

Gabriella Pusztai / Klára Kovács (eds.)

Well-Being of Academic Staff in Rapidly Changing Higher Education

**A Focus on Central
and Eastern Europe**

Changes in higher education in recent decades – such as expansion, the Bologna reform, internationalization, competition for students, managerialism, and the emergence of a service-oriented approach – have fundamentally transformed the work of academics. The aim of our research, which forms the basis of this volume and is particularly relevant to the region, was to examine the well-being, working conditions, and performance of academics in five Central and Eastern European countries: Hungary, Slovakia, Ukraine, Romania, and Serbia. This volume consists of two main chapters that present empirical findings based on qualitative and quantitative survey data, as well as national and international statistical databases. The first chapter analyses key higher education indicators from the five countries studied and describes the educational policy environment shaping academic work. The second chapter explores the background factors and effectiveness of academics' work.

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10. Research Productivity and Workplace Stress Among Academics

Klára Kovács, Marianna Moravec & Gabriella Hideg

ABSTRACT

In our study, the influencing factors of research productivity was examined among academics in five higher education institutions in CEE. Our main research question was which work-related stressors and resources reduce or contribute to their research productivity. The theoretical background of our research is based on the theory of job demands and resources (JD-R), which helps to explain and understand the relationship between job characteristics and employee productivity. For our research we used the CEETHE 2023 database (N=821). The data were collected from higher education institutions in two disadvantaged regions of Hungary, while for institutions across the border in Slovakia, Ukraine, Romania and Serbia, we targeted Hungarian minority institutions. Our results suggested that the most productive groups were older people, men in higher positions, those with an academic degree, those working in social and economic sciences, and senior academics. Stress caused by performance appraisal emerged as a negative factor for productivity.

Keywords: research productivity, JD-R theory, job demands and resources

Introduction

In this study, the factors influencing the research productivity of academics were examined in five Central and Eastern European countries (in Hungary, Slovakia, Ukraine, Romania and Serbia, which countries belong to the broader concept of the CEE region according to the interpretation of the OECD and the EU). Two main groups of work-related outcomes (well-being and productivity) have been identified. Productivity is nothing more than the behavior of the employee through which he/she contributes to the achievement of institutional goals (Utami & Viozeza, 2021). In this research, research productivity means workplace performance which the academics contribute to the effectiveness of higher education institutions, mainly measured in an international context (by publications in high-ranking journals, international conference presentations, participation in researches, receiving awards, grants etc.) or on individual level (highly motivated, satisfied academic staff) (Bland et al., 2005; Chen et al., 2006). In this competitive environment, there is an increasing emphasis on the research success of institutions, which is translated at the level of the academic staff into high requirements for publication and participation in research projects. From the perspective of academics, of the trinity of faculty roles—teaching, research and administrative duties—research dominates, while the other two remain in the background to research (Kwiek, 2016), confirming the relevance of applying the concept of research productivity we have adopted. Furthermore, research

seems to be the single most stratifying factor in Higher Education at the level of the individual academic based on a comparative study among academics in 11 countries (Kwiek, 2019).

Our main question is, what are the challenges faced by the region's academics in their work, and what are the resources at the institutional and individual levels that contribute to their productivity? To investigate this issue, the job demands and resources (JD-R) theory (Bakker & Demerouti, 2014) was used as a theoretical framework. The JD-R theory is a theoretical framework that helps to explain and understand the relationships between job characteristics and employee performance and well-being. It classifies job characteristics into two categories that are negatively correlated: (negative) job demands and job-related resources, which have a direct impact on employees' stress levels, motivation, health problems and a range of organizational outcomes (Bakker & Demerouti, 2014; Szigeti & Kovács, 2022; Mudrak et al., 2018).

Previous studies have mainly examined psychological sources of stress and resources from a psychological perspective and have shown their relationship with work performance, psychological well-being and burnout (Alquarni, 2021; Han et al., 2020a; Iyaji et al., 2020). In this exploratory study, their relationship with productivity is investigated from a higher education research perspective. The validity of JD-R theory and workplace stressors has been extensively researched by academics worldwide (see Alquarni, 2021; Aziz & Quraishi, 2017; Bell et al., 2012; Fetherston et al., 2021; Han et al., 2020a; Iyaji et al., 2020; Kinman et al., 2006), but these have primarily addressed stress and resources in relation to well-being, job performance, job satisfaction, etc., and most of the research has examined linear relationships rather than using a complex theory or model (Mudrak et al., 2018). In our previous study, a similar model was used to examine the mediating role of work engagement and work exhaustion to examine the associations between job demands and resources and physical activity as an individual coping strategy with well-being. In the present analysis, these relationships have been further explored, and the model has been developed to examine these factors in relation to work performance (research productivity), complemented by additional influencing factors identified in the literature (working hours, job insecurity).

1. The Changing Higher Education Context and Its Influence on the Productivity of Academics in CEE

In the project of Changing Academic Profession in 2006, a study of academics in 19 countries worldwide was carried out, which did not include CEE countries,

but the European continuation of the research, “The Academic Profession in Europe-Responses to Societal Challenges” (EUROAC), included Poland and Romania from the region in 2007–2011. The comparative studies have reached similar conclusions: although the academic profession is subject to increasing expectations and pressures, these expectations do not constrain how academics perceive their situation and how they act. Of course, they have to respond to these challenges, but they have room for maneuver in how they interpret and respond to them (Höhle & Teichler, 2013). The most important (negative) predictor of job satisfaction in almost all countries was administrative processes (Bentley et al., 2013). As a follow-up to CAP, the Academic Profession in the Knowledge-Based Society (APIKS) research was conducted in 18 countries (CEE countries were not included) between 2019 and 2021 (Aarrevaara et al.). One of the main messages of this volume is that although the academic profession appears similar in many respects across the countries studied, when examined in depth, there are very large differences even when answering a simple question such as who can be considered a researcher in a given country (Jung et al., 2021).

As a result of the advance of managerialism (Kovács, 2023), various performance evaluation systems have been developed to assess the work of academic staff. A longitudinal study of British, Dutch and Swedish academics found that in all three countries, performance evaluation itself does not really affect academics’ productivity, with Swedish respondents considering it merely an administrative practice, while Dutch academics doubt the validity of outcomes due to the distance manner of evaluation. British academics accept and understand the importance of performance evaluation for the effectiveness of the institution, to ensure fairness, transparency and better teaching quality, but they also doubt that it has any connection with teaching quality and its improvement. Three factors underlie this doubt: first, the scope of evaluation remains limited; second, the disadvantages of performance measurement; third, the most important aspects are immeasurable (Teelken, 2018), as academics also mentioned in our and other previous qualitative researches (Kovács et al., 2024; Kwiek & Antonowicz, 2015).

The CEE countries have followed this process with a slight delay, with effectiveness below the average of Western European counterparts (Goncharuk & Cirella, 2022), but the process of managerialism has also emerged in the 2010s. In Ukraine and Romania, specific performance evaluation systems have been developed to assess the work of academics, while in Hungary, all but five universities have been converted to private (foundation) status, and a portion of academics’ salaries is determined by the results of a newly developed performance evaluation system (Rodrigues Pimenta et al., 2021). As in Bosnia, the Czech Republic, like other Eastern European countries, has entered the arena of international

competition with an underfunded higher education system, and thus there is increasing pressure on academics to increase their productivity in order to meet indicators of international competition. Although the pressure to publish, grant-based funding, performance measurement and other reforms to increase institutional effectiveness are seen by academics as necessary, they are also seen as important to maintain their autonomy and influence in universities (Mudrak et al., 2006). Given the emergence and growing role of performance evaluation in academia, our research also examines the performance of academics based on quantifiable evaluation indicators, primarily related to academic research work. Indeed, these measurement tools tend to place a strong emphasis on this dimension of academics' work.

High workload and other sources of stress such as lack of institutional role clarity, lack of managerial support, interpersonal, role and work-family conflicts, and low student motivation are sources of job stress (job demands) that negatively affect employees' well-being, job satisfaction and performance (Anastasiou & Papakonstantinou, 2014; Bell et al., 2012; Fetherston et al., 2021; Iyaji et al., 2020; Kinman et al., 2006). Physiological and psychological stress are important predictors of job performance (Ismail et al., 2015), but it should be noted that some forms of stress—if managed and prevented in individuals and organizations (eustress)—increase performance, while distress due to workload, for example, decreases it, so the type of stress is a determinant beyond its amount (Usoro & Etuk, 2016).

However, perceptions of stressors and coping strategies vary by employee gender, age, position, years of teaching, job title and type of higher education institution (Akram, 2019; Anastasiou & Papakonstantinou, 2014; Bell et al., 2012; Faisal et al., 2019; Kinman, 2014; Malik et al., 2017; Mudrak et al., 2018). Men are more resilient to work stress than women, who are more likely to experience work-life conflict (Bell et al., 2012; Chukwuemeka et al., 2023; Malik et al., 2017; Mudrak et al., 2018).

A comparative study conducted across ten countries found that higher academic rank increased publication productivity in two countries (Australia and the U.K.) (Teodorescu, 2000). However, a study on Polish academics' international publication performance and career paths revealed that high-ranking academics in the top 10 percent achieved their positions due to outstanding publication performance and had already exhibited very high productivity earlier in their careers compared to colleagues in similar positions (Kwiek & Roszka, 2024). Abramo et al. (2014) examined the publication productivity of all Italian universities over a five-year period and highlighted the exceptional productivity of researchers in natural sciences, life sciences, and mathematics. The unique research styles,

processes, and techniques of different disciplines lead to significant differences in research performance both within and across disciplines (Wood, 1990). Analyzing research performance between academic ranks, Abramo et al. (2011) argued full professors publish more than associate professors, who publish more than assistant professor, but there also significant differences by disciplines. Authors emphasize, if higher academic rank is associated with greater research performance, evaluation methods should better differentiate individual scientists by rank and create performance rankings within these categories, alongside overall rankings.

According to JD-R theory, institutional resources contribute to work outcomes as intrinsic and extrinsic motivators. Among Indonesian academics, job satisfaction has a direct positive effect on productivity (Utami & Vioresa, 2021), while among Czech academics, influence over work and supervisor support as resources are positively associated with work engagement and job satisfaction. Work engagement was the most important predictor of well-being, while job demands (such as quantitative demands, work-life conflicts and job insecurity) were only associated with stress (Mudrak et al.). Work-life balance and its loss are a much-studied issue in academic work. Successfully maintaining a harmonious balance between the two is a source of strength and has a positive impact on job satisfaction (Saeed & Farooqi, 2014), contributes to optimal performance (Guest, 2002), and is also associated with higher satisfaction with family life and life in general (Sirgy & Lee, 2018). At the same time, work-life conflict has a negative impact on the well-being of academic staff (Bell et al., 2012).

Based on the previous theories and research findings, the following hypotheses were formulated:

1. Notable variations in productivity based on gender, age, country, position, and scientific field
2. Job Demands diminish academics' productivity, while available Job Resources enhance it

2. Methodology

2.1. Data and Sample

To answer the research questions, the CEETHE 2023 database was used (N=821). The data sampled higher education institutions in two disadvantaged regions of Hungary, the North Great Plain Region (University of Debrecen, Debrecen Reformed Theological University and University of Nyíregyháza) and the South Transdanubian Region (University of Pécs), while in the case of cross-border institutions in Slovakia, Ukraine, Romania and Serbia Hungarian minority institutions were targeted, but the survey was still sent in the majority language.

Based on the experience of the focus group interviews conducted prior to the quantitative research, the academics' tasks were listed, and respondents were asked to rate on a scale of 1 to 4 the extent to which they considered the given tasks to be part of their job. On the basis of the responses, we first performed a factor analysis and then a cluster analysis, separating out four different types of academics: teaching-focused academics (33.4%), academics with an administrative focus (19.7%), research-focused academics (20.3%) and academic leaders (26.6%).

2.2. Variables and Analysis

As the emergence and advance of managerialism in higher education in the region under study in recent years has led to an increasing role for the evaluation of academic performance, including the quantification of academic productivity, the academic performance of academics in this research was also measured on the basis of self-report. They were asked how many different publications, conference presentations, grant applications and leadership positions they had held the previous four years. This period was chosen because this is the time span assessed in the evaluation of academic performance in Hungary and Ukraine, and these indicators related to scientific research dominate. Although self-reporting may be biased and there may be a problem of inaccurate recall, as the questionnaire was self-administered, it was accurately documented in their performance appraisal and CV and could be used as a guide to help them tick the correct response category. The response options were numerical intervals that allowed respondents to rate their own performance on a category from 0 to 100. The nine-item scale was found to be reliable (Cronbach's $\alpha=.825$) and principal component analysis was used to produce a composite performance indicator ($KMO=.802$, $p<0.001$, explained variance 62.561%), which was converted to a 0–100-point scale. Here, 0 represented the lowest level of productivity and 100 the highest ($M=22.66$, $SD=15.59$).

Based on the work of Kinman et al. (2006), the stress and resources at work and their perceptions were also examined (Cronbach $\alpha=.869$, maximum likelihood method, varimax rotation, $KMO=.856$, $p=0.000$, explained variance 53.045%). Factor analysis identified three sources of stress and one resource: workload, performance appraisal and diversity of teacher roles as sources of stress and management support as a resource. These factors were complemented by good working conditions (5-item, Cronbach $\alpha=.739$, $KMO=.753$, $p=0.000$, explained variance 50.510%), peer support (4-item, Cronbach $\alpha=.867$, $KMO=.827$, $p=0.000$, explained variance 71.610%), and development opportunities (5-item, Cronbach $\alpha=.832$, $KMO=.808$, $p=0.000$, explained variance 60.101%) as resources (Malik et al., 2017). In addition, other factors influencing productivity and well-being that could also

serve as stressors and resources were examined. Since the main objective of this study was to uncover the hardships associated with work, Hayman's (2005) dimensions of work-life conflict, when work interferes with private life, were examined (6-item Chronbach $\alpha=.948$, KMO=.905, $p=000$, explained variance 79.545%).

Among the factors influencing research productivity, the area of emotional exhaustion at work (5 items Chronbach $\alpha=.911$, KMO=.852, $p=000$, explained variance 73.894%) and work engagement using the Utrecht Work Engagement-9 scales (9 items, Chronbach $\alpha=.931$, KMO=.900, $p=000$, explained variance 65.441%) were investigated (Han et al., 2020). Workplace bullying was measured using the Malik et al. (2017) completed scale (7 items, Chronbach $\alpha=.873$, KMO=.890, $p=000$, explained variance 59.590%). Each main component was formed into a scale from 0 to 100, where 0 indicated that the main component was not at all characteristic of the respondent, and 100 that it was completely typical of the respondent. Workload, performance appraisal, diversity of teacher roles, work-life conflict, emotional exhaustion, bullying at work, working hours per week, and job insecurity are considered as job demands, while management support and work engagement are considered as job resources.

The demographic background variables examined were age, gender and country of origin, and the work characteristics were academic degree, job position, managerial position, academic discipline and type of academics. Analyses were carried out using the SPSS 29 program, using the Kruskal-Wallis test, the Mann-Whitney test and linear regression, and checking normality with the Kolgomorov-Smirnov test.

3. Results

Almost half of the respondents had no books published in their mother tongue/national language or in an international language, 44.5% had 1–5 books published in their mother tongue and 21.5% in English or another foreign language. For articles published in the mother tongue/national language, 30.1% published 1–5, and almost 10% 21–40. More than 100 articles were published in a foreign language by 44, while 14.5%, 21–40 published articles in a foreign language in the last four years. Of these, 37.5% had published 1–5 articles in Q1-Q2, and 36.3% had published none. Again, six respondents chose one of more than 100 possible answers, which was not rejected because in certain scientific fields (medicine, natural sciences) it is typical for research to be conducted in large rooms and for a very high number of authors to write articles. The majority of respondents had presented 6–10 or 11–20 papers at national conferences (~19%), with about 11% presenting none. A fifth of respondents had not presented at an international

conference, 36.4% had presented 1–5 papers. Approximately one-third were not members of a national research group, and more than half were members of an international research group; nationally, 51.3% were members or leaders of at least one research groups, and internationally, 40.7% were members (Figure 10.1).

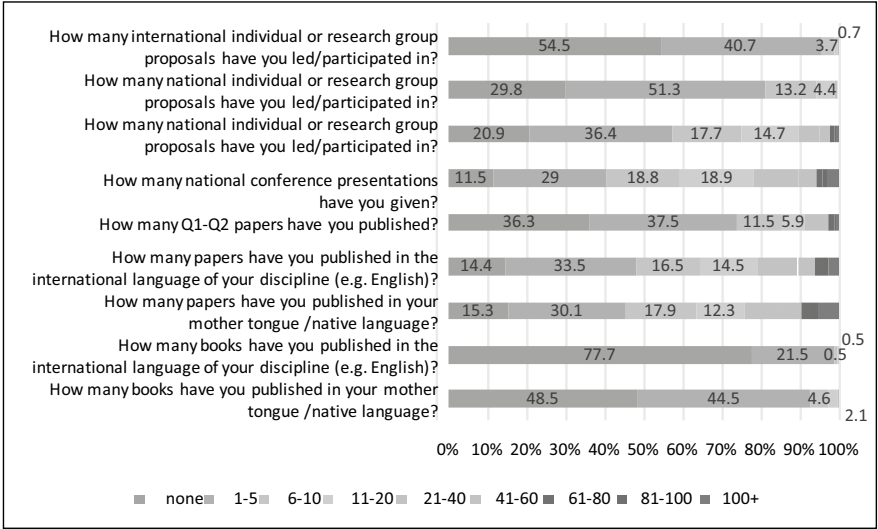


Figure 10.1: Research productivity of academics over the past four years based on self-report.
Source: CEETHE 2023.

3.1. Relationships Between Demographic, Work Characteristics and Research Productivity

Significant differences were found for all variables except country ($p < 0.001$). Results show that males ($M = 25.84$, $SD = 17.96$) than females ($M = 20.08$, $SD = 12.84$), researchers in social and economic sciences ($M = 25.32$, $SD = 15.18$), with DSc. degree ($M = 40$, $SD = 22.95$), those working at least as associate professors ($MR = 485.75$) and academic leaders ($M = 28.8$, $SD = 13.41$) or in leader position ($M = 28.91$, $SD = 17.17$) have the highest research productivity. Performance also increases with age and is highest among the oldest ($M = 37.78$, $SD = 26.99$). The lowest performance is found among the youngest age group ($M = 11.58$, $SD = 8.71$) and among academics with an administrative focus ($M = 14$, $SD = 11.39$) and academics in the scientific fields of arts and humanities ($M = 20.96$, $SD = 13.23$).

When examining workplace stress sources and resources, the only factor that is unsurprisingly significantly related to research productivity is performance evaluation: academics with above-average levels of this stressor perform

worse ($M=21.2$, $SD=14.61$). As working hours increase, with academics work more than 60 hours per week scoring the highest performance ($M=38.37$, $SD=21.51$), while those working 51–55 ($M=26.47$, $SD=17.71$), 56–60 hours per week scored about the same ($M=25.78$, $SD=16$). Academics working 36–40 hours per week scoring the lowest (18.19 , $SD=12.83$). Job security is associated with higher performance, with those who think there is no chance at all of being made redundant scoring the highest ($MR=25.38$, $SD=16.72$), while those who think there is a chance of being made redundant scored the lowest ($M=20.19$, $SD=15.19$) (Table 10.1).

Table 10.1: Correlations of workplace stressors with research productivity (means, SD)

		Mean	SD	Mann-Whitney U/Kruskal- Wallis H	N	sig.
performance evaluation	below the average	24.59	16.68	57155	720	0.008
	above the average	21.2	14.61			
number of working hours per week	36–40	18.19	12.83	55.107	753	<0.001
	41–45	20.2	12.84			
	46–50	23.02	14.75			
	51–55	26.46	17.71			
	56–60	25.78	16			
	>60	38.37	21.51			
job insecurity	No chance at all	25.38	16.72	8.385	636	0.039
	Not really a chance	22.4	15.01			
	There is a chance	20.19	15.19			
	There is a very high chance	21.34	8.1			

Source: CEETHE 2023.

3.2. Predictor Factors of Research Productivity

Linear regressions were used to examine the predictors of the principal component of research productivity. Multicollinearity was checked in all regressions, and the values of VIF and tolerance showed in all cases that there was no multicollinearity between the explanatory variables. Our model for research productivity

is significant ($F(36,485)=8.7$, $p<0.001$), with explanatory power $R^2=0.347$. Among job-related stress and resources, only performance evaluation is negatively related to productivity ($\beta=-0.148$). Age ($\beta=0.239$), Ph.D. ($\beta=0.142$), at least associate professor position ($\beta=0.172$), belonging to teaching-focused ($\beta=0.234$), academic leader ($\beta=0.222$) or research-focused ($\beta=0.171$) group increases performance. Working too few hours, less than 40 hours, decreases performance ($\beta=-0.132$), while working too many hours (more than 60, $\beta=0.126$) increases productivity.

4. Discussion

The academic profession faces significant challenges worldwide (Altbach, 2005) and has never been as unstructured and competitive as it is today. Competition for positions and resources is intense, and within this race, academics' scientific performance plays a particularly crucial role (Kwiek, 2019; Kwiek & Antonowicz, 2015). This study focused on assessing the factors that impact research productivity among academics in five CEE countries. Work-related characteristics, workplace stress sources and resources, and demographic factors were examined. The JD-R theory served as the theoretical foundation for this research, allowing for the exploration of the influence of work-related stressors and resources on well-being and research productivity. Our model included various predictors, such as demographic factors, work-related factors, stressors, resources, and well-being, because establishing causality can be challenging. For instance, well-being is in a positive relationship with higher levels of productivity. However, success at work and excellence in performance may also contribute to higher levels of well-being.

Initially, it was hypothesized that there would be notable disparities in productivity based on gender, age, country, job title, and discipline. Our hypothesis was supported, as older individuals, men in higher positions, those with academic degrees, and individuals in the social and economic sciences and senior academic groups displayed higher levels of productivity. Age, position, and academic degree were closely intertwined but also individually contributed to increased research productivity as in previous researches of Blend et al. (2005) and Teodorescu (2000). This can be attributed to the routine nature of a research career and the demands placed on early-stage academic careers, such as teaching, course preparation, and other teaching-related responsibilities (e.g., mentoring and talent management), which require significant time and energy. Similar challenges have been reported by young academics in the Czech Republic and France (Goncharuk & Cirella, 2022; Mudrak et al., 2018), and our previous interview research also highlighted the difficulties faced by young academics in juggling multiple roles, particularly teaching which hardly allows them to do other academic work

(Kovács et al., 2024). Numerous researchers in the region have shed light on the disadvantages faced by women in academia (Engler, 2015; Engler, 2020). Not only do women experience vertical segregation, meaning that they are underrepresented in high-status positions, but they also face horizontal segregation, resulting in their underrepresentation in STEM fields where notable high-level international research and achievements occur. Additionally, the interruption in their academic careers due to motherhood negatively affects them, particularly. Our analysis reveals that female researchers are disproportionately concentrated in the humanities and arts (Fényes, 2018), which, according to our findings, have the lowest productivity. The high productivity of senior academics can be attributed to their advancement in higher education, which is primarily based on academic performance rather than managerial skills (Mudrak et al., 2018; Gebregergis et al., 2023). Thus, their ranking is primarily a result of their increased teaching productivity. However, as Porter and Umbach (2001) demonstrate that workload impact is not uniform across all academic staff. Individual characteristics, such as discipline, rank, and tenure status, interact with institutional expectations, resulting in different productivity.

In our investigation of the impact of job demands and resources on research productivity in relation to JD-R theory, a second research question was posed. The second hypothesis suggested that there would be a negative correlation between job demands and a positive correlation between resources and well-being and research productivity. However, our findings only partially supported this hypothesis, as it was discovered that only the stress caused by performance evaluation had a negative effect. At the same time, other stressors and resources did not show a significant relationship with productivity. These results are in line with Teelken's (2018) longitudinal study on academics in the U.K., the Netherlands, and Sweden, which emphasized that while evaluating the work of academics may be important for monitoring institutional effectiveness, it does not contribute to their performance. Previous research (Usoro & Etuk, 2016) has shown that anxiety surrounding performance evaluation leads to decreased productivity. It is worth noting that this relationship can also be reversed. Academics who experience greater stress from performance assessments—whether due to concerns about academic freedom or the perceived pressure to meet publication requirements—tend to have lower performance levels. In contrast, high-performing academics view the evaluation system as fairer, with clear and measurable criteria guiding each stage of their careers. This dual nature of performance assessment has been highlighted in the work of Kwiek & Antonowicz (2015) as well as in our previous interview research (Kovács et al., 2024; Pusztai et al., 2025). However, for such a system to be effective, it must be transparent, clear,

and fair, ensuring that favoritism and informal relationships do not influence evaluations.

Well-being was not directly linked to research productivity; however, an indirect connection emerged through working hours (Kovács et al., 2025). Specifically, working fewer than 40 hours per week reduced productivity, while longer working hours—unsurprisingly—enhanced it. Nevertheless, when examining factors influencing well-being, it became evident that working between 50 and 60 hours per week negatively impacted it. This suggests that while excessive working hours may boost performance, they also harm the well-being of academics (Kovács et al., 2025). Overworking can lead to exhaustion and conflicts in personal life, ultimately undermining academic well-being. Thus, although no direct relationship was identified between well-being and performance, an indirect link existed through extended working hours.

Another key finding was that while higher academic ranks correlated with increased productivity, they also had implications for well-being. Leader academics tended to experience more negative emotions, such as stress, anxiety, and sadness, potentially due to work-related pressures.

Our results highlight that those who dedicate a larger portion of their work to research achieve the highest research productivity (research-focused academics and leaders), meaning they tend to be the most successful. At the same time, it is also evident that research productivity itself has led to significant stratification within the academic society. Only those who consciously invest more time and energy—particularly in international scientific work—can reach the ranks of the most successful academics. The way academics allocate their time and energy to research plays a crucial role in shaping their research productivity, as well as in balancing their teaching and administrative responsibilities. Kwiek's (2019) micro-level study of academic scientists reveals that, across Europe, top-performing academics form a relatively homogeneous group, whose high research output is driven by similar structural factors. Notably, the top 10% of academics are responsible for 50% of high-quality research publications. To be part of this elite group, academics must devote significantly more time to research than the average, requiring both a substantial commitment to research activities and a strong research-oriented mindset.

However, this often creates tensions between time dedicated to research and time allocated to other professional duties. The extent to which academics can meet these expectations is influenced by both individual choices and institutional strategies. An ideal work environment in this context is one where institutional priorities—such as an emphasis on research—align with individual ambitions, like publishing in high-impact journals. As Kwiek (2019) emphasizes,

it is particularly important for early-career academics to recognize that European academic institutions operate in a competitive landscape at both national and international levels, where rankings and resource allocation are heavily influenced by scientific performance. As a result, research output often becomes the primary determinant of career progression.

Conclusions

The key message from our study is that performance appraisal pressure is decreasing and negatively affecting research productivity. It is essential to make the process, purpose, results, format and consequences of performance evaluation transparent and constantly review it with the participation of academics so that they can understand and experience its significance with as little pressure as possible. This can reduce the negative impact on productivity.

Another important message from our research, particularly for managers of small units, is that while long working hours help increase productivity, they have serious long-term negative consequences for employee well-being. They can worsen academic well-being and increase the occurrence of negative emotions such as fatigue, depression, melancholy, and sadness, ultimately leading to exhaustion and burnout. Institutional leaders need to ask themselves: what is more important? To produce more high-impact publications in a short time and with a heavy workload, thereby increasing the efficiency and competitiveness of the institution, or to work in the long term with academics who feel good about their work, who love their job, who are satisfied, committed and motivated?

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References

- Aarrevaara, T., Finkelstein, M., Jones, G. A., & Jung, J. (2021). The Academic Profession in the Knowledge-Based Society (APIKS): Evolution of a Major Comparative Research Project. In T. Aarrevaara, M. Finkelstein, G. A. Jones, & J. Jung (Eds.), *Universities in the Knowledge Society: The Nexus of National*

- Systems of Innovation and Higher Education* (pp. 49–64). Springer International Publishing. <https://doi.org/10.1007/978-3-030-76579-8_4>
- Abramo, G., D’Angelo, C. A., & Di Costa, F. (2011). Research productivity: Are higher academic ranks more productive than lower ones? *Scientometrics*, 88, 915–928. <<https://doi.org/10.1007/s11192-011-0426-6>>
- Abramo, G., D’Angelo, C. A., & Di Costa, F. (2014). Variability of research performance across disciplines within universities in non-competitive higher education systems. *Scientometrics*, 98, 777–795. <<https://doi.org/10.1007/s11192-013-1088-3>>
- Akram, M. (2019). Psychological Wellbeing of University Teachers in Pakistan. *Journal of Education and Educational Development*, 6(2), 235–253.
- Altbach, P. (2005). Academic challenges: The American professoriate in comparative perspective. In Welch, A. (Ed.), *The professoriate: Profile of a profession* (pp. 147–165). Springer Netherlands.
- Alqarni, N. A. (2021). Well-being and the Perception of Stress among EFL University Teachers in Saudi Arabia. *Journal of Language & Education Volume*, 7(3), 8–22. <<https://doi.org/10.17323/jle.2021.11494>>
- Anastasiou, S., & Papakonstantinou, G. (2014). Factors affecting job satisfaction, stress and work performance of secondary education teachers in Epirus, NW Greece. *International Journal of Management in Education*, 8(1), 37–53. <<https://doi.org/10.1504/IJMIE.2014.058750>>
- Aziz, F., & Quraishi, U. (2017). Empowerment and mental health of university teachers: A case from Pakistan. *Pakistan Journal of Social and Clinical Psychology*, 15(2), 23–28.
- Bakker, A. B., & Demerouti, E. (2014). Job demands-resources theory. In P. Y. Chen, & C. Cooper (Eds.), *Work and Wellbeing: Wellbeing: A complete reference guide*, vol. III. (pp. 1–28). John Wiley & Sons, Ltd. <https://www.isonderhouden.nl/doc/pdf/arnoldbakker/articles/articles_arnold_bakker_344.pdf>
- Bakker, A. B., Demerouti, E., Oerlemans, W., & Sonnentag, S. (2013). Workaholism and daily recovery: A day reconstruction study of leisure activities. *Journal of Organizational Behavior*, 34(1), 87–107. <<https://doi.org/10.1002/job.1796>>
- Bell, A. S., Rajendran, D., & Theiler, S. (2012). Job stress, wellbeing, work-life balance and work-life conflict among Australian academics. *E-Journal of Applied Psychology*, 8(1), 25–37. <<https://doi.org/10.7790/ejap.v8i1.320>>
- Bentley, P. J., Coates, H., Dobson, I. R., Goedegebuure, L., & Meek, V. L. (2013). Academic Job Satisfaction from an International Comparative Perspective: Factors Associated with Satisfaction Across 12 Countries. In P. J. Bentley, H. Coates, I. R. Dobson, L. Goedegebuure, & V. L. Meek (Eds.), *Job Satisfaction*

- around the Academic World (pp. 239–262). Springer Netherlands. <https://doi.org/10.1007/978-94-007-5434-8_13>
- Bland, C. J., Center, B. A., Finstad, D. A., Risbey, K. R., & Staples, J. G. (2005). A theoretical, practical, predictive model of faculty and department research productivity. *Academic Medicine*, 80(3), 225–237.
- Chen, Y., Gupta, A., & Hoshower, L. B. (2006). Factors that motivate business faculty to conduct research: An expectancy theory analysis. *Journal of Education for Business*, 81(4), 179–189.
- Chukwuemeka, U. M., Okonkwo, U. P., Njoku, C. J., Igwe, S. E., Oyewumi, T. J., & Ugwuanyi, D. C. (2023). Work-related stress, quality of life, and coping mechanism among lecturers in a Tertiary Educational Institution in Anambra State, Nigeria. *BMC Psychology*, 11, 73. <<https://doi.org/10.1186/s40359-023-01114-5>>
- Engler, Á. (2015). The effect of student's commitment on career. In G. Pusztai, & T. Ceglédi (Eds.), *Professional Calling in Higher Education: Challenges of Teacher Education in the Carpathian Basin* (pp. 165–175). Új Mandátum.
- Engler, Á. (2020). *Career Path and Family Life*. Editorial Verbum.
- Faisal, F., Noor, N., & Khair, A. (2019). Causes and Consequences of Workplace Stress among Pakistan University Teachers. *Bulletin of Education and Research*, 41(3), 45–60.
- Fényes H. (2018). Mennyit ér egy tudományos fokozat—különös tekintettel a tudományos eredményesség és előmenetel nemi különbségeire [How Much Is a Scientific Degree Worth?—With Special Regard to Gender Differences in Scientific Productivity and Career Advancement]. *Szociológiai Szemle*, 28(1), 60–82.
- Fetherston, C., Fetherston, A., Batt, S., Sully, M., & Wei, R. (2021). Wellbeing and work-life merge in Australian and UK academics. *Studies in Higher Education*, 46(12), 2774–2788. <<https://doi.org/10.1080/03075079.2020.1828326>>
- Gebregergis, W. T., Kovács, K. E., & Csukonyi, Cs. (2023). Fostering Psychological Wellbeing and Student Engagement in Higher Education Students through Positive Psychological Capital: The Mediating Role of Academic Stress. *Journal of Positive Psychology and Wellbeing*, 7(4), 14–33.
- Gillespie, N. A., Walsh, M., Winefield, A. H., Dua, J., & Stough, C. (2001). Occupational stress in universities: Staff perceptions of the causes, consequences and moderators of stress. *Work & Stress*, 15(1), 53–72.
- Goncharuk, A. G., & Cirella, G. T. (2022). Effectiveness of academic institutional models in Europe: University instructor perception case research from Bosnia and Herzegovina and France. *International Journal of Educational Management*, 36(5), 836–853.

- Guest, D. E. (2002). Perspectives on the Study of Work-life Balance. *Social Science Information*, 41(2), 255–279. <<https://doi.org/10.1177/0539018402041002005>>
- Han, J., Yin, H., & Wang, J. (2020). Examining the Relationships Between Job Characteristics, Emotional Regulation and University Teachers' Well-Being: The Mediation of Emotional Regulation. *Frontiers in Psychology*, 11, 1727. <<https://doi.org/10.3389/fpsyg.2020.01727>>
- Han, J., Yin, H., Wang, J., & Zhang, J. (2020). Job demands and resources as antecedents of university teachers' exhaustion, engagement and job satisfaction. *Educational Psychology*, 40(3), 318–335. <<https://doi.org/10.1080/01443410.2019.1674249>>
- Höhle, E. A., & Teichler, U. (2013). The Academic Profession in the Light of Comparative Surveys. In B. M. Kehm, & U. Teichler (Eds.), *The academic profession in Europe: New tasks and new challenges*, vol. 5, (pp. 23–38). Springer. <https://www.academia.edu/download/76812256/978-94-007-4614-5_3.pdf>
- Ismail, A., Saudin, N., Ismail, Y., Samah, A. J. A., Bakar, R. A., & Aminudin, N. N. (2015). Effect of Workplace Stress on Job Performance. *Economic Review: Journal of Economics and Business*, 13(1), 45–57.
- Iyaji, T. O., Eyam, S. O., & Agashi, V. A. (2020). An Assessment Of Some Stress Factors In Academic Profession And Their Health Implications Among Academics In Tertiary Institutions In Cross River State Nigeria. *International Journal of Innovative Research and Advanced Studies*, 7(12), 53–59.
- Jung, J., Jones, G. A., Finkelstein, M., & Aarrevaara, T. (2021). Comparing Systems of Research and Innovation: Shifting Contexts for Higher Education and the Academic Profession. In T. Aarrevaara, M. Finkelstein, G. A. Jones, & J. Jung (Eds.), *Universities in the Knowledge Society: The Nexus of National Systems of Innovation and Higher Education* (pp. 415–428). Springer International Publishing. <https://doi.org/10.1007/978-3-030-76579-8_23>
- Kinman, G. (2014). Doing More with Less? Work and Wellbeing in Academics. *Somatechnics*, 4(2), 219–235. <<https://doi.org/10.3366/soma.2014.0129>>
- Kinman, G., Jones, F., & Kinman, R. (2006). The Well-being of the UK Academy, 1998–2004. *Quality in Higher Education*, 12(1), 15–27. <<https://doi.org/10.1080/13538320600685081>>
- Kovács, K., Dobay, B., Halasi, S., Pinczés, T., & Tódor, I. (2024). Demands, resources and institutional factors in the work of academic staff in Central and Eastern Europe: Results of a qualitative research among university teachers in five countries. *Frontiers in Education*, 8, 1326515. <<https://www.frontiersin.org/articles/10.3389/feduc.2023.1326515>>

- Kovács, K. (2025). Influencing factors of workplace outcomes among teachers of higher education institutions in five Central and Eastern European countries. *Social Sciences & Humanities Open* (under review).
- Kováts, G. (2023). University Governance Reform in an Illiberal Democracy. Public Interest Trusts in Hungary. In Broucker, B., Milsom, C., Calleja, J. & M. O'Hara (Eds.), *Accelerating the Future of Higher Education* (pp. 186–204). Brill
- Kwiek, M. (2016). The European research elite: a cross-national study of highly productive academics in 11 countries. *Higher Education*, 71(3), 379–397. <<https://doi.org/10.1007/s10734-015-9910-x>>
- Kwiek, M. (2019). Social stratification in Higher Education: What it means at the micro-level of the individual academic scientist. *Higher Education Quarterly*, 73(4), 419–444. <<https://doi.org/10.1111/hequ.12221>>
- Kwiek, M., & Roszka, W. (2024). Are Scientists Changing their Research Productivity Classes When They Move Up the Academic Ladder? *Innovative Higher Education*, 1–39. <<https://doi.org/10.1007/s10755-024-09735-3>>
- Malik, N. A. A., Björkqvist, K., & Österman, K. (2017). Factors associated with occupational stress among university teachers in Pakistan and Finland. *Journal of Educational, Health and Community Psychology*, 6(2), 1–14.
- Mudrak, J., Zabrodska, K., Kveton, P., Jelinek, M., Blatny, M., Solcova, I., & Machovcova, K. (2018). Occupational well-being among university faculty: A job demands-resources model. *Research in Higher Education*, 59, 325–348. <<https://doi.org/10.1007/s11162-017-9467-x>>
- Porter, S. R., & Umbach, P. D. (2001). Analyzing faculty workload data using multilevel modeling. *Research in Higher Education*, 42(2), 171–196. <<https://doi.org/10.1023/A:1026573503271>>
- Pusztai, G., Demeter-Karászi Zs., & Pallay, K. (2025). Performance assessment: A new dimension of institutional culture. In Pusztai, G. & Kovács, K. (Eds.), *Well-Being of Academic Staff in Rapidly Changing Higher Education: A Focus on Central and Eastern Europe*. (pp.). Peter Lang.
- Rodrigues Pimenta, C. L., Rónay, Z., & Németh, A. (2021). Centralisation and Decentralisation in Higher Education: A Comparative Study of Hungary and Germany. *Pedagogy*, 93(8), 1119–1135.
- Saeed, K., & Farooqi, Y. A. (2014). Examining the relationship between work life balance, job stress and job satisfaction among university teachers (A case of University of Gujrat). *International Journal of Multidisciplinary Sciences and Engineering*, 5(6), 9–15.

- Sirgy, M. J., & Lee, D.-J. (2018). Work-Life Balance: An Integrative Review. *Applied Research in Quality of Life*, 13(1), 229–254. <<https://doi.org/10.1007/s11482-017-9509-8>>
- Teelken, C. (2018). Teaching assessment and perceived quality of teaching: A longitudinal study among academics in three European countries. *European Journal of Higher Education*, 8(4), 382–399. <<https://doi.org/10.1080/21568235.2018.1490661>>
- Teodorescu, D. (2000). Correlates of faculty publication productivity: A cross-national analysis. *Higher Education*, 39(2), 201–222. <<https://doi.org/10.1023/A:1003901018634>>
- Usoro, A. A., & Etuk, G. R. (2016). Workload related stress and job effectiveness of university lecturers in Cross River and Akwa Ibom States, Nigeria. *Asian Journal of Social Sciences and Management Studies*, 3(1), 34–41.
- Utami, P. P., & Vioeza, N. (2021). Teacher Work Productivity in Senior High School. *International Journal of Instruction*, 14(1), 599–614.
- Wood, F. (1990). Factors influencing research performance of university academic staff. *Higher Education*, 19, 81–100. <<https://doi.org/10.1007/BF00142025>>