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# Characteristics of the Work Environment: An Exploratory Analysis of Job Demands and Job Resources among Employees across Different Industries and Career Stages in North Macedonia

**Abstract:** Building on the Job Demands-Resources model (Bakker & Demerouti, 2007) this research aims to identify differences in the characteristics of the work environment perceived by employees at varying career stages and across diverse industries (healthcare, education, administration, HRM, IT) in North Macedonia. The Questionnaire on the Experience and Evaluation of Work (QEEW2.0), developed by Van Veldhoven and Meijman (1994), was utilised for data collection. The sample comprised 229 participants (Nfemale = 194, Mage = 36.15, Std = 0.360) with data analysed using both parametric and non-parametric tests. Results indicate significant variations in job demands and resources perception across industries, with the IT sector often reporting more positive work environment characteristics. Additionally, notable distinctions were observed between employees in early and later career stages regarding emotional load, complexity, and colleague relationships. While these findings suggest that both industry and career stage may influence how employees perceive job demands and resources, they should be interpreted with caution due to the relatively small sample size. Nonetheless, the observed trends provide preliminary insights that can guide the design of more supportive work environments conducive to employee well-being and satisfaction.

**Keywords:** job demands, job resources, career stage differences, industries

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## **Introduction**

Building on the Job Demands-Resources model (Bakker & Demerouti 2007), this research aims to identify differences in the characteristics of the work environment as perceived by employees at various career stages and across diverse industries (healthcare, education, administration, HRM, IT) in North Macedonia using the Questionnaire on the Experience and Evaluation of Work (QEEW2.0) (Van Veldhoven et al. 2015). The Job Demands-Resources model illustrates the characteristics of the work environment by recognising the dynamic and interactive nature of job demands and resources. It also acknowledges individual differences, links well-being and job performance, and provides insights for organisations to create a positive and supportive work environment for their employees.

## **Job Resources**

Job resources are defined as physical, psychological, social, or organisational aspects of the job that help achieve work goals, reduce the impact of job demands, or stimulate personal growth and development (Bakker & Demerouti 2007). These resources can be internal, such as cognitive or behavioural strategies, or external, including social support and organisational structures. Job resources play a crucial role in fostering employee well-being, buffering the effects of job demands, and enhancing motivation. Within the Job Demands-Resources (JD-R) model, job demands refer to aspects of the job that require sustained effort and are associated with physical or psychological costs. The model posits that excessive job demands can lead to exhaustion, while insufficient resources may trigger withdrawal behaviours and eventual disengagement from work. Despite theoretical support for the interaction between job demands and resources in burnout development, empirical evidence remains sparse (De Jonge & Kompier 1997; Hockey 1993).

While extensive research has explored the impact of job demands and resources on employee mental health, burnout, and engagement (Bakker & Demerouti 2017; Schaufeli & Taris 2014), much of this work has been conducted within Western European contexts. However, the manifestation of these constructs may vary across different socio-economic and cultural settings. The North Macedonian labour market presents a unique context characterised by high unemployment, skill mismatches, and the effects

of economic migration, which create specific stressors and opportunities within its work environments (European Commission 2023). These regional dynamics highlight the need for localised investigations that examine how job demands and resources are experienced in industries shaped by distinct structural and cultural conditions.

To bridge this gap, this study investigates whether five diverse industries—healthcare, education, administration, HRM, and IT—are characterised by distinct levels of perceived job demands and job resources. Additionally, we investigate whether the perception of job demands and resources differs based on the career stages of employees, specifically distinguishing between early and later stages of their careers.

Career development theories (Super 1990; Savickas 2005) suggest that individuals experience the work environment differently depending on their career stage, which is shaped by evolving professional priorities, coping capacities, and role expectations. Empirical research has shown that knowledge-intensive industries, such as IT, often offer greater job resources—such as autonomy, learning opportunities, and supportive environments—while demanding less emotional labour compared to public sectors like healthcare or education, where resource constraints and emotional demands are typically higher (Bakker et al. 2005; Demerouti et al. 2001). Additionally, studies indicate that early-career employees tend to report higher emotional strain and lower autonomy, as they are still developing their professional identity and navigating organisational expectations (Ng & Feldman 2007; Sullivan & Baruch 2009). Based on this theoretical and empirical foundation, this study hypothesises that: (1) employees in knowledge-intensive industries (e.g. IT) will perceive higher job resources and lower job demands compared to those in public sectors (e.g. healthcare, education), and (2) early-career employees will report higher emotional demands and lower job autonomy than their later-career counterparts.

Job resources, whether organisational or personal, are crucial for achieving work goals, reducing stress, and fostering engagement. Resources such as learning opportunities, role clarity, and supportive relationships are particularly relevant for employees navigating complex work environments. Previous studies have demonstrated that resources serve as a protective factor against high demands, helping to prevent burnout (Hakanen Bakker & Demerouti 2005). Conversely, excessive job demands, such as emotional load, mental load, and work pace, can result in strain and withdrawal behaviours (Schaufeli 2017).

While the Job Demands-Resources model emphasises the importance of balancing demands and resources, cultural factors play a crucial role in shaping this balance (Xanthopoulou et al. 2007). In collectivist cultures characterised by strong social interdependence and group orientation—such as those commonly found in Southeast Europe, including North Macedonia (Hofstede Insights 2023), social resources such as peer support may hold amplified importance compared to individualistic contexts. By focusing on the local labour market, this research contributes to a growing body of literature that seeks to adapt and expand the Job Demands-Resources model to diverse socio-economic and cultural settings.

By conducting this research, the aim is to enhance the understanding of how the Job Demands-Resources model manifests in diverse work environments. This will provide valuable insights that can inform strategies for enhancing employee.

## Method

### *Research Design and Setting*

This study utilised a quantitative, non-experimental, cross-sectional design conducted in North Macedonia. Data were collected in the first half of 2023 through online self-report questionnaires distributed electronically to employees in various industries. The main goal was to investigate the perception of job demands and resources across different sectors and career stages, based on the theoretical framework of the Job Demands-Resources (JD-R) model.

### *Participants and Sampling*

The sample consisted of 229 participants ( $N_{\text{female}} = 194$ ,  $M_{\text{age}} = 36.15$ ), employed across various industries in North Macedonia. Participants were recruited through convenience sampling, utilising professional networks, company partnerships, and social media channels to reach a wide variety of sectors. The study focused on employees working in both knowledge-intensive industries (e.g. IT) and public-sector industries (e.g. healthcare, education).

For analysis purposes, participants were categorised into two groups based on career stage: early career ( $n = 175$ ) and later career ( $n = 53$ ). The division of research participants into two career stages—early career (under 40 years) and later career (40 years and above)—was based on established theoretical models and a commonly used age-based threshold in empirical research. The classification into career stages was informed by Super's lifespan, life-space theory (1990), which outlines developmental

stages such as exploration, establishment, maintenance, and disengagement. Similarly, Savickas (2005) emphasises the evolving priorities across career stages, with early stages focusing on growth and skill acquisition, and later stages prioritising stability and legacy building.

Empirical studies have validated age as a significant criterion in differentiating career stages, noting that early career individuals often face challenges related to role ambiguity and skill development (Kanfer et al. 2012), while late-career professionals manage responsibilities associated with organisational stability and career culmination (Zacher 2015).

### *Instrument and Procedure*

The Questionnaire on the Experience and Evaluation of Work (QEEW2.0) was utilised to evaluate the fundamental constructs of the Job Demands-Resources model (Demerouti et al. 2001; Bakker & Demerouti 2007). The QEEW2.0 is a standardised instrument designed to evaluate the organisation of work and its psychological effects, and it has been widely used in organisational and occupational health research.

The questionnaire comprises 42 short subscales, each measuring specific aspects of the work environment. These subscales are grouped into six higher-order dimensions: Job Demands, Job Resources, Job Conditions, Organisational Context, Vitality, and Diagnostic Indicators. Responses to items are gathered using two formats: a five-point Likert scale (e.g. 1 = strongly disagree to 5 = strongly agree) and a four-point frequency scale (e.g. 1 = never to 4 = always), depending on the construct being assessed. The psychometric evaluation of the QEEW2.0 shows strong internal consistency. The internal consistency of the QEEW2.0 subscales was evaluated using Mokken scale analysis, with Rho coefficients ranging from .67 for the Staffing scale to .95 for the Tiredness during work scale (van Veldhoven et al. 2015).

For the purposes of this study, a targeted selection of subscales from the QEEW2.0 was utilised, in line with the theoretical framework of the Job Demands-Resources model. From the Job Demands dimension, the following subscales were included: Emotional Load, Mental Load, Complexity, Pace and Amount of Work, and Role Conflict. From the Job Resources dimension, the selected subscales included: Job Autonomy, Learning Opportunities, Role Clarity, and Relationship with Colleagues. An additional subscale, Career Opportunities, was taken from the Job Conditions dimension. The internal consistency of these subscales within the current sample ranged from  $\alpha = .50$  (Relationship with Colleagues) to  $\alpha = .93$  (Career Opportunities), indicating acceptable to excellent reliability across most measures.

Data collection was conducted online using a secure digital platform. The survey was distributed electronically to employees across various industries in North Macedonia through company networks, professional associations, and targeted outreach. Participation was voluntary and anonymous.

Data were analysed using IBM SPSS Statistics (Version 29). Both parametric and non-parametric tests were applied based on the distribution characteristics of the variables. Parametric tests (e.g. ANOVA) were used for normally distributed data, while non-parametric tests (e.g. Kruskal–Wallis) were employed where assumptions of normality were violated, ensuring robust and reliable insights.

## Results

To examine how perceptions of job demands and resources vary across industries and career stages, we will first present descriptive statistics for all measured variables (Table 1), followed by group comparisons using parametric and non-parametric tests based on distribution characteristics.

**Table 1.** Descriptive statistics of the measured characteristics of the work environment

	<b>N</b>	<b>M</b>	<b>SD</b>	<b>Mdn</b>	<b>Min.</b>	<b>Max.</b>	<b>Skewness</b>	<b>Kurtosis</b>
Emotional load	226	8.69	3.007	9.00	0	15	-.297	-.161
Mental load	227	2.31	2.225	2.00	0	12	.849	.525
Complexity	226	6.02	2.005	6.00	0	9	-.835	.750
Pace and amount of work	225	10.33	3.118	11.00	0	17	-.455	.194
Role conflict	226	11.33	2.616	12.00	3	15	-.716	.279
Role clarity	227	9.11	2.547	9.00	1	12	-.845	.335
Relationship with colleagues	226	13.21	3.063	13.00	5	18	-.041	-.943
Learning opportunities	227	8.98	2.246	9.00	2	12	-.705	.188
Career opportunities	227	7.68	3.135	8.00	0	12	-.508	-.293
Job autonomy	227	8.54	2.643	9.00	0	12	-.498	-.496

Table 1 summarises the central tendencies and variability for each construct. Among job demands, the highest mean was reported for pace and amount of work ( $M = 10.33$ ,  $SD = 3.12$ ), followed by role conflict and emotional load. Mental load showed the lowest average, with a positively skewed distribution. For job resources, participants rated their relationship with colleagues ( $M = 13.21$ ,  $SD = 3.06$ ) and role

clarity (M = 9.11, SD = 2.55) highest. Career opportunities had the lowest mean among the resources. Most variables demonstrated acceptable levels of skewness and kurtosis, indicating approximately normal distributions, except for complexity, which showed slight negative skew and moderate kurtosis.

These results provide a descriptive overview of how employees perceive key aspects of their work environment and serve as a basis for the group comparisons reported below.

The results shown in Table 2 and 3 indicate a statistically significant difference in the perceived characteristics of the work environment across various industries for all measured job demands (emotional load, mental load, complexity, pace and amount of work, role conflict) and job resources (role clarity, relationship with colleagues, learning opportunities and career opportunities) except for one job resource (job autonomy).

**Table 2.** Results of the ANOVA and Tukey HSD post-hoc test: differences in perception of work characteristics between employees from various industries

Dependent variable			Mean difference	Std. Error	p	F	df	p
<b>Emotional load</b>	IT	Healthcare	<b>3.660*</b>	.583	.000	11.205	4	.000*
		Education	<b>1.903*</b>	.648	.030			
		Administration	1.360	.607	.169			
		HRM	<b>2.489*</b>	.644	.001			
	Healthcare	IT	<b>-3.660*</b>	.583	.000			
		Education	<b>-1.757*</b>	.568	.019			
		Administration	<b>-2.301*</b>	.521	.000			
		HRM	-1.171	.564	.233			
	Education	IT	<b>-1.903*</b>	.648	.030			
		Healthcare	<b>1.757*</b>	.568	.019			
		Administration	-.543	.593	.890			
		HRM	.586	.631	.885			
	Administration	IT	-1.360	.607	.169			
		Healthcare	<b>2.301*</b>	.521	.000			
		Education	.543	.593	.890			
		HRM	1.130	.588	.310			
Human Resource and Recruitment	IT	<b>-2.489*</b>	.644	.001				
	Healthcare	1.171	.564	.233				
	Education	-.586	.631	.885				
	Administration	-1.130	.588	.310				

Dependent variable		Mean difference	Std. Error	p	F	df	p	
Relationship with colleagues	IT	Healthcare	<b>2.010*</b>	.622	.012	5.306	4	.000*
		Education	<b>2.050*</b>	.692	.028			
		Administration	<b>2.099*</b>	.648	.012			
		HRM	.244	.687	.997			
Healthcare	IT	Healthcare	<b>-2.010*</b>	.622	.012			
		Education	.040	.606	1.000			
		Administration	.090	.556	1.000			
		HRM	<b>-1.766*</b>	.602	.030			
Education	IT	Healthcare	<b>-2.050*</b>	.692	.028			
		Education	-.040	.606	1.000			
		Administration	.050	.633	1.000			
		HRM	-1.806	.673	.060			
Administration	IT	Healthcare	<b>-2.099*</b>	.648	.012			
		Education	-.090	.556	1.000			
		Administration	-.050	.633	1.000			
		HRM	<b>-1.855*</b>	.628	.028			
Human Resource and Recruitment	IT	Healthcare	-.244	.687	.997			
		Education	<b>1.766*</b>	.602	.030			
		Administration	1.806	.673	.060			
		HRM	<b>1.855*</b>	.628	.028			

The results of the ANOVA showed a statistically significant difference at the  $p < .01$  level in the perception of emotional load and relationship with colleagues among the five industry groups. A post-hoc Tukey HSD test was conducted to determine which specific groups differed from each other. From Table 2, it is evident that there is a statistically significant difference in the perceived emotional load between employees in the IT industry and those in healthcare, education, and HRM respectively. Furthermore, there is a statistically significant difference in the perceived emotional load between employees working in healthcare and those in education and administration. Regarding the relationship with colleagues, there is a statistically significant difference in the perceived quality of relationships between employees in the IT industry and those in healthcare, education, and administration. Additionally, there is a statistically significant difference in the perceived quality of relationships between employees in healthcare and those in HRM, as well as between employees in administration and those in HRM.

**Table 3.** Results of the Kruskal-Wallis test: differences in perception of work characteristics between employees from various industries

		N	Rank	df	$\chi^2$	P
<b>Mental load</b>	IT	35	131.40	4	34.91	.000***
	Healthcare	63	77.78			
	Education	38	149.53			
	Administration	52	113.12			
	HRM	39	123.46			
	Total	227				
<b>Complexity</b>	IT	35	141.13	4	9.67	.046***
	Healthcare	63	99.49			
	Education	38	109.92			
	Administration	50	111.75			
	HRM	40	116.98			
	Total	226				
<b>Pace and amount of work</b>	IT	35	139.77	4	13.96	.007***
	Healthcare	63	100.64			
	Education	37	116.84			
	Administration	51	123.42			
	HRM	39	91.67			
	Total	225				
<b>Role conflict</b>	IT	35	139.29	4	9.82	.044***
	Healthcare	63	102.51			
	Education	38	124.76			
	Administration	51	109.49			
	HRM	39	102.38			
	Total	226				
<b>Role clarity</b>	IT	35	106.24	4	18.64	.001***
	Healthcare	63	136.65			
	Education	38	112.53			
	Administration	51	118.18			
	HRM	40	81.19			
	Total	227				

<b>Learning opportunities</b>	IT	35	139.49	4	14.26	.007***
	Healthcare	63	106.93			
	Education	38	116.82			
	Administration	52	92.38			
	HRM	39	128.63			
	Total	227				
<b>Career opportunities</b>	IT	35	159.21	4	38.73	.000***
	Healthcare	62	104.73			
	Education	38	85.96			
	Administration	52	92.81			
	HRM	40	142.99			
	Total	227				
<b>Job autonomy</b>	IT	35	131.36	4	5.29	.250
	Healthcare	62	103.73			
	Education	38	116.13			
	Administration	52	106.60			
	HRM	40	122.34			

The results of the Kruskal-Wallis test, as shown in Table 3, indicated that there are differences in the perceived characteristics of the work environment across various industries. These differences were observed for all measured job demands and job resources except job autonomy. Upon reviewing of the mean ranks for the groups, it was found that the IT group had the highest scores in six out of the eight measured characteristics of the work environment. This suggests that they likely perceive and evaluate their work environment more positively, with higher job resources and potentially lower job demands. These factors may be associated with better employee well-being and satisfaction.

Table 4 and Table 5 present findings that highlight significant differences in how employees in early and later career stages perceive specific aspects of their work environment.

**Table 4.** Results of the ANOVA test: differences in perceived work characteristics between employees in early and later stage career

		N	M	SD	F	t	df	p
Emotional load	Later career stage	53	7.77	2.812	.094	-2.652	223	.009***
	Early career stage	172	9.01	3.000				
Relationship with colleagues	Later career stage	53	12.30	3.029	.233	-2.532	223	.012***
	Early career stage	172	13.51	3.025				

The findings in Table 4 indicate that career stage significantly influences employees' perceptions of two aspects of the work environment. Results from the independent samples t-test revealed that early-career employees reported significantly higher levels of emotional load ( $M = 9.01$ ,  $SD = 3.00$ ) than those in the later career stage ( $M = 7.77$ ,  $SD = 2.81$ ),  $t(223) = -2.652$ ,  $p = .009$ . Similarly, early-career employees rated relationships with colleagues more positively ( $M = 13.51$ ,  $SD = 3.03$ ) than their later-career counterparts ( $M = 12.30$ ,  $SD = 3.03$ ),  $t(223) = -2.532$ ,  $p = .012$ . These findings suggest that employees earlier in their careers may experience more emotional strain and place greater value on collegial support.

**Table 5.** Results of the Mann-Whitney U test: differences in perceived work characteristics between employees in early and later stage career

		N	Mean Rank	Sum of Ranks	U	z
Mental load	Early career stage	173	115.74	20022.50	4197.500	-.947
	Later career stage	53	106.20	5628.50		
Complexity	Early career stage	172	116.85	20098.00	3896.000	-1.620
	Later career stage	53	100.51	5327.00		
Pace and amount of work	Early career stage	171	115.17	19694.00	4075.000	-1.113
	Later career stage	53	103.89	5506.00		
Role conflict	Early career stage	172	113.78	19571.00	4423.000	-.328
	Later career stage	53	110.45	5854.00		
Role clarity	Early career stage	173	108.85	1883.00	3780.000	-1.955
	Later career stage	53	128.68	6820.00		
Learning opportunities	Early career stage	173	113.05	19557.50	4506.500	-.191
	Later career stage	53	114.97	6093.50		
Career opportunities	Early career stage	173	114.14	19745.00	4474.500	-.267
	Later career stage	53	111.42	5905.50		
Job autonomy	Early career stage	173	114.95	19886.50	4333.500	-.607
	Later career stage	53	108.76	5764.50		

The results from the Mann–Whitney U test, as shows in Table 5, indicate that there were no statistically significant differences in mental load, complexity, pace and amount of work, role conflict, learning opportunities, career opportunities, or job autonomy across career stages. However, there was a trend towards significance in role clarity, with later-career employees tending to perceive higher clarity ( $z = -1.955$ ,  $p = .051$ ).

In summary, these findings suggest that career stage influences perceived emotional demands and interpersonal dynamics, though not consistently across all job demands and resources. Early-career professionals may experience more emotional strain and prioritise collegial relationships, possibly due to developmental and socialisation factors in the workplace. Overall, these results indicate that industry and employees' career stages impact the perception of job demands and resources within the work environment.

## Discussion

The conducted statistical analyses have provided significant insights into how perceptions of the work environment vary across industry sectors and career stages. These findings underscore the intricate interplay between context and career trajectory in shaping an employee's workplace experience. This discussion synthesises the core findings, acknowledges the study's limitations, and proposes future research directions, emphasising their implications for organisational practices and policies aimed at enhancing employee well-being and satisfaction.

The analyses revealed notable differences in perceptions of work environments across industries and career stages, highlighting the dynamic relationship between job demands, resources, and contextual factors. These findings align with existing literature, which emphasises the influence of both industry-specific (Bakker et al. 2004; Schaufeli 2017) and career stage-related differences (Super 1990; Kanfer et al. 2012) in shaping workplace experiences. For example, research shows that high-demand industries such as IT frequently offer greater autonomy and learning opportunities (Taris et al. 2001), while early-career employees typically report higher stress and a stronger need for peer support as they navigate role clarity and integration (Savickas 2005; Zacher 2015).

Our research identified significant disparities among industry groups. The Information Technology (IT) sector exhibited higher scores on six of the ten evaluated work environment characteristics, suggesting a more supportive environment potentially marked by abundant job resources and relatively lower job demands. Such conditions contribute to greater employee well-being and satisfaction, underscoring the critical role of industry context in shaping workplace experiences. These findings align with prior research indicating that knowledge-intensive industries often invest heavily in resource-rich environments to attract and retain talent (Wang & Netemeyer 2002). In contrast, sectors such as healthcare and education face structural challenges, including resource constraints and bureaucratic demands, which are more pronounced in public sector industries (Bakker et al. 2020). These observations highlight the need for policymakers and organisational leaders to tailor interventions to address industry-specific dynamics.

The analysis also revealed significant differences across career stages. Early-career employees reported higher emotional loads, reflecting heightened uncertainty and role ambiguity often associated with entry-level positions (Feldman & Beehr 2011). Conversely, later-career employees perceived stronger relationships with colleagues,

suggesting the importance of accumulated social capital and workplace integration over time. These findings underscore the necessity of organisational strategies tailored to the unique needs and challenges of employees at different career stages.

Together, these insights emphasise the significance of both industry context and career stage in shaping perceptions of job demands and resources. This aligns with Conservation of Resources (COR) theory, which posits that individuals strive to acquire and protect resources to manage stress (Hobfoll 1989). Employees with abundant resources, such as supportive colleagues or developmental opportunities, are better equipped to navigate demands and maintain engagement. Moreover, the findings reinforce the Job Demands-Resources model's proposition that fostering job resources not only mitigates the negative effects of demands but also promotes proactive behaviours such as innovation and knowledge sharing (Tims et al. 2011).

Recognising these variations is essential for organisations aiming to cultivate supportive and nurturing workplaces that cater to diverse workforce needs. This knowledge can inform targeted interventions to enhance employee well-being, job satisfaction, and overall organisational success.

## **Conclusion**

This study adds to the growing body of research that examines how contextual and individual factors, such as industry sector and career stage influence employee perceptions of job demands and resources. Utilising the Job Demands-Resources model, the findings demonstrate that these variables are not experienced uniformly across the workforce, but are influenced by the structural and developmental aspects of one's occupational setting and career trajectory.

By studying a diverse sample of employees from various industries in North Macedonia, the research provides a context-specific perspective that enriches the predominantly Western-centric literature on workplace well-being. The results indicate that employees in high-knowledge sectors such as IT report more positive work environments, likely due to increased autonomy, learning opportunities, and peer collaboration. Conversely, employees in public sector environments, such as healthcare and education, may face higher job demands without sufficient compensatory resources, highlighting systemic structural imbalances that require targeted policy and leadership interventions.

Furthermore, early-career employees were found to experience higher emotional demands while also reporting stronger collegial relationships, possibly due to their need for social support during role adjustment. Later-career employees, on the other hand, appeared to benefit from accumulated workplace experience and greater role clarity. These findings reinforce the importance of career stage-sensitive approaches to employee development and support.

In this study, we examined the relationship between industry, career stage, and perceptions of job demands and resources using a cross-sectional design. While this approach allowed for data collection at a single point in time, it inherently limited our ability to infer causality within these associations. Future investigations could benefit from adopting longitudinal methodologies to examine how these relationships evolve over time, thereby providing a more comprehensive understanding of the dynamics at play.

Another important consideration is the reliance on self-reported measures. While self-reporting is a widely used and valuable method in research, it is susceptible to response bias. Participants may not always accurately assess or report their perceptions and experiences, which may lead to potential distortions in the data. This highlights the need for incorporating additional objective measures or triangulating data sources in future studies to mitigate these limitations.

The generalisability of our findings is also a consideration. Our study population was drawn exclusively from North Macedonia, and as such, the results reflect the specific cultural, economic, and industrial context of this region. The extent to which these findings can be applied to other cultural or geographic contexts remains uncertain, underscoring the importance of conducting similar research in diverse settings to validate and possibly extend our insights.

Lastly, the selection of scales from the QEEW2.0 questionnaire to assess job demands and resources was driven by a desire for concise assessment. However, this approach may have inadvertently overlooked more nuanced aspects of job demands and resources that the full questionnaire is capable of capturing. Future research might consider employing the complete range of scales provided by the QEEW2.0 or integrating additional instruments to ensure a more detailed exploration of these constructs.

*Future Directions*

To further advance our understanding of job demands and resources, future research should focus on conducting longitudinal studies to monitor changes in employee perceptions over time. By combining quantitative data with qualitative methods, researchers can gain a deeper understanding of the nuances of workplace experiences. Additionally, broadening the scope to include cross-cultural comparisons and generational perspectives (e.g. Baby Boomers, Millennials, Gen Z) will improve the relevance and applicability of findings across various societal and demographic contexts.

# Karakteristike radnog okruženja: eksplorativna analiza zahtjeva i resursa na poslu među zaposlenima u različitim industrijama i fazama karijere u Sjevernoj Makedoniji

**Sažetak:** Polazeći od modela zahtjeva i resursa na poslu (Bakker i Demerouti 2007), ovo istraživanje ima za cilj da identifikuje razlike u karakteristikama radnog okruženja kako ih doživljavaju zaposleni u različitim fazama karijere i u različitim industrijama (zdravstvo, obrazovanje, administracija, regrutacija i upravljanje ljudskim resursima – HRM, informacione tehnologije – IT) u Sjevernoj Makedoniji, putem Upitnika o iskustvu i procjeni rada (QEEW2.0), koji su razvili Van Veldhoven i Meijman (1994). Uzorak je obuhvatio 229 učesnika ( $N_{\text{žene}} = 194$ ,  $M_{\text{srednja starost}} = 36,15$ ,  $\text{Std} = 0,360$ ). Za analizu podataka korišteni su i parametrijski i neparametrijski testovi. Rezultati analize otkrivaju značajne razlike između industrija u percepciji kako zahtjeva tako i resursa na poslu, pri čemu sektor informacijskih tehnologija često izvještava o pozitivnijim karakteristikama radnog okruženja. Također, uočene su značajne razlike između zaposlenih u ranoj i kasnijoj fazi karijere u procjeni emocionalnog opterećenja, složenosti posla i odnosa s kolegama. Iako ovi nalazi sugerišu da i industrija i faza karijere mogu biti povezani s tim kako zaposleni doživljavaju zahtjeve i resurse na poslu, treba ih tumačiti s oprezom zbog relativno malog uzorka. Ipak, uočeni trendovi nude preliminarne uvide koji mogu pomoći u oblikovanju podržavajućeg radnog okruženja koje doprinosi blagostanju i zadovoljstvu zaposlenih.

**Ključne riječi:** zahtjevi na poslu, resursi na poslu, razlike u fazama karijere, industrije

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