators Survey (MBI–ES) (Van Horn & Schaufeli, 1998). The AJDQ comprised stressors identified in the JD–R model (Demerouti et al., 2001) and those associated with academic work (Palafox Carvajal & Domínguez Guedea, 2021). It was developed with the support of ChatGPT, acknowledged as a tool for generating synopses (Steyn & Msweli, 2023), and refined through multiple rounds of review by a group of academics. The final instrument had 22 items; 21 were used in regression analyses after excluding item 7 due to conceptual overlap with EE. The MBI–ES builds on the seminal work of Maslach et al. (1997) and Schaufeli et al. (1994) and assesses EE, depersonalisation, and personal accomplishment. The focus of this study was EE, defined as feelings of being emotionally drained and overwhelmed by work demands, resulting in depletion and fatigue.

All demographic data were categorical or measured on ordinal scales and were presented narratively to comply with space limitations. Brief reliability (Cronbach's alpha) and validity information (CFA) are reported. Pearson product–moment correlation analyses were conducted to examine the strength and direction of relationships between stressors and EE, following Cohen's (1988) guidelines, which indicate that $r \geq .50$ represents a large effect. In the regression analyses, R^2 was interpreted as the coefficient of determination, and predictors were considered to make a unique contribution when associated p-values fell below the specified threshold (Field, 2018).

Ethical clearance was obtained from the University of South Africa's College of Human Sciences CREC (NHREC Registration No. Rec-240816-052; Ref. No. 2327) and, due to the involvement of university staff, from the Senate Research Permission Sub-committee (RPSC) of the Research, Innovation, Postgraduate Degrees and Commercialisation Committee (SRIPCC; Ref. No. 2024_RPC_049). All ethical guidelines were followed, and no ethical breaches were reported.

4. Results

A total of 265 responses were received. Given a permanent academic staff complement of 1,823 (Unisa, 2023), this represents a response rate of 14.5%, which is close to the anticipated rate. A low response rate can be attributed to frequent survey requests, leading to survey fatigue and limited engagement with online surveys.

The sample was predominantly female (69.3%), followed by male respondents (29.9%). Most respondents were aged 31–40 years (33.3%), followed by those aged 41–50 years (25.8%) and 51–60 years (23.1%). In terms of tenure, most respondents had 0–5 years (28.4%), 11–15 years (23.1%), or 6–10 years (20.5%) of service, with progressively fewer reporting longer tenure. The majority of respondents were lecturers (36.0%) or senior lecturers (34.8%), followed by associate professors (11.4%) and professors (10.2%). Most respondents reported working mainly in the office (40.2%) or in hybrid arrangements (23.5%), while fewer worked mostly away from (21.6%) or exclusively in or away from the office. This reporting serves to anchor the interpretation of the findings and the assessment of sample representativeness.

The reliability of the AJDQ (21 items) was high, with a Cronbach's alpha of .898. The Cronbach's alpha for the MBI-ES EE subscale (8 items) was .923. Normality tests were performed, and the data were found to meet the minimum requirements. With regard to factorial validity, AJDQ was treated as unidimensional while MBI-ES demonstrated acceptable absolute model fit, although incremental fit indices fell below conventional thresholds, suggesting that the hypothesised factor structure is broadly supported. Two inferential statistics are presented, namely correlation analysis and regression analysis.

Table 1: Correlations between stressors and EE

Stressor	N	R	p
<u>1. To what extent do you feel overloaded with work responsibilities?</u>	260	0.724	< .001
2. How often do you have to manage emotional demands, such as dealing with difficult situations, students, or colleagues?	262	0.472	< .001
3. To what extent does pressure to complete tasks within limited timeframes form part of your job?	261	0.483	< .001
<u>4. How often do you experience uncertainty about your job responsibilities and role within the institution?</u>	260	0.513	< .001
<u>5. To what extent do you feel pulled in multiple directions due to conflicting job roles or responsibilities?</u>	261	0.604	< .001
<u>6. How often do you perceive a lack of control over your job-related decisions and tasks?</u>	262	0.631	< .001
<u>8. To what extent do you feel overwhelmed by the volume of tasks and responsibilities in your role?</u>	261	0.718	< .001
<u>9. How often do you find yourself multi-tasking due to various demands in your position?</u>	262	0.547	< .001
10. To what extent do the demands of the evaluation system create stress for you in your academic role?	261	0.480	< .001
11. How often do you experience pressure related to the promotion and achievement of career milestones?	262	0.359	< .001
12. Is there a lack of scientific recognition in your academic field?	261	0.468	< .001
13. Please rate your comfort level in addressing diversity and inclusion issues in your role.	261	0.311	< .001
14. How effective is the leadership and management support you receive in your role? (Reverse)	261	0.436	< .001
<u>15. How often do concerns about your mental health and well-being affect your work performance?</u>	261	0.492	< .001
<u>16. Please rate the opportunities for professional growth and development in your current role. (Reverse)</u>	262	0.211	< .001
17. How does the required level of scientific production contribute to your job demands and stress?	259	0.497	< .001
<u>18. How do the number of teaching hours you are responsible for affect your job demands and stress?</u>	261	0.513	< .001
19. How often does your workload require you to work during the weekend?	262	0.344	< .001
20. How well does your university support the integration of technology into your processes? (Reverse)	261	0.299	< .001
21. Rate the extent to which the pressure to supervise post-graduate students research affects your job satisfaction.	259	0.304	< .001
22. How confident do you feel in adapting to and using evolving technologies in your job? (Reverse)	262	-0.052	.403
Work Stress (Total)	251	0.783	< .001

Note: Practically large correlation coefficients are bolded and stressors that made unique contributions in the regression analysis are underlined; N=Number of respondents; R=Pearsons correlation, p=Significance, Bold= practical significance, Underlined=Unique contribution; Item 7, “How often do you experience emotional fatigue as a result of your work?”, was removed due to its conceptual overlap with EE.

The multiple regression analysis, with stressors and demographic variables entered as predictors and EE as the outcome variable, indicated that the model explained approximately 72% of the variance in EE ($R^2 = .72$; adjusted $R^2 = .69$), and was statistically significant ($F = 22.17$, $p < .001$). In Table 1 the items which loaded significantly in the model are underlined.

5. Discussion

The literature review indicates that burnout is closely linked to job demands and resources, as described by the JD-R model (Demerouti et al., 2001). Workload, emotional demands, and role conflict are consistently identified as key stressors leading to burnout (Bakker et al., 2004), which, if unmanaged, may result in EE, depersonalisation, and reduced personal accomplishment (Maslach et al., 2001). This study aimed to identify the stressors that most strongly influence emotional exhaustion (EE) in order to inform potential interventions.

A cross-sectional survey design was employed using instruments with good reliability and acceptable validity. Although the response rate was low, it was consistent with expectations, and the demographic profile broadly reflected the university population. Despite these limitations, the study identified key stressors with detrimental effects on EE among academic staff.

As expected, overall work stress was strongly associated with EE ($r = .783$, $p < .001$), explaining approximately 61.3% of the variance ($R^2 = .613$). Seven stressors showed practically significant correlations with EE, while five stressors made independent and unique contributions in the regression analysis ($p < .001$). The overlap between practically significant correlations and unique contributions occurred for Items 1, 6, and 8, listed below, suggesting that these stressors warrant particular attention:

1. To what extent do you feel overloaded with work responsibilities?
2. How often do you perceive a lack of control over your job-related decisions and tasks?
3. To what extent do you feel overwhelmed by the volume of tasks and responsibilities in your role?

Considered together, these items could suggest that high workload demands coupled with limited control over work processes may contribute to feelings of being overwhelmed, which in turn may be associated with elevated levels of EE. Institutions could consider reviewing workload allocation and during peak demand periods, which may help reduce excessive and sustained workload demands and increase academic autonomy over scheduling, task prioritisation, or decision-making processes, which could enhance perceived control and potentially buffer the effects of high job demands on EE.

Items 15 and 16, presented below, made unique and statistically significant contributions to the explanation of EE in the regression analyses:

15. How often do concerns about your mental health and well-being affect your work performance?
16. Please rate the opportunities for professional growth and development in your current role.

Item 15 may reflect a high level of introspection among academics when considering how they are coping with job demands, but it could also be interpreted as an indirect call for institutional support. Interventions could involve institutions managing job demands more effectively or providing additional resources, in line with the JD–R model, while also proactively monitoring staff well-being and promoting mental health services as a post facto support mechanism. Item 16 appears to be linked to perceived resource constraints, particularly limited opportunities for professional growth. Within the institution, there are effectively five job categories, with limited opportunities for movement within categories, resulting in few short-term incentives for development or progression. In response, institutions could consider introducing multi-layered development pathways, offering short-term developmental milestones, or implementing recognition mechanisms that enable progression within existing job categories.

6. Conclusion

This study aimed to address burnout in the academic context by examining whether certain workplace stressors are particularly potent in producing negative outcomes, specifically EE. The single hypothesis set was rejected, as the findings demonstrated that some stressors exert a stronger influence on EE among academics than others. Consistent with the JD–R model, the results indicate that high workload demands, coupled with limited control over work processes, may contribute to feelings of being overwhelmed, which in turn are associated with elevated levels of EE. From an institutional perspective, there is considerable scope for intervention to address these challenges by rebalancing job demands and resources. Of particular concern is the finding that academics report worries about their own mental health, alongside perceptions of limited opportunities for professional development.

This study provided valuable insight into the stressor–burnout relationship, indicating that approximately 61.3% of the variance in EE can be explained by workplace stressors ($r = .783$, $R^2 = .613$, $p < .001$), and identified specific stressors of particular importance. The omission of diagnostics for multicollinearity and common method bias represents a potential limitation, as these factors may affect coefficient stability and inflate observed relationships, thereby influencing the interpretation of R^2 . However, the brevity of the paper prevented their inclusion.

The research could be strengthened by the inclusion of a qualitative component to provide deeper insight into academics' lived experiences of stress. Moreover, it would be naïve to assume that academics constitute a uniform group of employees; therefore, future research should adopt an intersectional approach to examine stressor–burnout relationships across groups

such as job levels or work arrangements. Nonetheless, this study contributes to the growing body of knowledge on workplace stressors and their effects on academics (Cao et al., 2024; Dlamini & Dlamini, 2024; Naidoo-Chetty & Du Plessis, 2021).

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