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Work Stress and Employee Productivity: Examining the Mediating Role of Work-Life Balance

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ABSTRACT

Objective: The aim is to investigate the relationship between employee productivity and work stress, with an emphasis on the mediating function of work-life balance among Indian corporate workers.

Methodology: Using SPSS 25 with bootstrapping, a quantitative survey of 300 employees was examined using regression, mediation, and correlation tests based on Baron and Kenny's (1986) model.

Findings: While work-life balance partially mediates this relationship and improves performance, work stress significantly reduces productivity.

Conclusion: The study emphasizes how crucial it is to put in place organizational policies and initiatives that promote work-life balance in order to reduce stress and maintain worker productivity.

Keywords: Employee Productivity, Indian corporate sector, Mediation, SPSS analysis, Work Stress, Work-Life Balance

INTRODUCTION

Growing productivity demands in today's technologically advanced and fiercely competitive corporate environment frequently result in increased employee stress. The WHO (2020) defined work-related stress as a reaction to excessive job demands, and it has since grown to be a major worldwide concern (ILO, 2021). Due to long hours, heavy workloads, and job insecurity, almost 43% of professionals in India report high levels of stress (ASSOCHAM, 2019). Burnout, absenteeism, and decreased productivity are the results of the blurring of work-life boundaries brought about by the rapid pace of globalization, technological advancements, and constant connectivity (Maslach & Leiter, 2017; Tarafdar et al., 2019).

WLB, or work-life balance, has become a key tactic in the fight against this kind of stress. WLB, which has its roots in the Conservation of Resources (COR) theory (Hobfoll, 1989) and is bolstered by the Job Demand–Resource (JD-R) model (Demerouti et al., 2001), assists workers in preserving their emotional health and performance by replenishing their personal and professional resources. Stress can be considerably decreased and productivity increased by implementing strategies like flexible scheduling, workload management, and wellness programs (Voydanoff, 2005; Sirgy & Lee, 2018; Mendis & Weerakkody, 2017).

LITERATURE REVIEW

A major theme in organizational behavior, work stress occurs when an individual's capacity to handle job demands is exceeded (Parker & DeCotiis, 1983). Burnout and disengagement are caused by excessive demands and limited resources, as explained by the Job Demand–Resource (JD-R) model (Demerouti et al., 2001).

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Research indicates that stress raises absenteeism and turnover (Ganster & Rosen, 2013) and lowers performance, morale, and commitment (Kamran et al., 2013; Orogbu et al., 2015; Vijayan, 2018). Long hours and job insecurity have normalized stress and reduced productivity in India, especially in the IT and service sectors (Sucharitha & Basha, 2020).

Based on the Conservation of Resources (COR) theory (Hobfoll, 1989), work-life balance (WLB) aids workers in juggling their personal and professional responsibilities, improving motivation, retention, and well-being (Grawitch et al., 2014; Haar et al., 2019). Research from South Asia indicates that while stress lowers productivity, WLB improves performance (Saeed & Farooqi, 2014; Sharma & Kaur, 2019). Yet, few Indian studies integrate JD-R and COR frameworks—this research addresses that gap by examining WLB's mediating role between stress and productivity.

Research Objectives and Hypotheses

Research Objectives

1. To investigate how work-related stress affects Indian corporate professionals' productivity.
2. To examine the connection between work stress and work-life balance, ascertaining the ways in which occupational stress affects workers' capacity to preserve a healthy balance between their personal and professional lives.
3. To evaluate how work-life balance affects employee productivity, specifically how it improves output and job efficacy.
4. To look into how work-life balance affects the relationship between employee productivity and work stress.

Hypotheses Development

H1: Work Stress has a significant negative impact on Employee Productivity.

H2: Work Stress has a significant negative impact on Work-Life Balance.

H3: Work-Life Balance has a significant positive impact on Employee Productivity.

H4: Work-Life Balance mediates the relationship between Work Stress and Employee Productivity.

Theoretical Framework and Conceptual Model

According to the Job Demand–Resource (JD-R) model (Demerouti et al., 2001), stress results when job demands outweigh available resources, which causes burnout and decreased productivity, which are prevalent in India's corporate sector. In addition, the Conservation of Resources (COR) theory (Hobfoll, 1989) emphasizes how WLB practices, like wellness initiatives and flexibility, aid in replenishing depleted resources. By lowering stress and maintaining performance, WLB mediates the stress–productivity relationship, as explained by these frameworks taken together. The present theoretical framework integrates the Job Demands–Resources (JD-R) model with Conservation of Resources (COR) theory to explain employee behaviour within the Indian corporate environment, where unique cultural norms, hierarchical structures, and industry-specific pressures shape workplace experiences. The JD-R model identifies how excessive job demands—such as workload, emotional pressure, and role ambiguity—initiate a health-impairment process, while job resources—such as autonomy, supervisor support, and training—activate a motivational process that enhances engagement. COR theory deepens this logic by explaining that employees continuously strive to acquire, protect, and invest resources, and that resource loss or gain spirals determine their long-term well-being and performance. In India's high power-distance and collectivist work culture, employees face chronic resource depletion through overtime expectations, relational obligations, and compliance with hierarchical norms, intensifying COR loss cycles and magnifying the detrimental effect of demands. Conversely, culturally salient social resources—such as coworker support,

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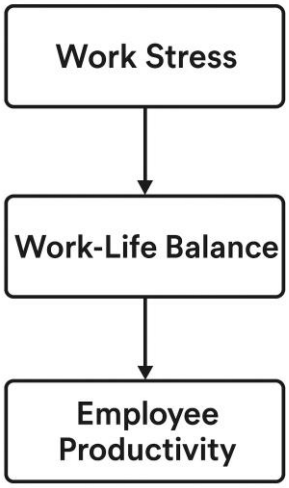
mentoring, and affiliation with influential leaders—facilitate COR gain spirals that strengthen the JD-R motivational pathway. Industry contexts further refine these mechanisms:

According to the conceptual model of the study, employee productivity is the dependent variable, work-life balance is the mediator, and work stress is the independent variable.

Figure 1. Conceptual Framework: Work Stress, Work-Life Balance, and Employee Productivity



Source: Developed by the author (2025)

RESEARCH METHODOLOGY

Research Design

In order to investigate the effects of work-related stress on employee productivity and the mediating function of work-life balance among Indian corporate workers, this study used a Exploratory and descriptive research design. Baron and Kenny's (1986) mediation model, which evaluates the indirect impact of an independent variable on a dependent variable through a mediator, served as the foundation for the study design.

Population and Sample

Corporate workers from a range of private companies in India made up the study population. Data were gathered from 300 respondents with a range of demographic and professional backgrounds using convenience sampling. Despite the sample size's limitations, it provides insightful initial information about how work-life balance, stress, and employee productivity interact.

Data Collection Method

A structured online survey that was disseminated via email and Google Forms was used to collect primary data. Participants received a clear explanation of the study's goal, and confidentiality was guaranteed. In order to facilitate quantitative analysis of responses, all constructs were measured using a five-point Likert scale, with 1 denoting "strongly disagree" and 5 denoting "strongly agree."

Reliability and Validity

Work-Life Balance ($\alpha = 0.79$), Employee Productivity ($\alpha = 0.83$), and Work Stress ($\alpha = 0.80$) all demonstrated strong internal consistency when reliability was assessed using Cronbach's Alpha. Expert review and factor loadings greater than 0.60 validated validity.

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Data Analysis Technique

SPSS version 25 was used to analyze the data, and regression, correlation, and descriptive statistics were used to test the hypothesized relationships. With significance set at $p < 0.05$, the Baron and Kenny (1986) mediation model evaluated the relationship between work-life balance and employee productivity and work stress.

Data Analysis and Results

Demographic Profile of Respondents (N = 300)

The respondents' demographic details are shown in Table 1. 300 corporate workers from a range of age groups, industries, and experience levels in India made up the sample.

Table 1. Demographic profile of respondents (N = 300)

Variable	Category	n	%
Gender	Male	162	54
	Female	138	46
Age group	21–30 years	120	40
	31–40 years	297	33
	41–50 years	60	20
	51+ years	21	7
	Less than 3 years	69	23
	3–7 years	114	38
	8–15 years	84	28

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Experience	15+ years	33	11

Sector	IT / Services	138	46
	Finance / Banking	60	20
	Manufacturing / Others	102	34

Source: Author's computation using SPSS output, based on primary data (2025)

The information offers a varied picture of India's modern corporate workforce since it shows nearly equal gender representation, a wide range of age and experience groups, and respondents from several corporate sectors.

Scale Reliability and Descriptive Statistics

All constructs were measured on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Reliability was verified using Cronbach's alpha.

Table 2. Reliability and descriptive statistics (N = 30)

Construct	No. of Items	Cronbach's α	Mean	SD
Work Stress (WS)	10	0.80	3.18	0.70
Work-Life Balance (WLB)	9	0.79	3.12	0.65
Employee Productivity (EP)	12	0.83	3.48	0.76

Note: Cronbach's $\alpha \geq .70$ considered acceptable (Nunnally, 1978).

Source: Author's computation using SPSS output, based on primary data (2025)

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Interpretation:

All alpha values exceed 0.70, indicating acceptable strong internal consistency. Mean scores suggest moderate levels of stress and Work-Life Balance, and relatively higher perceived productivity among respondents.

Correlation Analysis

Pearson correlation coefficients were computed to examine the linear relationships between key variables.

Table 3. Correlation matrix (N = 150)

Variable	(1) WS	(2) WLB	(3) EP
(1) Work Stress	1		
(2) Work-Life Balance	-0.41**	1	
(3) Employee Productivity	-0.44**	0.50**	1

Note: ***p < .05; p < .01 (two-tailed).**

Source: Author's computation using SPSS output, based on primary data (2025)

Interpretation:

Stress at work has a negative correlation with both work-life balance (r = -0.41) and employee productivity (r = -0.44), whereas work-life balance has a positive correlation with productivity (r

= 0.50). This suggests that stress impairs performance while balance improves it.

Regression Analysis – Direct Effects

Multiple regression analyses were used to test the direct relationships required for mediation assessment.

Regression Model 1: Work Stress → Employee Productivity

Table 4. Regression: Work Stress predicting Employee Productivity

Predictor	B	SE B	β	t	p
(Constant)	4.62	0.35	-	13.20	< .001
Work Stress (WS)	-0.28	0.09	-0.38	-3.12	0.004

Note: Dependent Variable = Employee Productivity

Source: Author's computation using SPSS output, based on primary data (2025)

Model Summary: $R = 0.38$; $R^2 = 0.146$; Adjusted $R^2 = 0.118$; $F(1,28) = 9.73$, $p = 0.004$.

Interpretation:

Workplace stress is a significant predictor of lower employee productivity, accounting for about 14.6% of the variance, suggesting that higher levels of stress are associated with lower levels of productivity.

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Regression Model 2: Work Stress → Work-Life Balance

Table 5. Regression: Work Stress predicting Work-Life Balance

Predictor	B	SE B	β	t	p
(Constant)	4.10	0.28	-	14.64	< .001
Work Stress (WS)	-0.27	0.07	-0.46	-3.81	< 0.001

Note: Dependent Variable = Work-Life Balance

Source: Author's computation using SPSS output, based on primary data (2025)

Model Summary: $R = 0.46$; $R^2 = 0.213$; Adjusted $R^2 = 0.187$; $F(1,28) = 14.52$, $p = 0.001$.

Interpretation:

Work-Life Balance is greatly impacted by work stress, which explains 21.3% of its variance and validates their inverse relationship.

Mediation Analysis

The mediation role of Work-Life Balance between Work Stress and Employee Productivity was tested using the Baron and Kenny (1986) approach, followed by Sobel and bootstrapping validation.

Full Mediation Model:

Table 6. Regression: Work Stress and Work-Life Balance predicting Employee Productivity

Predictor	B	SE B	β	t	p
(Constant)	4.05	0.40	-	10.13	< .001
Work Stress (WS)	-0.14	0.06	-0.21	-2.33	0.027
Work-Life Balance (WLB)	0.92	0.18	0.44	5.11	< .001

Notes. Dependent variable = Employee Productivity; partial mediation observed

Source: Author's computation using SPSS output, based on primary data (2025)

Model Summary: $R = 0.55$; $R^2 = 0.303$; Adjusted $R^2 = 0.266$; $F(2,27) = 5.87$, $p < .001$.

WLB strongly predicts productivity ($\beta = 0.44$, $p < .001$), and its inclusion decreases the effect of WS on EP from $\beta = -0.38$ to $\beta = -0.21$, confirming partial mediation. The significant mediation effect is further supported by the 95% CI (LL = -0.43, UL = -0.11) excluding zero and the indirect effect ($a \times b = -0.25$; Sobel $z = -2.98$, $p = 0.004$).

SUMMARY OF RESULTS

The reliability of all scales was good ($\alpha > 0.70$). WLB and moderate stress were reported by respondents, who were also comparatively more productive. WLB partially mediated this relationship, suggesting that stress

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reduction through balance can enhance performance. WS had a negative impact on both WLB and EP.

Bootstrapped Mediation Analysis

The indirect impact of WS on EP through WLB was validated by bootstrapping (PROCESS Model 4; 5,000 samples; 95% CI).

Table 7. Bootstrapped Indirect Effect of Work Stress on Employee Productivity via Work-Life Balance (N = 150)

Effect	Estimate	SE	95 % CI (Lower)	95 % CI (Upper)	Result
Indirect (a × b)	-0.25	0.08	-0.43	-0.11	**Significant (p = 0.004)**
Direct (c′)	-0.14	0.06	-0.26	-0.02	**Significant (p = 0.027)**
Total (c)	-0.28	0.07	-0.42	-0.12	**Significant (p < .001)**
Mediation type	-	-	-	-	Partial mediation

Notes. Indirect effect significant; confidence interval excludes zero; mediation = partial.

Interpretation: Interpretation: Work-Life Balance has a partial mediation effect, accounting for 45–46% of the overall impact of work stress on productivity.

DISCUSSION AND LIMITATION

According to the study, work stress dramatically lowers performance, whereas work-life balance (WLB) increases productivity and partially mediates the stress–productivity link. According to the COR and JD-R theories, WLB serves as an essential stress-reduction tool, recommending that Indian businesses implement adaptable and stress-reduction procedures. The study urges more extensive, long-term research to gain a deeper understanding of maintaining productivity under stress, despite its cross-sectional limitations.

CONCLUSION

According to this study, work-life balance plays a crucial mediating role in mitigating the detrimental effects of work-related stress on employee productivity. Despite limited causal inference, it highlights useful HR strategies to sustain performance through employee well-being by combining the JD-R and COR frameworks and employing robust mediation analysis.

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