Digital Communication Overload, Exhaustion and Psychological Well-being in University Employees

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Abstract

The present study examined the impact of digital communication overload on exhaustion and psychological well-being among employees working in private and public universities in Lahore and Faisalabad, Pakistan. A cross-sectional correlational research design and a purposive sampling technique were employed, with 132 participants aged 22 or older and with at least 1 year of experience at their current university. The sample included teaching, administrative, and managerial staff with a minimum qualification of a bachelor's degree. Data were collected using the Perceived Information Overload Scale, the exhaustion subscale of the Oldenburg Burnout Inventory (OLBI), and the Psychological Well-being Questionnaire. Results revealed a significant positive correlation between digital communication overload and exhaustion ($r = .95$, $p < .01$) and a significant negative correlation with psychological well-being ($r = –.24$, $p < .01$). Exhaustion was also negatively associated with psychological well-being ($r = –.21$, $p < .05$). Linear regression analyses indicated that digital communication overload significantly predicted higher employee exhaustion ($B = .42$, $\beta = .95$, $p < .001$, $R^2 = .95$) and lower psychological well-being ($B = –.25$, $\beta = –.24$, $p = .006$, $R^2 = .05$). These findings suggest that excessive digital communication contributes to elevated burnout and diminished psychological well-being among university employees. The study highlights the importance of managing digital workloads and promoting strategies to support employee mental health and productivity in academic settings.

Keywords: Digital Communication Overload, Exhaustion, Psychological Well-Being, University Employees, Pakistan.

Introduction

Digital communication refers to the use of online tools such as email, instant messaging, learning management systems, and video conferencing to facilitate interaction among individuals and groups (Khan et al., 2024; Putro, 2023; Shahid et al., 2024; Uzuegbunam, 2020). In modern workplaces, particularly within educational institutions, employees increasingly rely on these tools

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for administrative coordination, teaching activities, and academic collaboration (Colbert et al., 2016; Mialkovska et al., 2023; Shahid et al., 2025). However, when employees are exposed to excessive emails, messages, calls, and online meetings that exceed their capacity to process information effectively, they experience digital communication overload. This overload can reduce productivity, increase stress, and limit employees' ability to focus on important tasks (Bahri et al., 2020; Soomro et al., 2025).

Previous research has indicated a significant relationship between digital communication overload and exhaustion, defined as a state of prolonged work-related stress characterised by emotional and physical exhaustion, feelings of helplessness, and reduced accomplishment (Sexton et al., 2022). In educational settings, employees such as teachers, administrative staff, and managers frequently manage multiple digital communication channels, including institutional email, messaging platforms, and online learning tools. Constant digital interaction may contribute to emotional exhaustion, fatigue, and decreased motivation. Burnout can reduce work engagement and task completion, ultimately affecting job performance and productivity. For instance, a study in South Korea on 434 employees found that information overload and system feature overload significantly contributed to burnout (Cho et al., 2019). Similarly, a study in Brazil reported that prolonged screen time and continuous digital communication demands predicted emotional exhaustion, cynicism, and decreased motivation among employees working in remote and hybrid roles (de Lima Nardin, 2025).

Digital communication overload has also been shown to negatively affect psychological well-being, which encompasses an individual's mental, emotional, and social functioning, including personal growth, self-esteem, social relationships, life satisfaction, and a sense of purpose. Within educational institutions, excessive digital demands—such as responding to student emails, attending virtual meetings, and managing online learning platforms—can increase techno-stress and diminish well-being. A study on maritime professionals indicated that digital communication overload contributed to techno-stress, which increased burnout and reduced psychological well-being (Li et al., 2025). Similarly, research in China reported that excessive digitalisation in employees' roles was associated with poorer mental health and higher burnout, particularly when organisational support was limited, and job demands were high (Zhang et al., 2025).

Theoretical Framework

The Job Demands–Resources (JD-R) model (Bakker & Demerouti, 2007) provides a framework for understanding how job demands and resources influence employee health and work outcomes. Job demands, such as workload, time pressure, and excessive digital communication, require sustained effort and can increase stress and exhaustion. Job resources—including organisational support, flexible work policies, and teamwork—help employees cope with these demands. In the context of this study, digital communication overload represents a job demand that, when not balanced with sufficient resources, can deplete employees' energy, leading to burnout and lower psychological well-being.

Rationale

Despite the growing reliance on digital communication in educational institutions, there is limited empirical research examining its impact on employee exhaustion and psychological well-being in the education sector in Pakistan. Understanding these relationships is critical, as excessive digital communication may adversely affect employees' productivity, mental health, and psychological well-being. Therefore, the present study investigates the effect of digital communication overload

on exhaustion and psychological well-being among employees in private and public universities in Lahore and Faisalabad, Pakistan.

Hypotheses

The following hypotheses were proposed:

1. There is likely to be a positive and significant relationship between digital communication overload and exhaustion.
2. There is likely to be a negative and significant relationship between digital communication overload and psychological well-being.
3. There is likely to be a significant and positive effect of digital communication overload on exhaustion.
4. There is likely to be a significant negative effect of digital communication overload on psychological well-being.

Methodology

The study employed a cross-sectional correlational research design and a purposive sampling technique to collect data from employees at private and public universities in Lahore and Faisalabad, Pakistan. Participants were required to be at least 22 years old and to have at least 1 year of experience at their current university. The sample included teaching, administrative, and managerial staff. It is noteworthy that participants were required to hold a bachelor's degree or higher.

The study comprised three measures to assess the study variables: the Perceived Information Overload Scale, the Oldenburg Burnout Inventory (OLBI) exhaustion subscale, and the Psychological Well-being Questionnaire.

Perceived Information Overload Scale was developed by Shalini Misra in 2011. The scale comprised 16 items with a Likert response range from *0 to 4*. In the present study, items assessing digital overload were used, with higher scores indicating greater perceived information overload. A Cronbach's alpha of 0.89 has been reported.

The *Oldenburg Burnout Inventory (OLBI),* developed by Demerouti (1999), consists of 16 items rated on a Likert scale ranging from *strongly disagree (1) to strongly agree (4).* The Cronbach's alpha for the OLBI has been reported as 0.83 (Khan & Yusoff, 2016). In the present study, only the exhaustion subscale was used. The exhaustion dimension includes eight items (2, 4, 5, 8, 10, 12, 14, and 16) and measures physical, emotional, and cognitive fatigue associated with work. Higher scores indicate greater levels of work-related exhaustion.

Psychological well-being was assessed using the 18-item scale developed by Ryff and Keyes (1995), rated on a 7-point Likert scale (α = .87–.93). In the present study, the Cronbach's alpha was 0.89, reflecting high internal consistency and reliability.

The study adhered to APA 7 ethical standards. Permission to use the instruments was obtained from the original authors. After obtaining permission, participants were approached and provided with a consent form, a demographic questionnaire, and the study instruments. After providing written consent, participants completed the demographic form and study measures. The consent form clearly stated that participation was voluntary, that participants were not coerced into completing the questionnaires, and that they had the right to withdraw at any time without providing a reason. It ensured no harm to participants. After data collection, the responses were entered into IBM SPSS version 26 for statistical analysis.

Results

Table 1: Socio-demographic Characteristics of the Participants

	Frequency	Percentage	Mean	Standard Deviation
Age			35.50	10.80
Gender				
Men	67	50.8		
Women	65	49.2		
Qualification				
Bachelor	38	28.8		
Master	62	47		
Ph.D.	32	24.2		
Type of University				
Public	96	72.7		
Private	36	27.3		
Designation/Role				
Dean	3	2.3		
Head of Department	7	5.3		
Professor	7	5.3		
Associate Professor	9	6.8		
Assistant Professor	10	7.6		
Research Associate	11	8.3		
Research Assistant	15	11.4		
Senior Lecturer	13	9.8		
Lecturer	5	3.8		
HR Manager	6	4.5		
HR Officer	4	3		
HR Assistant	3	2.3		
Controller of Examination	3	2.3		
Assistant Controller of Examinations	10	7.6		
IT Support Staff	15	11.4		
Librarian	4	3		
Lab Assistant	7	5.3		
Experience				
1 to 2 Years	20	15.2		
3 to 4 Years	36	27.3		
5 to 6 Years	31	23.5		
7 to 8 Years	17	12.9		
9 to 10 years	17	12.9		
More than 10 years	11	8.3		

Note: N = 132, SD = Standard Deviation

The sample consisted of 132 university employees with a mean age of 35.50 years (SD = 10.80). The gender distribution was nearly equal, with 50.8% men (n = 67) and 49.2% women (n = 65). Regarding educational qualifications, 28.8% of participants held a bachelor's degree (n = 38), 47% had a master's degree (n = 62), and 24.2% possessed a Ph.D. (n = 32). In terms of work experience, 15.2% had 1–2 years of experience (n = 20), 27.3% had 3–4 years (n = 36), 23.5% had 5–6 years

(n = 31), 12.9% had 7–8 years (n = 17), 12.9% had 9–10 years (n = 17), and 8.3% had more than 10 years of experience (n = 11). Participants were employed in both public (72.7%, n = 96) and private universities (27.3%, n = 36). The sample included a variety of academic and administrative roles: the largest groups were IT support staff (11.4%, n = 15) and research assistants (11.4%, n = 15), followed by senior lecturers (9.8%, n = 13) and assistant professors (7.6%, n = 10). Smaller proportions held positions such as dean (2.3%, n = 3), HR assistant (2.3%, n = 3), and librarian (3%, n = 4).

Table 2: Correlational Analysis between Study Variables

Variables	1	2	3
1.Digital Communication Overload	-	.95**	-.24**
2.Exhaustion		-	-.21*
3.Psychological Well-being			-

Note: N = 132, **$p < .01$, *$p < .05$

A significant positive correlation was found between digital communication overload and exhaustion ($r = .95$, $p < .01$), indicating that higher levels of digital communication overload are associated with higher levels of burnout among employees. Digital communication overload also showed a significant negative correlation with psychological well-being ($r = –.24$, $p < .01$), suggesting that increased communication overload is related to lower psychological well-being. Additionally, exhaustion was negatively correlated with psychological well-being ($r = –.21$, $p < .05$).

Table 3: Predicting Exhaustion from Digital Communication Overload

Variables	*B*	*SE*	β	*P*	*95% CI*	
					LL	*UL*
Constant	4.72	.42		<.001	3.88	5.57
Digital Communication Overload	.42	.01	.95	<.001	.40	.45

Note: N = 132, $R^2 = .95$, $F = 1450.41$, ***$p < .001$

A simple linear regression analysis was conducted to examine whether digital communication overload predicted employee exhaustion. The results indicated that digital communication overload was a significant positive predictor of employee exhaustion ($B = .42$, $SE = .01$, $\beta = .95$, $p < .001$, 95% CI [.40, .45]). The overall regression model was statistically significant, $F(1, 130) = 1450.41$, $p < .001$, explaining 95% of the variance in employee exhaustion ($R^2 = .95$).

Table 4: Predicting Psychological Well-being from Digital Communication Overload

Variables	*B*	*SE*	β	*P*	*95% CI*	
					LL	*UL*
Constant	65.39	3.45		<.001	58.55	72.23
Digital Communication Overload	-.25	.09	-.24	.006	-.43	-.07

Note: N = 132, $R^2 = .05$, $F = 7.96$, **$p <. 01$, ***$p < .001$

A simple linear regression analysis was conducted to examine whether digital communication overload predicted psychological well-being. The results indicated that digital communication

overload was a significant negative predictor of psychological well-being (B = –.25, SE = .09, β = –.24, p = .006, 95% CI [–.43, –.07]). The overall regression model was statistically significant, $F(1, 130) = 7.96$, $p < .01$, explaining 5% of the variance in psychological well-being (R^2 = .05).

Discussion

This study examined how digital communication overload affects exhaustion and psychological well-being among university employees in Lahore and Faisalabad, Pakistan.

The first hypothesis stated that digital communication overload would be positively associated with exhaustion. The results supported this hypothesis, indicating that as digital communication overload increases, exhaustion also increases. This finding aligns with previous research, which reported that excessive digitalisation significantly contributes to employee exhaustion (Zhang et al., 2025). The likely explanation is that constant emails, messages, and calls impose continuous cognitive and emotional demands, leading to fatigue and emotional depletion.

The second hypothesis predicted a negative relationship between digital communication overload and psychological well-being. This was also supported: employees experiencing higher levels of digital communication overload reported lower psychological well-being, consistent with prior research showing that excessive digital communication is linked to increased stress, anxiety, and depressive symptoms (Reinecke et al., 2017; Shahid et al., 2024). Continuous digital demands may prevent mental rest, reducing satisfaction and overall psychological functioning.

The correlation analysis further indicated a significant negative relationship between exhaustion and psychological well-being, confirming that higher burnout is associated with lower psychological well-being. This is consistent with research demonstrating that emotional, physical, and cognitive exhaustion depletes mental resources, leading to feelings of hopelessness, reduced motivation, and lower life satisfaction (Thakre & Kawde, 2021).

A simple linear regression analysis supported the third hypothesis: digital communication overload significantly and positively predicted exhaustion. The consistent cognitive and emotional effort required to manage digital messages, emails, and calls likely disrupts work-life balance, leading to increased exhaustion and stress (Marsh et al., 2024). Similarly, support was found for the fourth hypothesis, with digital communication overload negatively predicting psychological well-being. High digital communication volumes may overwhelm employees and diminish overall well-being (Khetawat & Steele, 2023).

Limitations and Recommendations

The study has several limitations. First, the sample size was relatively small (N = 132), which may limit generalizability. Future studies should include larger samples. Second, while this study included a range of university positions, detailed distinctions regarding job contracts (permanent, part-time, or temporary) were not captured and should be considered in future research. Finally, the study focused only on employees at Lahore and Faisalabad universities; future research should include employees from multiple cities and regions in Pakistan to enhance representativeness.

Implications

The findings have practical implications for university administration and policymakers. Workplaces should manage the volume of digital communication, including emails, messages, and calls, to prevent employee distress. Universities should encourage scheduled breaks during work hours to improve well-being. Training programs to help staff manage digital communication effectively can reduce overload. Additionally, monitoring and counselling for employees

experiencing burnout, particularly female staff, may be beneficial. Raising awareness about digital overload, burnout, and psychological well-being can help both employees and higher authorities proactively address these issues, thereby enhancing job satisfaction and productivity.

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