

Digital Media Overload and Bipolar Spectrum Symptoms Among Employees in the Corporate Sector

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Abstract

The present study examined the relationship between digital media overload and bipolar spectrum symptoms among employees in Pakistan's information technology, telecommunication, and banking/finance sectors. It also investigated whether digital media overload predicts bipolar spectrum symptoms and whether gender differences exist in these variables. A total of 127 employees (66 male and 61 female), all at least 23 years old and holding a minimum of a bachelor's degree, participated in the study. Digital media overload was assessed using the Perceived Information Overload Scale, and bipolar spectrum symptoms were measured with the Mood Disorder Questionnaire. Results indicated that higher levels of digital media overload were associated with greater bipolar spectrum symptoms. Furthermore, digital media overload emerged as a strong predictor of these symptoms. Female employees reported higher digital media overload than male employees; however, no significant gender differences were observed for bipolar spectrum symptoms. These findings highlight the potential impact of excessive digital engagement on employees' mood and mental health, suggesting that organisations should implement strategies to manage digital workloads and support employee well-being.

Keywords: Digital Media Overload, Bipolar Spectrum Symptoms, Employees, Gender Differences, Workplace Well-Being

Introduction

Rapid technological advancement has transformed the modern corporate workplace, enabling employees to perform tasks more efficiently and communicate across geographical boundaries (George, 2024; Li, 2024). Activities that once required physical presence, such as meetings and business discussions, are now commonly conducted through digital platforms. Moreover, organisations increasingly rely on technology-enabled systems to expand their operations internationally (Buhalis et al., 2024; Khan et al., 2024; Mgbame et al., 2024; Shahid et al., 2024). Despite these benefits, excessive use of digital media in corporate settings has been linked to increased psychological strain and mood-related problems among employees

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(Brailovskaia et al., 2022; Soomro et al., 2025). While this issue has been widely studied in developed countries, similar patterns observed in Asian contexts, including Pakistan, remain underexplored.

Excessive digital media use has been associated with difficulties in emotional regulation, sleep disturbances, and impaired impulse control. These features overlap closely with bipolar spectrum symptoms, such as elevated energy levels, distractibility, irritability, and mood fluctuations (Caldiroli et al., 2018; Peper & Harvey, 2018). Corporate environments are typically characterised by high pressure, strict deadlines, and constant performance demands. When combined with prolonged exposure to digital media, these conditions can limit recovery opportunities and contribute to emotional instability and circadian rhythm disruption (Lindholm, 2013; Woo & Postolache, 2008). This interaction between occupational stress and excessive digital engagement highlights the importance of examining bipolar spectrum symptoms within the context of workplace digital behaviour (Baptista et al., 2025; Shahid et al., 2024).

Existing research demonstrates a strong association between digital media overuse and bipolar spectrum symptoms. For example, a cross-sectional study conducted in India with 200 corporate employees aged 24 years and above used standardised questionnaires to examine the relationship between excessive digital media use and bipolar spectrum symptoms, including mood changes, impulsivity, and sleep problems. The study also identified work-related factors such as long working hours, high job demands, constant online availability, workload pressure, and limited recovery time as contributors to excessive digital media use (Jahagirdar et al., 2024). Similarly, a cross-sectional study in the United Kingdom involving 142 employees working in digitally intensive environments examined the effects of digital work demands, including information overload, constant connectivity, and fear of missing out. The findings indicated that continuous online pressure and poor digital information management negatively affect employee stress levels, exhaustion, and overall mental health (Marsh et al., 2024).

The present study is grounded in the Job Demands–Resources (JD–R) model, circadian rhythm theory, and the stress–diathesis perspective. In corporate settings, high job demands—such as extended working hours, constant online availability, information overload, and heavy workloads—function as stressors that increase employees’ engagement with digital media (Hong et al., 2023; Zhang et al., 2024). According to the JD–R model, excessive demands combined with insufficient recovery opportunities can lead to stress, fatigue, and poor emotional regulation (Demerouti et al., 2001). From a circadian rhythm perspective, excessive digital media use disrupts sleep–wake cycles, which may result in mood instability, irritability, and impulsive behaviour (Folkard, 1990; Völker & Wiegmann, 2025). Furthermore, the stress–diathesis perspective suggests that individuals with a predisposition toward bipolar spectrum symptoms are more vulnerable to environmental stressors, with excessive digital media use acting as a trigger for mood and behavioural dysregulation (Caldiroli et al., 2018; Irfan et al., 2025; Lindholm, 2013; Winz, 2018; Zubin & Spring, 1977).

Although a substantial body of literature has examined digital media overload and bipolar spectrum symptoms in high-stress organisational environments, this relationship has received limited attention in the Pakistani context. Therefore, the present study aims to address this gap by examining the association between digital media overuse and bipolar spectrum symptoms among corporate employees in Pakistan and by offering culturally relevant implications for workplace mental health and organisational practices.

Research Questions

1. Is there a significant relationship between digital media overload and bipolar spectrum symptoms among employees?

2. Does digital media overload significantly predict bipolar spectrum symptoms among employees?
3. Are there significant gender differences between male and female employees in digital media overload and bipolar spectrum symptoms?

Hypotheses

H₁: There is a significant relationship between digital media overload and bipolar spectrum symptoms among employees.

H₂: Digital media overload significantly predicts bipolar spectrum symptoms among employees.

H₃: There are significant gender differences between male and female employees in digital media overload and bipolar spectrum symptoms.

Methodology

The study adopted a cross-sectional correlational design and a purposive sampling technique to collect data from employees in Pakistan's information technology, telecommunications, and banking/finance industries who were at least 23 years old and had at least 1 year of experience in their current industry. Participants were required to deal with digital work in their respective industries and to be Bachelor-qualified. The study aimed to collect data from 200 employees, but only 127 completed the questionnaire, while others withdrew from the study.

Perceived Information Overload (Misra & Stokols, 2012). The scale comprised 16 items, with a Likert range from 0 to 4. The scale has demonstrated good internal consistency in previous research ($\alpha = .88$) and showed excellent reliability in the present study ($\alpha = .91$).

Bipolar spectrum symptoms were assessed using the 15-item Mood Disorder Questionnaire (MDQ) developed by Hirschfeld et al. (2000). Items 1–14 assess lifetime bipolar spectrum symptoms and are scored in a binary format (*Yes* = 1, *No* = 0). Item 15 assesses the level of functional impairment caused by these symptoms and is rated on a 4-point Likert scale, ranging from 0 (no problem) to 3 (serious problem). Higher total scores indicate greater bipolar spectrum symptomatology.

The study adhered to APA 7 ethical standards. The authors were approached for permission to use their questionnaires in the study. Upon permission, the participants from various industries were approached with a consent form, demographic questionnaire, and study instruments. Upon written signature on the consent form, the participants were given demographic and study instruments. The consent form clearly stated that participation was voluntary, that participants were not coerced into completing questionnaires, that participants had the right to withdraw at any time without providing a reason, and that no harm would be caused to participants. Once the participants completed the data collection, the data were entered into IBM SPSS version 26 for analysis.

Results

Table 1: Socio-demographic Characteristics of the Participants (N = 127)

	M	SD	Frequency	Percentage
Age	36.12	10.83		
Gender				
Male			66	52
Female			61	48
Qualification				
Bachelor			39	30.7
Master			54	42.5

PhD	34	26.8
Experience		
1-5 years	50	39.3
6-10 years	27	21.3
11-15 years	32	25.2
More than 15 Years	18	14.2
Employment Industries		
Information Technology	45	35.4
Telecommunication	48	37.8
Banking/Finance	34	26.8
Sleep Per Night		
Less than 5 hours	50	39.4
6 to 8 hours	41	32.3
7 to 8 hours	23	18.1
More than 8 Hours	13	10.2

Note. M = Mean, SD = Standard Deviation

Table 1 presents the socio-demographic characteristics of the participants. The mean age of the employees was 36.12 years ($SD = 10.83$). The sample comprised 66 men (52%) and 61 women (48%). Most participants held a master's degree (42.5%), followed by bachelor's (30.7%) and doctoral qualifications (26.8%). In terms of work experience, the majority of employees had 1–5 years of experience (39.3%), while 14.2% reported more than 15 years of professional experience. Participants were primarily employed in the telecommunication (37.8%) and information technology (35.4%) sectors. Regarding sleep duration, a substantial proportion of employees (39.4%) reported sleeping less than five hours per night.

Table 2: Correlational Matrix (N = 127)

Variables	Digital Media Overload	Bipolar Spectrum Symptoms
Digital Media Overload	-	.89**
Bipolar Spectrum Symptoms	-	-

Note: ** $p < .01$

Pearson correlation analysis revealed a strong and statistically significant positive relationship between digital media overload and bipolar spectrum symptoms, $r = .89$, $p < .01$.

Table 3: Predicting Bipolar Spectrum Symptoms from Digital Media Overload (N = 127)

Variables	B	SE	β	R^2	F	P
				.79	477.01	
Constant	-2.41	.48				<.001
DMO	.27	.01	.89			<.001

Note: *** $p < .001$, DMO = Digital Media Overload

Table 3 shows that the regression model predicting bipolar spectrum symptoms from digital media overload was statistically significant, $F = 477.01$, $p < .001$, explaining 79% of the variance ($R^2 = .79$). Digital media overload was a strong positive predictor of bipolar spectrum symptoms ($B = .27$, $SE = .01$, $\beta = .89$, $p < .001$), indicating that higher levels of digital media overload were associated with increased bipolar spectrum symptoms.

Table 4: Mean Differences in Digital Media Overload and Bipolar Spectrum Symptoms Across Gender i.e., Men and Women (N = 127)

Variables	Men (n = 66)		Women (n = 61)		<i>t</i>	<i>p</i>	Cohen's <i>d</i>
	Mean	<i>SD</i>	Mean	<i>SD</i>			
DMO	29.45	18.60	36.39	18	-2.13	.03	0.37
BSS	5.90	5.57	7.59	5.97	-1.63	.10	0.29

Note: * $p < .05$

An independent-samples *t* test indicated a significant gender difference in digital media overload, $t(125) = -2.13$, $p = .03$, $d = 0.37$. Female employees ($M = 36.39$, $SD = 18.00$) reported significantly higher levels of digital media overload than male employees ($M = 29.45$, $SD = 18.60$). The effect size suggests a small-to-moderate practical difference between genders. In contrast, no significant gender difference was observed in bipolar spectrum symptoms, $t(125) = -1.63$, $p = .10$, $d = 0.29$. Although female employees ($M = 7.59$, $SD = 5.97$) showed higher mean scores than male employees ($M = 5.90$, $SD = 5.57$), this difference did not reach statistical significance, indicating a small effect size.

Discussion

The present study examined how digital media overload is related to bipolar spectrum symptoms among employees in Pakistan's IT, telecommunication, and banking/finance sectors. It also explored whether digital media overload could predict bipolar spectrum symptoms and whether there were gender differences in these variables.

The findings showed a strong positive relationship between digital media overload and bipolar spectrum symptoms. In other words, employees who experienced higher levels of digital media overload also tended to report more symptoms associated with bipolar mood changes. This aligns with earlier research suggesting that excessive engagement with digital platforms can increase stress, aggression, emotional strain, and sleep problems, which may contribute to mood instability (Bashir et al., 2024; Misra & Stokols, 2012; Shahid & Yaseen, 2025; Shahid et al., 2025). Employees constantly dealing with multiple digital tasks may experience cognitive fatigue and heightened emotional reactivity, which can worsen mood-related symptoms.

The results also indicated that digital media overload is a strong predictor of bipolar spectrum symptoms. This means that as employees' digital workload increases, their risk of experiencing bipolar spectrum symptoms also rises. This finding highlights the important role of digital demands in shaping mental health outcomes in highly digitalised workplaces. The findings align with the previous studies regarding the impact of digital media overload on impairment in psychological functioning, distress, burnout and detrimental effect on mental wellbeing (Bashir et al., 2024; Shahid & Yaseen, 2025; Shahid et al., 2024; Soomro et al., 2025). The reason for such results could be the excessive digital workload assigned to employees. As Pakistan is a country where human rights violations are common, strict actions are required. If employees perceive the organization as being socially responsible, it can ultimately reduce distress and bipolar-related symptoms among employees (Munir et al., 2025; Shahid et al., 2025).

The study found that female employees reported higher levels of digital media overload compared to male employees. This finding is consistent with previous research suggesting that women may face greater multitasking pressures and experience higher emotional and cognitive strain related to digital workloads (Lui et al., 2021). However, there were no notable differences between men and women in bipolar spectrum symptoms. This indicates that, while women may

feel more overloaded by digital work, the impact of this overload on mood symptoms appears similar for both genders.

Conclusion

In conclusion, the study shows that digital media overload is closely linked to bipolar spectrum symptoms among employees and can predict the severity of these symptoms. Female employees experience higher digital media overload, although gender does not appear to affect mood symptoms. These results emphasise the importance of managing digital workload to support mental health and well-being in workplaces that rely heavily on digital communication and technology.

Implications

These findings have important implications for workplaces. Organisations should consider strategies to manage digital workload and reduce employee stress. For example, setting clear boundaries on after-hours communication, encouraging regular breaks, and promoting digital literacy can help employees cope with digital demands. Given that female employees reported higher digital media overload, organisations may also consider providing targeted support to help reduce this burden.

Limitations and Future Directions

The study has some limitations. It used a cross-sectional design, so it cannot determine cause and effect. Future studies could track employees over time to better understand how digital media overload influences mood changes. The study relied on self-reported measures, which may be influenced by personal bias. Including objective measures of digital use and clinical assessments of mood symptoms in future research could strengthen the findings. Finally, the sample size was smaller than intended, which may limit the generalizability of the results to other employee populations.

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