

Original Article

# Workplace Bullying and Depression, Mediating Role of Insomnia among Employees

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## ABSTRACT

**Background:** Workplace bullying is characterized by unpleasant and unethical behavior, which can manifest directly or indirectly, affecting individuals' mental health. Insomnia is also a known consequence of workplace bullying, which can lead to depression.

**Objective:** To explore the association between workplace bullying, insomnia, and depression among employees in Lahore, and to determine the mediating role of insomnia in the relationship between workplace bullying and depression.

**Methods:** This study employed a correlational research design with a purposive sample of 200 employees, both male and female, from Lahore, Pakistan. Data were collected using a demographic form, a 21-item Workplace Bullying Scale, the Insomnia Severity Index (ISI), and the Depression, Anxiety, and Stress Scale-21 (DASS-21). The study followed the principles outlined in the Declaration of Helsinki, and statistical analysis was conducted using SPSS version 25, including descriptive statistics, correlation analysis, and regression analysis.

**Results:** The mean score for workplace bullying was 42.54 (SD = 15.8), for insomnia was 9.88 (SD = 6.26), and for depression was 18.97 (SD = 13.69). There were significant positive correlations between workplace bullying, insomnia, and depression, with correlation coefficients of 0.53, 0.62, and 0.61, respectively (all  $p < 0.01$ ). Both workplace bullying ( $B = 0.36$ ,  $p < 0.001$ ) and insomnia ( $B = 0.84$ ,  $p < 0.001$ ) were significant predictors of depression. Insomnia also mediated the relationship between workplace bullying and depression, with an indirect effect of 0.1714 (95% CI: 0.1105, 0.2393).

**Conclusion:** Workplace bullying contributes to higher levels of depression among employees, with insomnia serving as a mediator. Both workplace bullying and insomnia are significant predictors of depression. These findings highlight the importance of addressing workplace bullying to improve employee mental health.

**Keywords:** workplace bullying, depression, insomnia, mental health, employee well-being, correlational study.

## INTRODUCTION

Workplace bullying is characterized by unpleasant and unethical conduct executed in a planned manner by an individual or group, often leaving the target feeling helpless and unprotected. Bullying can manifest as either direct, involving clearly aggressive actions such as teasing, scolding, spreading gossip, or making threats, or indirect, involving social isolation or withholding important information. Moreover, bullying can be categorized as work-related, involving activities that hinder job performance, or personal (1, 2). This issue is prevalent in various settings globally, including schools, colleges, and workplaces, and can lead to depression, anxiety, substance abuse, and poor psychosocial adjustment, affecting both perpetrators and victims (3).

Bullying has varied detrimental emotional, psychological, and physical effects on its victims, including anxiety, depression, stress-related sleep disorders such as insomnia and nightmares, and physical symptoms such as headaches, high blood pressure, sweating, and tremors. In extreme cases, bullying can result in suicide. The negative consequences of workplace bullying extend beyond the victim, affecting the bully, bystanders or witnesses, the target's family and friends, and the organization's broader dynamics, impacting society as a whole (4). According to a study by Einarsen (2000), 75% of over 100 people who experienced persistent workplace bullying displayed symptoms similar to those of post-traumatic stress disorder (5).

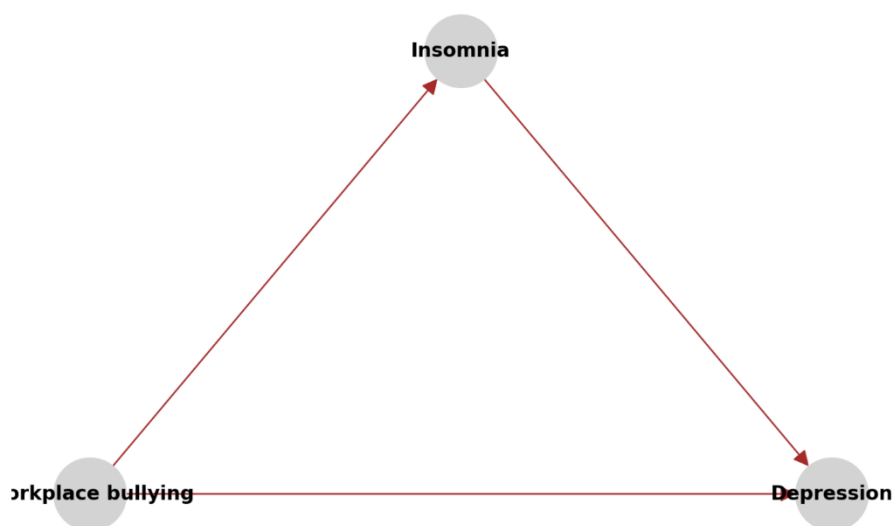
Workplace bullying, described as a slow, often invisible, personalized, and damaging experience, can have serious consequences for individuals and presents significant challenges for organizations, including prevention, incident management, and effective

interventions (6). Higher rates of leadership bullying have been observed in medium and small organizations, particularly in the public sector, where managerial bullying has been noted (7, 8). A previous study in Pakistan found that workplace bullying among female doctors and nurses was associated with decreased job satisfaction, decreased organizational loyalty, detachment from job responsibilities, and decreased physical and mental well-being, manifesting as symptoms similar to post-traumatic stress disorder (9).

Insomnia, derived from the Latin "insomnus" meaning "no sleep," involves disturbances in sleep quality, sleep latency, or sleep maintenance (10, 11). Disruption in any of these components can lead to negative work-related consequences, including negative affect, decreased self-control, unethical behavior, abuse, and incivility (12, 13). Longer working hours have been linked to psychological health indicators such as depression, stress, and anxiety among nursing care attendants in the United States, with depression being more common in those who worked two or more additional shifts each month (14). Sleep, essential for life, has a restorative effect, and adults typically require 7-9 hours of sleep per night for normal functioning. Those who do not meet these standards are at increased risk of health and well-being issues (15, 16).

The objectives of this study are to explore the association between workplace bullying, depression, and insomnia among employees; to examine gender differences in workplace bullying, insomnia, and depression; to investigate the predictive role of workplace bullying and insomnia in depression; and to assess the mediating role of insomnia between workplace bullying and depression. The study's hypotheses include: (H1) a significant positive correlation among workplace bullying, insomnia, and depression; (H2) females experiencing higher levels of workplace bullying, insomnia, and depression than males; (H3) workplace bullying and insomnia being positive predictors of depression; and (H4) insomnia mediating the relationship between workplace bullying and depression.

Research Model



## MATERIAL AND METHODS

This study employed a correlational research design to explore the impact of workplace bullying and depression, with a mediating role of insomnia. The sample comprised 200 employees, both male and female, recruited from various workplaces in Lahore, Pakistan. A purposive sampling strategy was utilized to collect the data. The study included adults from Lahore.

To identify the demographic characteristics of the participants, the researcher developed a demographic form that included questions about age, gender, education level, socioeconomic status, family structure, number of siblings, and birth order.

For the measurement of workplace bullying, a recently developed 21-item workplace bullying scale was employed. Participants rated the scale on a 5-point Likert scale, with "Never" scoring one and "Daily" scoring five. The Cronbach's alpha values for this scale were 0.87 for the overall scale, 0.77 for person-related bullying, 0.77 for work-related bullying, and 0.91 for the entire workplace bullying scale (17).

The Insomnia Severity Index (ISI) was used to assess various aspects of insomnia, including difficulty falling asleep, difficulty staying asleep, early morning waking issues, sleep satisfaction, impairment with daily functioning, perception of sleep-related impairment, and discomfort caused by sleep challenges. Participants rated each component on a scale from 0 (none) to 4 (very severe). The ISI showed high internal consistency, with a Cronbach's alpha of 0.86 (18).

The Depression, Anxiety, and Stress Scale-21 components (DASS-21) were utilized as self-report measures of depression, anxiety, and stress. The DASS-21 consists of 21 items divided into subscales measuring depressive mood, autonomic arousal, and general nonspecific arousal. The Cronbach's alpha for the overall DASS-21 scale was 0.74, with alphas of 0.66 for depression, 0.29 for anxiety, and 0.52 for stress (19).

Data collection was conducted in accordance with the principles outlined in the Declaration of Helsinki, ensuring ethical treatment of all participants. Informed consent was obtained from all participants before data collection. The collected data were analyzed using the Statistical Package for Social Sciences (SPSS) version 25. The analysis included descriptive statistics, correlation analyses, and regression analyses to explore the relationships among workplace bullying, insomnia, and depression.

## RESULTS

The results of this study explored the impact of workplace bullying and depression with a mediating role of insomnia among a sample of 200 employees from Lahore. The findings are presented across several key areas.

First, the psychometric properties of the scales were examined. The mean score for workplace bullying was 42.54 with a standard deviation of 15.8, as measured by the 21-item Workplace Bullying Scale, which had a high Cronbach's alpha of 0.93 (Table 1). The Insomnia Severity Index (ISI) yielded a mean score of 9.88 with a standard deviation of 6.26, and a Cronbach's alpha of 0.87. The Depression, Anxiety, and Stress Scale-21 (DASS-21) had a mean score of 18.97 with a standard deviation of 13.69, and a high Cronbach's alpha of 0.94.

Table 1: Psychometric Properties of Scales

Variable	Mean (M)	SD	Items (k)	Cronbach's Alpha
Workplace Bullying (WBS)	42.54	15.8	21	0.93
Insomnia (ISI)	9.88	6.26	7	0.87
Depression (DASS)	18.97	13.69	21	0.94

Note: SD = Standard Deviation, k = Number of items

Table 2: Pearson Product Moment Correlation between WBS, ISI, and DASS

Variables	Mean (M)	SD	1	2	3
WBS	42.54	15.8	-	0.53**	0.62**
ISI	9.88	6.3	-	-	0.61**
DASS	18.97	13.7	-	-	-

Table 3: Regression Analysis of Workplace Bullying, Insomnia, and Depression

Variables	B	SE	t	p	95% CI- LL	95% CI- UL
Constant	-4.4	2.01	-2.2	0.028	-8.41	-0.485
WBS	0.36	0.052	6.8	0.000	0.251	0.458
ISI	0.84	0.132	6.39	0.000	0.584	1.16

Table 4: Independent t-test for Gender Differences in Workplace Bullying, Insomnia, and Depression

Variables	Male Mean (M)	Male SD	Female Mean (M)	Female SD	t	p	95% CI- LL	95% CI – UL
WB	42.99	16.9	42.2	14.88	0.370	0.712	-3.60	5.27
INS	9.8	6.2	9.9	6.35	-	0.937	-1.83	1.69
DEP	18.35	14.15	19.50	13.35	-	0.555	-4.99	2.69
					0.592			

Table 5: Mediating Role of Insomnia between Workplace Bullying and Depression

	Insomnia	Depression	
Workplace Bullying	0.214***	0.362***	
Insomnia	-	0.811***	
Age	-1.473**	-1.334	
Gender (1 = male)	-0.154	1.034	
R <sup>2</sup>	0.308	0.492	
Effect Size	Bootstrap SE	LLCI	ULCI
0.3623	0.0525	0.2588	0.4659
Effect Size	Bootstrap SE	LLCI	ULCI
0.1714	0.0330	0.1105	0.2393

The Pearson Product Moment Correlation analysis revealed a significant positive correlation between workplace bullying, insomnia, and depression (Table 2). Specifically, the correlation between workplace bullying and insomnia was 0.53, and between workplace

bullying and depression was 0.62, while the correlation between insomnia and depression was 0.61, all statistically significant with p-values less than 0.01.

A regression analysis was conducted to determine the impact of workplace bullying and insomnia on depression (Table 3). The results showed that workplace bullying had a significant positive effect on depression, with a B value of 0.36, a standard error of 0.052, and a p-value of less than 0.001. Insomnia also had a significant positive effect on depression, with a B value of 0.84, a standard error of 0.132, and a p-value of less than 0.001. The constant term was -4.4 with a standard error of 2.01 and a p-value of 0.028.

An independent t-test was performed to investigate gender differences in workplace bullying, insomnia, and depression (Table 4). The results indicated no significant differences between males and females in terms of workplace bullying (male: M = 42.99, SD = 16.9; female: M = 42.2, SD = 14.88;  $t = 0.370$ ,  $p = 0.712$ ), insomnia (male: M = 9.8, SD = 6.2; female: M = 9.9, SD = 6.35;  $t = -0.079$ ,  $p = 0.937$ ), or depression (male: M = 18.35, SD = 14.15; female: M = 19.50, SD = 13.35;  $t = -0.592$ ,  $p = 0.555$ ).

Lastly, the mediating role of insomnia between workplace bullying and depression was assessed (Table 5). The results showed that workplace bullying had a significant positive effect on insomnia, with a coefficient of 0.214 ( $p < 0.001$ ), and a significant positive effect on depression, with a coefficient of 0.362 ( $p < 0.001$ ). Insomnia also had a significant positive effect on depression, with a coefficient of 0.811 ( $p < 0.001$ ). The  $R^2$  values for the models were 0.308 and 0.492, respectively. The direct effect of workplace bullying on depression had an effect size of 0.3623 with a 95% confidence interval ranging from 0.2588 to 0.4659, while the indirect effect, mediated by insomnia, had an effect size of 0.1714 with a 95% confidence interval ranging from 0.1105 to 0.2393. These findings highlight the importance of addressing workplace bullying and its associated outcomes, particularly insomnia and depression, among employees.

## DISCUSSION

The aim of the present study was to explore the association between workplace bullying, insomnia, and depression, as well as the potential mediating role of insomnia among employees. Data from employees in Lahore were collected using a correlational research design and a purposive sampling technique. The discussion integrates these findings with previous empirical literature and provides insights into the relationships among the key variables.

The psychometric properties of the scales used in the study were characterized by descriptive statistics. The workplace bullying scale demonstrated very good reliability with a Cronbach's alpha of 0.93, while the insomnia scale and depression scale showed good reliability with Cronbach's alpha values of 0.87 and 0.94, respectively. The reliability of these scales suggests their appropriateness for research purposes (Table 1).

In this study, workplace bullying was found to have a significant positive association with insomnia and depression (Table 2). These findings align with previous studies that reported a positive association among workplace bullying, depression, insomnia, and job stress (20). The study also highlighted that female employees, particularly those in lower-level positions, were more vulnerable to workplace bullying, while male employees experienced bullying regardless of their position (21). The association between stress, anxiety, and insomnia has also been noted in previous studies, where stress and anxiety management influenced depression levels (22).

The results of the present study revealed that workplace bullying was associated with higher levels of depression and insomnia in both genders. Insomnia likely functioned as a mediator between workplace bullying and employee depression, while workplace bullying and insomnia were positive predictors of depression among employees (Table 3). These findings are consistent with previous research, which indicated that individuals who experienced or witnessed workplace bullying had an increased risk of developing depressive symptoms (23, 24).

Furthermore, the study's findings highlight the need for further research into the relationship between workplace bullying and sleep disorders. A recent systematic review and meta-analysis provided compelling evidence that individuals subjected to workplace bullying were more likely to report sleep issues than non-bullied employees (25). However, prior research has primarily focused on how bullying leads to sleep problems without considering the possibility that sleep problems might increase the likelihood of future workplace bullying. This suggests the need for more nuanced research into the bidirectional relationship between bullying and sleep. The study's strengths include its focus on a significant issue affecting employee well-being and its use of reliable and valid scales. However, the study also had several limitations. The use of a cross-sectional design limited the ability to draw causal conclusions, and the sample was limited to employees from Lahore, which may affect the generalizability of the findings. Future research should consider employing longitudinal designs and sampling employees from multiple cities to improve the generalizability of the results. Additionally, incorporating qualitative methods could provide a richer understanding of the variables and their interactions.

## CONCLUSION

In conclusion, the present study demonstrated significant associations between workplace bullying, insomnia, and depression, with insomnia serving as a mediator. These findings underscore the importance of addressing workplace bullying to promote employee well-being. The study's implications for practice include the need for organizational strategies to manage workplace bullying, support employee well-being, and address the detrimental effects of bullying on mental health. The findings also suggest the potential benefits of developing counseling centers to assist employees in managing stress and insomnia.

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