

ORIGINAL ARTICLE**Road Traffic Accidents; Modern Causes and Trends among RTA Patients.**

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Affiliations 4th Year MBBS Students, Sialkot Medical College, Sialkot Corresponding Author: Amna Saeed, 4th Year MBBS Students, Sialkot Medical College, Sialkot Contact No. 0331-6629114 amnasaheed007@gmail.com CNIC: 34602-6180100-2 Submission complete: Sept., 2025 Review began: Oct, 2025 Review ended: Dec, 2025 Acceptance: March, 2026 Published: Sept, 2026 Author contribution: AS: conceptualization of project HR, KZ, JJ & MS; Data Collection AN, AN, FM, & S; Writing GA: Approval	Abstract Objectives: Road traffic accidents (RTAs) are a growing public health concern in Pakistan, particularly in urban areas. This study aims to investigate the modern causes and trends of RTAs among patients in Sialkot City. Methodology: A descriptive cross-sectional study was conducted using data collected from major hospitals. A sample of RTA patients was selected to complete a questionnaire, gathering information on the circumstances surrounding the accidents. The data was analyzed using descriptive and inferential statistics to identify significant patterns and correlations. Results: The majority of the RTA patients were males (67.2%, n= 336) aged 21-40 years. The most common occupation was drivers (54.6%, n= 273), followed by students (45.4%, n= 227). Human error was the leading cause, followed by road conditions and vehicle-related factors: • Distracted driving (excluding mobile phones): 100 patients (20%) - e.g., eating. • Speeding/Reckless driving: 150 patients (30%) • Failure to Yield/Disobeying Traffic Signs: 138 patients (27.6%) • For mobile phone usage: • Using a mobile phone: 110 (22%) • Not using a mobile phone: 390 (78%) • Most RTAs occurred during peak time hours (7 am-9 am and 4 pm-6 pm) (55.1%, n = 250) Conclusion: The study emphasizes the necessity of targeted interventions to mitigate human error, enhance road conditions, and foster safe driving practices in Sialkot City. The findings underscore the dominant role of human error, particularly in speeding and phone usage. Keywords: . Cite this Article as: Saeed A et al.; Road Traffic Accidents; Modern Causes and Trends among RTA Patients. <i>SIAL J Med. Sci. Sept-2026 V-5 (Issue-1, Overall Issue-17): 29-32</i>
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Introduction

Every year almost 1.3 million people lose their lives as a result of road traffic accidents, contributing to above 3500 deaths per day world-wide. The aim of this study was to assess the frequency and distribution of RTAs leading to fatality.¹

Globally, distracted driving accounts for a large proportion of RTAs, with mobile phone use being a major contributor. According to the WHO, the use of mobile phones while driving increases the risk of a crash by four times.²

In Pakistan, recent statistics from Pakistan Bureau of Statistics indicate a persistent rise

in the urban accidents. While most data focus on metropolitan areas like Lahore and Karachi, limited literature exists specifically for mid-sized urban centers like Sialkot.³

A local hospital-based study by Hussain et al. found that over 40% of RTA patients admitted to Sialkot's emergency departments were involved in distracted driving, often linked to smartphone use.⁴

Another local observation by Malik and Zafar highlighted that urban road planning in Sialkot fails to meet traffic safety standards, increasing the risk of collisions. This gap in localized research underlines the importance of studying Sialkot's unique tra-

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ffic and urban conditions to propose effective, city-specific interventions.⁴

Objectives:

- To investigate the role of smartphone use in road traffic accidents among the patients in Sialkot.
- To identify trends in RTA demographics, causes, and injury patterns in Sialkot city
- To assess how urban factors like traffic congestion, road conditions, and law enforcement contribute to RTAs.
- To provide data-driven recommendation for urban traffic policy in Sialkot.

Methodology

A descriptive cross-sectional study was conducted using data collected from major hospitals. A sample of RTA patients was selected to complete a questionnaire, gathering information on the circumstances surrounding the accidents. The data was analyzed using descriptive and inferential statistics to identify significant patterns and correlations.

Operational Definitions:

- RTA (Road Traffic Accident): An incident involving vehicles that leads to injury and requires emergency treatment.
- Urban Area (Sialkot): Geographical and administrative boundaries of Sialkot city, excluding rural or peri-urban regions.
- Smartphone Usage While Driving: Use of a mobile phone for texting, calling, browsing, or navigation during vehicle operation.
- RTA Patient: Any individual who sustained injuries from a road traffic accident and was admitted to an emergency unit in Sialkot.

Study Design: Descriptive cross-sectional study conducted in the Emergency departments of two major hospitals in Sialkot, Allama Iqbal Memorial Teaching Hospital and Imran Idrees Teaching Hospital (IITH) during 01-01-2026 to 30-06-2026.

Non-probability consecutive sampling was used to include all eligible RTA patients presenting during the study period.

A structured questionnaire was administered to each patient (or an attendant if the patient was incapacitated).

We included in the study;

- RTA patients aged 10–60 years presenting to emergency departments in Sialkot city.
- Patients are conscious and medically stable enough to provide consent or information.
- Patients involved in accidents within Sialkot city limits.

But following were excluded;

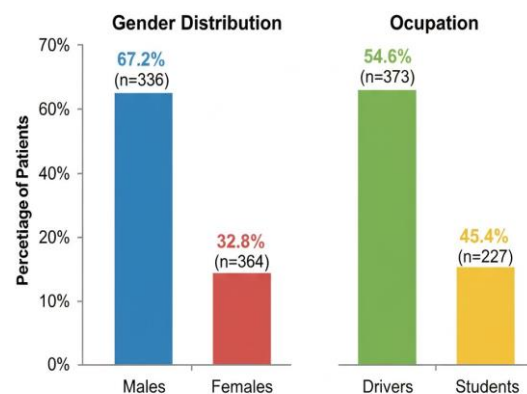
- Patients from rural or outside city areas.
- Patients below 10 or above 60.
- Patients who are unwilling to consent.
- RTAs due to non-vehicular causes (e.g., falls, assault).

The data were analyzed using SPSS version 25.

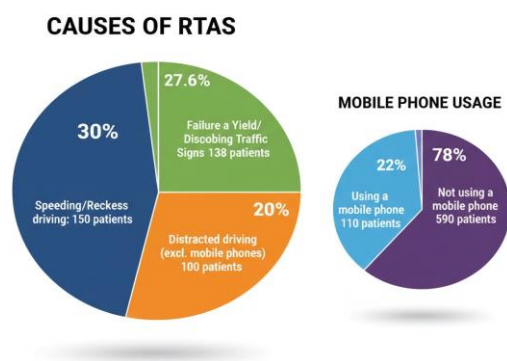
Chi-square and logistic regression tests were used to assess associations between smartphone use and accident severity.

Results

Road Traffic Accident Patient Demographics



Age Group: 21-40 years (most common)



Discussion

Road Traffic Accidents (RTAs) represent a significant public health and safety concern in urban Pakistan. In rapidly urbanizing cities like Sialkot, an increase in vehicular traffic, inadequate infrastructure, and the rising use of smartphones while driving have collectively contributed to a sharp rise in road mishaps.⁴

Sialkot, a growing industrial and commercial city, is witnessing expanding road networks and an increasing number of private and commercial vehicles. With the urban expansion comes the challenge of managing traffic and ensuring road safety.⁴

A growing concern is smartphone-induced distracted driving, especially among young adults, motorcyclists, and delivery riders. Furthermore, unregulated urban growth has led to poor signage, a lack of pedestrian lanes, and minimal enforcement of traffic laws.⁵

The study aims to explore the modern causes and emerging trends of RTAs among patients in Sialkot, with a special focus on smartphone usage and urban traffic behaviours.⁵

The results highlight how important it is to improve emergency systems, enforce traffic laws, and raise public awareness in order to reduce RTAs.⁶

In Azad Jammu Kashmir there were 5263 major road traffic accidents during the period studied, causing 2317 the deaths and 12963 injuries.⁷

Unfortunately, accident data collection in Pakistan is highly inadequate and not consistent with international standards.⁸

Road traffic injuries (RTIs) are one of the leading causes of death among productive age group. Using systems approach framework (SAF), current preventive strategies for RTI control were reviewed in Pakistan. A review of the literature was done using four international search engines. Only ten studies on preventive strategies for RTI stemming from Pakistan were found. The first Road Traffic Injuries Research Network (RTIRN) surveillance system for road traffic injuries was established in urban city (Karachi) in Pakistan has shown promise for injury control and should be scaled up to other cities. Enforcement of traffic laws on seat-belt and helmet wearing is poor. National Highway and Motorway Police Ordinance (2000) was one of the few legislative measure so far taken in Pakistan. Using SAF, efforts are required to implement interventions targeting human, vehicle design and also making environment safer for road users.⁹

Conclusion:

The study emphasizes the necessity of targeted interventions to mitigate human error, enhance road conditions, and foster safe driving practices in Sialkot City. The findings underscore the dominant role of human error, particularly in speeding and phone usage. To mitigate the impact of RTAs, policymakers must prioritize evidence based strategies, including improved road infrastructure, public awareness campaigns, and strict enforcement of traffic laws. By addressing these concerns, Sialkot City can reduce the burden of RTAs and create a safer transportation environment for its residents.

Recommendations

To mitigate the impact of RTAs, policy-makers must prioritize evidence based strategies, including improved road infrastructure, public awareness campaigns, and strict

enforcement of traffic laws. By addressing these concerns, Sialkot City can reduce the burden of RTAs and create a safer transportation environment for its residents.

Limitations:

- Official road traffic accident data, particularly at the city level, such as Sialkot, was incomplete, inconsistent, or not digitized. This made it difficult to get a comprehensive picture of all accidents.
- Moreover, information recorded at the scene or in hospital records (e.g., exact cause, contributing factors) was subjective, based on eyewitness accounts, or lacked detailed technical investigation.
- The unavailability of resources was another limitation that cannot be underestimated.

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Conflict of Interest: None

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