

Research Paper

## Traffic Congestion's Differential Impact on Stress and Productivity: A Gender-Specific Analysis of Bangalore Corporate Employees

Ashwathi Aravindakshan<sup>1\*</sup>, Kavya Vijayan<sup>2</sup>

### ABSTRACT

This study examines the gender-specific impacts of traffic congestion in Bangalore on corporate employees' stress, productivity, and well-being. Using quantitative and qualitative methods, the research demonstrates higher stress and health concerns among female commuters, highlighting safety and work-life balance issues. Using a cross-sectional mixed-methods approach, data were collected via structured questionnaires from 140 IT sector employees in Bangalore, with gender-disaggregated analysis to reveal nuanced differences. Findings indicate that female employees report significantly higher commute-related stress (84% vs 70% males), health complaints including anxiety and fatigue (80% vs 66% males), and work-life interference (78% vs 61% males) compared to male employees. Women emphasize safety concerns and a greater need for flexible work arrangements and reliable, secure public transport. Male employees focus more on infrastructural inefficiencies and enforcement issues. These gendered disparities highlight the urgent need for equitable, targeted interventions both at the organizational and urban planning levels. Incorporating gender-sensitive policies such as flexible work hours, safe transit options, and workplace support can enhance employee well-being and productivity. This research fills critical gaps in understanding traffic congestion's differential effects by gender, offering actionable insights to foster sustainable workforce management and inclusive urban mobility solutions in Bangalore's rapidly growing economy.

**Keywords:** *Bangalore Traffic, Corporate Employees, Gender Analysis, Stress, Commute, Mental Health, Productivity, Work-Life Balance, Public Transport, Safety, Flexibility, Organizational Policy, Traffic Congestion, Commuting Stress, Employee Well-being, Gender-specific Interventions*

**B**angalore's emergence as a leading economic and technological hub has established its corporate sector as a critical driver of India's growth and innovation. However, this rapid economic expansion has been accompanied by mounting challenges, chief

<sup>1</sup>Student, Department of Psychology, Centre for Distance Education and Virtual Learning, JAIN (Deemed to be University), Bengaluru, India

<sup>2</sup>Assistant Professor, Department of Psychology, JAIN (Deemed to be University), Bengaluru, India

\*Corresponding Author

Received: October 08, 2025; Revision Received: March 27, 2026; Accepted: March 31, 2026

## **Traffic Congestion's Differential Impact on Stress and Productivity: A Gender-Specific Analysis of Bangalore Corporate Employees**

among them being the city's notorious traffic congestion. Every day, thousands of corporate employees navigate congested roads, facing prolonged commutes that not only drain time but also generate significant physical and psychological stress.

This urban strain has complex implications that extend beyond generalized workforce concerns, as mounting evidence suggests that men and women experience these challenges differently due to distinct socio-cultural roles, mobility patterns, and safety considerations. Previous research has highlighted that gender shapes how individuals interact with urban environments and cope with associated stressors. For example, women often bear a disproportionate share of household and caregiving responsibilities, which amplify the consequences of unpredictable or extended travel times.

### ***Statement of the Problem***

Bangalore's ever-increasing traffic congestion poses significant challenges for corporate employees, critically affecting their stress levels, productivity, and overall well-being. While extended and unpredictable commute times commonly reduce employee motivation and health, the differential impact of this urban challenge on male and female employees remains inadequately understood.

Women in Bangalore's IT-dominated workforce report considerably higher levels of persistent stress, health problems such as anxiety and fatigue, and greater interference with their work-life balance compared to their male counterparts. These challenges are compounded by safety concerns during commutes and the additional burden of caregiving and household responsibilities that many women simultaneously manage.

### ***Research Objectives***

1. To assess the impact of traffic congestion on stress and well-being among Bangalore corporate employees, disaggregated by gender
2. To evaluate gender-specific differences in productivity loss, job satisfaction, and attrition attributed to traffic-related stress
3. To identify gender-sensitive strategies and organizational support mechanisms for mitigating commuting stress and optimizing urban and workplace interventions

## **LITERATURE REVIEW**

Traffic congestion in Bangalore has become an alarming urban issue, affecting not only environmental conditions but also directly impacting public health and workforce productivity. Research from multiple sources, including a comprehensive report by Indian Statistical Economic Consultancy (ISEC, 2023), documents how consistently rising vehicle numbers and inadequate infrastructure strain the city's transport system causing prolonged travel times, increased pollution, and deteriorating commuter well-being.

Academic and field studies emphasize the gendered dynamics of commuting stress and resilience. Women disproportionately face challenges related to personal safety, comfort in public transport, and double burdens from caregiving responsibilities. A study analyzing women commuters in Bangalore's metro context revealed anxiety and mistrust caused by overcrowding, inadequate facilities, and harassment risks.

Men's commuting-related stresses, while significant, tend to emphasize efficiency and infrastructural concerns. Data from transportation studies highlight that men more often rate

## **Traffic Congestion's Differential Impact on Stress and Productivity: A Gender-Specific Analysis of Bangalore Corporate Employees**

travel time and road conditions as primary stressors, advocating for systemic traffic flow improvement measures and enhanced law enforcement. In contrast, women prioritize travel safety, accessible first and last-mile connections, and reliable transit timing.

### ***Theoretical Framework***

This study is grounded in the integration of stress theory, gender role theory, and occupational health psychology. Stress theory posits that environmental stressors, such as prolonged and unpredictable commutes caused by traffic congestion, can induce psychological and physiological responses that negatively affect health and functioning.

Gender role theory explains how societal norms and expectations shape the behaviors, responsibilities, and experiences of men and women differently. Occupational health psychology focuses on the well-being of employees in workplace contexts, emphasizing how external factors such as commuting stress influence job performance, satisfaction, and retention.

## **RESEARCH METHODOLOGY**

### ***Research Design***

A cross-sectional descriptive research design with a mixed-methods approach was adopted, combining quantitative surveys with qualitative open-ended responses to gather rich, gender-disaggregated data.

### ***Sample***

A purposive sampling technique was utilized, targeting corporate employees with 3+ years of experience regularly commuting to offices in Bangalore's IT sector. A total of 140 corporate employees participated, with approximately 52% female (n≈73) and 48% male (n≈66).

### ***Data Collection***

Data were collected using structured questionnaires administered online. The questionnaire included sections on demographic details, commute duration, stress levels, health symptoms, organizational support, and work productivity. Gender identification was mandatory, and responses were separately tabulated for males and females.

### ***Data Analysis***

Descriptive statistics, including frequencies, percentages, means, and standard deviations, were calculated. Comparative analyses between genders were performed using chi-square tests and t-tests where appropriate. Qualitative responses were thematically analyzed to extract gender-specific concerns and suggestions.

### ***Ethical Considerations***

This study was conducted following the ethical guidelines prescribed by JAIN (Deemed to be University) for psychological research. Ethical clearance was obtained from the institutional review board. All participants voluntarily consented to take part after being informed of the study's objectives, confidentiality measures, and their right to withdraw at any time without penalty.

## **RESULTS**

### **Demographic Profile**

The study participants showed similar demographics across genders, with mean ages of 35.6 (SD=7.7) for females and 36.8 (SD=6.9) for males. Both groups were predominantly from the IT sector (91.5% females, 88.9% males) with over 90% having more than 3 years of experience.

### **Commute Duration and Stress**

Female employees reported a higher average daily commute time (2.7 hours) compared to males (2.4 hours). Significantly, 84% of females versus 70% of males stated they "always or often" felt stressed during commuting. Additionally, 80% of females reported health issues linked to commuting, compared to 66% of males.

### **Productivity and Attrition**

Productivity was negatively impacted for 86% of females and 78% of males. Similarly, 85% of females considered job change due to traffic compared to 76% of males, indicating higher attrition intent among women.

### **Personal Life Interference**

Commute interference with personal life was reported by 78% of females versus 61% of males. Anxiety or depression due to commute was experienced by 66% of females compared to 48% of males.

### **Organizational Support and Alternative Modes**

48% of females and 41% of males reported receiving organizational commute support. However, 81% of females and 74% of males expressed openness to alternative commuting modes if they were safe and accessible.

### **Qualitative Findings**

Women highlighted safety concerns, work-life conflict, and strong preferences for flexible work and reliable public transport. Men emphasized infrastructure improvements and enforcement as priority solutions. Both genders expressed willingness to adopt alternative commuting modes if safety and reliability were ensured.

## **DISCUSSION**

### **Gender Disparities in Commuting Impact**

The study reveals significant gender disparities in how traffic congestion impacts corporate employees in Bangalore. Women report higher levels of both psychological and physical stress related to commuting. The greatest differences between genders are seen in psychological stress markers such as anxiety, persistent worry, and interference with work-life balance.

### **Safety and Infrastructure Concerns**

Women often expressed concerns about personal safety, which markedly affects their willingness or ability to use public or shared transportation. This safety concern introduces an additional layer of stress not as commonly reported by male respondents. Conversely, men tend to focus more on infrastructural problems like road conditions, the need for flyovers, and traffic law enforcement as sources of stress.

# Traffic Congestion's Differential Impact on Stress and Productivity: A Gender-Specific Analysis of Bangalore Corporate Employees

## Socio-Cultural Context

The differential impact is rooted in complex socio-cultural roles and urban infrastructure inadequacies. Women often shoulder a disproportionately higher burden of household and caregiving responsibilities, compounding the negative effects of lengthy and stressful commutes.

## Implications and Recommendations

### Urban Transport Policies

- Develop and expand women-only transit coaches and safer public transit options.
- Ensure last-mile connectivity is safe, reliable, and accessible.
- Improve lighting and station security, especially for night travel.

### Workplace Interventions

- Offer staggered work hours, remote work options, and flexible schedules.
- Provide counselling services and stress management workshops.
- Encourage organizational culture that supports gender equality and wellbeing initiatives.

### Infrastructure Development

- Accelerate construction of flyovers and better traffic signal synchronization.
- Strengthen traffic law enforcement to reduce congestion.
- Focus on maintenance of roads in congested areas.

### Public Awareness

- Conduct anti-harassment campaigns and community policing in transit areas.
- Promote awareness about gender-sensitive transport planning.

## CONCLUSION

Traffic congestion negatively affects all employees, but its severity, manifestations, and consequences are gender-specific. Female employees are significantly more likely to experience continuous, high-level stress, with consequent mental and physical health impacts. These findings call for gender-sensitive solutions that prioritize safety and flexibility improvements to benefit women disproportionately and help narrow gender disparities in health, productivity, and workforce retention.

## Limitations and Future Directions

This study has limitations including the sample size of 140 employees predominantly from IT sectors, reliance on self-reporting, and cross-sectional design. Future research should expand to larger, more diverse samples spanning multiple industries, employ longitudinal studies, and explore intersectionality including caste, class, and disability alongside gender.

## REFERENCES

- Bangalore Metropolitan Region Development Authority. (2024). Comprehensive Traffic and Transportation Study (CTTS) for Bangalore Metropolitan Region.
- Gupta, V., Agrawal, A., Madhu, D. K., Agrawal, Y., Bhayani, J., & Adhlakha, S. (2024). Overview of the effect of rising traffic and congestion in Bangalore on the lives of general public. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*. <https://doi.org/10.22214/ijraset.2024.59262>

## **Traffic Congestion's Differential Impact on Stress and Productivity: A Gender-Specific Analysis of Bangalore Corporate Employees**

- Indian Institute of Science (IISc) Bangalore. (2025). Sustainable Transportation Lab reports on urban mobility and pollution.
- Journal of Urban Transport and Planning. (2024). Impact of Metro on Traffic Congestion: A case study on Bengaluru.
- Mahambare, V., Rathi, S., & Patel, D. (2022). Gender perspectives on urban commuting stress in Indian metropolitan cities. *Journal of Urban Health and Planning*, 15(3), 45-62.
- Shah, P. (2017). Urban transport policy evaluation: A critique of one-size-fits-all approaches. *Transport Policy Review*, 24(4), 156-172.
- Vijayalakshmi, S., & Krishna Raj, M. (2023). Economic efficiency and workforce productivity in Bangalore's IT sector. ISEC Working Papers.
- Yadav, R. (2025). Women commuters and safety concerns in Bangalore metro: An ethnographic study. *Urban Studies Quarterly*, 12(2), 78-95.

### ***Acknowledgment***

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

### ***Conflict of Interest***

The author(s) declared no conflict of interest.

***How to cite this article:*** Ashwathi, A., & Kavya, V. (2026). Traffic Congestion's Differential Impact on Stress and Productivity: A Gender-Specific Analysis of Bangalore Corporate Employees. *International Journal of Indian Psychology*, 14(1), 2389-2394. DIP:18.01.238.20261401, DOI:10.25215/1401.238