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## Original Research Article

## Unpacking the stress-satisfaction-Performance triangle in the IT workforce

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## ABSTRACT

**Background:** The booming Information Technology (IT) sector has led to high job stress due to intense workloads and technological changes worldwide. Examining the relationship between job stress, satisfaction, and performance is vital for employee well-being and productivity in IT industry.

**Materials and Methods:** The primary objective of this research was to analyse how job stress and job satisfaction collectively impact job performance in IT sector employees of Delhi-NCR. IT professionals (n=255) working in service-based company from various roles and experience levels were recruited. Participants' perceived levels of job stress, job satisfaction, and job performance using validated scales.

**Results:** Through statistical analyses, it was observed that higher levels of job satisfaction will be associated with lower job stress and enhanced job performance. Conversely, elevated job stress is expected to correlate with decreased job satisfaction and diminished job performance. The demographic and work-related variables of the study added context to these findings by elucidating personal experiences, working conditions, communication, and contextual factors that may moderate these relationships.

**Conclusion :** By exploring the multifaceted connections between job stress, job satisfaction, and job performance, this study provides a valuable insight that can inform evidence-based practices for fostering healthier and more productive work environments in the IT industry.

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## 1. Introduction

The Information Technology (IT) sector has become a critical component of modern business operations, driving innovation, connectivity, and efficiency in today's digital world. As the IT industry continues to evolve and grow, employees in this sector face unique challenges that can impact their well-being and work outcomes. Among these challenges, job stress emerges as a significant concern, given the fast-paced and demanding nature of IT roles.<sup>1</sup> At the same time, job satisfaction and job performance play pivotal roles in determining employees' productivity,

retention, and overall success within organizations.<sup>2,3</sup>

Understanding the dynamic relationships among job stress, job satisfaction, team effectiveness, and job performance is essential for addressing the workforce's needs and optimizing organizational outcomes in the IT sector. Previous studies have independently explored some of these factors, but there is a need to comprehensively investigate their interconnectedness to gain a holistic understanding of how they influence each other within the IT industry.

Job stress in the IT sector can arise from factors such as tight project deadlines, high expectations, and the rapidly changing technological landscape. Understanding the sources and consequences of job stress is crucial

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for designing targeted interventions to support employees' mental health and mitigate burnout.

In addition, Job satisfaction is a crucial determinant of employee motivation, engagement, and retention. In the IT sector, where skilled professionals are in high demand, understanding the factors that contribute to job satisfaction can help organizations attract and retain top talent.

Moreover, Job performance directly impacts organizational productivity and competitiveness.<sup>4</sup> Understanding the factors that influence job performance in the IT sector can guide the implementation of measures to enhance individual and team contributions to organizational success.

Therefore, the present research aims to examine the intricate interplay of job stress, job satisfaction and job performance among IT sector employees. By investigating these factors collectively, we can gain insights into how they mutually impact each other and influence overall employee well-being and organizational performance in the IT context.

## 2. Materials and Methods

The present study was conducted from September 2022 to May 2023 in the Northern region of India. Total number of 255 IT (informational technology) professionals working in service-based multinational company from various roles and experience levels were recruited from the same organization to maintain the homogeneity of samples. We included the people working in the IT sector (age group: 30 to 45 years) willing to participate in the study. The participants on probation and notice period were excluded. To explore the interrelationships between job stress, job satisfaction, and job performance, a cross-sectional survey design was employed. The institute ethics committee permission was obtained for conducting the study. Informed consent (written) was obtained from the participants. The study collected data through validated questionnaires distributed among a representative sample of IT sector employees from service oriented large-scale organizations. The questionnaire included validated scales to assess job stress, job satisfaction, and job performance respectively.<sup>5-7</sup>

### 2.1. Statistical analysis

Data obtained from filled questionnaire was collected manually, tabulated in MS windows excel sheet. Mean score values of the study group variables were calculated by taking sum of score of each variable (present in the above-mentioned questionnaire) of all the participant divided by number of participants. Data were analysed using SPSS 25 version using various statistical tests like t test, Pearson correlation and regression analyses to examine the associations and difference between the variables.

## 3. Results

Demographic and work profile of IT employee are represented in Table 1. The study aimed to examine the interplay of job stress, job satisfaction, team effectiveness, and job performance among IT sector employees. A cross-sectional survey was conducted, and data were collected through self-report questionnaires from a representative sample of IT professionals. The perceived stress among the employee was almost positive with more than 5 score. The stress severity was highest for moderate stress, followed by mild and then severe stress (Figure 1).

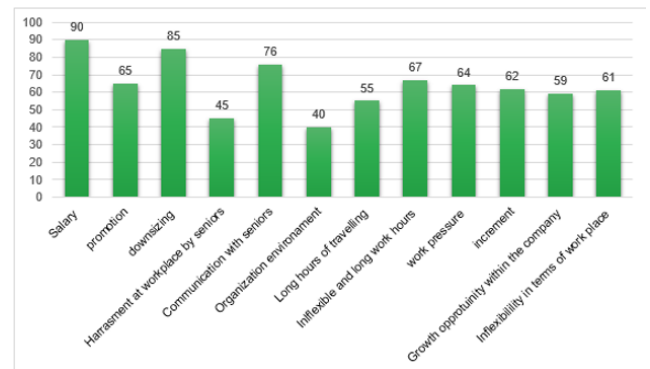


Figure 1: ; Concerns of employee in percentage

The stress severity was highest for moderate stress, followed by Mild, Severe and Very severe. Mean score of various variables are represented in Table 2. The satisfaction of the job among the participants were found to be Low (58%) only 42% people were satisfied with their job. Among sub variables of role based performance least mean scores were from domains of career, job and organization (Table 2).

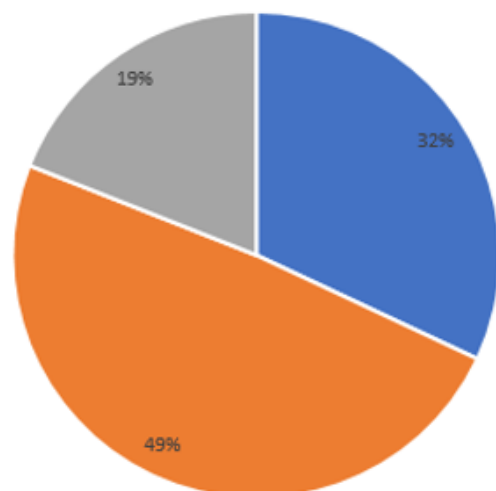


Figure 2: Stress status in IT sector employees

**Table 1:** Represents the demographic and work (Profile) characteristics of IT employee under this study (N=255)

Variables		Frequency	N %
Sex	Male	134	52.54%
	Female	121	47.45%
Marital status	Married	46	18.0%
	Unmarried	209	82.0%
Family type	Nuclear	188	73.7%
	Joint	67	26.3%
Job type	Developer/coder	197	77.3%
	Tester	18	7.1%
	Documentations	22	8.6%
	Tech.Com	8	3.1%
	Leader	10	3.9%
	Other	0	0.0%
Organizational hierarchy	Junior level	165	64.7%
	Middle level	90	35.3%
Satisfied with your job	Yes	105	41.17%
	No	150	58.82%
Salary (Monthly)	less than 20	37	14.5%
	25-50	102	40.0%
	50-1 lac	102	40.0%
Which of the following is most difficult task	above 1 Lac	14	5.5%
	Work -Personal life balance	119	46.7%
	Travelling	68	26.7%
	Difficulty in communicating with supervisor	62	24.3%
Do you attend any Work integrated continual learning	Work related	6	2.4%
	Yes	165	64.7%
Do you wish to switch your current job role	No	90	35.3%
	Yes	212	45.0%
Do you wish to switch your work mode to	No	41	16.2%
	Yes	115	46.7%
What is your main concern in the present situation	No	62	24.3%
	Hybrid	78	30.5%
	Salary	230	90.18%
	Low Increment	33	13.2%
Organizational environment	downsizing	28	11.2%
	Promotion	47	18.8%
		35	14.0%

**Table 2:** Mean score of different study variables

Variables	Mean	Std. Deviation
Age	32.2	6.24
JSS	37.8	8.281
Stress score	21.72	5.919
RBPS (Role based performance score)	73.5	9.246
Career	11.16	2.044
Job	11.68	2.215
Innovation	14.56	2.785
Organization	11.35	2.029
Team	13.47	2.381

There were no association found between age and work variable like job satisfaction, stress and role-based performance. Job satisfaction was found to be negatively correlated with stress and positively correlated with performance ( $r = -0.378$ ,  $p = 0.0001$ ; RBPS  $r = 0.158$ ,  $p = 0.01$ ). RBPS was associative with stress negatively ( $r = -0.128$ ,  $p = 0.041$ ).

Simple linear regression was used to test if [Job satisfaction] significantly predicted [Job performance]. The fitted regression model was: [fitted regression equation]. The overall regression was statistically significant ( $R^2 = [0.220]$ ,  $F(df \text{ regression}^1 \text{ df residual}^1) = [F-6.587]$ ,  $p = [0.01]$ ). It was found that [Job satisfaction] significantly predicted [Job performance] ( $\beta = [\beta-0.159]$ ,  $p = [p-0.0001]$ ). Various studies are similar to the findings of present study.

The work-related variable differs statistically in terms of stress, job satisfaction and performance. Stress was highest in leaders, least people working in documentation. Concern in present were Salary, low increment, downsizing, promotion and Organizational environment (Table 1). The major concern of the employees was alarmingly very high where more than 70 percent of employee shown concerns about salary issue, downsizing, poor communication with seniors followed by inflexible working hours, promotions issues and work pressure (Figure 1). Least concern was about organizational climate although it was also a significantly a big percentage of nearly 40 %.

#### 4. Discussion

The findings of this study provide valuable insights into the complex relationships among job stress, job satisfaction, team effectiveness, and job performance in the IT sector. The negative correlation between job stress and job satisfaction aligns with previous research indicating that high job stress can lead to reduced employee satisfaction and overall well-being.<sup>8,9</sup> Organizations in the IT sector should focus on addressing stressors and providing supportive work environments to promote employee job satisfaction and retention.

The stress was positive for all the employees. The stress severity was highest for moderate stress, followed by mild and then severe stress (Figure 1).

1. Stress and Job Satisfaction: The results revealed a significant negative correlation between job stress and job satisfaction. This finding suggests that higher levels of job stress were associated with lower levels of job satisfaction among IT sector employees.
2. Stress and Job Performance: The study found a significant negative correlation between job stress and job performance. This suggests that higher job stress levels were associated with decreased job performance among IT sector employees.

3. Job Satisfaction and Job Performance: There was a significant positive correlation between job satisfaction and job performance. This indicates that higher levels of job satisfaction were associated with better job performance among IT sector employees.

The negative correlation between Stress job stress and job performance highlights the adverse effects of job stress on individual employee performance in the IT sector. Excessive stress can impair concentration, creativity, and problem-solving abilities, leading to decreased job performance.<sup>10,11</sup> Organizations should implement stress management programs and offer resources to help employees cope with job-related pressures effectively.

On the other hand, the positive correlations between job satisfaction, and job performance underscore the importance of employee satisfaction and team dynamics for overall work performance in the IT sector. Further there were no difference in the stress score based on gender. which suggest that stress can be present among all the employees irrespective of their biological variations.<sup>3,12</sup>

Regression analysis shown that job satisfaction can be used to predict the performance of the employees. Satisfied employees tend to be more engaged, motivated, and collaborative, contributing to improved team effectiveness and job performance.<sup>4,13</sup> The score were although invariable low in subdomain of performance viz career, job and organization which was less compare to mean score of the original study (APA PsycNet, n.d.). Organizations should invest in employee satisfaction initiatives and team-building strategies to foster a positive work environment and maximize organizational outcomes.

The norm of job satisfaction given by Specter et al. (Mean score 140.7) for private sector service employee.<sup>5</sup> In our present study none of the employee's scores reach that mean scores which suggest poor job satisfaction among IT sector employees. Overall, the results suggest that promoting job satisfaction, while reducing job stress can have a positive impact on job performance among IT sector employees.<sup>14,15</sup> Organizations can benefit from adopting comprehensive strategies that prioritize employee well-being, team collaboration, and job satisfaction, ultimately leading to a more efficient and successful IT workforce.<sup>16</sup>

The work-related variable did not differ in terms of stress, job satisfaction and performance. Similar to the study conducted by Susanto et al., our study suggest stress was highest in leaders, least people working in documentation.<sup>3</sup> Concern in present were Salary, supervisors support, increment, downsizing, promotion and Organizational environment. These factors might be contributing to high stress and low job satisfaction and performance in our study group as it can be seen from both the figures (1&2) all the concerns are in significant no almost every variable crossed 60 percent of the respective concerns. Our findings results matches various studies which suggest all work related

variables will be impacted by individual and organizational factors.<sup>3,17</sup>

However, as a cross-sectional study, this research only captures a snapshot of the relationships among these variables. Future longitudinal studies could provide further insights into the causal relationships and changes over time, guiding the development of targeted interventions and sustainable practices to enhance employee well-being and organizational success in the IT sector.

## 5. Conclusion

The findings of this research will contribute valuable insights to both academia and the IT industry. By uncovering the complex interactions among job stress, job satisfaction, team effectiveness, and job performance, organizations can develop evidence-based strategies to promote employee well-being, job satisfaction, and overall productivity in the IT sector. Ultimately, this research aims to inform HR practices and organizational policies that optimize the performance and satisfaction of IT sector employees, leading to enhanced organizational success and a competitive edge in the digital landscape. Furthermore, the implications of this research are significant for both administrators, academicians, and researchers in the field of organizational psychology and human resource management.

## 6. Source of Funding

None.

## 7. Conflict of Interest

There is no conflict of interests. All authors are equally contributed.

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