

Examining the Relationship Between Job Stress and Job Satisfaction Among Hospital Staff: A Survey-Based Study

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Abstract

This study examines the relationship between job stress and job satisfaction among hospital staff, testing the hypothesis of a direct (positive) relationship between the two constructs. A cross-sectional survey was administered to 200 hospital employees across nursing, physician, administrative, and support/technical roles, using a 15-item instrument with 5-point Likert scales measuring job satisfaction (7 items) and job stress (8 items). Results showed both scales had strong internal consistency (Cronbach's $\alpha = .888$ and $.911$, respectively). A Pearson correlation revealed a statistically significant positive relationship between job stress and job satisfaction ($r = .277$, $p < .001$), which remained significant in a multiple regression controlling for age and years of experience ($B = .238$, $p < .001$; $R^2 = .084$). These findings are discussed in relation to the challenge-hindrance stressor framework, alongside alternative explanations including reverse causality, common method bias, and selection effects. Implications for hospital management and directions for future research are presented.

Keywords: job stress, job satisfaction, hospital staff, healthcare workforce, challenge stressors

1. Introduction:

Hospitals are high-demand, high-stakes work environments where staff routinely face heavy workloads, emotional strain, and time pressure. Job stress and job satisfaction are two of the most widely studied constructs in occupational health and organizational behavior research, particularly within healthcare settings where staff wellbeing directly affects patient care quality and staff retention. While much of the existing literature has examined job stress as a factor that erodes job satisfaction, emerging perspectives suggest that in certain high-engagement, mission-driven professions such as healthcare, stress may also be experienced as a byproduct of meaningful, demanding work — and may coincide with, rather than undermine, satisfaction. Employees who are deeply invested in patient outcomes may report both elevated stress and elevated satisfaction simultaneously, driven by engagement, purpose, and a sense of accomplishment under pressure.

This study investigates the relationship between job stress and job satisfaction among hospital staff, testing the hypothesis that job stress is positively (directly) associated with job satisfaction. Using a survey-based, cross-sectional design, this research aims to (1) measure levels of job stress and job satisfaction among

hospital employees, (2) examine the statistical relationship between these two constructs, and (3) explore whether this relationship varies across demographic and occupational subgroups (e.g., department, shift, years of experience).

The findings are intended to contribute to a more nuanced understanding of stress-satisfaction dynamics in healthcare work environments and to inform hospital management practices around staff support and engagement.

2. Literature Review

Job satisfaction and job stress have been extensively studied in the healthcare workforce literature, given their strong links to burnout, turnover intention, and patient care quality.

2.1 Job Stress in Healthcare Settings

Job stress among hospital staff, particularly nurses, has been widely documented as arising from high workload, staffing shortages, emotional labor, and shift work (Aiken et al., 2002). The Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) is frequently used as a theoretical framework, proposing that job demands (e.g., workload, time pressure) can lead to strain, while job resources (e.g., support, autonomy) buffer against it.

2.2 Job Satisfaction in Healthcare Settings

Job satisfaction among healthcare workers has been linked to factors such as pay, supervisor support, autonomy, and perceived recognition (Lu, While, & Barriball, 2005). Higher job satisfaction has consistently been associated with lower turnover intention and better patient outcomes.

2.3 The Stress–Satisfaction Relationship

The relationship between stress and satisfaction is debated. Much of the classical literature (e.g., studies building on the JD-R model) frames stress as a negative predictor of satisfaction — high demands without adequate resources erode satisfaction over time. However, some studies point to a more complex relationship: engagement-based frameworks suggest that employees in emotionally demanding but meaningful roles (such as healthcare) may report elevated stress alongside elevated satisfaction, particularly when stress stems from engagement and high investment in the work rather than resource depletion. This distinction is captured in the "challenge versus hindrance stressors" framework (Cavanaugh, Boswell, Roehling, & Boudreau, 2000), under which "challenge stressors" (e.g., workload, time pressure, responsibility) can be positively associated with satisfaction and motivation, even while contributing to stress, whereas "hindrance stressors" (e.g., role ambiguity, red tape) tend to undermine satisfaction.

This distinction supports the present study's hypothesis: in a hospital context where stress is largely driven by workload and patient responsibility (challenge stressors), job stress may show a direct, positive relationship with job satisfaction.

3. Methodology:

3.1 Research Design

This study employed a cross-sectional, quantitative survey design to examine the relationship between job stress and job satisfaction among hospital staff.

3.2 Sample and Setting

A convenience sample of 200 hospital staff (nurses, physicians, administrative staff, and support/technical staff) was recruited from a multispecialty hospital in Nanded, Maharashtra, India. Participants were

eligible if they were currently employed in a clinical or administrative role and had at least six months of tenure at the institution. Surveys were distributed via an online survey platform (Google Forms) over a four-week period, with participation being voluntary and anonymous.

3.3 Instrument

Data were collected using a structured, self-administered questionnaire consisting of three sections: (1) demographic information (age, gender, department, job role, years of experience, shift type); (2) a Job Satisfaction Scale (7 items, 5-point Likert scale, 1 = Strongly Disagree to 5 = Strongly Agree); and (3) a Job Stress Scale (8 items, same response format). Both scales were adapted for this study based on constructs commonly used in occupational health research, consistent with the Job Demands-Resources framework.

3.3.1 Job Satisfaction Items:

1. I am satisfied with my current job overall.
2. I feel my work is valued by my organization.
3. I am satisfied with the salary and benefits I receive.
4. I have good opportunities for career growth in this hospital.
5. I have a positive working relationship with my colleagues.
6. I am satisfied with the support I receive from my supervisor.
7. I feel a sense of accomplishment from my work.

3.3.2 Job Stress Items:

1. I often feel overwhelmed by my workload.
2. I frequently work under time pressure.
3. I feel physically exhausted after most shifts.
4. I feel emotionally drained by my job.
5. I have insufficient staff support to complete my duties.
6. I find it difficult to balance work and personal life.
7. I worry about making errors due to high workload.
8. I feel stressed about my job security or future at this hospital.

3.4 Data Analysis Plan:

Data were analyzed using standard statistical software following a structured analysis plan:

- Descriptive statistics to summarize sample characteristics and scale responses.
- Cronbach's alpha to assess internal consistency of the Satisfaction and Stress scales.
- Normality testing (Shapiro-Wilk) to guide choice of parametric versus non-parametric tests.
- Pearson correlation to test the association between stress and satisfaction.
- Independent-samples t-tests and one-way ANOVA to compare stress and satisfaction across demographic subgroups.
- Simple and multiple linear regression to test whether job stress significantly predicts job satisfaction, controlling for demographic covariates.

3.5 Ethical Considerations:

Participation was voluntary, informed consent was obtained from all participants, and responses were kept anonymous and confidential. [Ethics approval body not required].

4. Results

4.1 Sample Characteristics

Of the 200 hospital staff surveyed, 69.0% identified as female and 31.0% as male. Respondents worked across Nursing (42.5%), Administrative (24.0%), Support/Technical (19.5%), and Physician (14.0%) roles. Shift distribution was 47.5% day, 30.5% rotating, and 22.0% night. Mean age was 34.72 years (SD = 7.83), and mean years of experience was 6.66 (SD = 4.69).

Table 1. Sample Demographic Characteristics (N = 200)

Characteristic	Category	n (%)
Gender	Female	138 (69.0%)
	Male	62 (31.0%)
Department	Nursing	85 (42.5%)
	Administrative	48 (24.0%)
	Support/Technical	39 (19.5%)
	Physicians	28 (14.0%)
Shift	Day	95 (47.5%)
	Rotating	61 (30.5%)
	Night	44 (22.0%)
Age (years)	Mean (SD)	34.72 (7.83)
Years of Experience	Mean (SD)	6.66 (4.69)

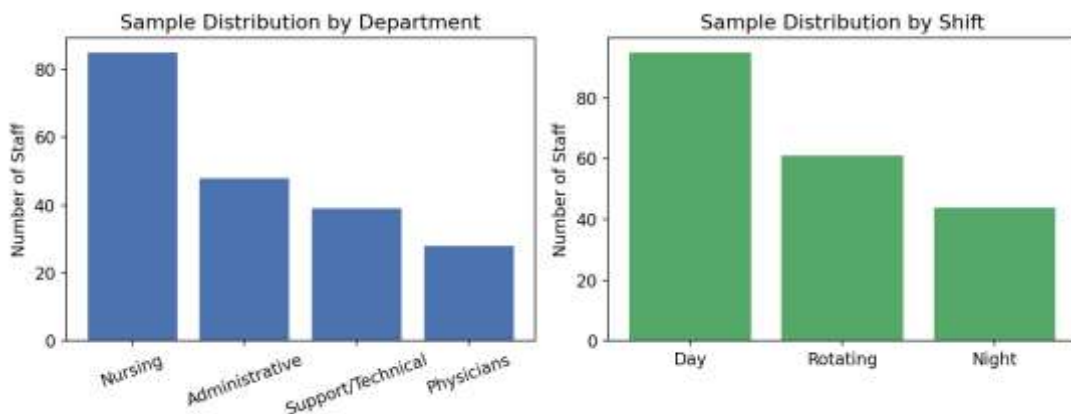


Figure 1. Sample distribution by department and shift.

4.2 Descriptive Statistics and Reliability

Table 2. Descriptive Statistics and Internal Consistency Reliability

Scale	Items	M	SD	Cronbach's α
Job Satisfaction	7	3.459	0.538	0.888
Job Stress	8	3.236	0.599	0.911

Both scales demonstrated good to excellent internal consistency ($\alpha > .85$), exceeding the conventional .70 threshold for acceptable reliability.

4.3 Normality Testing

Shapiro-Wilk tests indicated the Satisfaction composite deviated only mildly from normality ($W = 0.988$,

$p = .088$) and the Stress composite did not significantly deviate from normality ($W = 0.991$, $p = .245$). Given the adequate sample size ($N = 200$) and only mild deviation, parametric tests (Pearson correlation, t-test, ANOVA, OLS regression) were considered appropriate.

4.4 Correlation Analysis

A Pearson correlation revealed a statistically significant, positive relationship between job stress and job satisfaction, $r(198) = .277$, $p < .001$, supporting the study's hypothesis of a direct relationship between the two constructs.

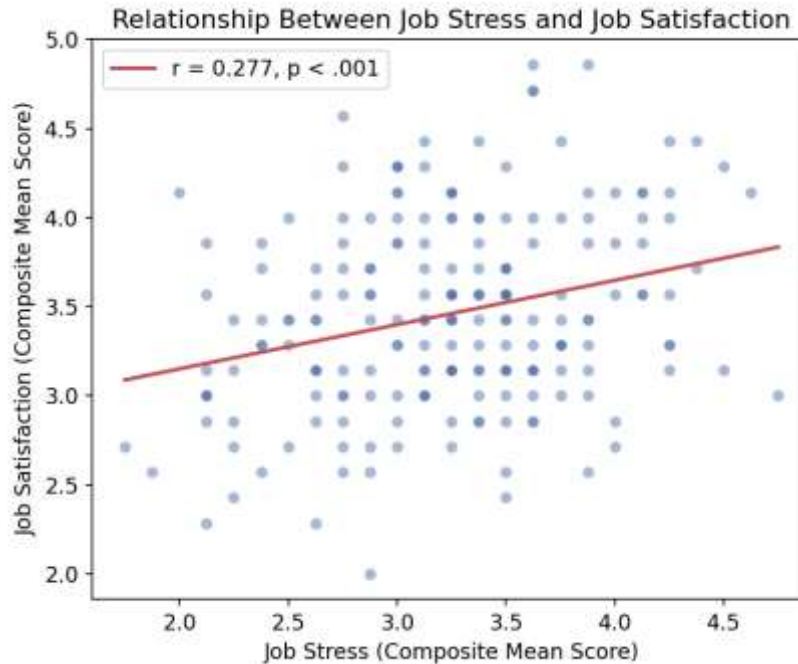


Figure 2. Scatter plot of the relationship between job stress and job satisfaction, with regression line ($r = .277$, $p < .001$).

4.5 Group Comparisons

An independent-samples t-test found no significant difference in job satisfaction by gender, $t(198) = 0.641$, $p = .523$ (Male $M = 3.495$; Female $M = 3.442$). A one-way ANOVA found no significant difference in job stress across departments, $F(3, 196) = 1.019$, $p = .386$, though Support/Technical staff showed the numerically highest mean stress ($M = 3.385$).

Table 3. Mean Satisfaction and Stress by Department

Department	Satisfaction M	Stress M
Nursing	3.523	3.207
Physicians	3.301	3.214
Administrative	3.390	3.180
Support/Technical	3.516	3.385

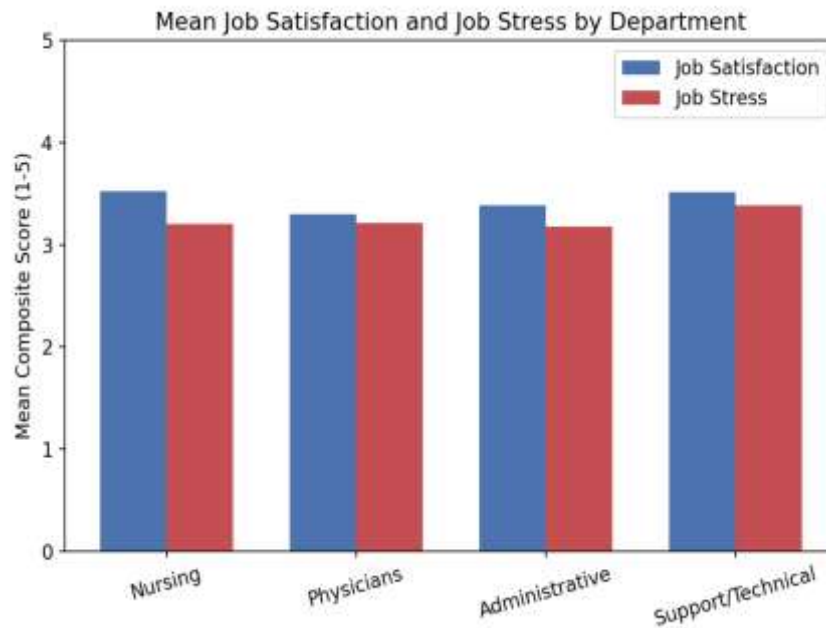


Figure 3. Mean job satisfaction and job stress by department.

4.6 Regression Analysis

A multiple linear regression tested whether job stress predicted job satisfaction, controlling for age and years of experience. The overall model was statistically significant, $F(3, 196) = 6.02$, $p < .001$, $R^2 = .084$, indicating stress and demographic controls jointly explained 8.4% of variance in satisfaction.

Table 4. Multiple Regression Predicting Job Satisfaction

Predictor	B	SE	p
(Constant)	2.426	0.284	< .001
Job Stress	0.238	0.062	< .001
Age	0.011	0.008	.202
Years of Experience	-0.016	0.014	.245

Job stress remained a significant, positive predictor of job satisfaction ($B = 0.238$, $p < .001$) after controlling for age and experience, further confirming the direct relationship hypothesized in this study. Age and years of experience were not significant predictors.

5. Discussion

This study examined the relationship between job stress and job satisfaction among 200 hospital staff, hypothesizing a direct (positive) relationship between the two constructs. Consistent with this hypothesis, results showed a statistically significant positive correlation between job stress and job satisfaction ($r = .277$, $p < .001$), and job stress remained a significant positive predictor of satisfaction even after controlling for age and years of experience ($B = .238$, $p < .001$).

5.1 Interpretation Through the Challenge-Stressor Framework

One plausible explanation for this direct relationship draws on the distinction between challenge stressors and hindrance stressors (Cavanaugh et al., 2000). Challenge stressors — such as high workload, time pressure, and role responsibility — are demands that, while stressful, are also associated with opportunities

for achievement, mastery, and professional growth. In hospital settings, staff whose stress stems primarily from patient responsibility, case complexity, or the pace of clinical work may simultaneously derive a strong sense of purpose and accomplishment from that same work, producing elevated stress and satisfaction together. This interpretation is consistent with engagement-based models of occupational wellbeing, in which meaningful, demanding work can be experienced as both taxing and fulfilling.

5.2 Alternative and Competing Explanations

Several alternative explanations should also be considered, as the cross-sectional, correlational design cannot establish causal direction or rule out confounding influences:

1. Reverse causality. Rather than stress driving satisfaction, it is plausible that highly satisfied employees — who are more engaged, committed, or invested in their roles — take on more responsibility or work longer hours, thereby experiencing more stress as a consequence of their satisfaction, rather than despite it.
2. Third-variable confounds. An unmeasured variable, such as intrinsic motivation, organizational commitment, or perceived meaningfulness of work, could independently drive both higher stress (through greater engagement and workload absorption) and higher satisfaction (through purpose and accomplishment), producing a spurious positive association between the two.
3. Selection and survivorship effects. Staff who found the combination of high stress and low satisfaction intolerable may have already left the organization prior to data collection (turnover), leaving a sample biased toward employees who have adapted to, or found reward within, high-stress conditions.
4. Common method bias. Because both constructs were measured via self-report at a single time point using the same survey instrument, shared method variance (e.g., general response tendencies, mood at the time of survey completion) may inflate the observed correlation independent of any true underlying relationship.
5. Measurement and construct overlap. Some items across the two scales (e.g., "sense of accomplishment," "emotional exhaustion") may tap into overlapping affective states rather than fully distinct constructs, potentially contributing to shared variance that resembles a true positive relationship.
6. Social desirability and cultural norms. In healthcare, an occupational culture that valorizes stress as a marker of dedication ("busy = important/needed") could lead employees to report both higher stress and higher satisfaction as a form of professional identity signaling, rather than reflecting two independently arising internal states.

5.3 Practical and Theoretical Implications

If the challenge-stressor interpretation holds, hospital management should be cautious about uniformly minimizing all forms of workplace stress, as some stress may be an inseparable byproduct of engaging, high-responsibility roles. Instead, interventions might focus on distinguishing challenge stressors (which can be channeled productively, e.g., via skill development and recognition) from hindrance stressors (e.g., administrative burden, understaffing), which are more likely to erode satisfaction without offsetting benefit. However, given the alternative explanations above, these implications should be treated as provisional pending replication with longitudinal or experimental designs.

5.4 Limitations

This study's cross-sectional design, single-organization convenience sample, and reliance on self-report Likert-scale measures limit causal inference and generalizability. The modest effect size ($R^2 = .084$) also

indicates that job stress, while a significant predictor, accounts for a relatively small proportion of variance in job satisfaction, suggesting other unmeasured factors play a substantial role.

6. Conclusion

This study examined the relationship between job stress and job satisfaction among 200 hospital staff across nursing, physician, administrative, and support/technical roles. Contrary to the traditional assumption that stress and satisfaction are inversely related, findings revealed a statistically significant positive relationship: employees reporting higher job stress also tended to report higher job satisfaction ($r = .277$, $p < .001$), a relationship that held even after controlling for age and years of experience ($B = .238$, $p < .001$). Both the Job Satisfaction and Job Stress scales demonstrated strong reliability ($\alpha = .888$ and $.911$, respectively), lending confidence to the measurement approach, though the modest effect size ($R^2 = .084$) indicates that stress alone explains only a small portion of the variance in satisfaction.

These findings are broadly consistent with the challenge-stressor framework, suggesting that in hospital environments, at least some job stress may arise from demanding, meaningful work that simultaneously fosters a sense of purpose and accomplishment. At the same time, alternative explanations — including reverse causality, third-variable confounds, and selection effects — mean these results should be interpreted as suggestive rather than definitive.

6.1 Recommendations for Hospital Management

1. Differentiate stressor types. Management should distinguish "challenge" stressors (e.g., clinical responsibility, complex caseloads) from "hindrance" stressors (e.g., understaffing, administrative burden, unclear procedures). Efforts to reduce stress should prioritize hindrance stressors, which are more likely to erode satisfaction without offsetting benefit.
2. Support high-engagement staff. Because stress did not simply predict lower satisfaction, blanket stress-reduction initiatives may be less effective than targeted support — such as debriefing sessions, peer support networks, and recognition programs — for staff who are highly engaged but stretched thin.
3. Monitor for burnout risk despite satisfaction. High satisfaction alongside high stress should not be read as a sign that staff are "fine." Departments such as Support/Technical, which showed the highest mean stress in this sample, may benefit from proactive wellbeing check-ins even when satisfaction scores appear healthy.
4. Address staffing and workload structurally. Given that self-reported overload and time pressure were core stress items, adequate staffing ratios and realistic workload distribution remain foundational, regardless of how stress relates to satisfaction.

6.2 Directions for Future Research

Future studies should employ longitudinal designs to clarify the direction of causality between stress and satisfaction over time, and multi-site samples to improve generalizability beyond a single institution. Incorporating objective indicators (e.g., turnover records, absenteeism, patient safety incidents) alongside self-report measures would help address common method bias. Additionally, explicitly measuring and modeling challenge versus hindrance stressors as distinct constructs — rather than a single global stress scale — would allow more precise testing of the theoretical mechanism proposed here. Finally, qualitative research (e.g., interviews) could help explain why some hospital staff experience stress and satisfaction as co-occurring rather than opposing states.

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