

Quality of Work Life and Job Satisfaction in Indian Central Railways: A Multi-Dimensional Empirical Analysis

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Abstract—Quality of Work Life (QWL) has emerged as a crucial determinant of employee well-being and organizational effectiveness, particularly in large public sector organizations. This study examines the relationship between QWL and Job Satisfaction among Ticket Checking Staff in Indian Central Railways. The research is based on primary data collected from 417 respondents across five divisions—Mumbai, Bhusaval, Nagpur, Pune, and Solapur.

The study employs correlation, regression, and one-way ANOVA for analysis. The findings reveal a strong and statistically significant relationship between QWL and Job Satisfaction ($r = 0.823$, $p < 0.001$). Regression analysis indicates that QWL explains 67.7% of the variance in Job Satisfaction ($R^2 = 0.677$). ANOVA results reveal significant differences across QWL dimensions ($F = 557.87$, $p < 0.001$) and demographic variables.

The findings suggest that non-monetary factors such as working conditions, employee participation, and work-life balance have a stronger influence on Job Satisfaction than financial incentives. The study provides both theoretical and practical implications for improving employee well-being and organizational performance in public sector organizations.

Keywords — *Quality of Work Life, Job Satisfaction, Indian Central Railways, Public Sector Employees, Work Environment, Employee Well-being*

I. INTRODUCTION

Quality of Work Life (QWL) has emerged as a critical construct in organizational behaviour, reflecting the extent to which employees are able to satisfy important personal and professional needs through their workplace experiences. In the contemporary business environment, employee satisfaction is no longer determined solely by financial compensation but is increasingly influenced by psychological, social, and environmental factors such as working conditions, work-life balance, and organizational support.

Public sector organizations present a unique context for examining QWL due to their structured hierarchy, large workforce, and operational complexity. In this regard, Central Railway, a prominent zone of Indian Central Railways, provides a suitable setting for analysing employee experiences. It operates through five major divisions—Mumbai, Bhusaval, Nagpur, Pune, and Solapur—each representing distinct operational environments with varying workloads, infrastructure, and administrative practices.

The organizational structure of Central Railway is hierarchical, comprising different designations such as Chief Ticket Inspectors (CTI), Travelling Ticket Examiners (TTE), Ticket Collectors (TC), and Head Ticket Collectors. These employees perform critical functions related to revenue protection and passenger service, often under demanding and dynamic working conditions. Furthermore, employees are distributed across multiple departments, including operational (productive), administrative (station/office), and amenities-related units, each differing in terms of job responsibilities, work environment, and exposure to stress.

These structural and functional differences across divisions, designations, and departments are likely to influence employees' perception of Quality of Work Life and their level of Job Satisfaction. Despite the significance of these factors, empirical research focusing on QWL among operational staff in large public sector organizations such as Central Railway remains limited.

Against this backdrop, the present study seeks to examine the relationship between Quality of Work Life and Job Satisfaction among Ticket Checking Staff in Central Railway, with particular emphasis on understanding how demographic and organizational factors shape employee experiences.

II. LITERATURE REVIEW

The concept of QWL has evolved from a narrow focus on physical working conditions to a broader framework encompassing psychological well-being, work–life balance, and organizational support (Walton, 1973; Sirgy et al., 2001). Contemporary research conceptualizes QWL as a multidimensional construct that significantly influences employee attitudes and organizational outcomes.

Recent empirical studies consistently demonstrate a strong positive relationship between QWL and job satisfaction (Rubel et al., 2023; Kukulj, 2023). These studies suggest that improvements in workplace conditions and employee support systems can significantly enhance satisfaction levels.

Furthermore, QWL has been found to contribute significantly to work–life balance, which in turn plays a crucial role in shaping employee satisfaction and well-being (Jayaraman et al., 2023; Aruldoss et al., 2022). This indicates that employees increasingly evaluate their work environment in terms of both professional and personal fulfillment.

In the Indian context, workplace environment, organizational culture, and developmental opportunities have been identified as key determinants of QWL (Soundarya Priya & Anandh, 2024; Sharma, 2022). These factors influence not only job satisfaction but also employee engagement and retention.

Demographic variables such as age and gender have also been found to significantly influence perceptions of QWL and job satisfaction (Singh, 2021; Boamah et al., 2022). Younger employees tend to have higher expectations regarding work–life balance, while female employees often prioritize supportive work environments.

While the existing literature consistently supports the positive relationship between QWL and job satisfaction, there remains limited consensus regarding the relative influence of demographic and organizational factors. Moreover, most studies are conducted in private sector contexts with relatively smaller samples, thereby limiting their applicability to large public sector institutions (Mabele, 2025; Prasad et al., 2025). This highlights the need for context-specific empirical research, which the present study seeks to address.

III. OBJECTIVES OF THE STUDY

1. To examine the impact of Quality of Work Life on Job Satisfaction
2. To analyze variations in QWL and Job Satisfaction across demographic variables
3. To assess the influence of organizational hierarchy on employee satisfaction

IV. HYPOTHESES

H1: Quality of Work Life positively influences Job Satisfaction.

H2: Quality of Work Life varies significantly across demographic groups.

H3: Job Satisfaction varies significantly across demographic groups.

H4: Organizational hierarchy moderates the relationship between Quality of Work Life and Job Satisfaction.

V. RESEARCH METHODOLOGY

The study adopts a descriptive and analytical research design based on established quantitative research methods. Primary data were collected through a structured questionnaire administered to ticket checking staff across five divisions of Indian Central Railways. A total of 417 valid responses were obtained.

The measurement instrument was structured based on established QWL dimensions and job satisfaction scales. Reliability of the instrument was assessed using Cronbach’s alpha, which indicated acceptable internal consistency ($\alpha > 0.89$).

Statistical tools including correlation analysis, regression analysis, and analysis of variance (ANOVA) were employed to examine the relationships among variables and test the proposed hypotheses.

VI. DATA ANALYSIS AND RESULTS

Table 1: Correlation Analysis

Variables	Correlation (r)	p-value
QWL & JS	0.823	0.000

Strong positive relationship exists between QWL and Job Satisfaction.

Table 2: Regression Analysis

Variable	R	R ²	p-value
QWL → JS	0.823	0.677	0.000

QWL explains 67.7% variation in Job Satisfaction.

Table 3: Division-wise Regression

Division	R ²
Mumbai	0.363
Bhusaval	0.545
Nagpur	0.760
Pune	0.784
Solapur	0.902

Quality of Work Life has an increasingly strong impact on Job Satisfaction across divisions, being weakest in Mumbai ($R^2 = 0.363$) and strongest in Solapur ($R^2 = 0.902$).

Table 4: ANOVA Results

Variable	Significance
Division	Significant
Designation	Significant
Department	Not Significant
Gender	Significant
Age	Significant

Job Satisfaction varies significantly across division, designation, gender, and age, but shows no significant difference across departments.

The analysis focuses on testing the hypotheses related to the relationship between Quality of Work Life (QWL) and Job Satisfaction, along with the influence of demographic variables.

6.1 Relationship between Quality of Work Life and Job Satisfaction (H1)

The relationship between Quality of Work Life and Job Satisfaction was examined using correlation and regression analysis. The results indicate a strong and positive correlation between QWL and Job Satisfaction ($r = 0.823$, $p < 0.001$), suggesting that higher levels of QWL are associated with increased employee satisfaction.

Further, regression analysis reveals that QWL explains approximately 67.7% of the variance in Job Satisfaction ($R^2 = 0.677$, $p < 0.001$), indicating a strong predictive relationship. This demonstrates that improvements in QWL dimensions significantly contribute to enhancing employee satisfaction levels. Therefore, H1 is accepted, confirming that Quality of Work Life has a significant positive impact on Job Satisfaction.

Discussion

This finding is consistent with previous research that highlights QWL as a key determinant of employee satisfaction. Studies by Abdullah et al. (2021) and Siagian et al. (2023) also reported a strong positive relationship between QWL and job satisfaction, emphasizing the importance of organizational

support, work environment, and employee well-being.

Similarly, Rubel et al. (2023) found that QWL significantly influences employee engagement and satisfaction, reinforcing the argument that organizations must focus on improving working conditions and employee participation to achieve higher satisfaction levels.

6.2 Differences in Quality of Work Life across Demographic Variables (H2)

To examine whether QWL differs across demographic groups, one-way ANOVA was applied across variables such as designation, department, division, gender, age, and experience.

The results indicate that QWL differs significantly across designation ($p = 0.046$) and division ($p = 0.000$), while no significant differences were observed across department ($p = 0.613$), gender ($p = 0.164$), age ($p = 0.728$), and experience ($p = 0.117$). Thus, H2 is partially accepted, as QWL varies significantly across selected demographic variables.

Discussion

The variation in QWL across designation suggests that employees at different hierarchical levels experience work conditions differently. This aligns with findings by Rai (2021), who noted that job roles and hierarchical positioning significantly influence employee perceptions of QWL.

Similarly, the significant variation across divisions indicates the presence of regional or operational differences within the organization. This supports the findings of Sharma and Verma (2022), who emphasized that organizational context and workplace environment play a critical role in shaping employee experiences.

The absence of significant differences across gender, age, and experience suggests that QWL perceptions are relatively uniform across these groups, indicating a standardized organizational structure in Indian Central Railways.

6.3 Differences in Job Satisfaction across Demographic Variables (H3)

The analysis of Job Satisfaction across demographic variables using ANOVA reveals significant differences across designation ($p = 0.000$), division ($p = 0.000$), gender ($p = 0.046$), age ($p = 0.007$), and experience ($p = 0.000$). However, no significant difference was observed across departments ($p = 0.149$).

Accordingly, H3 is accepted, indicating that Job Satisfaction varies significantly across demographic groups.

Discussion

The findings suggest that demographic factors play a crucial role in determining Job Satisfaction. The variation across designation reflects differences in responsibilities, authority, and work pressure, which influence satisfaction levels.

The significant influence of age and experience on Job Satisfaction is consistent with the findings of Ferreira et al. (2022), who reported that experienced employees tend to have different expectations and satisfaction levels compared to younger employees. The gender-based variation in Job Satisfaction, although marginal, indicates potential differences in work experiences, which aligns with contemporary studies on workplace diversity and inclusion.

6.4 Influence of Organizational Hierarchy (H4)

Organizational hierarchy was analysed using designation as a proxy variable. The ANOVA results indicate a significant difference in Job Satisfaction across different designations ($p = 0.000$).

Thus, H4 is accepted, suggesting that organizational hierarchy significantly influences Job Satisfaction.

Discussion

The influence of organizational hierarchy on Job Satisfaction highlights the importance of structural factors in shaping employee attitudes. Employees at higher hierarchical levels may experience greater autonomy and recognition, leading to higher satisfaction levels.

This finding is consistent with the work of Jayaraman et al. (2023), who emphasized that hierarchical position influences employee engagement and satisfaction. It also aligns with modern organizational theories that stress the role of empowerment and participation in enhancing employee well-being.

6.5 Overall Interpretation of Findings

The overall findings of the study clearly establish that Quality of Work Life is a critical determinant of Job Satisfaction in public sector organizations. The strong relationship between QWL and Job Satisfaction highlights the importance of focusing on both monetary and non-monetary aspects of work.

The study also reveals that while QWL is influenced by structural factors such as designation and division, Job Satisfaction is affected by a broader range of demographic variables.

VII. CONCLUSION

The study concludes that Quality of Work Life is a significant predictor of Job Satisfaction among employees in Indian Central Railways. The findings reinforce the importance of creating supportive work environments and improving working conditions, consistent with established literature (Sirgy et al., 2001).

VIII. THEORETICAL IMPLICATIONS

This study extends the application of QWL frameworks to public sector organizations and contributes to the growing body of literature on employee well-being in large-scale institutional settings.

IX. MANAGERIAL IMPLICATIONS

The findings of the study provide several important implications for management in public sector organizations:

- **Focus on Non-Monetary Factors:** Organizations should prioritize improving working conditions, employee participation, and work-life balance, as these factors significantly influence employee satisfaction.
- **Targeted HR Policies:** Since Job Satisfaction varies across demographic variables, customized HR policies should be developed for different employee groups.
- **Enhancing Work Environment:** Improvements in hygiene, recreational facilities, and infrastructure can significantly enhance employee well-being.
- **Employee Participation:** Encouraging participative management can improve morale and organizational commitment.
- **Training and Development:** Continuous skill development and training programs can enhance employee satisfaction and productivity.

X. LIMITATIONS AND FUTURE RESEARCH

This study is subject to certain limitations. First, the use of cross-sectional data restricts the ability to establish causal relationships between Quality of Work Life and Job Satisfaction. Second, the study focuses exclusively on ticket checking staff within Indian Central Railways, which may limit the

generalizability of the findings. Future research may adopt longitudinal designs and include comparative analyses across different public sector organizations.

XI. ETHICAL CONSIDERATIONS

The study was conducted in accordance with ethical research standards. Participation was voluntary, and informed consent was obtained from all respondents. Confidentiality and anonymity of participants were strictly maintained.

XII. ACKNOWLEDGEMENT

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