

Driving Civic Sense: A Behavioural Study of Road Users in India's Growing City

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Abstract: Urban India is witnessing unprecedented rates of population growth, motorization, and spatial expansion. Cities that were once designed to accommodate limited traffic volumes are now struggling to manage increasing numbers of private vehicles, public transport systems, pedestrians, and non-motorized transport users. Despite substantial investments in road infrastructure, flyovers, signalized intersections, intelligent traffic management systems, and public awareness campaigns, traffic congestion and road safety concerns continue to persist across Indian cities.

A critical yet often overlooked factor contributing to these challenges is the absence of driving civic sense among road users. Driving civic sense refers to the collective responsibility, discipline, ethical conduct, and awareness displayed by individuals while using public roads. It encompasses adherence to traffic regulations, respect for pedestrians, lane discipline, proper parking behaviour, responsible use of public infrastructure, and mutual cooperation among road users.

In rapidly growing cities such as Lucknow, behavioural issues including signal jumping, wrong-side driving, illegal parking, excessive honking, non-compliance with pedestrian facilities, and disregard for traffic regulations have become increasingly common. These behaviours negatively impact mobility efficiency, environmental quality, road safety, and overall urban liveability.

This research investigates the behavioural dimensions of driving civic sense among urban road users. Through theoretical analysis, literature review, observational assessment, case study evaluation, and survey-based findings, the study examines the factors influencing civic behaviour on roads and their implications for transportation systems. The research further explores the relationship between awareness, enforcement, infrastructure, social norms, and behavioural compliance.

The findings highlight that improving road infrastructure alone cannot resolve transportation challenges unless accompanied by behavioural transformation among road users. The study concludes by recommending educational interventions, stricter enforcement mechanisms, community participation programs, and behaviour-centred transportation planning strategies to foster a culture of responsible road usage in Indian cities.

1. INTRODUCTION

Transportation systems are fundamental to the economic, social, and spatial functioning of cities. Efficient mobility enables access to employment, education, healthcare, and recreational opportunities while contributing to economic productivity and quality of life. However, transportation systems depend not only on physical infrastructure but also on the behaviour of the people who use them.

The concept of driving civic sense has emerged as a significant area of concern in urban transportation studies. Civic sense on roads refers to the awareness, discipline, responsibility, and mutual respect demonstrated by road users in shared transportation environments. While infrastructure provides the physical framework for mobility, behavioural compliance determines how effectively and safely that infrastructure functions.

Indian cities have experienced rapid urbanization over the past two decades, resulting in increased motorization, traffic congestion, and pressure on existing transportation networks. According to various transportation studies, behavioural violations such as signal jumping, unauthorized parking, wrong-side driving, excessive honking, failure to yield to pedestrians, and lane indiscipline significantly contribute to congestion and accidents.

Unlike infrastructure deficiencies, behavioural issues often arise from social attitudes, lack of awareness, inadequate enforcement, cultural norms, and weak civic responsibility. Consequently, understanding the behavioural dimensions of road usage has become essential for achieving safer, more efficient, and sustainable urban transportation systems.

Lucknow, one of India's rapidly expanding metropolitan cities, presents an ideal context for studying driving civic sense. The city has witnessed substantial infrastructure development, including metro rail systems, widened roads, flyovers, and intelligent traffic management initiatives. Despite these improvements, behavioural challenges continue to affect transportation efficiency and safety. This study therefore seeks to investigate driving civic sense among urban road users, identify behavioural determinants influencing compliance, and develop recommendations for improving transportation culture in growing Indian cities.

1.1 Why This Study Is Needed

The need for this study arises from increasing concerns regarding the role of human behaviour in transportation system performance. While engineering solutions have traditionally dominated transportation planning, evidence suggests that behavioural factors often determine the effectiveness of such interventions.

Several reasons justify the necessity of this research:

1. Traffic violations remain widespread despite improvements in transportation infrastructure.
2. Road accidents continue to cause substantial loss of life, property, and productivity.
3. Growing vehicle ownership has increased interaction conflicts among different road user groups.
4. Urban mobility challenges are increasingly linked to behavioural non-compliance rather than infrastructure shortages alone.
5. Civic responsibility among road users remains inadequately explored in transportation research.
6. Existing studies focus heavily on accident statistics and engineering measures while providing limited attention to behavioural causes.
7. Sustainable transportation systems require active participation and cooperation from all road users.
8. Understanding behavioural patterns is essential for designing effective awareness campaigns, enforcement policies, and transportation planning interventions.
9. Growing cities such as Lucknow require integrated strategies that combine infrastructure development with behavioural transformation.
10. There is a need to establish a theoretical framework connecting civic sense, transportation behaviour, and urban mobility outcomes.

1.2 Aim & Objectives

AIM

To examine the behavioural dimensions of driving civic sense among road users and evaluate its influence on traffic discipline, road safety, and urban mobility in a growing Indian city.

OBJECTIVES

1. To assess the level of driving civic sense among different categories of road users.
2. To identify behavioural factors affecting compliance with traffic regulations.
3. To analyse the relationship between civic behaviour and transportation efficiency.
4. To examine the impact of awareness, education, and enforcement on road user behaviour.
5. To evaluate common traffic violations associated with poor civic sense.
6. To investigate behavioural challenges affecting pedestrian and vehicular interactions.
7. To develop recommendations for improving civic responsibility within urban transportation systems.
8. To contribute towards behaviour-oriented transportation planning approaches.

1.3 Initial Hypotheses (Inferences)

The study is based on the following preliminary hypotheses:

- Road users with higher awareness levels demonstrate better compliance with traffic regulations.
- Poor driving civic sense contributes significantly to traffic congestion and mobility inefficiencies.
- Inadequate enforcement increases the likelihood of traffic violations.
- Social norms and peer behaviour strongly influence road user conduct.
- Young drivers exhibit higher tendencies toward risky and non-compliant traffic behaviour.
- Improved civic sense leads to enhanced road safety outcomes.
- Educational interventions positively influence long-term behavioural compliance.
- Traffic discipline is influenced by both infrastructure quality and behavioural attitudes.
- Pedestrian behaviour plays an equally important role in transportation safety as driver behaviour.
- Behaviour-centred transportation planning can significantly improve urban mobility performance.

2. LITERATURE REVIEW

This section reviews the existing body of knowledge concerning driving civic sense, traffic behaviour, road user psychology, and behavioural compliance within transportation systems. The review synthesizes findings from international behavioural studies, transportation psychology research, urban mobility literature, and Indian traffic studies to establish a theoretical foundation for understanding civic behaviour on roads.

Although significant attention has been given to transportation infrastructure and engineering solutions, behavioural dimensions of traffic management have increasingly gained recognition among researchers and policymakers. Numerous studies indicate that human behaviour remains one of the most influential factors affecting traffic safety, congestion, mobility efficiency, and environmental sustainability.

The literature suggests that driving civic sense is influenced by a combination of psychological, social, cultural, educational, and institutional factors. These factors collectively determine how individuals interact with transportation infrastructure and other road users.

The following table summarizes major studies relevant to the present research.

Author & Year	Topic	Country	Key Finding
Ajzen (1991)	Theory of Planned Behaviour	United Kingdom	Behaviour is influenced by attitudes, social norms, and perceived behavioural control.
Reason (1990)	Human Error Theory	United Kingdom	Violations and unsafe behaviours significantly contribute to transportation accidents.
Evans (2004)	Traffic Safety Behaviour	USA	Human behaviour accounts for the majority of road crash causes.
WHO (2023)	Global Road Safety	Global	Unsafe road user behaviour remains a leading contributor to fatalities.
Ponnaluri (2012)	Traffic Safety in India	India	Behavioural violations significantly increase urban accident risks.
Singh & Misra (2018)	Urban Traffic Behaviour	India	Awareness deficits contribute to non-compliance with traffic regulations.
MoRTH (2023)	Road Accident Analysis	India	Traffic violations remain among the primary causes of road accidents.
TRIPP-IIT Delhi (2021)	Pedestrian Behaviour	India	Inadequate civic responsibility affects pedestrian safety and mobility.
OECD (2019)	Road User Compliance	International	Enforcement and education jointly improve behavioural compliance.
IRC (2022)	Traffic Management Practices	India	Traffic discipline is essential for efficient utilization of road infrastructure.

2.1 Civic Sense and Traffic Behaviour

Driving civic sense is fundamentally associated with responsible participation in public transportation environments. It reflects the willingness of individuals to prioritize collective welfare alongside personal convenience.

Researchers argue that transportation systems function efficiently only when road users voluntarily comply with established rules and behavioural norms. Traffic regulations are designed not merely as legal requirements but as mechanisms to facilitate coordinated movement among diverse user groups.

The concept of civic sense extends beyond obeying traffic signals. It includes:

1. Respecting pedestrian rights.
2. Following lane discipline.
3. Avoiding unnecessary honking.
4. Maintaining road cleanliness.
5. Practicing responsible parking behaviour.
6. Giving way to emergency vehicles.

7. Respecting public transportation facilities.
8. Cooperating with traffic authorities.

Studies conducted in developed transportation systems indicate that high levels of civic responsibility contribute significantly to reduced accident rates, improved mobility, and lower congestion levels. Conversely, poor civic behaviour often manifests through:

- Signal violations.
- Wrong-side driving.
- Aggressive driving.
- Illegal parking.
- Road rage incidents.
- Encroachment of pedestrian spaces.
- Non-compliance with safety regulations.

Such behaviours reduce transportation efficiency and increase risks for all road users.

Researchers have consistently observed that transportation infrastructure alone cannot ensure safe mobility unless accompanied by responsible behavioural practices.

2.2 Traffic Psychology and Compliance Behaviour

Traffic psychology examines the mental processes influencing behaviour within transportation environments. It focuses on how perception, attitudes, emotions, motivation, habits, and social influences shape decision-making on roads.

According to Ajzen's Theory of Planned Behaviour (1991), individuals are more likely to engage in responsible behaviour when:

- They possess positive attitudes toward compliance.
- Social norms support lawful conduct.
- They believe compliance is achievable and beneficial.

This theory is particularly relevant to driving civic sense because many traffic violations are deliberate rather than accidental.

Psychological studies suggest that drivers often engage in violations due to:

- **Risk Perception Errors:** Drivers frequently underestimate the risks associated with behaviours such as speeding, signal jumping, and wrong-side driving.
- **Overconfidence:** Experienced drivers often develop excessive confidence in their abilities, leading to reduced adherence to safety measures.
- **Habit Formation:** Repeated violations gradually become normalized behaviours, making compliance less likely.
- **Social Influence:** Observing widespread violations encourages individuals to imitate similar behaviours.
- **Time Pressure:** Perceived urgency often motivates drivers to bypass regulations for short-term convenience.
- **Frustration and Stress:** Congestion and delays can increase aggressive driving tendencies and reduce civic behaviour.

Researchers have found that psychological factors frequently exert greater influence on road behaviour than technical knowledge of traffic regulations.

2.3 Urban Mobility Behaviour

Urban mobility refers to the movement patterns of people and goods within cities. The effectiveness of urban mobility systems depends on both infrastructure and behavioural interactions among users.

Growing cities face increasing transportation complexity due to:

- Population growth.
- Vehicle ownership expansion.
- Mixed traffic conditions.
- Limited road capacity.
- Competing transport modes.

In such environments, civic behaviour becomes essential for maintaining operational efficiency.

Studies indicate that mobility performance improves when road users exhibit:

- **Cooperative Behaviour:** Individuals make decisions considering the impact on others.
- **Predictable Behaviour:** Consistent compliance allows other users to anticipate movements accurately.

- **Shared Responsibility:** Road users collectively contribute to transportation system performance.
- **Respect for Public Space:** Road infrastructure is treated as a shared community asset.

Where civic sense is weak, transportation systems experience:

- Increased delays.
- Reduced travel reliability.
- Higher conflict rates.
- Elevated accident risks.
- Greater environmental impacts.

Urban mobility researchers increasingly emphasize behavioural management alongside infrastructure development to achieve sustainable transportation outcomes.

2.4 Indian Research Context

The Indian transportation environment presents unique behavioural challenges due to its highly heterogeneous nature.

Unlike many developed countries where traffic streams are relatively homogeneous, Indian roads accommodate:

- Cars
- Two-wheelers
- Auto-rickshaws
- Buses
- Trucks
- Cycles
- Handcarts
- Pedestrians
- Street vendors
- Informal activities, within the same transportation corridor.

This complexity places substantial demands on road user judgement and behavioural adaptation.

Research conducted in Indian cities highlights several recurring behavioural concerns:

- **Signal Non-Compliance:** Signal jumping remains one of the most common traffic violations at urban intersections.
- **Wrong-Side Driving:** Drivers frequently use opposing traffic lanes to reduce travel distance or avoid congestion.
- **Illegal Parking:** Unauthorized parking significantly reduces roadway capacity and disrupts traffic flow.
- **Pedestrian Behaviour:** Pedestrians often cross roads at undesignated locations due to convenience and inadequate facilities.
- **Excessive Honking:** Noise pollution from unnecessary horn usage reflects low levels of road etiquette and civic responsibility.
- **Helmet and Seatbelt Non-Compliance:** Safety regulations are frequently ignored despite widespread awareness of their benefits.

Studies by Indian transportation researchers suggest that these behaviours are influenced by:

1. Weak enforcement.
2. Inadequate awareness.
3. Cultural acceptance of minor violations.
4. Perceived lack of consequences.
5. Peer influence.
6. Limited civic education.

The literature further indicates that improving transportation outcomes in Indian cities requires a combination of:

- Infrastructure enhancement.
- Behavioural interventions.
- Educational campaigns.
- Technological monitoring.
- Institutional enforcement.

Consequently, driving civic sense emerges as a critical component of sustainable urban mobility planning in the Indian context.

LITERATURE REVIEW SYNTHESIS

The reviewed literature establishes several important conclusions:

1. Road user behaviour significantly affects transportation system performance.
2. Civic sense is closely linked with traffic safety and mobility efficiency.
3. Psychological factors strongly influence compliance decisions.
4. Social norms and cultural attitudes shape transportation behaviour.
5. Urban mobility challenges cannot be solved solely through infrastructure expansion.
6. Behavioural transformation is essential for sustainable transportation systems.
7. Indian cities face unique behavioural challenges due to heterogeneous traffic conditions.
8. Integrated approaches combining awareness, enforcement, education, and planning are most effective in improving civic responsibility among road users.

3. CASE STUDY: LUCKNOW CITY

Lucknow, the capital city of Uttar Pradesh, has emerged as one of India's fastest-growing urban centres. The city has experienced substantial population growth, expansion of residential and commercial areas, increasing vehicle ownership, and significant infrastructure development over the past decade. Major transportation investments including the Lucknow Metro, road widening projects, flyovers, and smart traffic management systems have transformed the city's mobility landscape.

Despite these developments, behavioural challenges among road users continue to affect transportation efficiency and road safety. Observations across major corridors indicate that inadequate driving civic sense remains a major contributor to congestion, conflicts, and traffic violations.

For the purpose of this study, key observations were undertaken at major traffic corridors and intersections including:

- Hazrat Ganj
- Charbagh Railway Station
- Shaheed Path
- Gomti Nagar
- Polytechnic Chauraha
- Engineering College Chauraha
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These locations represent diverse traffic environments comprising commercial, institutional, residential, and transit-oriented activities.

3.1 Key Observations

Field observations revealed several recurring behavioural patterns associated with inadequate driving civic sense.

1. **Signal Jumping:** Many motorists were observed crossing intersections during red signal phases, particularly during low enforcement periods. Such behaviour disrupted traffic flow and increased collision risks.
2. **Wrong-Side Driving:** Wrong-side driving was frequently observed on divided roads and near intersections where users attempted to minimize travel distance.
3. **Lane Indiscipline:** Vehicles frequently changed lanes without signalling, occupied multiple lanes simultaneously, and ignored lane markings.
4. **Illegal Parking:** Unauthorized parking along commercial streets reduced effective carriageway width and created bottlenecks.
5. **Pedestrian Non-Compliance:** Pedestrians often crossed roads away from designated crossings despite the availability of zebra crossings and foot-over bridges.
6. **Excessive Honking:** Unnecessary horn usage was observed even under stationary traffic conditions, indicating impatience and poor road etiquette.
7. **Encroachment of Public Space:** Road shoulders, footpaths, and service lanes were often occupied by informal activities, affecting both mobility and pedestrian safety.
8. **Poor Yielding Behaviour:** Limited willingness was observed among drivers to give way to pedestrians, cyclists, emergency vehicles, and merging traffic.
9. **Safety Equipment Non-Compliance:** Instances of helmetless riding, improper helmet usage, and seatbelt violations remained common.
10. **Aggressive Driving Behaviour:** Frequent tailgating, sudden acceleration, and risky overtaking manoeuvres were observed during peak hours.

3.2 Traffic Composition in Lucknow (Estimated)

The heterogeneous traffic conditions of Lucknow significantly influence road user behaviour and transportation performance.

Vehicle Type	Estimated Share (%)	Average Speed Range (km/h)	Civic Sense Challenge Level
Two-Wheelers	42%	30–70	Very High
Cars & SUVs	28%	40–80	High
Auto-Rickshaws	12%	20–50	High
E-Rickshaws	7%	15–35	Moderate
Buses	4%	30–60	Moderate
Goods Vehicles	3%	25–55	Moderate
Cycles	2%	10–25	Low
Pedestrians	2%	Walking Speed	High Interaction Risk

Major Behavioural Challenges Identified

Behaviour	Frequency	Impact on Mobility	Impact on Safety
Signal Jumping	High	Moderate	Very High
Wrong-Side Driving	High	High	Very High
Illegal Parking	Very High	Very High	Moderate
Lane Indiscipline	High	High	High
Excessive Honking	Very High	Low	Moderate
Pedestrian Violations	Moderate	Moderate	High
Helmet Violations	High	Low	Very High
Seatbelt Violations	Moderate	Low	High

4. PRIMARY SURVEY: DRIVING CIVIC SENSE DATA

A structured questionnaire survey was conducted among road users in Lucknow to understand behavioural attitudes, compliance levels, and perceptions regarding driving civic sense.

Sample Characteristics

Respondent Category	Percentage (%)
Students	31
Working Professionals	34
Business Owners	14
Government Employees	11
Others	10

MODE OF TRAVEL

Mode	Percentage (%)
Two-Wheeler	48
Car	28
Public Transport	11
E-Rickshaw	7
Walking/Cycling	6

SURVEY FINDINGS

Behavioural Indicator	Percentage (%)	Severity Assessment	Implication
Observe traffic signals regularly	74%	Moderate	Compliance exists but not universal
Wear helmets/seatbelts regularly	69%	Moderate	Safety awareness improving
Witness wrong-side driving frequently	82%	Very High	Major civic challenge
Observe illegal parking frequently	79%	Very High	Significant mobility issue
Believe enforcement is insufficient	76%	High	Need for stricter monitoring
Experience congestion due to poor behaviour	84%	Very High	Behaviour strongly impacts mobility
Support stricter penalties	71%	High	Public supports enforcement
Believe awareness programs are needed	88%	Very High	Strong demand for education
Report excessive honking as common	81%	High	Poor road etiquette prevalent
Believe civic sense affects road safety	92%	Very High	High public recognition

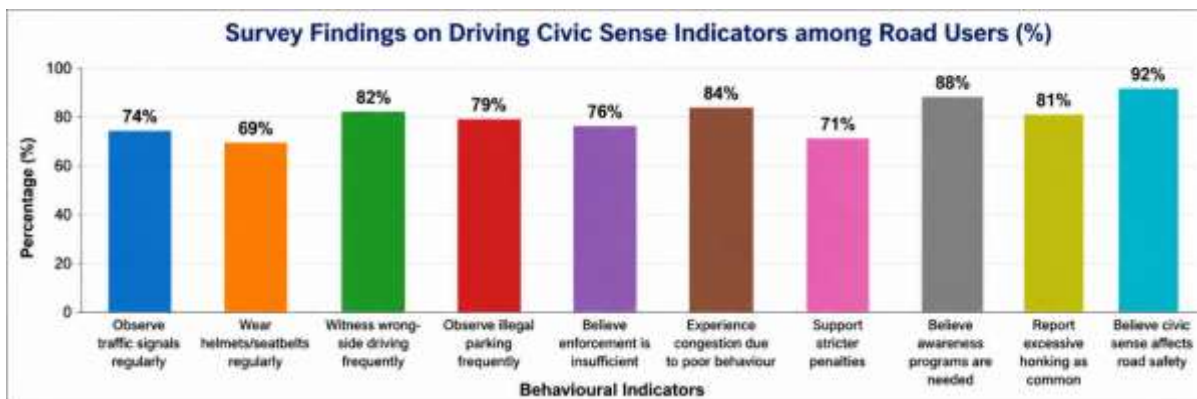


Figure 1: The pie chart illustrates major behavioural and civic-sense-related transportation issues



Figure 2: The pie chart illustrates the major Perceived Causes of Poor Driving Civic Sense by the respondents

Public Perception of Solutions for Improving Civic Sense

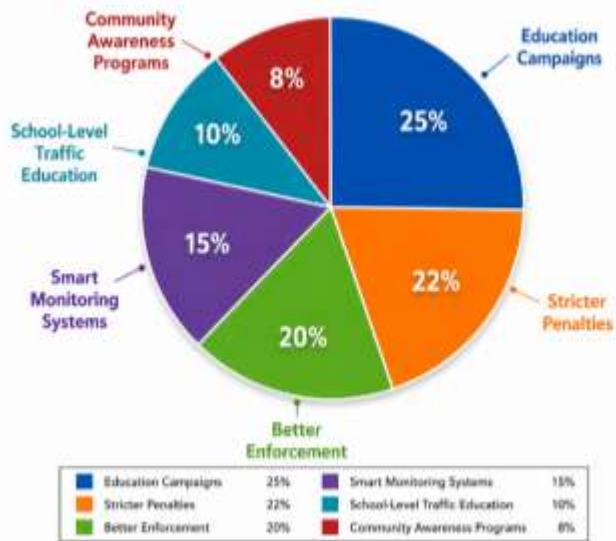


Figure 3: The pie chart illustrates the perception of solutions for improving civic sense

5. METHODOLOGY

This research adopts a descriptive and behavioural analytical methodology to examine the relationship between civic sense and transportation system performance.

The methodology combines:

1. Literature Review
2. Case Study Assessment
3. Traffic Behaviour Observation
4. Questionnaire Survey
5. Comparative Analysis
6. Behavioural Interpretation
7. Recommendation Formulation

The approach integrates both qualitative and quantitative perspectives to provide a comprehensive understanding of driving civic sense in an urban transportation context.

Research Methodology Flowchart – Seven Phase Behavioural Assessment Framework



Figure 4: Research methodology

5.1 Methodological Steps

Phase 1: Problem Identification

Identification of behavioural issues affecting urban transportation efficiency and road safety.

Phase 2: Literature Review

Review of international and Indian studies related to civic behaviour, transportation psychology, and traffic compliance.

Phase 3: Study Area Selection

Selection of Lucknow as a representative growing Indian city experiencing rapid urbanization and transportation expansion.

Phase 4: Behavioural Observation

Observation of road user behaviour at major intersections, commercial corridors, and transit hubs.

Phase 5: Survey Administration

Collection of primary data through structured questionnaires from various categories of road users.

Phase 6: Behavioural Analysis

Interpretation of behavioural trends using transportation psychology and urban mobility concepts.

Phase 7: Recommendations Development

Formulation of planning, policy, educational, and enforcement recommendations aimed at improving driving civic sense.

Key Variables Considered

Variable	Type	Purpose
Traffic Rule Compliance	Independent	Measure civic behaviour
Awareness Level	Independent	Assess behavioural understanding
Enforcement Perception	Independent	Evaluate institutional influence
Road Safety Attitude	Independent	Understand behavioural intentions
Civic Responsibility	Independent	Measure social awareness
Traffic Violations	Dependent	Measure behavioural outcomes
Mobility Efficiency	Dependent	Evaluate transportation impacts
Road Safety Performance	Dependent	Assess overall consequences

6. DRIVING CIVIC SENSE DECISION-MAKING PROCESS

Driving behaviour is not merely a response to traffic regulations but the outcome of a complex psychological decision-making process. Every action performed by a road user, whether compliant or non-compliant, results from interactions among perception, awareness, attitudes, social influences, situational conditions, and personal values.

In urban transportation environments, individuals constantly evaluate available choices before taking action. The quality of these decisions determines the level of civic responsibility displayed on roads.

The behavioural decision-making framework for driving civic sense can be represented through the following sequence:

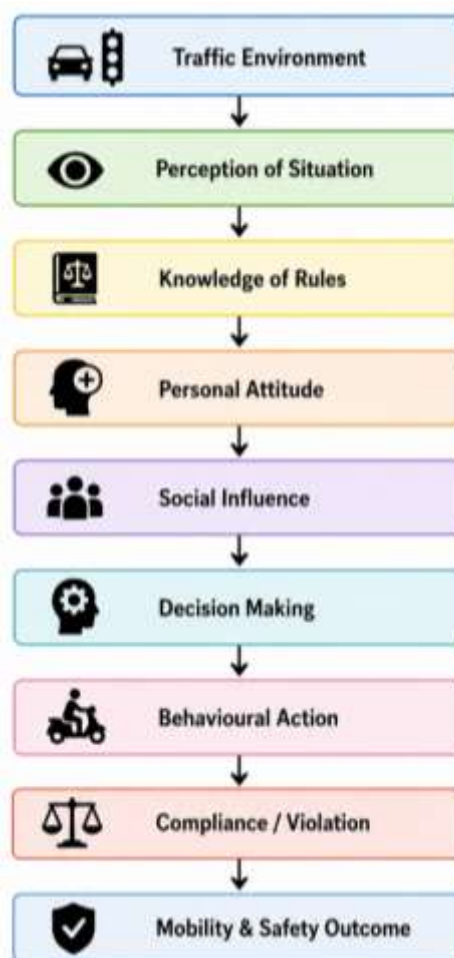


Figure 5: Behavioural decision-making process of road users

Key Behavioural Stages

1. Perception Stage

Road users observe traffic signals, road markings, pedestrian movements, congestion levels, and enforcement presence.

2. Awareness Stage

Individuals recall traffic regulations and assess their responsibilities.

3. Attitude Formation

Personal beliefs regarding the importance of compliance influence behavioural choices.

4. Social Influence Stage

Behaviour of surrounding road users affects decision-making.

5. Action Stage

Road users either comply with regulations or engage in violations.

6. Outcome Stage

Behavioural choices generate consequences affecting traffic flow, safety, and overall transportation performance.

7. BEHAVIOURAL ATTENTION DISTRIBUTION FRAMEWORK

Transportation psychologists argue that road users possess limited attention resources. Safe road behaviour requires attention to be distributed among multiple transportation elements simultaneously.

Poor civic sense often emerges when individuals prioritize personal convenience over situational awareness.

Theoretical attention distribution among urban road users is estimated as follows:

Attention Component	Attention Share (%)
Traffic Signals & Signs	24
Surrounding Vehicles	22
Road Conditions	18
Pedestrians & Cyclists	14
Navigation & Route Decisions	10
Mobile Phone & Distractions	7
Enforcement Observation	5

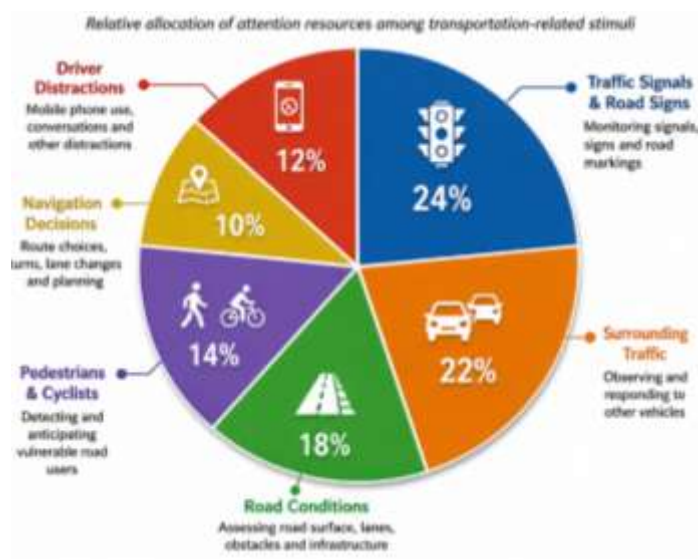


Figure 6: Driver attention distribution during urban travel

Road users who divert significant attention toward distractions such as mobile phones, conversations, or time pressure are more likely to engage in behaviours inconsistent with civic responsibility.

8. ANALYSIS: DETAILED OUTCOMES

The findings from literature review, case study observations, and survey analysis reveal several critical behavioural factors affecting driving civic sense.

The following table summarizes the magnitude, causes, risks, and potential interventions associated with major behavioural challenges.

Behavioural Factor	Magnitude	Primary Cause	Impact Level	Recommended Intervention
Signal Jumping	High	Time pressure	Very High	Automated enforcement
Wrong-Side Driving	Very High	Convenience seeking	Very High	Strict penalties
Illegal Parking	Very High	Lack of parking discipline	High	Parking management
Lane Indiscipline	High	Poor awareness	High	Lane education campaigns
Excessive Honking	Very High	Impatience	Moderate	Anti-honking initiatives
Helmet Violations	High	Negligence	Very High	Safety enforcement
Seatbelt Violations	Moderate	Overconfidence	High	Awareness campaigns
Pedestrian Violations	Moderate	Convenience	High	Pedestrian education
Mobile Phone Usage	Moderate	Distraction	High	Enforcement & awareness
Aggressive Driving	High	Stress & frustration	Very High	Behavioural interventions

8.1 Awareness and Compliance Relationship

Survey findings indicate a strong relationship between awareness and behavioural compliance.

Respondents with higher awareness levels reported:

- Better adherence to traffic signals.
- Higher helmet and seatbelt usage.
- Greater respect for pedestrian facilities.
- Reduced involvement in traffic violations.

However, awareness alone was found insufficient to ensure compliance. Behavioural habits and enforcement levels significantly influenced actual actions.

8.2 Role of Enforcement

A significant proportion of respondents believed that inadequate enforcement contributes to poor civic behaviour.

Observations revealed that:

- Compliance increases in the presence of traffic police.
- Violations increase when monitoring is absent.
- Automated surveillance systems improve rule adherence.
- Consistent enforcement creates long-term behavioural change.

8.3 Social Behaviour Influence

Behavioural conformity emerged as a significant factor.

When road users observe widespread violations, they often perceive such behaviour as socially acceptable.

Examples include:

- Following others during signal jumping.
- Wrong-side driving in groups.
- Ignoring lane markings.
- Parking in unauthorized locations where similar violations already exist.

This demonstrates the importance of social norms in shaping transportation behaviour.

8.4 Mobility Impacts

Poor driving civic sense directly affects transportation system efficiency through:

1. Increased congestion.
2. Reduced roadway capacity.
3. Delayed travel times.
4. Increased intersection conflicts.

5. Reduced public transport reliability.
6. Increased environmental pollution.

Behavioural inefficiencies often reduce the effectiveness of expensive transportation infrastructure investments.

9. DISCUSSION

9.1 Civic Sense as a Transportation Challenge

The findings suggest that driving civic sense should be viewed as a transportation planning issue rather than merely a law enforcement concern.

While infrastructure development remains important, transportation systems ultimately depend upon behavioural cooperation among users.

Roads designed according to engineering standards may fail to perform effectively when behavioural compliance remains weak.

9.2 Behavioural Factors and Safety

The study demonstrates that many traffic accidents originate not from infrastructure deficiencies but from behavioural decisions. Signal violations, wrong-side driving, speeding, and failure to yield are largely preventable through improved civic responsibility.

Consequently, behavioural improvement offers substantial potential for enhancing road safety outcomes.

9.3 The Growing City Challenge

Rapid urbanization increases transportation complexity by introducing:

- Higher traffic volumes.
- Greater modal diversity.
- Increased interaction conflicts.
- More demanding mobility requirements.

Without corresponding improvements in civic behaviour, transportation systems become increasingly inefficient. Lucknow's experience reflects challenges faced by many emerging Indian cities.

9.4 Importance of Education and Awareness

Long-term behavioural change requires sustained educational interventions.

Traffic education should extend beyond licensing requirements and become integrated into:

- School curricula.
- University programs.
- Community outreach initiatives.
- Public awareness campaigns.

Developing civic responsibility from an early age can create lasting improvements in transportation culture.

10. RECOMMENDATIONS

Based on the findings of this research, the following recommendations are proposed.

Category	Problem Addressed	Recommendation	Expected Impact
Policy	Traffic Violations	Strengthen enforcement mechanisms	Improved compliance
Education	Low awareness	Road safety education campaigns	Behavioural improvement
Schools	Weak civic culture	Traffic education curriculum	Long-term change
Technology	Monitoring gaps	AI-based traffic surveillance	Reduced violations
Infrastructure	Pedestrian conflicts	Improve crossings and walkways	Safer mobility
Parking Management	Illegal parking	Smart parking systems	Reduced congestion
Enforcement	Signal jumping	Automated penalty systems	Higher compliance
Community Programs	Social acceptance of violations	Citizen engagement initiatives	Stronger civic responsibility
Public Transport	Modal shift challenges	Improve transit quality	Reduced private vehicle dependence
Research	Data limitations	Behavioural monitoring studies	Evidence-based planning

CONCLUSION

Driving civic sense represents one of the most critical yet underexplored dimensions of urban transportation systems. This research demonstrates that transportation efficiency, road safety, and urban mobility are significantly influenced by the behaviour of road users.

Through literature review, case study analysis, behavioural observations, and survey findings, the study identifies inadequate civic responsibility as a major contributor to traffic violations, congestion, and safety challenges in growing Indian cities.

The research highlights that behaviours such as signal jumping, wrong-side driving, illegal parking, lane indiscipline, excessive honking, and pedestrian non-compliance continue to affect transportation system performance despite improvements in infrastructure.

The findings further reveal that awareness, social norms, enforcement mechanisms, and educational interventions play significant roles in shaping road user behaviour. While infrastructure development remains important, sustainable transportation outcomes cannot be achieved without corresponding behavioural improvements.

The study concludes that enhancing driving civic sense requires a comprehensive approach involving education, enforcement, technology, community participation, and behaviour-oriented transportation planning. By fostering a culture of responsibility and mutual respect among road users, cities can improve mobility efficiency, reduce accidents, and create safer and more sustainable urban environments.

Future research should focus on behavioural modelling, real-time observation studies, smart-city traffic behaviour analytics, and longitudinal assessments of civic responsibility interventions. Such efforts will contribute to the development of transportation systems that are not only physically efficient but also socially responsible and behaviourally sustainable.

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