Impact of Job Demands and Job Resources on Employee Digital Wellbeing in Higher Educational Institutions of Pakistan

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ABSTRACT

The objective of this study is to test the impact of job demands and job resources on employees' digital well-being among those working in higher educational institutions in Pakistan in the context of digitalization, conceptualized through the Job Demands–Resources model. Although transformations related to digitalization have intensified job demands and reshaped employee well-being, very few empirical studies have examined digital well-being through the Job Demands–Resources theoretical framework in the Pakistani context, particularly in higher educational institutions. Data were collected from 216 faculty and administrative staff members in higher educational institutions in Pakistan through a structured questionnaire. Statistical Package for the Social Sciences software was employed to test the study hypotheses using descriptive statistics, exploratory factor analysis, Pearson correlation analysis, and regression analysis to examine the effects of job demands and job resources on employees' digital well-being. The results indicate that job demands have a significant negative relationship with employee digital well-being, whereas job resources show a positive relationship with employee digital well-being. This study aims to bridge the gap in empirical literature concerning employee digital well-being in higher educational institutions of developing countries, specifically Pakistan. The findings also contribute to understanding digital working environments and support the development of balanced digital workplaces to achieve sustainable employee well-being.

Keywords: Job demands, Job resources, Employee digital well-being, Higher educational institutions, Job Demands–Resources model

JEL Classification Codes: M5, M10, O15, I31

1. INTORDUCTION

The dawn of the modern digital era has remade work processes and employee experiences through the integration of technologies such as collaborative software, learning management systems, and cloud computing in organizations, thus redefining job roles. Digitalization is a strategic priority even within developing countries, for instance, in Pakistan, it is part of the Digital Pakistan Policy. Even though digital tools are associated with increased operational efficiency, they create complex job demands like continuous connectivity, digital-related overload, along with techno-stress that impinges negatively on physical, psychological, and emotional well-being. These challenges underscore the importance of job resources, which refer to the Job Demands–Resources (JD–R) model/theory and buffer the adverse strain/job demand effects, as well as promote employee digital wellbeing. Job resources refer to those aspects of the job that are functional in achieving work goals, reducing job demands, and stimulating personal growth and development (Bakker et al., 2023). Employee digital well-being (EDWB) has psychological, physical, emotional, and social dimensions that reflect the ability to use technology effectively while health and balance are maintained.

Whereas there is an element of psychological impact brought forth by digitalization in international literature, research in developing countries remains limited. Despite the increasing amount of research on digital well-being globally, the existing research on digital well-being remains underexplored in developing countries, specifically in the Pakistani context. Educators and administrative staff are confronted with increased workloads, blurred boundaries of work and life, and pressures at an institutional level from top-down digital reforms, leading to cognitive overload and burnout conditions with a decline in well-being.

Pakistan's public and private sectors have rapidly embraced digitalization in recent years, intending to improve governance, efficiency, and service delivery. However, this digital transformation has introduced new forms of job demands that significantly challenge employee well-being. Instead of reducing workload, digital systems often require constant engagement, increase screen exposure, and blur the lines between professional and personal life (Yu et al., 2022). The country’s uneven digital infrastructure and digital literacy rates tend to raise such issues, particularly in fields such as education and administration, where digital training and support systems are likely to be absent.

Although digital technology is built to help eliminate work, it often ends up causing digital fatigue (Jauhar et al., 2025). This is evidenced in the country's industries, including Pakistan, where instructors are under constant pressure to juggle digital environments, plan digital materials, and virtually interact, causing

them to feel tension, solitude, and eye-health issues (Shahzad, 2024). It is evident that the digitization of Pakistan was not done in conjunction with the establishment of job resources such as digital training and development (T&D), policies, or mental health support. Referring to the Job Demands–Resources (JD–R) model, worker wellness is constructed on the interaction of the job demand–resource balance. But this balance can be upset because demands increase and resources dwindle, which contributes to diminishing engagement, satisfaction, and well-being (Bakker et al., 2007; Xanthopoulou et al., 2009).

People in Pakistan are still trying to figure out how to deal with stress. The things that institutions are doing to help with stress in Pakistan are not very good. They are just reacting to problems as they happen. This makes it hard for people in Pakistan to get the help they need to manage stress. Institutions in Pakistan need to do a better job of helping people with digital stress. Moreover, the work pressure in Pakistan's institutions that are using technology is getting worse. This includes things like not having time, having too much work, and dealing with emotional stress. If workers do not get the help they need on time, these pressures will make workers feel bad, cause them to feel very tired, and make it hard for the organization to work well. Pakistan's institutions need to think about this (MacCallum, 2022; Schleicher, 2020). Regrettably, the majority of organizations continue to ignore digital wellbeing as a strategic human resource (HR) issue, and available academic literature from Pakistan has a tendency to generalize stress, failing to consider the distinctive psychosocial effects of digital workplaces (Noor et al., 2025).

Overall, although international focus on employee digital wellbeing is increasing, the issue in Pakistan is under-researched and not well-integrated into digital policy agendas. There is a clear need to understand how job demands and job resources interplay to have an impact on employee digital wellbeing.

In the past decades, scholars and practitioners have witnessed a sustained increase in work demands, noting the increasing necessity of sufficient job resources to promote employee well-being, particularly in the current age of technology. Although organizational digital transformation is highly advocated to increase operational efficiency and productivity, mounting evidence suggests it also presents great psychological and emotional challenges for employees. Most of the research thus far conducted on workplace stress in Pakistan has been largely centered on general stressors, burnout, and job satisfaction, yet without specifically addressing the digital aspects of stress, including technostress, digital overload, and screen fatigue (Noor et al., 2025).

Research that does cover employee wellbeing tends to have a generic focus and misses the fine-grained insight into how digitalization has changed the nature of

work, especially in educational institutions. In addition, while international research has recognized the development of digital wellbeing as an essential construct, it remains poorly explored in the Pakistani scenario (Gui et al., 2017; Roffarello & De Russis, 2023). The existing exploration on employee well-being in Pakistani settings has largely focused on well-being, job-related stress, and job burnout. There seems to be a significant absence of research that could demonstrate the link between JDs and JRs accessible to stimulate digital wellbeing among employees in Pakistani organizations, specifically higher education institutions that are rapidly becoming digitalized.

Compounding the gap is the fact that contextual factors unique to Pakistan, such as disparities in digital infrastructure, varying levels of digital literacy, lack of formal support systems, and socio-cultural expectations, are often overlooked in mainstream literature (Yu et al., 2022). Therefore, with the increasing importance of employee digital wellbeing, scholarly research into its determinants, insofar as it includes the contributions of JDs and JRs in developing economies such as Pakistan, is lacking. This shortcoming calls for a dedicated, firsthand study, and the objectives of this exploration are to examine the impact of job demands and job resources on employee digital wellbeing in Higher Education Institutions within Pakistan.

To address the identified research gaps and guide the empirical investigation, the following research questions are proposed:

- What is the impact of job demands on employees' digital well-being in Higher Education Institutions in Pakistan?
- What is the impact of job resources on employees' digital well-being in Higher Education Institutions in Pakistan?

This paper gives ideas to researchers who work in the field and people who make policies. It analyzes how employee digital wellbeing can be achieved in a digital workplace through the interplay of job demands and job resources. This research adds to the Job Demands–Resources (JD–R) theory by situating it in digitalized organizations and adding employee digital wellbeing as a key outcome variable. The contribution of this exploration to the literature lies in its focus on the JD–R model in combination with job demands and resources at digital workplaces. This study contributes to academic knowledge by extending the Job Demands–Resources model to explore the under-researched domain of employee digital wellbeing.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Job Demands & Employee's Digital Well-Being (EDWB)

The advancement of digital technologies in the workplace has resulted in greater connectivity and adaptability, but it also creates new challenges for employees' well-being. When organizations incorporate digital tools into operations, there is a need to consider how the tools affect workers' mental and emotional well-being (Marsh et al., 2024). Digital well-being here means the impact of technology consumption on workers' psychological, physical, and social well-being (Thomas et al., 2022). Comprehending the impact of digital-related job demands is therefore important for effective management of employee well-being. For instance, job demands include factors that create strain. They include examples such as excessive work pressure, emotional demands, cognitive difficulties, role vagueness, and organizational hassles (Bakker et al., 2023), though they are present at all times in conventional workplaces.

In fact, some of the job requirements are either compounded or specifically emerge in the virtual space. For example, constant connectivity provided by contemporary technologies has the potential to decrease well-being through the inability to mentally disconnect from work (Marsh et al., 2024). Workers are often forced to be "always on" and available, making it impossible to separate work and personal life and elevating the susceptibility to burnout and exhaustion (Arnold et al., 2023). Furthermore, the sheer amount of information and the fast rate of technological development can exert too much pressure on workers. It is especially true for organizations such as academic institutions, where handling multiple online platforms and tools simultaneously can result in operational complexity and psychological stress (Sevic et al., 2025).

The emerging construct of digital workplace technology intensity recognizes these challenges by reflecting similar forces as in traditional work intensity, but in a digital context. The demands of working digitally have a demonstrated influence on various dimensions of employees' digital well-being. They are linked to various outcomes, including strain. For example, the demand to constantly maintain familiarity with the latest technology, as well as maintain a steady stream of digital communication, could lead to chronic strain and burnout over time (Marsh et al., 2024).

However, there is empirical evidence that the stressors of hyper-connectivity and information overload are known to predict emotional exhaustion (Sevic et al., 2025). Nevertheless, the constantly "always-on" culture of the majority of digital workplaces has been observed to have a significant effect on work–life balance. Employees are unable to "switch off," hence resulting in perpetual work–life conflict, as well as a reduced level of well-being (Supriyadi et al., 2025). While

job demands are the central theme in such a proposition, the buffering capacity of job resources and personality traits such as resilience and competencies should also be investigated. In this respect, the perceived digital skill set and digital literacy as a whole are seen as crucial determinants for employees' digital well-being. Various research works have underlined the significance of digital literacy and expertise and have referred to the fact that employees with elevated levels of digital literacy and expertise capabilities possess better coping strategies for dealing with emerging demands within technological advancements (Yu et al., 2022).

Digital work requirements have become a challenge for employees in terms of their digital well-being. This requirement for digital work is not only technical but also strategic for organizational well-being. To ensure proper working in the digital environment, employers should alleviate digital overload in the organization and equip personnel with the mandatory skills to deal effectively with the digital environment (Yu et al., 2022).

2.2. Job Resources & Employee's Digital Well-Being

Along with the digitalization of all spheres of work, where technology dominates almost every facet of work, employee digital well-being has become a priority issue for companies. With the increasing use of digital tools by employees more intensively and on a regular basis, their emotional, social, and psychological reactions to these technologies become pivotal factors for creating healthy and productive workplaces (Marsh et al., 2024).

Whereas demands at work can impede employee well-being by causing stress and burnout (Marsh et al., 2024; Sevic et al., 2025), job resources are now better understood as protective factors that have the capacity to buffer adverse effects and bring about positive consequences (Yu et al., 2022).

According to researchers, job resources are the physical, emotional, social, or organizational features of the occupation that support personnel in attaining their work-related objectives, reduce the impact of JDs, and promote individual progression as well as development. Job resources thus play a very dynamic role in enhancing EDWB in digital workplaces by promoting resilience and adaptability (Bakker et al., 2023).

A key human resource is transformational leadership. Transformational leaders are ethical role models, have a clear vision, stimulate creativity, and offer personalized guidance through coaching and mentoring (Teoh et al., 2022). Transformational leaders can assist their personnel in dealing with the challenges of digital transformations by providing direction and emotional support (Riza et al., 2025). In addition, transformational leadership has been associated with

lower employee stress by leading employees through technological change with vision and compassion (Li et al., 2025). This type of leadership promotes motivation and commitment in the consumption of digital technologies and develops emotional resilience (Yu et al., 2022).

Besides leadership, development opportunities are another key job resource. Such opportunities cover access to training, learning, and development programs within the company and are vital in helping boost the skills and competencies of employees within a technology-based environment (Trenerry et al., 2021). Developmental resources enhance digital competency, in turn enhancing confidence and self-efficacy when using new technologies (Yu et al., 2022). The more digitally empowered employees become, the more adept they are at handling work issues and accepting change positively.

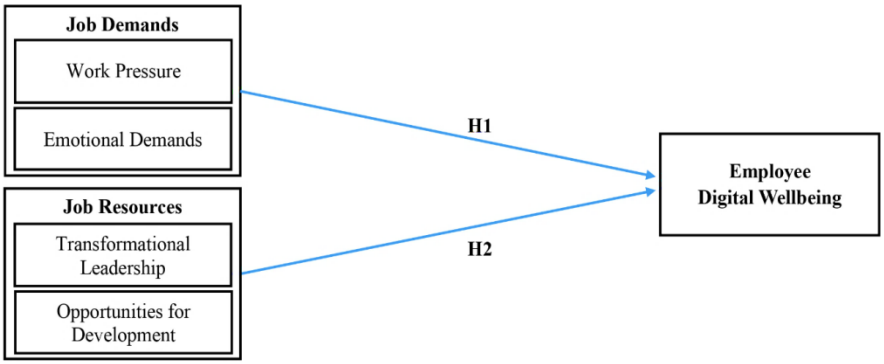
Finally, resources like transformational leadership and developmental opportunities are core drivers of employee digital well-being. Through providing resources, guidance, and avenues for development, organizations can enable their employees to flourish in today's digital workplace (Li et al., 2025). Proactive management of digital well-being among employees can also translate into more optimal and meaningful utilization of digital technologies in roles and departments (Ren et al., 2025). Ongoing research is required to further investigate these dynamics and guide strategies that enhance EDWB by organizations.

2.3. Job Demands–Resources Theory

One of the most popular models related to employee engagement and burnout is the Job Demands–Resources (JD–R) theory (Demerouti et al., 2001). According to it, job demands and job resources measure well-being along with strain. In this model, job demands include factors of work that entail hard work, which may cause strain, exhaustion, or mental overload. In contrast, job resources include factors of work that support goal attainment, decrease the negative implications of JDs, and contribute to growth along with well-being (Bakker et al., 2023). This theory also encompasses two processes. Firstly, it is based on a health-impairment process, where high job demands reduce energy and lead to burnout. Conversely, it comprises a motivational process where JRs increase work engagement, work performance, and well-being (Bakker et al., 2023).

2.4. Theoretical Framework

Figure 1: Theoretical Framework



Source: Authors own compilation.

The conceptual model in figure 1 is grounded in the Job Demands–Resources (JD–R) theory and illustrates the proposed relationships between job demands, job resources, and employee digital well-being. In this framework, job demands are represented by work pressure and emotional demands, which reflect the strain-inducing aspects of digitally intensive work environments. These demands are expected to exert a negative influence on employee digital well-being by increasing stress, cognitive overload, and emotional exhaustion. Conversely, job resources, operationalized through transformational leadership and opportunities for development, represent supportive organizational factors that enhance employees' capabilities, resilience, and adaptation to digital work settings. The model proposes that while job demands impair digital well-being, job resources play a motivational and buffering role, thereby positively influencing employees' digital well-being in higher education institutions.

H_1: Job demands have an impact on employees' digital well-being.

H_2: Job resources have an impact on employees' digital well-being.

Thus, continuous consumption of negative news and information distorts an individual's sense of meaning and purpose, resulting in heightened existential anxiety.

3. METHODOLOGY

3.1. Research Design

The paper follows a quantitative research design with a foundation in the philosophy of positivism, believing in the objectivity of reality and its ability to

be observed (Creswell, 2009; Saunders et al., 2009). The study uses a survey-based, correlational, as well as explanatory research design to explore the hypothesized relationship amongst the study variables. The study uses a time-lagged cross-sectional approach, wherein data collection occurred in two waves (T1 and T2), one week apart, to reduce common-method bias and increase causal inferences. In light of the above, the primary purpose of this research is hypothesis testing, centered around the explanation of the causal and explanatory influences of job demands and job resources on employees' digital well-being within higher education institutions in Pakistan.

3.2. Sample

The unit of analysis includes individual faculty members and administrative staff working in digitally enabled higher educational institutions in Pakistan. In this regard, since Pakistani higher education has been facing rapid digitalization, specifically due to initiatives by the Higher Education Commission within areas such as high-speed internet connectivity, learning management systems, digital libraries, and campus-wide enterprise resource planning (ERP) solutions, employees have increasingly used digital technologies at work.

Primary data are collected with the help of a self-administered questionnaire. Data collection is conducted in two waves to improve causal modeling and alleviate common-method bias. At T1, data on independent variables, such as job demands (JDs) and job resources (JRs), are collected, followed by the collection of the dependent variable, which is employee digital well-being (EDWB), at T2, a week later for both stages. The research aims for a minimum of approximately 252 responses (Hair Jr et al., 2019b). Based on a pool of 450 distributed questionnaires, 280 responses are received at T1 and 232 at T2. After matching, the final sample consists of 216 respondents used in the study, since some participants dropped out due to incomplete or unmatched responses between T1 and T2. The response rate obtained is satisfactory, keeping in mind survey-based research.

A sample size of 200 observations, according to research, is usually recommended as a general rule to achieve stable parameter estimates, assuming factor solutions in factor analysis and regression models (Hair et al., 2019a). Moreover, according to researchers, 200 participants would constitute a "fair" standard for sampling. They would also constitute an acceptable standard for factor-analytic tests (Comrey & Lee, 2013). Following these guidelines, it is deemed that 216 participants are sufficient for analysis. The data consist of participants representing diverse demographic groups in terms of gender, age, and job designations (also reported in the results).

3.3. Measurement

The scales are adopted from previously validated instruments reported in the relevant literature to ensure content validity and reliability. In the questionnaire, job demands (JDs), including work pressure (Cronbach's alpha = 0.81) and emotional demands (Cronbach's alpha = 0.88), are assessed using 10 items adapted from Bakker et al. (2003a, 2004). Job resources are assessed using 8 items, including transformational leadership (Cronbach's alpha = 0.93) adopted from Carless et al. (2000) and opportunities for development (Cronbach's alpha = 0.88) adapted from Bakker et al. (2003b). Employee digital well-being (Cronbach's alpha = 0.91) is measured using 18 items adapted from Zheng et al. (2015), and all items are measured on a seven-point Likert scale. Authors of these scales emphasize their broader application and adaptability. These models are designed to be context-flexible and applicable across different sectors and countries**, especially developing ones** (Bakker et al., 2003a; Zheng et al., 2015).

3.4. Data Analysis Technique

The collected data are coded, cleaned, and analyzed via SPSS, using descriptive analysis, exploratory factor analysis (EFA), correlation analysis, as well as multiple regression to test the hypotheses proposed in the paper.

4. RESULTS AND FINDINGS

The respondents were selected from the Higher Education Institutions (HEIs) in Pakistan through convenience-snowball sampling, and the initial filtering question was used to ensure only those who were actively working in the digital space were considered for the analysis. The demographics show that the respondents are mainly female participants at 71.8% and 155 in number, representing the distribution of women in higher education institutions. The age distribution is highly representative, with most respondents falling in the mid-life workforce category of 36–40 (22.2%), 31–35 (20.4%), and 26–30 (19.0%), who can provide input from highly experienced and mature personnel who still employ and interact with digital technology. Most of the respondents appeared highly educated, at 58.3% who had an MPhil/MS degree and 27.3% who had a PhD, which is suitable for the analysis of complex data from digital working experiences. Most of the respondents, at 69.9%, had over 10 years of working life behind them, representing highly stable and experienced personnel. The demographics show that the data was collected for analysis from highly educated, experienced, and representative respondents working in the digital domain.

4.1. Descriptive Statistics

Table 1: Descriptive Statistics

Variable	N	Mean	Standard Deviation	Skewness	Kurtosis
Job Demands	216	39.07	7.82	0.194	0.838
Job Resources	216	32.37	6.82	-0.065	0.127
Employee Digital Well-Being	216	73.56	15.97	0.049	-0.160
Valid N (listwise)	216				

Source: Author's own calculations using SPSS

Table 1 reveals that the job demands (JDs) (Mean = 39.07, Standard Deviation = 7.82) and job resources (Mean = 32.37, Standard Deviation = 6.82) are reported. Employee digital well-being appears to be relatively high (Mean = 73.56, Standard Deviation = 15.97), and the data is relatively free of skewness. It can be said that job demands (JDs) are a high-effort job characteristic that might show a negative impact on Employee Digital Well-Being (EDWB) at work, whereas job resources (JRs) are a motivator that could act as a buffer for high job demands (JDs).

4.2. Factor Analysis

Table 2: Communalities – Factor Analysis

	Initial	Extraction
JobDemands	1.000	0.939
JobResources	1.000	0.895
EmployeeDigitalWellbeing	1.000	0.838

Extraction Method: Principal Component Analysis (PCA).

Source: Author's own calculations using SPSS.

Table 2, derived from results related to the Principal Component Analysis (PCA), reveals that all three variables are adequately described by the factors derived from PCA. Job demands (JDs) demonstrate an extraordinarily high value for communality of 0.939, Job Resources (JRs) with 0.895, and Employee Digital Wellbeing with 0.838, both showing values greater than the acceptable

limit of 0.50. This justifies an excessive amount of variability within each variable being accounted for via the factor structure, thus ascertaining the suitability of these variables for further analysis regarding the effect of JDs and JRs on Employee Digital Well-Being (EDWB) within Pakistani Higher Education Institutions (HEIs).

Table 3: Total Variance Explained-Factor Analysis

Component	Eigenvalue	% of Variance	Cumulative %
1	1.658	55.26	55.26
2	1.014	33.82	89.07
3	0.328	10.93	100.00

Extraction Method: Principal Component Analysis (PCA).

Source: Author's own calculations using SPSS.

Table 3, explained by PCA, reveals that the first two components explain 89% of the total variance. The first principal component has an eigenvalue of 1.658 and contributes 55.26% to the explained variance, and the second principal component has an eigenvalue of 1.014, adding 33.82% to the described variance. Lastly, the third principal component has an eigenvalue of 0.328 and accounts for the remaining 10.93% of the variance and, hence, can be discarded as it does not meet the criteria of the Kaiser criterion. Therefore, the PCA model can be said to be appropriate for this study.

Table 4: Component Matrix[a]-Factor Analysis

Variable	Component 1	Component 2
Job Demands		0.804
Job Resources	0.726	
Employee Digital Wellbeing	0.915	

Note. 2 components extracted. **Extraction Method:** Principal Component Analysis (PCA).

Source: Author's own calculations using SPSS.

Table 4 displays the loadings related to JDs, JRs, and Employee Digital Well-Being (EDWB) on two extracted components. Employee Digital Wellbeing loads strongly on Component 1 (0.915), while Job Resources also load positively (0.726) on the same component, indicating that Component 1 stands for a resource–wellbeing dimension wherein the higher the job resources, the higher the digital well-being. In contrast, Job Demands (JDs) load strongly on Component 2 (0.804), indicating that this component reflects the intensity of

work-related demands. This pattern emphasizes another clear dichotomy in that Component 1 captures the motivational and supportive effects of resources on digital wellbeing, while Component 2 captures the level of job demands (JDs) without directly influencing wellbeing. All in all, the matrix supports theoretical expectations of the Job Demands–Resources (JD-R) model that job resources relate to employee digital wellbeing in a positive way, while job demands (JDs) form a different dimension of workload intensity.

4.2 Correlations

Table 5: Correlations

Variable	Job Demands	Job Resources	Employee Digital Wellbeing
Job Demands	1	0.015	-0.401**
Job Resources	0.015	1	0.531**
Employee Digital Wellbeing	-0.401**	0.531**	1

Note: Correlation is significant at the 0.01 level (2-tailed).

Source: Author's own calculations using SPSS.

Analysis of Table 5 indicates that Job Demands (JDs) have a moderate and negative correlation with EDWB (correlation of −0.401, $p < 0.01$), indicating that work pressure and emotional demands have implications for poor digital wellbeing, thus confirming H1. Job Resources (JRs) have a moderate and positive correlation with EDWB (correlation of 0.531, $p < 0.01$), indicating that transformational leadership and opportunities for development have implications for better wellbeing, thus confirming H2. Job demands (JDs) and Job Resources (JRs) have a very weak and non-significant association (correlation of 0.015, $p = 0.826$), thus confirming that Job demands (JDs) as well as Job Resources (JRs) work independently.

4.3 Regression

Table 6: Model Summary[b]-Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Durbin-Watson
1	0.670[a]	0.449	0.443	11.91444	1.987

a. Predictors: (Constant), Job Resources, Job Demands

b. Dependent Variable: Employee Digital Wellbeing

Source: Author's own calculations using SPSS

Table 6, 'Regression Analysis' on the effect of JD & JR on EDWB, illustrates a 'good fit' for the study, as the multiple correlation coefficient is R = 0.670. The R-square measure of 0.449 reveals that the independent variables are capable of explaining 44.9% of the DV's variance. The adjusted R-squared measure of about 0.443 validates the robustness of the findings. Further, the Durbin–Watson statistic of 1.987 implies that there are no severe levels of autocorrelation among the residuals. In conclusion, the findings suggest a significant joint effect of JDs as well as JRs on employee digital well-being, validating research hypotheses H1 & H2, which establishes the validity of the JD-R model within Pakistani higher education institutions.

Table 7: ANOVA[a]-Regression Analysis

Source	Sum of Squares	df	F	Sig.
Regression	24599.07	2	86.65	0.000
Residual	30236.15	213		
Total	54835.22	215		

a. Dependent Variable: Employee Digital Wellbeing

b. Predictors: (Constant), Job Resources, Job Demands

Source: Author's own calculations using SPSS.

Table 7, F-test results show that the regression equation for the prediction of EDWB (employee digital wellbeing) from JDs and JRs is significant ($F = 86.65$, $p < 0.001$). The comparison of the regression sum of squares (24,599.07) with the residual sum of squares (30,236.15) reveals that a large part of the variance is explained by the predictors. This further justifies that the given regression equation is a 'good fit' for analysis/data, thereby validating the assumption in H1 and H2 that the JD-R framework is relevant in the setting of Pakistan's educational institutions.

Table 8: Coefficients[a] – Regression Analysis

Predictor	B	Std. Error	Beta	t	Sig.
Constant	65.553	5.616		11.672	0.000
Job Demands	-0.835	0.104	-0.409	-8.034	0.000
Job Resources	1.256	0.119	0.537	10.547	0.000

Dependent Variable: Employee Digital Wellbeing

Source: Author's own calculations using SPSS.

Table 8 indicates that Job demands (JDs) have a significant negative effect on the digital wellbeing of employees ($B = -0.835$, $\beta = -0.409$, $p < 0.001$), indicating that greater job demands (JDs) lower the level of digital well-being. This supports H1. The result indicates that JRs have a positive and significant effect ($B = 1.256$, $\beta = 0.537$, $p < 0.001$), which shows that greater job resources improve the level of digital wellbeing. This supports H2. These discoveries are consistent with the JD-R approach because JDs are proven sources of strain, and JRs are proven to be sources of motivation/protection in cultivating the digital well-being of employees in Higher Education Institutions (HEIs) of Pakistan.

5. DISCUSSION

The research aimed to explore the "effects of job demands and job resources on digital well-being" in Pakistani higher education institutions using the "Job Demands-Resources model". Overall, findings offer strong support for validating the practical use of the "JD-R model" in understanding digital well-being in a Pakistani academic setting. It was revealed that, in accordance with the health impairment mechanism of the "JD-R model", JDs share a significant negative relationship with employee digital well-being. This general result adds to prior research evidence that excessive workload, emotional, and technology-based job demands contribute to experienced stress and subsequently lower digital well-being at work (Bakker & Demerouti, 2017; Tarafdar et al., 2015). Significantly, this research reveals that such unfavorable outcomes of job demands are also prevalent in the digitally transformed Pakistani higher education sector, in which academics continuously experience digital teaching and connectivity.

This research tested the effect of JDs & JRs on employee digital well-being of higher education institutions (HEIs) in Pakistan through the Job Demands-Resources (JD-R) model. The results strengthen existing theories by supporting both hypotheses, proving that the JD-R model/theory is valid for digital well-being in the current educational setting at colleges and universities. Trying to prove H1, "job demands (JDs) have a negative effect on digital well-being," about the study participants in educational institutions in Pakistan, because of heavier workloads, time constraints, and technology use (Bakker et al., 2023; Salanova et al., 2013). Conversely, trying to prove H2, "job resources (JRs) have a positive effect," because it remains the strongest predictor in the study with $\beta = 0.537$, implying that greater support from the organization in terms of digital tools and training benefits the EDWB at HEIs (Bakker & Demerouti, 2017; Salanova et al., 2013; Xanthopoulou et al., 2007).

The finding of independence between JDs & JRs also verifies the JD-R hypothesis that these variables are mediated by different psychological mechanisms (Bakker & Demerouti, 2007). Regression analysis accounts for a

substantial quantity of variance for employees' digital well-being ($R^2 = 0.449$), which fully supports previous well-being as well as burnout applications of the JD-R model (Lesener et al., 2019; Schaufeli & Bakker, 2004). In practical terms, the key implication of this result is that notwithstanding potential negative impacts of digital demands within the sector of higher education on well-being, investment in job resources (digital skills training, technical support, and autonomy) can be a powerful means of upgrading employees' ability to deal with demands and maintain digital well-being (Bakker & Demerouti, 2017; Nielsen & Miraglia, 2017).

Briefly stated, this research work extends the JD-R model theory, as its relevance is proven within digital well-being in the context of higher education in a non-Western setting. This is important, as achieving stability between JDs & JRs is fundamental, with building job resources fundamental for promoting employee well-being within technology-driven academic settings.

6. CONCLUSION

This study highlights that workload and organizational support significantly influence how university employees experience digital technologies in their work. High job demands, such as excessive workload and stress, negatively affect employees' digital well-being. In contrast, digital well-being improves when employees receive adequate support, including opportunities for skill development and transformational leadership. Thus, job demands and job resources play a critical role in shaping employee digital well-being.

These findings hold important implications for education policymakers in Pakistan. The Higher Education Commission and institutional leaders must prioritize digital well-being as a key component of faculty and staff support. Addressing digital stress and preventing burnout require the development of structured policies, including staff development programs that enhance digital literacy and leadership capabilities.

At the institutional level, integrating regular digital well-being assessments into performance management and accreditation systems can promote sustainable academic work practices. Aligning human resource policies with flexible work arrangements, professional development opportunities, and monitoring of psychosocial risks can further strengthen faculty resilience and well-being.

These policy directions also contribute to achieving the United Nations Sustainable Development Goals, particularly Goal 3 (Good Health and Well-being), Goal 4 (Quality Education), and Goal 8 (Decent Work and Economic Growth). Overall, strengthening employee digital well-being is a strategic priority for fostering a sustainable higher education system in Pakistan.

7. IMPLICATIONS

This study provides empirical support for the JD-R model within the Pakistani higher education context, confirming that job demands negatively affect employee digital well-being, while job resources have a positive influence. It also contributes to the literature by applying the JD-R framework to the emerging domain of digital work and well-being.

The findings emphasize that job resources not only directly enhance well-being but also serve a protective function against job demands. Therefore, higher education institutions should adopt strategies that simultaneously manage demands and strengthen resources. These may include digital skills training, organizational support, increased autonomy, flexible work arrangements, and targeted well-being initiatives.

8. LIMITATIONS AND FUTURE RECOMMENDATIONS

Despite its contributions, this study has certain limitations. First, the research focuses solely on higher education institutions in Pakistan, which may limit the generalizability of the findings to other sectors or countries. Second, the study examines only direct relationships among job demands, job resources, and employee digital well-being.

Future research should incorporate mediating and moderating variables to explore more complex mechanisms influencing digital well-being. Additionally, extending the study to different industries and organizational contexts would provide broader insights into the applicability of the JD-R framework in promoting employee digital well-being across diverse work environments.

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