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The Incidence Of Intentional And Unintentional Injuries In A Private Tertiary Care Hospital In Telangana, India - A Prospective Cross-Sectional Study

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Abstract

BACKGROUND: *Injuries, irrespective of being inflicted purposefully or by accident, have arisen as pressing issues in public health, significantly contributing to morbidity and mortality.*

The core objective of this exploration was to examine the frequency of occurrence and socio-demographic patterns, place, and determinants of harm resulting from both deliberate acts and accidental events in a tertiary healthcare setting located in Medchal Malkajgiri district, Telangana state, India.

METHOD: *The clinical records maintained for each individual presenting with trauma who arrived at a private tertiary care hospital at Medchal Malkajgiri, Telangana, from August to January (6 months) were analyzed for sociodemographic data, segments of trauma cases, affected anatomical regions, antecedent medical information, and injury repercussions.*

RESULTS: *Of the 313 cases analyzed, 270 were classified as inadvertent and 43 as intentional. Males predominated, primarily aged 30–60 years. Few unintentional cases had prior medical histories, none among intentional ones. Spatially, intentional harm was mainly poisoning in domestic settings, while unintentional injuries were linked to road traffic accidents. Anatomically, intentional injuries involved the abdomen and thorax; unintentional injuries affected the extremities. Most patients required hospitalization, showed favorable outcomes, and were discharged in stable condition.*

CONCLUSION: *This study found injuries from fortuitous events occur more frequently than those stemming from deliberate actions, with road traffic accidents (RTA) emerging as the foremost cause. Among intentional injuries, poisoning was deemed the most dominant cause.*

Keywords: *Incidence, Injuries, Intentional and Unintentional, Tertiary Care Hospital, Road Traffic Accidents.*

INTRODUCTION:

An injury is commonly described as the detriment or deterioration inflicted upon the body by an external force, whether deliberate or accidental. (1)

In 2005, the Joint Committee of the Society for Advancement of Violence and Injury Research (SAVIR) and the State and Territorial Injury Prevention Directors Association (STIPDA) defined injury as physical harm resulting from either inadvertent or purposeful contact with thermal, mechanical, electrical, or chemical forces that surpass the body's resilience threshold or from the deprivation of essential entities like heat or oxygen.

According to the SAVIR-STIPDA Joint Committee, unintentional injuries are conceived as incidents that materialize without deliberate intent to cause harm, are customarily referred to as accidental injuries, and manifest in diverse environments. Motor vehicle collisions, falls, poisoning, burns, suffocation, and drowning are examples of unintentional injuries.

The committee's definition of intentional injuries encompasses those spawning from deliberate human actions, whether self-inflicted or directed at others, and is habitually identified as violent injuries. This category includes acts such as homicides, suicides, and assaults.

Trauma is a significant public health concern that disproportionately affects certain segments of the population. The environments inhabited by individuals on a daily basis, including residential spaces, occupational settings, urban areas, and transportation networks, contain intrinsic hazards that are challenging to fully mitigate. (2) Injuries, whether accidental or pertaining to violence, result in the deprivation of 4.4 million lives globally each year, accounting for approximately 8% of total deaths, as per WHO in 2021. (3) Among them, approximately 3.16 million are due to unintentional trauma annually, while harm resulting from violence constitutes the deaths of 1.25 million individuals annually. Roughly one-third of these fatalities stem from RTA, one-sixth from suicide, one-tenth from homicide, and one-sixth from war and conflict. (3) Across 2022, India witnessed approximately 74 thousand accidental deaths among females, surpassing 355 grand for males. There was an escalation in the enumeration of accidental fatalities relative to the preceding year. (4)

Trauma composed 9% of all global deaths. Among inadvertent injuries, RTA falls and thermal injuries accounted for 29%, 12%, and 9% of total disability-adjusted life years (DALYs), respectively. In the deliberate injury category, suicide and hostile actions contributed to 41% and 43% of total DALYs, respectively, as reported by WHO in 2003. (5)

Telangana has experienced an elevated incidence of road-related collisions, which contribute significantly to unintended trauma in the region. The Telangana State Road Safety Council's 2022 report highlighted approximately 21,619 accidents, resulting in 7,559 deaths and over 12,000 injuries (Times of India, 2023).

Unintentional injuries among children, particularly from falls and road traffic incidents, have been notably prevalent. Research facilitated by Manchana et al. (2022) in Telangana revealed that 54% of youth injuries were unintentional, with traffic collisions being the pivotal factor of fatality among children. (6) Suicide rates in Telangana, as in many other states in India, have been rising. The National Crime Records Bureau (NCRB) data indicated that suicides remain a key catalyst for deliberate injuries. In 2021, the state recorded 6,272 suicides, highlighting growing concerns related to mental health, particularly among the youth and farming communities. Additionally, intentional injuries encompass homicides and assaults, though these make up a smaller share of injury-related deaths. Crime-related violence has been steadily increasing in the state, with homicide incidents reaching around 3,500 in 2022. Police data recommend that although assault magnitude has oscillated, focused interventions are indispensable to address violent crimes effectively. (7) This inquiry is designed to investigate and assess the frequency of injuries resulting from intentional actions and those caused by accidents among individuals at a tertiary medical center. It analyzes the allocation of injuries by socio-demographic factors, the locations where the injuries occurred, and the underlying causes. Furthermore, the survey documents the ramifications of purposeful and incidental injuries, presenting a holistic perspective on their influence.

MATERIALS AND METHODS

Study Design and Settings:

This prospective cross-sectional study was carried out at a private tertiary care hospital in Telangana state, India, from August 2023 to January 2024.

Inclusion/Exclusion criteria:

The research accounted for gender-based diversity by including both men and women individuals across all age groups who presented to the emergency or inpatient departments. Participants with a documented history of previous injuries were also considered eligible for inclusion. Conversely, individuals presenting with underlying medical conditions, such as those who had undergone recent surgical procedures, were excluded. Patients who were exclusively treated through ambulatory care, as well as those who experienced severe trauma not captured within the available dataset, were excluded from the analysis. Additionally, individuals who refused to provide informed consent were not enrolled in the study.

Study Population & Sample Size:

The enrolled subjects will be recruited using a convenient sampling method, targeting both inpatient and emergency patients from the tertiary care hospital across all age groups. The respondent base was determined using the Raosoft online analytical cohort calculator, considering both deliberate and accidental injuries within the hospital setting, based on a 90% confidence level, a 5% margin of error, and a 50% response distribution. The estimated sample size was found to be 267 participants, which was rounded off to 300 by adding 10% for potential dropouts to ensure statistical reliability.

Target study population and study time:

The assessment included patients of all age groups, both inpatient and emergency cases, who sustained injuries at a tertiary care hospital in Telangana, India. Conducted as a prospective cross-sectional study, it spanned six months, from August 2023 to January 2024, with a particular emphasis on individuals admitted due to previous injuries.

Recruitment of study participants:

Participants were selected using a convenient selection technique from the hospital’s emergency and inpatient departments. Initial recruitment was carried out through visits to these departments, followed by direct interaction with patients to obtain detailed accounts of how the injuries occurred. The selection process was finalized based on the diagnostic appraisal conducted by the assigned healthcare provider.

Development and Validation of Data Collection Form:

The data acquisition form was meticulously developed by consulting reference articles, such as "Epidemiology of Injuries" in Kranali, and further refined through original insights to align more explicitly with the inquiries objectives. It was extensively amended to comprehensively address relevant aspects, including sociodemographic characteristics, injury classification, geographical location, nature of trauma, affected body regions, medical history, and injury outcomes. Subsequently, the questionnaire was reviewed by the pharmacy practice staff, who affirmed its appropriateness and coherence with the research objectives.

Modality of obtaining response:

In this study, the strategy for response acquisition employed a combination of verbal and observational techniques. A case collection form was meticulously intended to capture responses during patient interactions. Data were acquired via direct verbal communication, wherein patients provided their responses, as well as through detailed visual assessment of their clinical conditions. This integrated approach facilitated a thorough appreciation of the patients' circumstances, ensuring the accuracy and authenticity of the data collected.

Statistical Analysis:

Statistical analysis was conducted using SPSS software (Version 26.0; IBM Corp., Armonk, NY, USA). Descriptive statistics, including means, standard deviations, frequencies, and percentages, were utilized to summarize the data. The chi-square test was employed to evaluate associations between categorical variables, with a p-value < 0.05 considered statistically significant. No significant association was observed in the gender-based distribution of injuries ($p = 0.808$). Thoracic injuries demonstrated a statistically significant association ($p < 0.016$), whereas head injuries did not ($p = 0.182$). A statistically significant finding was also observed in the overall analysis ($p = 0.005$).

RESULT

The occurrence and proportion of injuries differ concerning age, gender, injury type, geographical location, and past medical history [PMH].

Throughout the course of the investigation, a total of 313 incidents of injuries were examined, with 270 categorized as accidental and 43 as deliberate. Males were disproportionately affected, constituting 78% of cases, while females comprised only 22%. The occurrence of both premeditated and inadvertent injuries continues to be a major concern in specialized healthcare facilities, particularly among middle-aged individuals.

Table 1- Sociodemographic characteristics

Variables	N (%)
Age	
≤10	8 (2.6)
10 - 20	18 (5.8)
20 - 30	62 (19.8)
30 - 40	62 (19.8)
40 - 50	66 (21.1)
50 - 60	47 (15.0)
60 - 70	23 (7.3)
70 - 80	23 (7.3)
≥80	4 (1.3)
Gender	
Male	243 (77.6)
Female	70 (22.4)
Injury Classification	
Intentional Injury	43 (13.7)
Unintentional Injury	270 (86.3)
Geographical Location	
Home	119 (38.0)
Hospital	1 (0.3)
Road	155 (49.5)
Sports Place	2 (0.6)
Work Place	30 (9.6)
Other	6 (1.9)
Type of Injury	
Assault	10 (3.2)
RTA	133 (42.5)
Fall	117 (37.4)
Poisoning	32 (10.2)
Snake Bite	2 (0.6)
Burns	5 (1.6)
Suicide	1 (0.3)
Others	13 (4.2)
Past Health History	
Yes	18 (5.8)
No	295 (94.2)

RTA – Road Traffic Accident

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As illustrated in **Table 1**, individuals between the ages of 40 and 50 years exhibited the greatest frequency of injuries (19.8%), with males forming the principal fraction at 77.6%. Unintentional trauma represented the vast majority of reported cases (85.7%), whereas deliberate harm was identified in 13.3% of instances. With regard to location, roadway-associated events were the most frequently recorded (49.5%), followed by incidents occurring in residential settings (38.0%) and within medical institutions (9.6%). The prevailing causes included RTA (42.5%) and falls (37.4%), with both significantly more common in the unintentional category ($p < 0.001$). with burns contributing to 10.2% of cases. Additionally, only 5.8% of patients had a documented medical history, indicating that the preponderance of injury cases emerged in individuals without pre-existing health conditions.

Table 2- Gender based distribution of Injuries

Variables	Injury Classification		Total	X^2	*P Value
	Intentional Injury	Unintentional Injury			
	N (%)	N (%)	N (%)		
Gender					
Male	34 (79)	209 (77)	24 (78)	.059[a]	0.808
Female	9 (21)	61 (23)	70 (22)		
Total	43 (100)	270 (100)	313 (100)		

*Chi-square test; $p < .05$ is significant.

The information outlined in Table 2 classify injuries with respect to sex. Of the 313 recorded cases, 270 (86.3%) were classified as accidental injuries, whereas 43 (13.7%) were deliberate injuries. Males constituted the majority of cases (78%), with 34 cases (79%) involving deliberate harms and 209 cases (77%) related to accidental injuries. In contrast, females made up 22% of the entire cases, was not statistically significant ($p = 0.808$), suggesting that the type of injury (intentional vs. unintentional) was independent of gender.with 9 cases (21%) of deliberate harms and 61 cases (23%) of accidental injuries.

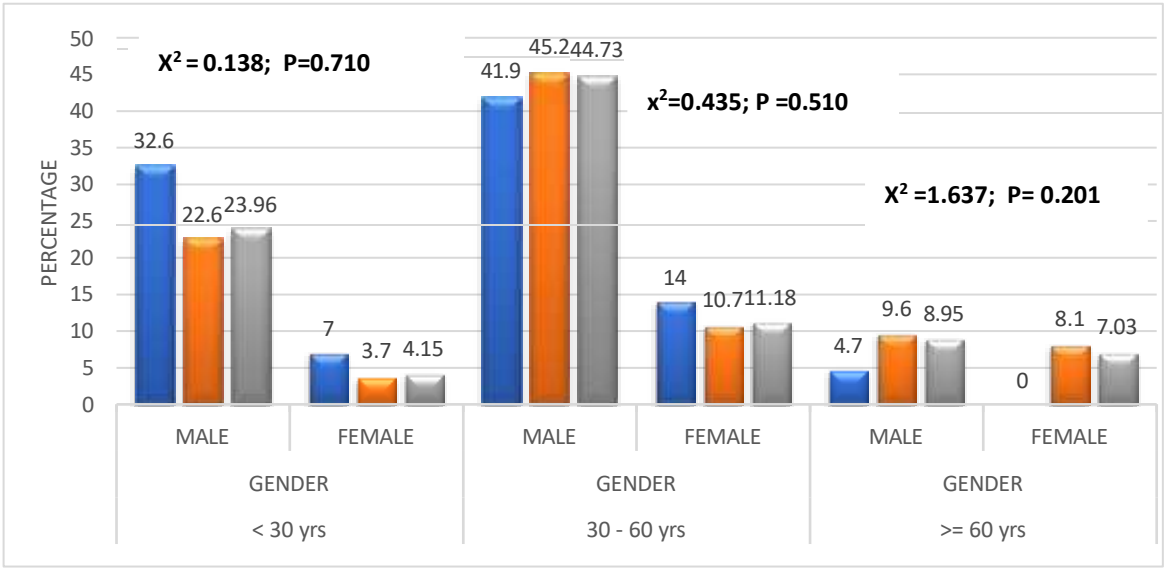

Figure 1: Age and Gender-based Injury Distribution. (N=313)

Figure 1 depicts trends of injuries across various age brackets and genders, differentiating between deliberate and accidental cases. Males below 30 years experience the greatest injury prevalence, with accidental incidents being more frequent. A noteworthy surge is seen in the 30–60-year-old male demographic, where both deliberate and accidental injuries peak, identifying them as a high-risk segment. Conversely, females display consistently lower injury occurrences across all age brackets, with accidental cases being more dominant. The senior population (≥60 yrs) registers the minimal injury cases, with minimal variation between genders.

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Table 3 -Statistical data for deliberate and Unintended injuries for geographical location concerning age groups.

Variables		Injury classification		Total	X^2	*P Value
		Intentional Injury	Unintentional Injury			
		N (%)	N (%)	N (%)		
Age in years						
	Home	16(37.2)	8 (3.0)	24(7.67)		
	Hospital	0 (0.0)	0 (0.0)	0 (0.0)		
< 30 yrs	Road	1 (2.3)	55 (20.4)	56(17.9)	47.48	<.001
	Sports Place	0 (0.0)	2 (0.7)	2 (0.64)		
	Work Place	0 (0.0)	4 (1.5)	4 (1.28)		
	Other	0 (0.0)	2 (0.7)	2 (0.64)		
	Home	18(41.9)	43 (15.9)	61(19.5)		
	Hospital	1 (2.3)	0 (0.0)	1 (0.32)		
30–60 yrs	Road	1 (2.3)	88 (32.6)	89(28.4)	51.37	<.001
	SportsPlace	0(0.0)	0(0.0)	0(0.0)		
	Work Place	1 (2.3)	20 (7.4)	21(6.71)		
	Other	3 (7.0)	0 (0.0)	3 (0.96)		
	Home	2 (4.7)	32 (11.9)	34(10.9)		
	Hospital	0(0.0)	0(0.0)	0(0.0)		
≥ 60 yrs	Road	0 (0.0)	10 (3.7)	10(3.19)	1.582	0.006<0.001
	Sports Place	0(0.0)	0(0.0)	0(0.0)		
	Work Place	0 (0.0)	5 (1.9)	5 (1.6)		
	Other	0 (0.0)	1 (0.4)	1 (0.32)		

*Chi Square Test, $p < .05$ is significant.

Table 3 presents an analytical breakdown of injuries categorized according to age group and region. Most injuries among people under 30 years old (17.9%) happened on the road, and most of them were unintentional. Home-related injuries were also significant in this age group, particularly intentional incidents (37.2%). The most common cause of injuries among those aged 30 to 60 was traffic accidents (32.6%), which were followed by occurrences at home (19.5%). Intentional injuries were consistently noted in residential settings (41.9%, **$p < 0.001$**), highlighting a critical demographic and spatial concern. The statistical significance ($\chi2 = 51.37$, **$p < 0.001$**) in this age group emphasizes the need for targeted intervention. Among individuals aged 60 and above, home remained the principal site of injury (14.0%), with inadvertent instances being most prevalent (11.9%). Road-related injuries were minimal (3.7%), while workplace incidents were the lowest reported across all age groups. Though the chi-square value for this group was low ($\chi2 = 1.582$), the result still showed significance ($p = 0.006$)**,** underscoring a concerning trend within this demographic.

Table 4- Injuries based on types and age groups.

Variables		Injury classification		Total	X^2	*P Value
		Intentional Injury	Unintentional injury			
		N (%)	N (%)	N (%)		
Age in Years						
	Assault	1 (2.3)	0 (0.0)	1 (0.3)		
< 30 yrs	RTA	0 (0.0)	50 (18.5)	50 (16.0)	88	<.001
	Fall	0 (0.0)	14 (5.2)	14 (4.5)		
	Poisoning	16 (37.2)	0 (0.0)	16 (5.1)		

	Snake Bite	0 (0.0)	1 (0.4)	1 (0.3)		
	Burns	0 (0.0)	0 (0.0)	0 (0.0)		
	Suicide	0 (0.0)	0 (0.0)	0 (0.0)		
	Others	0 (0.0)	6 (2.2)	6 (1.9)		
	Assault	9 (20.9)	0 (0.0)	9 (2.9)		
	RTA	0 (0.0)	76 (28.1)	76 (24.3)		
	Fall	0 (0.0)	65 (24.1)	65 (20.8)		
30 - 60 yrs	Poisoning	14 (32.6)	0 (0.0)	14 (4.5)	175	<.001
	Snake Bite	0 (0.0)	0 (0.0)	0 (0.0)		
	Burns	0 (0.0)	4 (1.5)	4 (1.3)		
	Suicide	1 (2.3)	0 (0.0)	1 (0.3)		
	Others	0 (0.0)	6 (2.2)	6 (1.9)		
	Assault	0 (0.0)	0 (0.0)	0 (0.0)		
	RTA	0 (0.0)	7 (2.6)	7 (2.2)		
	Fall	0 (0.0)	38 (14.1)	38 (12.1)		
>= 60 yrs	Poisoning	2 (4.7)	0 (0.0)	2 (0.6)	50	<.001
	Snake Bite	0 (0.0)	1 (0.4)	1 (0.3)		
	Burns	0 (0.0)	1 (0.4)	1 (0.3)		
	Suicide	0 (0.0)	0 (0.0)	0 (0.0)		
	Others	0 (0.0)	1 (0.4)	1 (0.3)		

*Chi Square Test, p < .05 is significant; RTA – Road Traffic Accident

An injury classification is shown in Table 4, across various age groups, differentiating between purposeful and inadvertent factors. Among individuals beneath the age of 30 years, poisoning (n = 16, 37.2%) constitutes the most common type of deliberate harm, whereas road traffic accidents (RTA) (n = 50, 18.5%) represent the main reason for inadvertent harm (**p < 0.001**). In the 30–60 age group, intentional injuries are predominantly attributed to assault (n = 9, 20.9%) and poisoning (n = 14, 32.6%), while unintentional injuries are largely caused by RTAs (n = 76, 28.1%) and falls (n = 65, 24.1%) (**p < 0.001**). In people aged 60 years and older, falls (n = 38, 14.1%) represent the primary contributor to unintended injuries, whereas poisoning (n = 2, 4.7%) continues to be the most common intentional injury. Notably, willful harm is significantly less common in this age category, with the difference between injury intent and type also being statistically significant (**p < 0.001**).

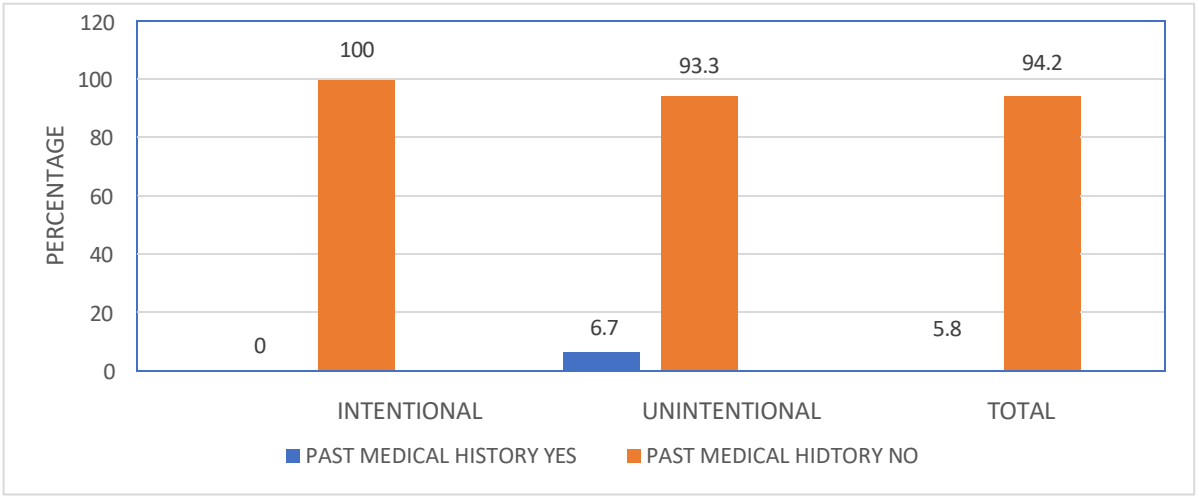

Figure 2: Percentage of Past Medical History concerning injury classification. (N=313)

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According to figure-2, there were no documented instances of purposeful harm among people with a prior medical history (PMH). All injuries in this group were unintentional (n = 18, 6.7%), were unintentional, suggesting a statistically notable absence of deliberate harm among individuals with pre-existing health conditions ($p < 0.001$)

Table 5-Involvement of body regions with concern to injuries.

	Injury Classification				
	Intentional Injury	Unintentional Injury	Total	X^2	*P Value
	N (%)	N (%)	N (%)		
Head					
Yes	3 (7)	39 (14)	42 (13)	1.780	
No	40 (93)	231 (86)	271 (87)		.182
Thorax					
Yes	7 (16)	16 (6)	23 (7)		
No	36 (84)	254 (94)	290 (93)	5.840	.016
Abdomen					
Yes	23 (53)	16 (6)	39 (12)		
No	20 (47)	254 (94)	274 (88)	76.929	<.001
Upper Limb					
Yes	2 (5)	76 (28)	78 (25)		
No	41 (95)	194 (72)	235 (75)	10.946	.001
Lower Limb					
Yes	3 (7)	133 (49)	136 (43)		
No	40 (93)	137 (51)	177 (57)	26.989	<.001

*Chi Square Test, $p < .05$ is significant; RTA – Road Traffic Accident

Table 5 displays the abdomen (n=23, 53%) and thorax (n=7, 16%) being most affected in the case of deliberate injuries ($p < 0.001$ and $p = 0.016$, respectively); in inadvertent injuries, the lower (n=133, 49%) and upper limbs (n=76, 28%) with significant associations ($p < 0.001$ and $p = 0.001$) are the places affected in the body. Head injuries did not show a significant association with injury classification ($p = 0.182$), indicating a more uniform distribution across both injury types.

Distribution of Clinical Outcomes Among Injured Patients:

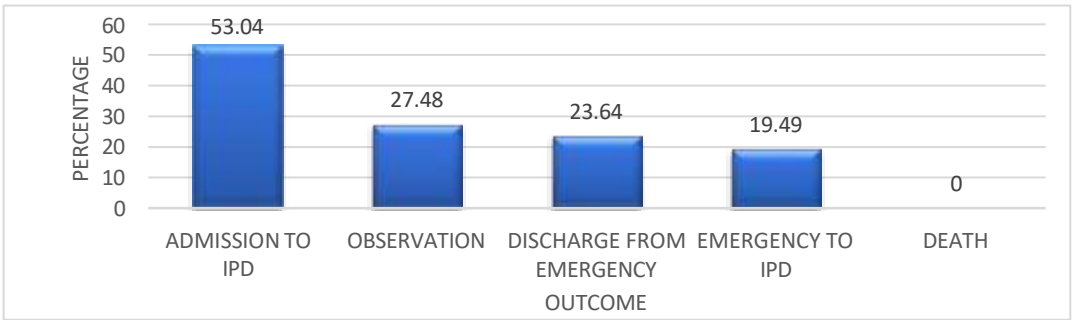

Figure 3: Graphical representations of results of injured patients indicates that admission to IPD saw a notable increase based on the depicted graph. (N=313)

Figure 3 illustrates the clinical outcomes of injured patients managed in the emergency department. The most frequent outcome was admission to inpatient departments (IPD), accounting for 53.04% of cases, indicating a high requirement for ongoing hospital care. Observation was the second most common outcome (27.48%), followed by discharge from emergency (23.64%). A notable 19.49% of patients required transfer from emergency to IPD, reflecting the need for escalated care post-initial assessment. Importantly, no deaths were recorded, suggesting effective emergency interventions and management. These findings emphasize the burden on inpatient services and the critical role of emergency triage in trauma care.

DISCUSSION:

Trauma constitutes a considerable threat to both life and public health globally. On an upsetting note, every six seconds witnesses a fatality because of injuries. These incidents stem from various causes, including hostile deeds directed towards others or oneself, road traffic collisions, burns, falls, and instances of poisoning. Similar to other health concerns, injuries reveal an evident structure and process encompassing agents (N18products and vehicles), hosts (human beings), and environmental circumstances (such as roads, homes, and workplaces) in conjunction with system-related challenges. According to our research, unintentional injuries accounted for 86.3% of all injury-related cases, making them the most common type of trauma among Telangana residents. Similarly, a study carried out in Karnali identified unexpected injury as the principal reason for trauma, comprising 84.1% of the total reported cases.(8)

This research, encompassing both deliberate and inadvertent harm, revealed a disproportionately higher incidence among males compared to females, a pattern similarly seen in related research that was performed in Tanzania (9). This discrepancy can be attributed to their involvement in high-risk occupations like construction, agriculture, and transportation; cultural norms promoting risk-taking; increased alcohol consumption; reckless driving; frequent physical altercations; and reluctance to seek timely medical intervention, all of which increase their vulnerability to injuries.

Age is a vital determinant of injury patterns, with its impact varying depending on the kind of injury sustained. Our findings reveal that unintentional harm predominantly affects males aged 30-60 years more than females, likely due to their increased exposure to risk-taking behaviors, occupational hazards, and their roles as primary earners. The injury burden within this demographic leads to substantial societal costs, including healthcare expenses, income loss, and long-term economic impacts. While a few explorations emphasize respondents aged 15-44 years as more vulnerable (8, 9), our findings suggest a greater incidence in the 30-60 years age group, with fewer cases occurring in individuals under 30 years. Regarding intentional injuries, males under 30 years are most affected, reflecting youth-related behaviors and social challenges. In contrast, women between the ages of 30 and 60 exhibit a greater prevalence of violence-related injuries. RTAs, followed by falls and poisoning, constitute the leading causes of injury across all age brackets. The geographic site is a critical determinant in the occurrence and prevention of injuries, as different regions present distinct risks influenced by infrastructure, environmental conditions, and common activities. Understanding the geographic context of injuries is crucial for developing targeted safety measures and intervention strategies that are tailored to specific environments, thereby mitigating injury risks. Our research found that deliberate injuries predominantly occurred in residential areas among individuals aged 30-60 years. This pattern can be attributed to factors such as privacy and the availability of means for self-harm, making household environments a more frequent setting for suicide attempts. In contrast, unplanned injury cases were chiefly concentrated on the road, followed by occurrences at home and in the workplace, within the same age group. Road traffic accidents (RTAs) were identified as the leading cause of road injuries, while falls were the most prevalent type of injury at home. These results highlight the significance of implementing location-specific interventions, such as enhancing road safety measures, promoting home safety practices to avoid falls, and improving occupational safety to reduce injury rates in these critical areas.

The study identified RTAs as the primary reason for injuries, then falls, among individuals in Telangana, India. This pattern is likely influenced by factors such as high vehicle density, poor road infrastructure, inadequacy of adherence to traffic regulations, and risky driving behaviors. This finding contrasts with earlier research that reported falls as the foremost cause of trauma (8). In this study, falls constituted the second most prevalent source of injury after RTAs, while burns and snakebites represented the fewest instances. Notably, these injuries were

predominantly observed in the 30-60 years age group. For intentional injuries, poisoning emerged as the most common cause among individuals under 30 years, followed by assault and suicide. The elevated rate of poisoning in younger individuals might be attributed to factors such as impulsivity, psychological distress, or accessibility to toxic substances.

In our investigation, we gathered information on participants' PMH, specifically focusing on individuals who had previously visited hospitals for injuries accompanied by pain. Notably, there were only a few reported instances of past hospital visits pertaining to accidental accidents, while no cases were noted for purposeful harm.

In relation to the involvement of body regions, intentional injuries predominantly affect the abdomen and thorax, while unintentional injuries commonly impact the extremities, encompassing the upper and lower limbs. This observation aligns with the findings of Elachi et al. (10), who reported that extremities are the most frequently injured body regions. However, in contrast, the head and neck are the most frequently traumatized areas, according to a study done in Southern Iran. (11). Considering the outcomes of injured patients, the majority were admitted to the inpatient department (IPD), treated effectively, and subsequently discharged. A smaller proportion remained under observation but received appropriate care before discharge. Notably, 231 patients were directly discharged from the emergency department, reflecting successful immediate management. Only a minimal number required transfer from the emergency department to the IPD, and most importantly, no fatalities were recorded, indicating favorable overall outcomes.

This study provides timely and relevant insights into the epidemiology of both intentional and unintentional injuries within a tertiary care setting in Telangana, India. By including a wide age range. and both genders, the research offers an extensive overview of injury trends across different demographic groups. The utilization of real-time hospital data enhances the reliability of the findings, and the categorization based on injury type, anatomical site, and causative factors allows for a detailed analysis that can inform targeted public health interventions. Additionally, focusing on both the clinical and spatial aspects of injury adds depth to the understanding of injury burden in the region.

Despite offering insightful information, this study has certain limitations. Carried out at a single tertiary care facility with a low sample size, the results might not be generalizable to other regions. Patients treated at home, in outpatient settings, or referred elsewhere were not included, possibly underestimating the true injury burden. Additionally, psychological and socioeconomic factors were not assessed, and the lack of long-term follow-up limits insights into post-discharge outcomes.

CONCLUSION:

Unintentional injuries were the predominant form of trauma in Telangana, India, with road traffic accidents (RTA) being the most common, followed by falls and burns. Males were disproportionately affected compared to females, with the highest incidence observed among individuals aged 30 to 60 years. Geographically, roads, homes, and workplaces ranked first, second, and third, respectively, as the most common locations for these injuries. Among intentional injuries, poisoning was most prevalent, followed by assault, primarily affecting males under the age of 30, with the highest incidence occurring at home. Medical history played a minimal role in unintentional injuries, with no relevant cases reported among intentional injuries. Intentional injuries most commonly affected the abdomen and thorax, whereas unintentional injuries primarily involved the extremities. In terms of outcomes, the majority of patients were admitted for inpatient care, received appropriate treatment, and were successfully discharged, with no fatalities reported throughout the study period.

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ETHICAL CONSIDERATIONS:

This study received approval from the Institutional Review Board on August 22, 2023, after meeting all the necessary criteria outlined in the study's application (Reference No. GCPK/PD23/07). All research integrity was strictly abided by during the full span of the examination to ensure the protection and well-being of the participants.

CONFLICT OF INTERST: None

FINANCIAL DISCLOSURE: This research did not receive any specific grant or funds from any agency in the public, commercial or not profit sector.

Data availability: The data that support the findings of this study are available on request from the corresponding author.

AUTHOR'S CONTRIBUTION:
N. Sravani, B. Ramya, S. Uday Bhaskar, Y. Vaishnavi surveyed, analyzed, and documented the manuscript.

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