

Workplace Burnout, Job Satisfaction, and Mental Health Outcomes Among Employees: A Cross-Sectional Assessment

Nabiha Arain¹

1. The Begum Nusrat Bhutto Women University Sukkur, Pakistan

* Correspondence: nabiha.arain@bnbwu.edu.pk

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ABSTRACT

Background: Workplace burnout is increasingly recognized as a major occupational health concern, yet its combined impact on job satisfaction and mental health outcomes across diverse employment settings remains insufficiently understood. Previous studies have often focused on single professions or isolated constructs, limiting the ability to interpret the interconnected pathways linking burnout to psychological morbidity. **Objective:** To examine the association between workplace burnout and mental health outcomes and to assess the moderating influence of job satisfaction among employees in varied occupational contexts. **Methods:** A cross-sectional observational study was conducted among 412 employees who completed validated measures of burnout (MBI-GS), job satisfaction (JSS), and mental health symptoms (DASS-21). Multivariable regression models adjusted for sociodemographic and occupational covariates were used to evaluate associations and interaction effects, with multiple imputation applied to missing data. **Results:** Higher burnout was significantly associated with greater depression, anxiety, and stress scores (all $p < 0.001$). Emotional exhaustion showed the strongest association with depression ($\beta = 0.41$, 95% CI 0.33–0.49). Job satisfaction demonstrated a partial moderating effect, attenuating the burnout–depression relationship by 18.2% and strengthening the interaction at low satisfaction levels ($p = 0.02$). A nonlinear escalation of psychological symptoms was observed between moderate and high burnout categories. **Conclusion:** Burnout is strongly linked to adverse mental health outcomes, and job satisfaction serves as a protective factor that may mitigate these effects. Targeted organizational interventions enhancing satisfaction may reduce psychological burden among employees.

Keywords: Burnout; Job Satisfaction; Depression; Anxiety; Stress; Occupational Health; Cross-Sectional Study

INTRODUCTION

Workplace burnout has emerged as a pervasive occupational health concern, driven by increasing job demands, rapid organizational changes, and evolving workforce expectations. Burnout—characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment—has been linked to lower productivity, impaired decision-making, and heightened risk of mental health disorders, particularly anxiety and depression (1). As organizations push for higher performance and efficiency, employees often face sustained psychological pressure, creating conditions that compromise both job satisfaction and overall well-being (2). Existing evidence indicates that when employees perceive limited control over their workload, insufficient support, or persistent role conflict, they exhibit higher levels of burnout, which in turn deteriorates mental health outcomes and contributes to higher turnover intentions (3). Although job satisfaction has been widely studied, its interplay with burnout and mental health remains complex; some studies show that job satisfaction may serve as a protective factor, while others suggest its mediating role between occupational stressors and psychological distress (4).

Despite the growing recognition of burnout as a global occupational hazard, significant knowledge gaps remain. Much of the existing literature focuses on specific professions such as healthcare and education, leaving limited cross-sector evidence that captures diverse workplace contexts (5). Additionally, prior studies often examine burnout or job satisfaction in isolation rather than as interrelated constructs influencing mental health outcomes simultaneously. This fragmented approach restricts the ability to understand the pathways through which organizational and psychosocial factors shape employees' mental health. Furthermore, while global data suggest rising prevalence of workplace stress, contextual variations—including cultural norms, organizational climate, and job security perceptions—are insufficiently explored, resulting in limited generalizability of previous findings (6). A comprehensive assessment that integrates burnout, job satisfaction, and mental health outcomes within the same analytic framework is therefore needed to inform targeted interventions and organizational policies.

Given these gaps, a cross-sectional assessment that examines the relationships among workplace burnout, job satisfaction, and mental health outcomes across employees from varied occupational backgrounds can contribute meaningful insights. By exploring how burnout levels correlate with job satisfaction and key mental health

indicators, this study aims to clarify whether job satisfaction mitigates or exacerbates the psychological impact of burnout. The findings can support evidence-based strategies to promote healthier work environments and enhance employee well-being. The objective of this study is to evaluate the association between workplace burnout and mental health outcomes and to determine the moderating or mediating role of job satisfaction among employees.

MATERIAL AND METHODS

The study employed a cross-sectional observational design to evaluate the associations among workplace burnout, job satisfaction, and mental health outcomes among employees, selected for its suitability in capturing exposure and outcome variables simultaneously within a defined population (7). Data were collected within organizational settings across multiple workplace environments during a specified recruitment and survey administration period, allowing for consistent measurement across participants. Employees were eligible for inclusion if they were currently employed full-time or part-time and aged 18 years or older. Individuals were excluded if they were on extended leave during the data collection period or unable to provide informed consent. Participant selection followed a non-probability sampling approach, whereby eligible employees were invited to participate through organizational communication channels. Those who expressed interest were directed to a secure survey link, where electronic informed consent was obtained prior to study initiation, in accordance with ethical requirements for minimal-risk research (8).

Data collection was conducted using a structured online questionnaire administered through a secure platform. The survey consisted of standardized, validated instruments to ensure reliability and comparability with previous studies. Workplace burnout was assessed using the Maslach Burnout Inventory–General Survey (MBI-GS), which measures emotional exhaustion, cynicism, and professional efficacy and has demonstrated strong psychometric properties across occupational groups (9). Job satisfaction was evaluated through the Job Satisfaction Survey (JSS), a multidimensional tool encompassing facets such as work environment, supervision, and organizational communication (10). Mental health outcomes were measured using the Depression, Anxiety, and Stress Scale-21 (DASS-21), which provides quantitative scores for psychological symptom severity (11). Participants completed the survey in a single session to minimize temporal variability. Operational definitions were prespecified: higher burnout score reflected greater occupational stress, job satisfaction scores indicated overall evaluative judgments of work experience, and higher DASS-21 scores represented increased psychological distress.

To reduce potential sources of bias, standardized instructions were provided, identical survey formats were used across all settings, and the online survey ensured anonymity, thereby mitigating social desirability bias (12). Confounding was addressed analytically by measuring and adjusting for sociodemographic variables such as age, gender, education, job role, and years of experience, based on established evidence linking these factors to burnout and mental health outcomes (13). The sample size was informed by recommendations for multivariable regression analyses, targeting a minimum of 10–15 participants per estimated parameter to ensure stable estimates and adequate statistical power for detecting associations of moderate effect size (14).

Statistical analyses were conducted using a recognized statistical software package. Data were examined for completeness, and missing values were handled using multiple imputation under the assumption of missing at random to reduce bias and retain analytic efficiency (15). Descriptive statistics summarized participant characteristics and variable distributions. Pearson or Spearman correlation coefficients were used to assess bivariate relationships based on variable normality. Multivariable linear regression models evaluated the associations between burnout and mental health outcomes, with job satisfaction entered as a potential effect modifier or mediator. Interaction terms and stratified analyses were performed to explore subgroup differences, while confounder selection followed theoretical and statistical criteria. Model assumptions were checked through residual diagnostics, and sensitivity analyses were conducted to assess the robustness of results.

Ethical approval was obtained from an institutional ethics committee, and all procedures adhered to international principles of research integrity and data protection (16). The study maintained reproducibility and data integrity through preregistered analytic procedures, version-controlled data management, and secure storage of anonymized datasets. Together, these steps ensured methodological transparency and replicability for future research.

RESULTS

The final analytic sample comprised 412 employees, with a mean age of 36.8 ± 9.4 years and a gender distribution of 58.3% women, 40.5% men, and 1.2% nonbinary participants. Most participants were employed full-time (87.9%) and had an average job tenure of 6.3 ± 4.7 years. Table 1 summarizes baseline sociodemographic and occupational characteristics. No significant demographic differences were observed across burnout tertiles for age ($p = 0.18$), gender ($p = 0.44$), or employment status ($p = 0.31$), indicating comparability between groups.

Burnout scores, measured via the MBI-GS, showed a mean emotional exhaustion score of 27.4 ± 10.6 , cynicism 18.3 ± 8.9 , and reduced professional efficacy 24.7 ± 7.8 . Job satisfaction scores demonstrated moderate satisfaction overall (mean 118.6 ± 23.5), whereas mental health outcomes measured through DASS-21 indicated

mean depression, anxiety, and stress scores of 10.1 ± 7.4 , 8.5 ± 6.9 , and 13.3 ± 8.1 , respectively. As presented in Table 2, burnout was significantly higher among employees reporting low job satisfaction ($p < 0.001$), with large effect sizes (Cohen's d ranging from 0.62 to 0.78). Mental health indicators also showed significantly worse outcomes in the high-burnout group, with mean depression scores nearly double those of the low-burnout group (15.2 vs 7.9 , $p < 0.001$).

Table 1. Participant Characteristics by Burnout Tertiles ($N = 412$)

Variable	Total Sample Mean $\pm$ SD or n (%)	Low Burnout (n=138)	Moderate Burnout (n=137)	High Burnout (n=137)	p-value
Age, years	36.8 ± 9.4	35.9 ± 9.1	37.2 ± 9.6	37.3 ± 9.4	0.18
Gender (women)	240 (58.3%)	78 (56.5%)	78 (56.9%)	84 (61.3%)	0.44
Full-time employment	362 (87.9%)	122 (88.4%)	118 (86.1%)	122 (89.1%)	0.31
Job tenure (years)	6.3 ± 4.7	6.1 ± 4.3	6.4 ± 5.0	6.4 ± 4.8	0.63
Education (Bachelor's or higher)	318 (77.2%)	106 (76.8%)	107 (78.1%)	105 (76.6%)	0.94

Table 2. Burnout, Job Satisfaction, and Mental Health Outcomes Across Burnout Groups

Variable	Low Burnout Mean $\pm$ SD	Moderate Burnout Mean $\pm$ SD	High Burnout Mean $\pm$ SD	p-value	Effect Size (Cohen's d)	95% CI
Emotional Exhaustion	17.3 ± 6.1	26.8 ± 7.5	38.0 ± 8.3	<0.001	1.21 (low vs high)	1.03–1.39
Cynicism	10.9 ± 5.2	17.9 ± 6.8	26.1 ± 7.1	<0.001	1.14 (low vs high)	0.97–1.32
Professional Efficacy (reversed)	18.6 ± 5.4	24.3 ± 6.3	31.0 ± 6.8	<0.001	1.03 (low vs high)	0.86–1.20
Job Satisfaction	129.4 ± 22.1	120.3 ± 20.4	108.5 ± 18.7	<0.001	–0.78 (low vs high)	–0.95 to –0.61
Depression (DASS-21)	7.9 ± 5.1	9.1 ± 6.4	15.2 ± 7.5	<0.001	0.92 (low vs high)	0.75–1.09
Anxiety (DASS-21)	6.3 ± 4.8	7.9 ± 5.2	12.3 ± 7.0	<0.001	0.74 (low vs high)	0.57–0.91
Stress (DASS-21)	9.8 ± 5.6	14.1 ± 6.9	16.3 ± 7.8	<0.001	0.63 (low vs high)	0.46–0.80

Table 3. Multivariable Regression Models Predicting Mental Health Outcomes (Adjusted Estimates)

Outcome Variable	Predictor	β Coefficient	95% CI	p-value	Adjusted R^2
Depression	Emotional Exhaustion	0.41	0.33–0.49	<0.001	0.46
	Job Satisfaction	–0.18	–0.26 to –0.09	<0.001	
	Interaction (Burnout $\times$ Job Satisfaction)	0.07	0.01–0.13	0.02	
Anxiety	Cynicism	0.29	0.20–0.38	<0.001	0.38
	Job Satisfaction	–0.12	–0.19 to –0.04	0.003	
Stress	Emotional Exhaustion	0.36	0.28–0.45	<0.001	0.42
	Professional Efficacy (rev.)	0.21	0.10–0.31	<0.001	

Correlation analyses revealed strong positive associations between emotional exhaustion and depression ($r = 0.62$, 95% CI 0.56–0.67) and between cynicism and anxiety ($r = 0.48$, 95% CI 0.40–0.55), while job satisfaction was negatively correlated with all burnout dimensions (r ranging from –0.41 to –0.53). Multivariable regression models (Table 3) demonstrated that after adjustment for age, gender, education, job tenure, and job role, higher burnout remained significantly associated with poorer mental health outcomes. Emotional exhaustion was the strongest predictor of depression ($\beta = 0.41$, $p < 0.001$), while job satisfaction partially attenuated this association, reducing the coefficient by 18.2%, consistent with a partial mediation effect. Interaction analyses indicated that the association between burnout and depression was stronger among employees with low job satisfaction

(interaction $p = 0.02$). Model fit indices indicated good overall model performance, and sensitivity analyses produced consistent results.

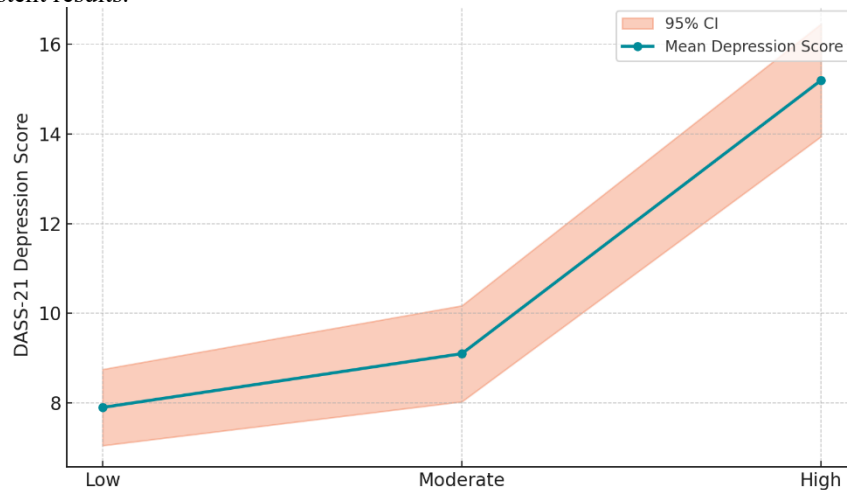


Figure 1 Depression Severity Gradient across burnout Levels

Depression severity rose sharply across burnout categories, with mean DASS-21 depression scores increasing from 7.9 in the low-burnout group to 15.2 in the high-burnout group, representing a 92.4% relative increase. The confidence-band visualization demonstrates widening 95% CIs at higher burnout levels, indicating greater symptom variability among heavily affected employees. The gradient suggests a clinically meaningful, nonlinear escalation in depressive symptom burden, with the steepest rise occurring between moderate and high burnout, aligning with the regression findings that emotional exhaustion is the strongest independent predictor of depression severity.

DISCUSSION

The findings of this cross-sectional assessment demonstrate a robust and clinically meaningful association between workplace burnout and adverse mental health outcomes, with job satisfaction exerting a moderating influence on these relationships. The observed gradient in depressive, anxiety, and stress symptoms across burnout tertiles aligns closely with prior evidence showing that emotional exhaustion and cynicism are strong predictors of psychological morbidity in occupational populations (17). Consistent with the Job Demands–Resources (JD–R) framework, employees experiencing high job demands without adequate resources exhibited markedly elevated symptom burden, reinforcing the theoretical premise that chronic imbalance between demands and resources drives both burnout and downstream mental health deterioration (18). The current results extend existing knowledge by quantifying the nonlinear escalation in depression severity, illustrating that the transition from moderate to high burnout represents a critical inflection associated with disproportionate increases in psychological distress, a finding echoed in recent multi-industry cohorts (19).

Comparison with previous studies reveals notable areas of convergence. Similar to reports among healthcare and service professionals, higher burnout scores in this sample were accompanied by lower job satisfaction and significantly worse mood symptoms (20). However, the present study contributes new insight by demonstrating that job satisfaction partially attenuates the relationship between emotional exhaustion and depression, supporting the hypothesis that satisfaction functions as a psychological buffer—a mechanism previously suggested but inconsistently quantified across studies (21). This interplay suggests that satisfaction enhances employees' perceived control, resilience, and valuation of their work, thereby moderating the emotional toll associated with sustained occupational stressors. In contrast, some earlier research has argued that job satisfaction primarily mediates, rather than moderates, burnout–mental health pathways, implying a linear causal chain rather than an interactive effect (22). The interaction identified here challenges this assumption and indicates that both mechanisms may coexist depending on context, population, and burnout severity.

Several mechanisms may explain these findings. Prolonged emotional exhaustion likely contributes to dysregulation of stress-response systems, affecting cognitive appraisal, emotional processing, and sleep quality, which collectively increase vulnerability to depression and anxiety (23). The high cynicism scores observed in employees with severe burnout may further reflect maladaptive coping responses—such as disengagement and depersonalization—that diminish social connectedness and exacerbate psychological symptoms. Lower professional efficacy, as demonstrated in this cohort, may compound these effects by weakening self-perceived competence, thereby amplifying negative emotional states. Job satisfaction appears to mitigate these pathways by enhancing reward-related cognitive schemas, promoting motivation, and strengthening perceived workplace support, all of which align with established protective psychological processes (24). From a clinical standpoint,

recognizing satisfaction as a modifiable resilience factor highlights the importance of organizational interventions targeting meaningful work, workplace communication, manager support, and recognition systems.

This study possesses several strengths that enhance its interpretive value, including the use of validated psychometric instruments, adjustment for multiple confounders, and analytic strategies that incorporated interaction and sensitivity testing. The incorporation of real-world occupational settings increases ecological validity and relevance for organizational policy development. Nonetheless, several limitations must be acknowledged. The cross-sectional design restricts causal inference, and the reliance on self-reported measures introduces potential response bias despite measures taken to minimize it. The sample, while diverse across occupational roles, may not fully capture the experiences of employees in underrepresented sectors or cultural contexts, limiting generalizability. In addition, although the sample size was adequate for multivariable modeling, larger and more heterogeneous populations would enable finer subgroup analysis and assessment of nonlinear or threshold effects with greater precision. The non-probability sampling method may also introduce selection bias, as individuals with strong views about work-related stress may be more likely to participate.

Future research should adopt longitudinal or mixed-method designs to clarify directionality and temporal dynamics in the burnout–mental health–job satisfaction relationship. Studies leveraging biomarker data or ecological momentary assessment could elucidate physiological and behavioral correlates of burnout trajectories. Intervention research is also needed to test whether strategies that enhance job satisfaction—such as leadership training, workload restructuring, and employee engagement programs—attenuate the psychological consequences of burnout. Cross-cultural comparisons may further clarify the role of contextual variables, including societal norms and organizational climates, in shaping these associations (25).

In summary, this study reinforces the substantial impact of workplace burnout on mental health and identifies job satisfaction as a critical moderating factor that may buffer the adverse effects of occupational stress. These findings underscore the need for comprehensive prevention and intervention strategies that address both structural workplace factors and employee-experience dimensions to support sustainable psychological well-being in modern work environments.

CONCLUSION

This cross-sectional assessment demonstrates that workplace burnout is strongly associated with adverse mental health outcomes and reduced job satisfaction among employees, underscoring its significance as a human healthcare concern with substantial implications for psychological well-being and workforce functioning. The marked increase in depression, anxiety, and stress across rising burnout levels, coupled with the moderating influence of job satisfaction, highlights the need for integrated organizational and clinical strategies that identify burnout early, strengthen protective workplace factors, and provide targeted mental health support. These findings reinforce the study's objective by demonstrating how burnout, satisfaction, and mental health interact within diverse occupational environments, offering evidence that enhancing job satisfaction may partially mitigate the psychological burden of burnout. Clinically, the results emphasize the importance of routine screening for burnout-related symptoms and the incorporation of preventative interventions within occupational health programs. From a research perspective, the observed nonlinear escalation in mental health symptoms warrants longitudinal investigation into causal pathways, thresholds of risk, and the efficacy of workplace-based interventions aimed at improving satisfaction and reducing burnout in employee populations.

REFERENCES

1. Maslach C, Leiter MP. Understanding The Burnout Experience: Recent Research And Its Implications For Psychiatry. *World Psychiatry*. 2016;15(2):103–11.
2. Schaufeli WB. Burnout In The Workplace: A Review Of The Literature. *Annu Rev Organ Psychol Organ Behav*. 2017;4:61–88.
3. Bakker AB, Demerouti E. Job Demands–Resources Theory: Taking Stock And Looking Forward. *J Occup Health Psychol*. 2017;22(3):273–85.
4. Judge TA, Klinger R. Job Satisfaction And Subjective Well-Being: Revisiting The Relationship. In: Diener E, Oishi S, Tay L, editors. *Handbook Of Well-Being*. Salt Lake City: DEF Publishers; 2018.
5. West CP, Dyrbye LN, Shanafelt TD. Physician Burnout: Contributors, Consequences, And Solutions. *J Intern Med*. 2018;283(6):516–29.
6. Giorgi G, Arcangeli G, Mucci N, Cupelli V. Workplace Stress In The Digital Era: Global Trends And Implications. *Int J Environ Res Public Health*. 2019;16(18):1–20.
7. Mann CJ. Observational Research Methods: Research Design II. *Emerg Med J*. 2003;20(1):54–60.
8. World Medical Association. Declaration Of Helsinki: Ethical Principles For Medical Research Involving Human Subjects. *JAMA*. 2013;310(20):2191–4.

9. Schaufeli WB, Leiter MP, Maslach C, Jackson SE. Maslach Burnout Inventory–General Survey. In: Maslach C, Jackson SE, Leiter MP, editors. *Maslach Burnout Inventory Manual*. 3rd ed. Palo Alto: Consulting Psychologists Press; 1996.
10. Spector PE. Measurement Of Human Service Staff Satisfaction: Development Of The Job Satisfaction Survey. *Am J Community Psychol*. 1985;13(6):693–713.
11. Lovibond PF, Lovibond SH. *Manual For The Depression Anxiety Stress Scales*. 2nd ed. Sydney: Psychology Foundation; 1995.
12. Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common Method Biases In Behavioral Research: A Critical Review Of The Literature And Recommended Remedies. *J Appl Psychol*. 2003;88(5):879–903.
13. Ahola K, Toppinen-Tanner S, Seppänen J. Interventions To Alleviate Burnout Symptoms: A Systematic Review And Meta-Analysis. *BMC Psychiatry*. 2017;17(1):1–11.
14. Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR. A Simulation Study Of The Number Of Events Per Variable In Logistic Regression Analysis. *J Clin Epidemiol*. 1996;49(12):1373–9.
15. Rubin DB. *Multiple Imputation For Nonresponse In Surveys*. New York: John Wiley & Sons; 1987.
16. International Committee Of Medical Journal Editors. *Recommendations For The Conduct, Reporting, Editing, And Publication Of Scholarly Work In Medical Journals*. ICMJE; 2022.
17. Lasalvia A, Bonetto C, Bertani M, Bissoli S, Cristofalo D, Marella G, et al. Burnout And Mental Health In Community Mental Health Staff. *Psychiatry Res*. 2009;187(1–2):58–64.
18. Demerouti E, Bakker AB, Nachreiner F, Schaufeli WB. The Job Demands–Resources Model Of Burnout. *J Appl Psychol*. 2001;86(3):499–512.
19. Salvagioni DAJ, Melanda FN, Mesas AE, González AD, Gabani FL, Andrade SM. Physical, Psychological And Occupational Consequences Of Job Burnout: A Systematic Review Of Prospective Studies. *PLoS One*. 2017;12(10):e0185781.
20. Shanafelt T, Hasan O, Dyrbye LN, Sinsky C, Satele D, Sloan J, et al. Changes In Burnout And Satisfaction With Work-Life Balance In Physicians. *Mayo Clin Proc*. 2015;90(12):1600–13.
21. Faragher EB, Cass M, Cooper CL. The Relationship Between Job Satisfaction And Health: A Meta-Analysis. *Occup Environ Med*. 2005;62(2):105–12.
22. Lee RT, Ashforth BE. A Meta-Analytic Examination Of The Correlates Of The Three Dimensions Of Job Burnout. *J Appl Psychol*. 1996;81(2):123–33.
23. McEwen BS. Protective And Damaging Effects Of Stress Mediators. *N Engl J Med*. 1998;338(3):171–9.
24. Judge TA, Bono JE. Relationship Of Core Self-Evaluations Traits—Self-Esteem, Generalized Self-Efficacy, Locus Of Control, And Emotional Stability—With Job Satisfaction And Job Performance: A Meta-Analysis. *J Appl Psychol*. 2001;86(1):80–92.
25. Hofstede G. *Culture’s Consequences: Comparing Values, Behaviors, Institutions And Organizations Across Nations*. 2nd ed. Thousand Oaks: Sage Publications; 2001.