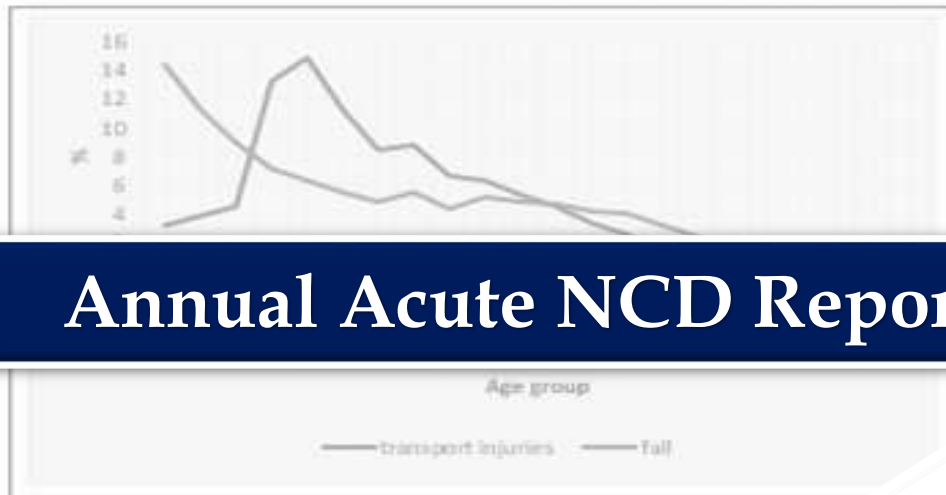


Figure 2.8: Distribution of falls and transport injuries by age groups

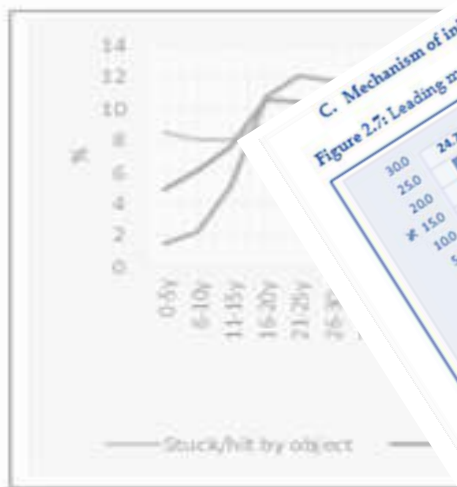


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Transport injuries were commonest among 16 - 25 years age group and children less than 5 years of age and gradually reduced

were highest among

Figure 2.9: Distribution of injuries due to stuck/hit by object and stab/cut injuries by age groups



and by stab/cut

Stuck/ hit by object, by person and animal were common among 16 - 40 years age group.

injuries were common among 16 - 40 years age

C. Mechanism of injury
Figure 2.7: Leading mechanisms of injury



Leading mechanism of injury was falls (24.7%) followed by animal bites (19.1%), transport injuries (17.7%), stuck/hit by object (13.7%), stuck/hit by person (9.1%), stab or cut (7.7%), poisoning (2.2%) and venomous animal stings (1.2%).



Directorate of Non-Communicable Diseases
Ministry of Health, Sri Lanka
2018



Annual Acute NCD Report - 2018



Directorate of Non-Communicable Diseases

Ministry of Health, Sri Lanka

2018



Annual Acute NCD Report - 2018

First Published - 2022

ISBN - 978-624-5719-48-8

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Directorate of Non Communicable Diseases

Ministry of Health

Colombo 10

Preface

Injuries are the number one cause of hospitalization in Sri Lanka. Injuries are seen across all age categories and the outcome of injuries may range from a simple knock to devastating aftermath including disability and death of the affected individuals. Risk factors for injuries may vary according to the type of individual, type of injury and place of occurrence of event. Management of injuries may also depend on several factors. Therefore, in-depth understanding of injuries is essential to design and implement appropriate interventions for prevention of injuries. Following the establishment of the National Injury Surveillance System (NISS) in 2016, specific information on injuries are collected to explore the multidimensional nature of injuries. The reported data will significantly aid in formulating policies and guidelines and to take appropriate action to prevent all injuries.

As the national focal point for injury prevention in the Ministry of Health, Sri Lanka, Directorate of Non Communicable Diseases (NCD) has decided to share the information collected in the NISS with the stakeholders interested in prevention of injuries. Publishing of an annual injury report is among one of the many activities undertaken by the directorate in disseminating information related to injuries. The first report of this nature was published for 2017 in 2018. This report outlines information related to common injury types reported through the NISS in relation to the year 2018. **Due to the nature of entering data into electronic Indoor Morbidity and Mortality Report (eIMMR), information entered until May 2019 were considered for detailed analysis of inward data. But for outpatient and injury-related mortality analysis, the data entered in the District Health Information Software 2 (dhis 2) system for the whole of 2018 were considered.** While we welcome your valuable feedback and comments on this to improve the next report, we hope that this report will be an excellent resource to for development of injury related multi-disciplinary policies, guidelines and action plans for prevention of injuries.

Directorate of Non Communicable Diseases

Ministry of Health

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October, 2018

Abbreviations

A and E	Accident and Emergency
BHT	Bed Head Ticket
dhis 2	District Health Information Software 2
eIMMR	electronic Indoor Morbidity and Mortality Report
ENT	Ear, Nose, Throat
ETU	Emergency Treatment Unit
HHMIS	Hospital Health Information Management System
HMIS	Health Management Information System
ICD	International Classification of Diseases
IMMS	Indoor Morbidity Mortality Statistics
MRO	Medical Record Office
NCD	Non Communicable Diseases
NIHS	National Institute of Health Sciences
NISS	National Injury Surveillance System
OPD	Outpatient Department
PCU	Primary Care Unit
TI	Transport injuries

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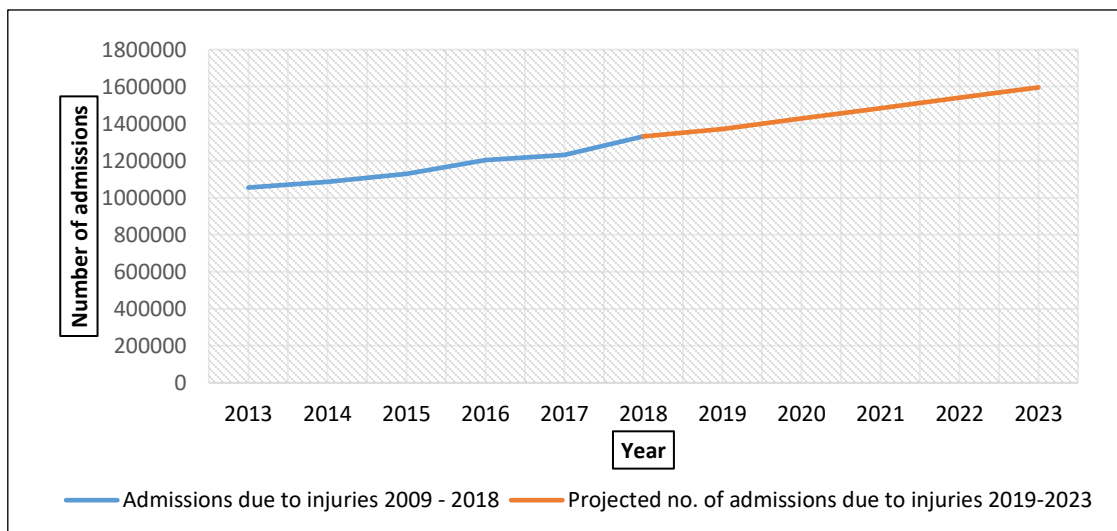
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1. Introduction

- Traumatic injuries are the number one cause of hospitalization over the last few decades
- More than 1.3 million were admitted to Government hospitals for treatment of injuries
- About 1/6th of the total admissions was due to injuries
- The numbers of hospital admissions are gradually increasing over the years
- 6% of the total deaths following hospital admissions was due to injuries
- National coverages of outpatient, inpatient surveillances and death notifications for 2018 were 3.8%, 25.8% and 7.7% respectively.
- Completeness of identified data elements in outpatient and inpatient surveillances vary from 40% to 101%; however, in death notifications, completeness of almost all elements considered were 100%.

According to the Indoor Morbidity Mortality Statistics (IMMS) of government hospitals, in Sri Lanka, injuries are the number one cause of hospitalization over last few decades and it continued to be the same in 2018. In 2018, more than 1.3 million were admitted for the treatment of injuries. Based on the Indoor Morbidity and Mortality Statistics (IMMS) 2013 - 2018, it has been projected the number of injury admissions to all government hospitals may increase by 0.26 million by the year 2023 if the current trend continues (figure 1).

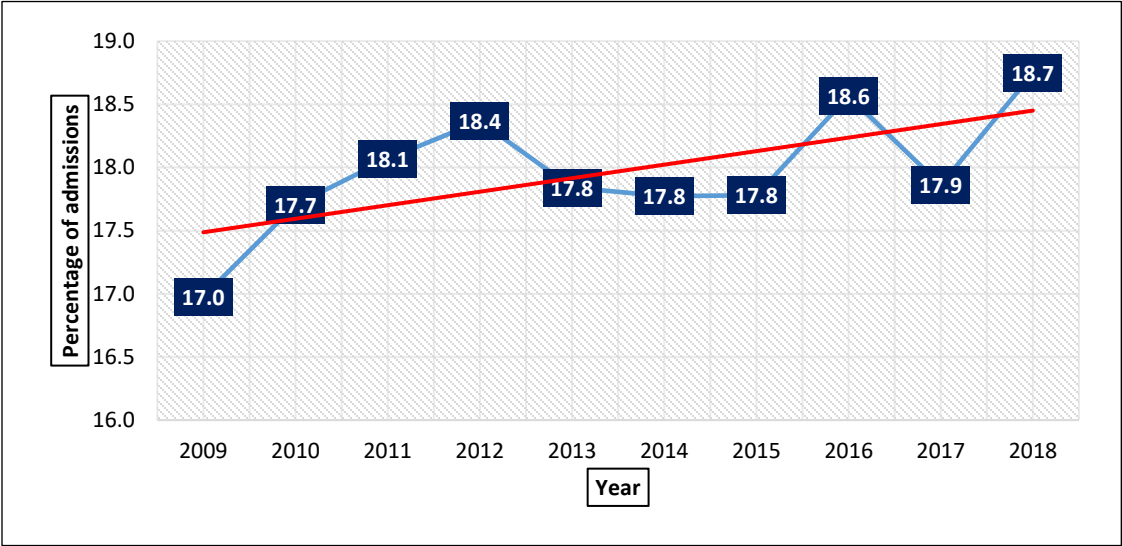
Figure 1.1: Projected number of inward admissions to government hospitals due to injuries - 2019 to 2025



Source: Medical statistics unit, Ministry of Health

Out of all admissions to government hospitals, injuries accounted for about 18%. The percentage of injury admissions has gradually increased from 17% in 2009 to 18.7% in 2018. (figure 1. 2).

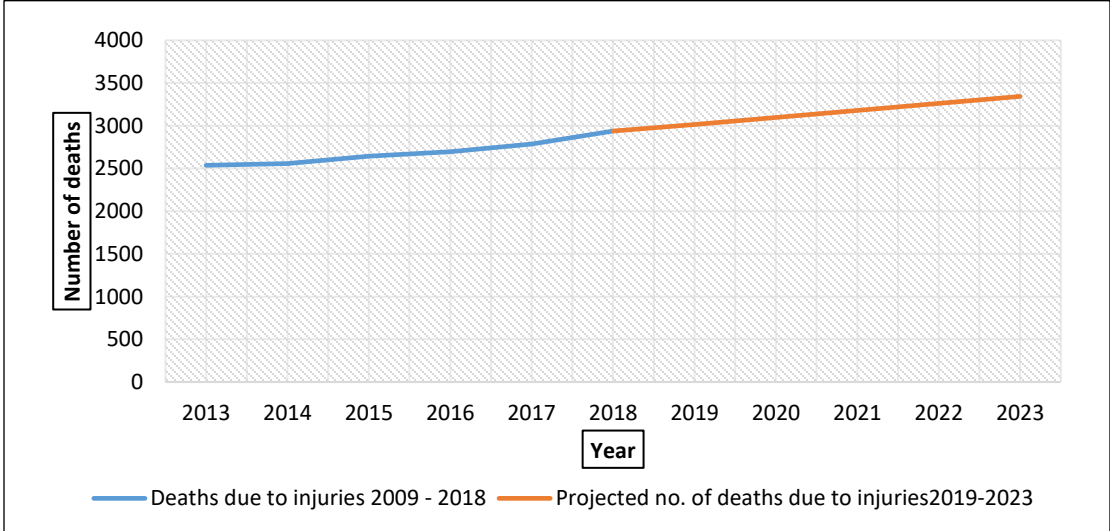
Figure 1.2: Admission due to injuries out of the total admissions to government hospitals from 2009 – 2018



Source: Medical statistics unit, Ministry of Health

According to the IMMS for the last 10 years, deaths due to injuries have increased over the years. However, it has been projected that the number of deaths may increase by 400 by the year 2023 if no intervention for prevention of injuries are carried out (figure 3).

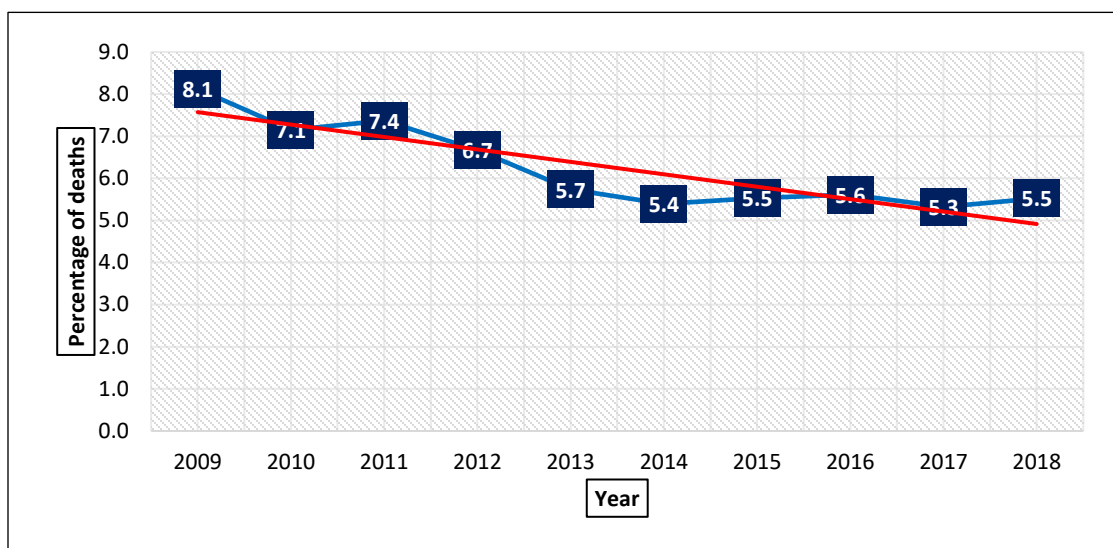
Figure 1.3: Projected number of injury related deaths after admission to government hospitals 2019 to 2025



Source: Medical statistics unit, Ministry of Health

Even though the total number of deaths after admission to government hospitals have increased over the years, a gradual decline has been observed in injury related deaths of all deaths after admissions to government hospitals. On average it was about 6%. In 2009, it was 8.1%, but in 2019 it was 5.2% and on average it was about 6%. (Figure1.4).

Figure 1.4: Deaths due to injuries out of the total deaths after admission to government hospitals 2009 to 2018



Source: Medical statistics unit, Ministry of Health

National Injury Surveillance System

The National Injury Surveillance System started in 2016 gives more information of injuries reported from sentinel hospitals compared to the IMMS. There are four components of National Injury Surveillance.

1. Outpatient surveillance
2. Inpatient (inward) surveillance
3. Death surveillance
 - 3.1 Death notification
 - 3.2 Death investigation and review
4. Injury related transfer surveillance

Other than the death investigation and review which has not yet been started, all the other components of the National Injury Surveillance System have shown a good progress.

Performance indicators and targets

National Injury Surveillance programme has set indicators and performance targets to monitor the programme. As there is no accurate and reliable data sources to calculate the coverage at the moment, the coverage is calculated according to estimated numbers derived from several sources based on assumptions.

Coverage:

The overall coverage expected from any component of the National Injury Surveillance is set as 80% for decision making purposes. Hence,

1. Of all injuries treated as outpatients, at least 80% should be reported
2. Of all injuries treated as inpatients, at least 80% should be reported
3. Of all injury related deaths, at least 80% should be reported
4. Of all patients with injuries transferred from the hospital to another hospital for any reason, at least 80% should be reported
5. But the coverage of completion of data elements of all reported injuries through H 1258 forms should be 100%

Calculation of coverage:

Each year, at least 8% increase of coverage is expected from each hospital for all of the components mentioned above; Therefore, hospitals as well as nationally are expected to achieve the final target of 80% in 10 years, i.e., in 2028.

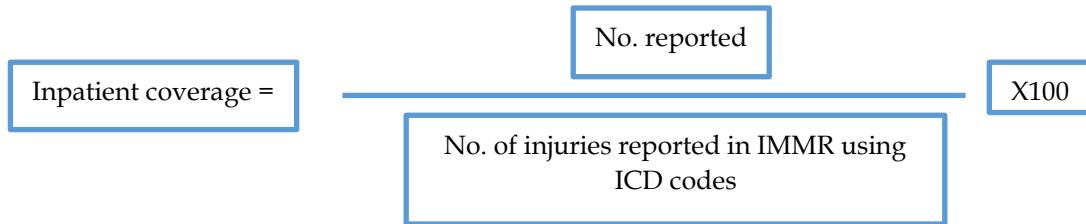
Outpatient coverage

To calculate the outpatient coverage, the denominator should be the total number of patients treated as outpatients for injuries. As there is no system currently in place to obtain the total number of patients treated as outpatients, the denominator for the outpatient coverage assessment is considered to be twice as much as injuries reported via IMMR using ICD codes based on survey data from some sentinel hospitals and existing literature.

$$\text{Outpatient coverage} = \frac{\text{No. reported}}{\text{Estimated no. of OPD injuries (2X No. reported in IMMR using ICD codes for the last completed year)}} \times 100$$

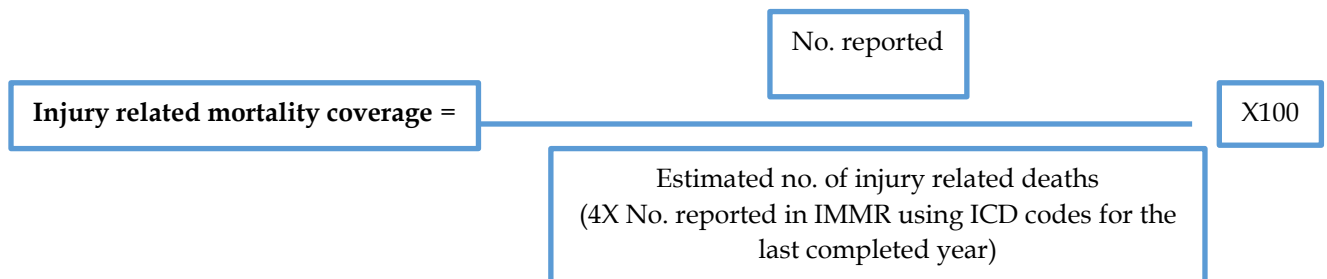
Inpatient coverage

The total number of BHTs entered in to eIMMR using ICD codes is considered as the denominator to calculate the inpatient coverage.



Injury related mortality coverage

To calculate the Injury related mortality coverage, the denominator should be the total number of deaths reported to the hospital (i.e. the sum of injury deaths reported in eIMMR and on admission deaths). Other than the injury deaths reported through eIMMR, no mechanism is being in place to obtain total number of deaths reported to the hospital. According to the available data, an estimated number of 12000 deaths occur annually due to injuries. Out of that, around 3000 deaths are reported through IMMR. Hence, it is assumed that for each injury reported in IMMR, at least 3 deaths can be reported as on admission deaths. With this assumption, the current denominator of **Injury related mortality coverage** assessment is considered to be four times as the injuries reported via IMMR using ICD codes.



Coverage of completeness

Completeness of the surveillance is measured by considering the data elements in the H 1258 form considered for the calculation of coverage.

Coverage of overall completeness

To calculate the coverage of overall completeness of data elements filled in the H 1258 forms, the denominator should be considered as the total number of data elements in the total number of H 1258 forms considered for calculation. The total number of data elements marked in the forms considered should be taken as the numerator.

$$\text{Overall completeness} = \frac{\text{Some of total no. of data elements filled in all H 1258 forms considered for calculation in all H 1258 forms considered for calculation}}{\text{Total no. of data elements in all H 1258 forms considered for calculation}} \times 100$$

Coverage of completeness of a single data element

To calculate the coverage of the completeness of a single data element filled in the forms, the denominator should be considered as the total number of forms considered for calculation. The total number of the selected data element marked in the forms considered should be taken as the numerator.

$$\text{Completeness of a selected data element} = \frac{\text{No. of H 1258 forms marked for the selected data element}}{\text{Total no. of H 1258 forms considered for calculation}} \times 100$$

National Injury Surveillance performance

Table 1.1: Injury surveillance performance in 2018

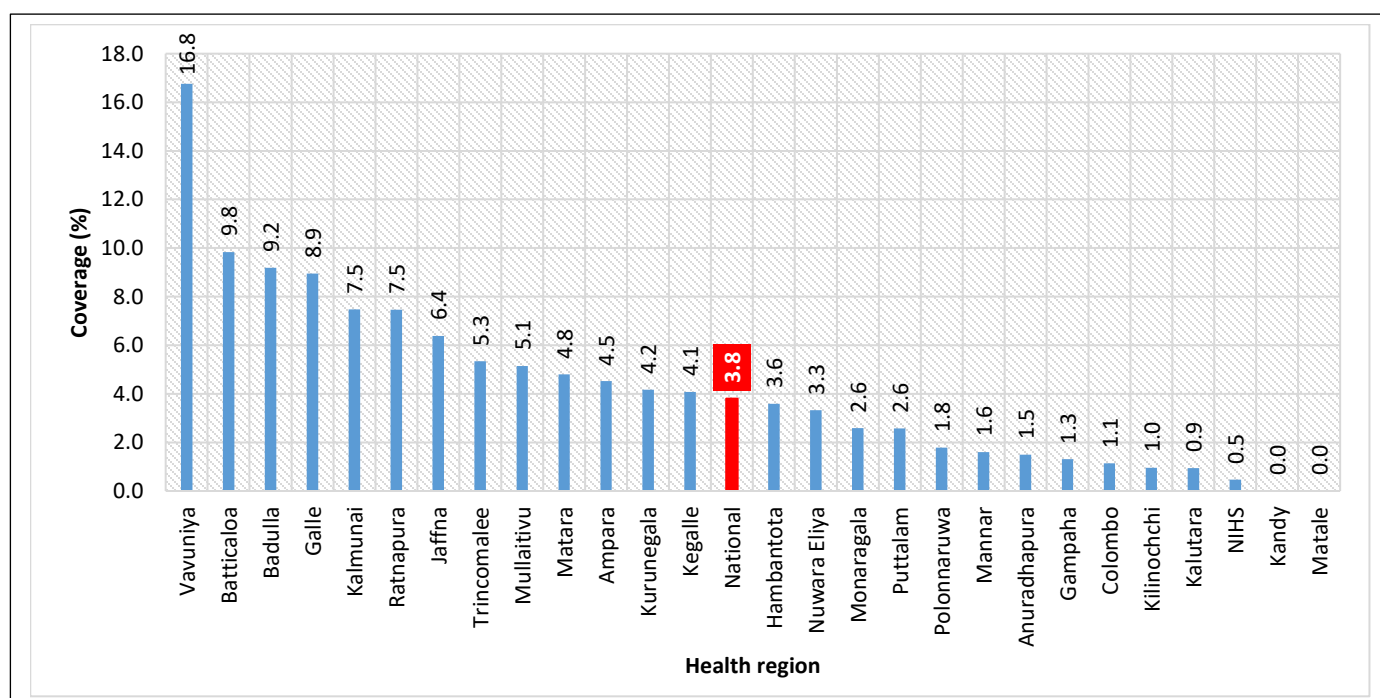
Surveillance Component	Reported number	National Coverage (%)
Outpatient	70,314	3.8*
Inpatient	238,658	25.8
Death	860	7.7

The coverage of outpatient, inpatient and death surveillances were 3.8%, 25.8% and 8.4% respectively.

* Some sentinel hospitals are performing paperless online systems (either Health Management Information System – HMIS or Hospital Health Information Management System – HHMIS) for patients attending for outpatient treatment. Therefore, some of these hospitals do not conduct outpatient surveillance in the outpatient departments (OPD). But when calculating outpatient coverage, all hospitals are considered together, regardless of the system performed in the outpatient department.

National Injury Surveillance health region and provincial performances

Figure 1.5: Coverage of outpatient surveillance by Health region – 2018



*Kandy and Matale districts of Central province have not yet started outpatient surveillance. Only Nuwara Eliya health division started out patient surveillance of the 3 districts in Central province

Figure 1.6: Coverage of outpatient surveillance by province – 2018

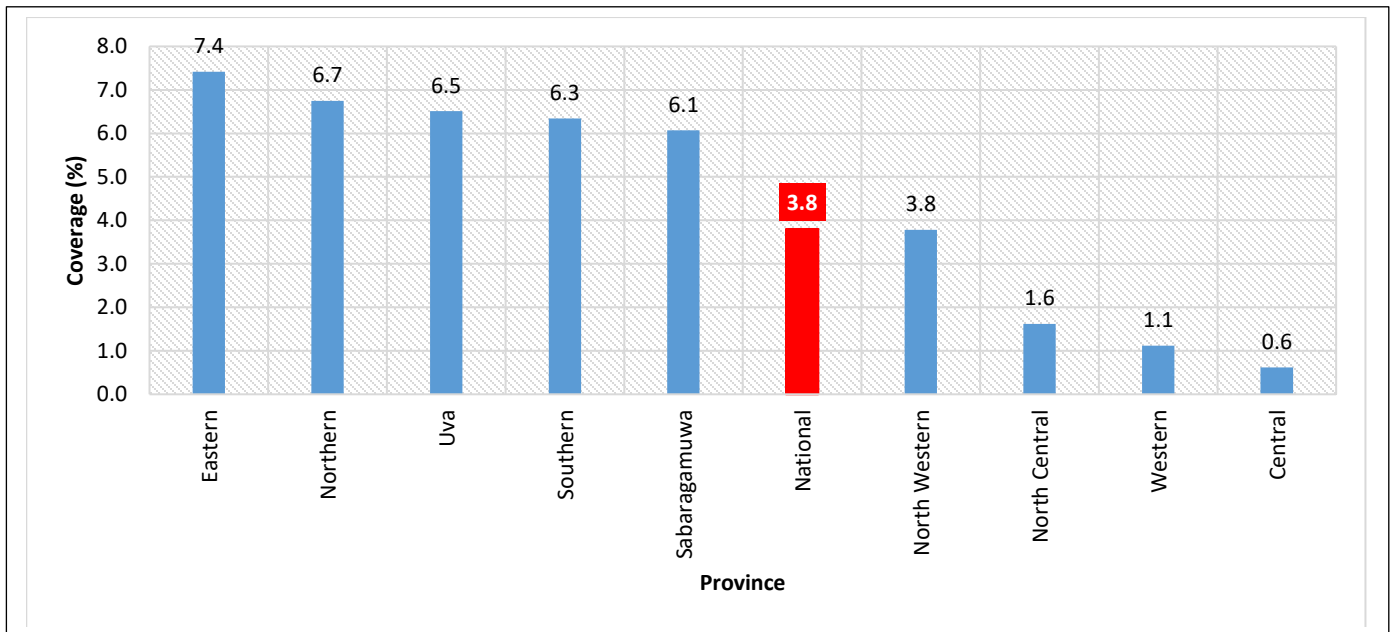
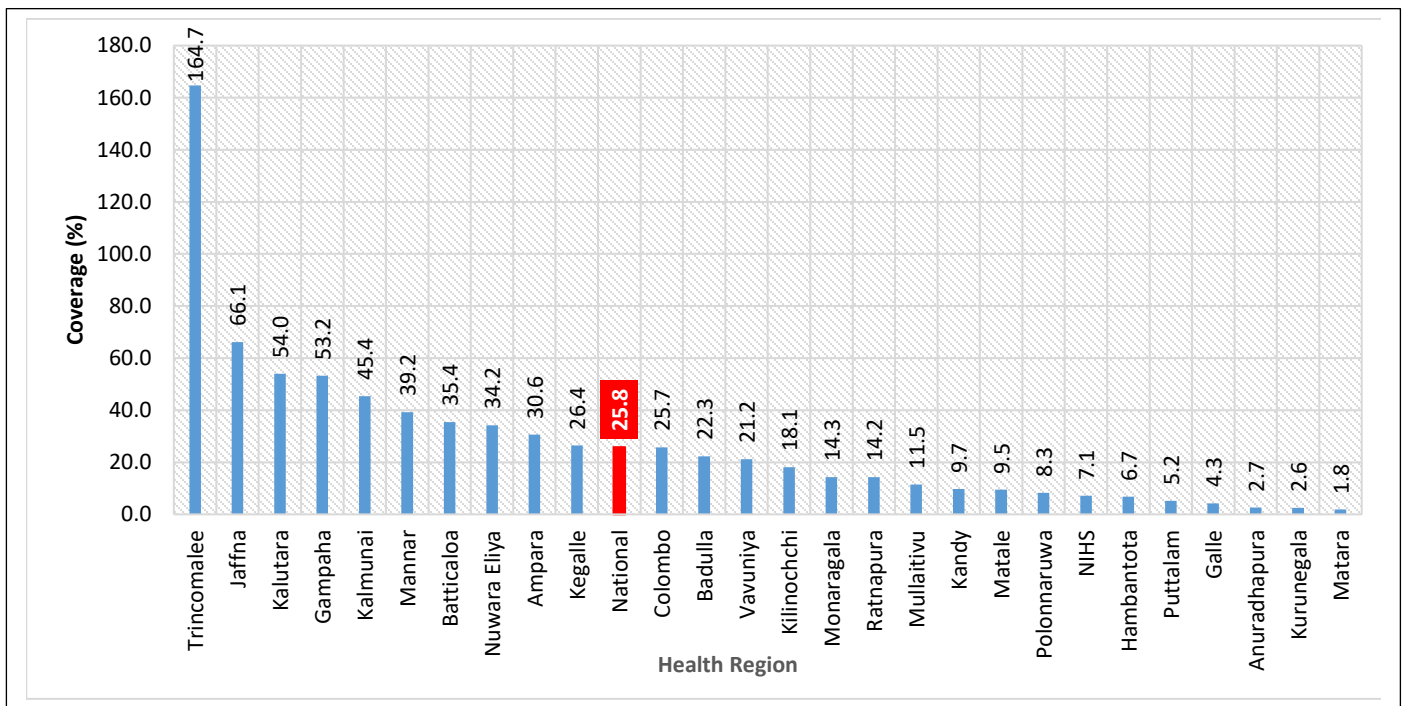


Figure 1.7: Coverage of inpatient surveillance by Health division – 2018



*An unusual higher number of injury data entry into inpatient surveillance was observed in the DGH Trincomalee in the Trincomalee district of Eastern province. But it was later identified as a reporting error.

Figure 1.8: Coverage of inpatient surveillance by province - 2018

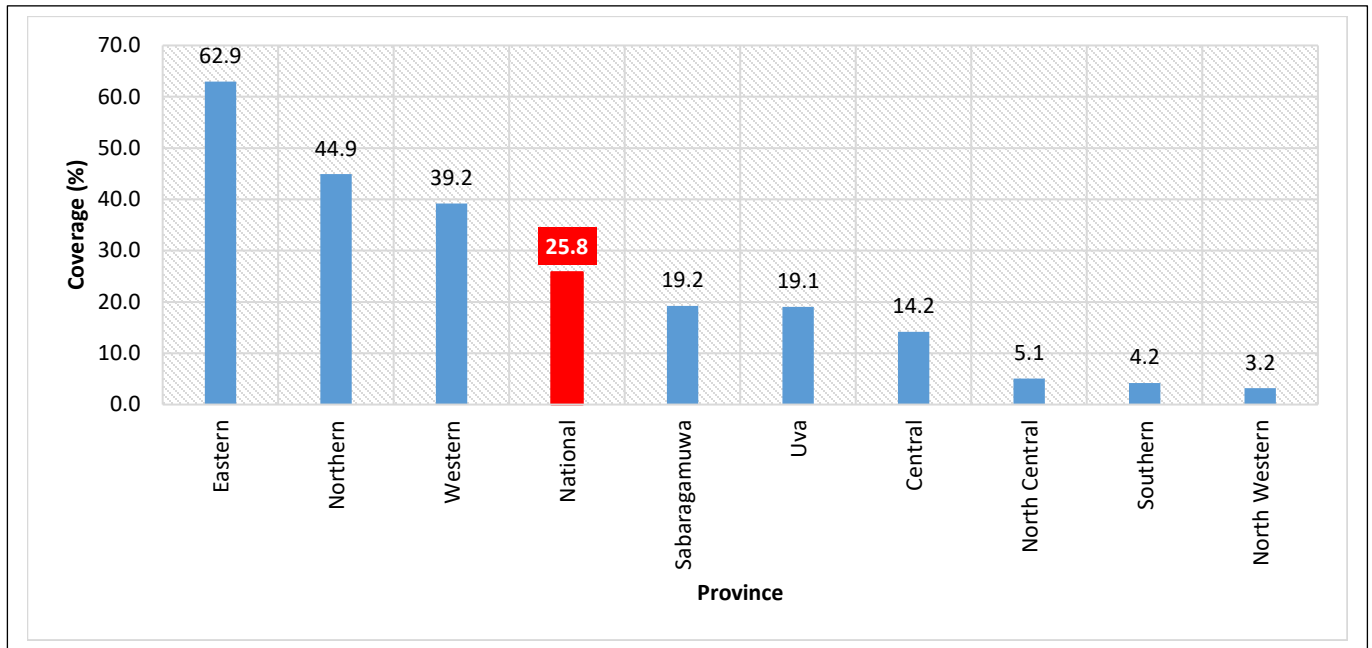
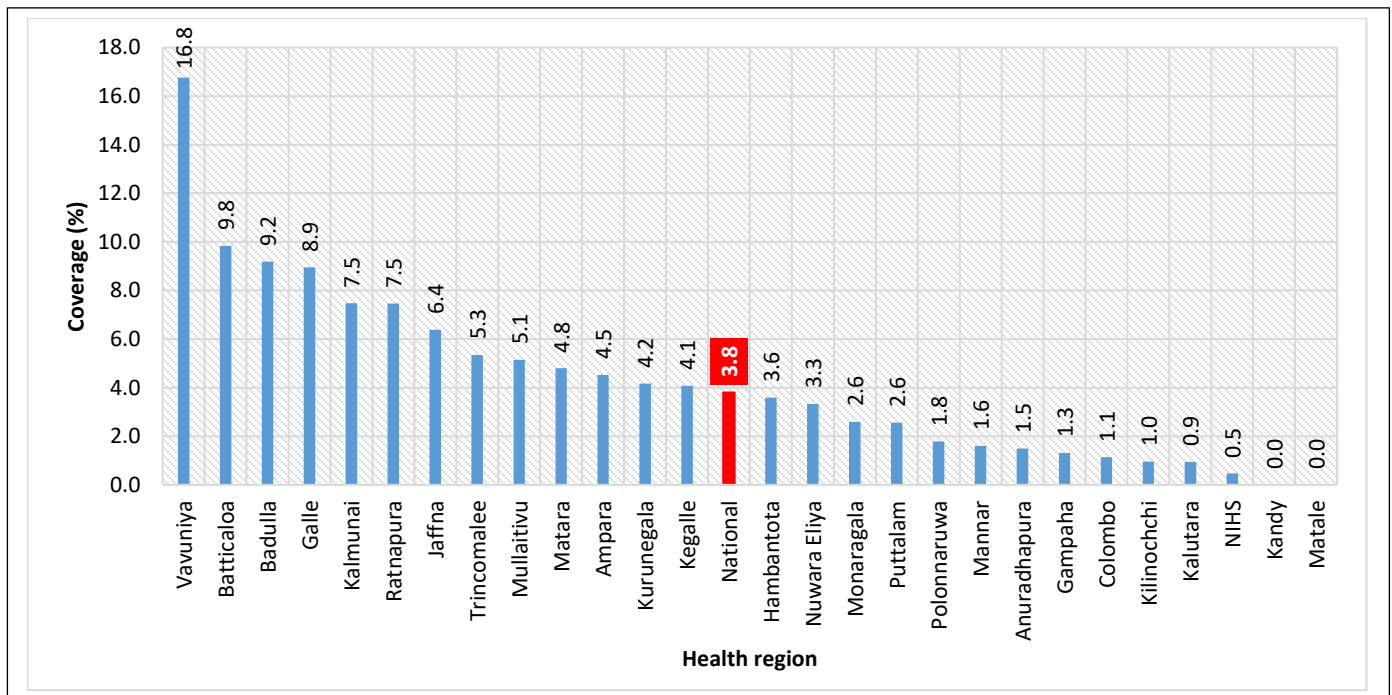


Figure 1.9: Coverage of outpatient surveillance by Health region - 2018



*Kandy and Matale districts of Central province have not yet started outpatient surveillance. Only Nuwara Eliya health division started out patient surveillance of the 3 districts in Central province

Figure 1.10: Coverage of outpatient surveillance by province - 2018

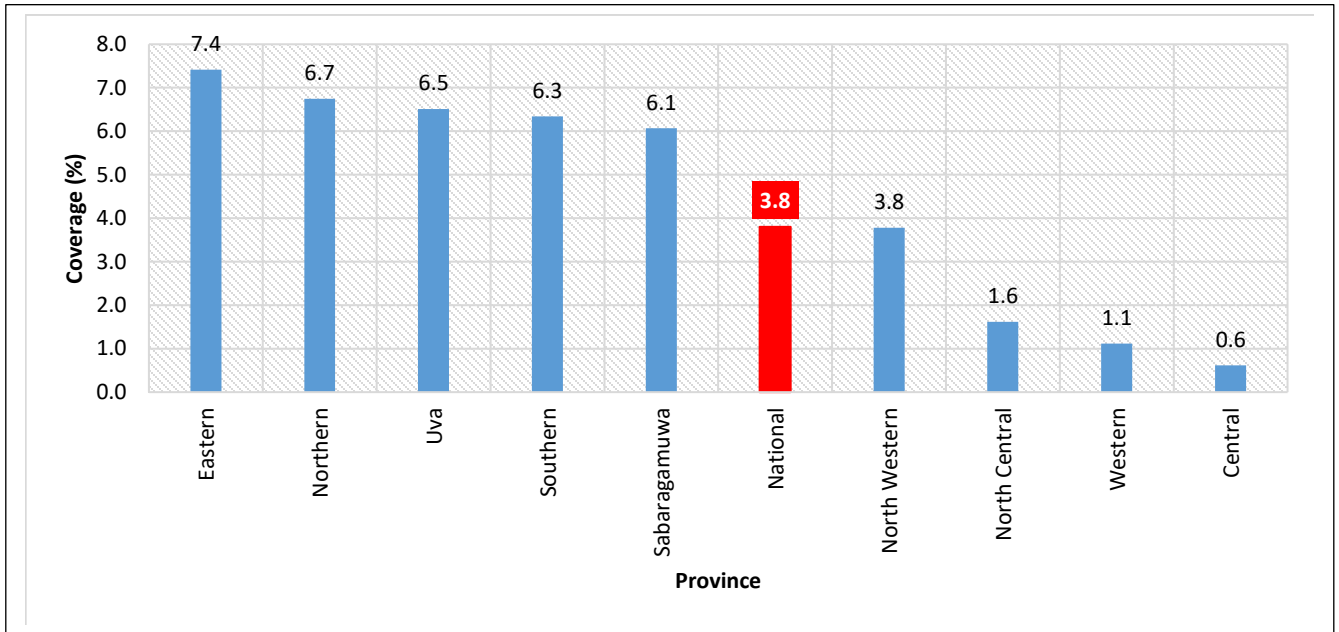
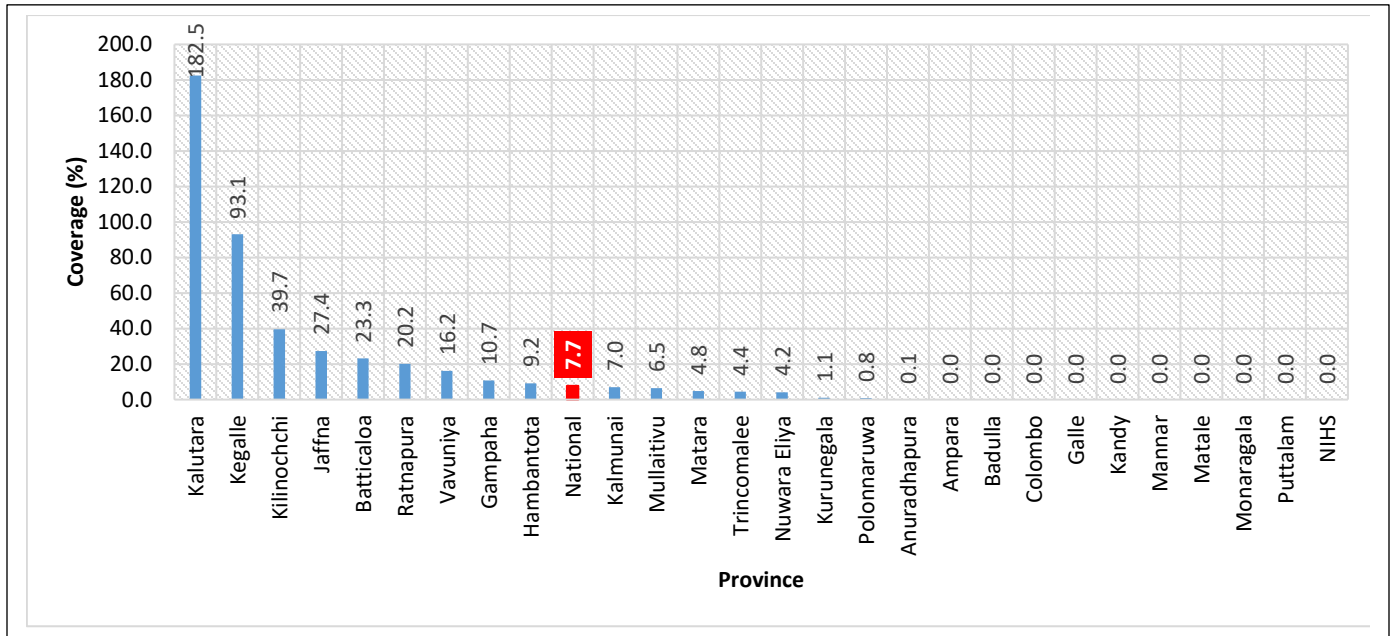


Figure 1.11: Coverage of death notification by Health region - 2018



*All hospitals in the Uva province, all hospitals in the Central province except DBH Rikillagaskada, all hospitals in the Colombo, Galle, Mannar and Puttalam districts and DGH Kalutara in the NIHS Kalutara have not yet started death notification.

Figure 1.12: Coverage of death notification by province - 2018

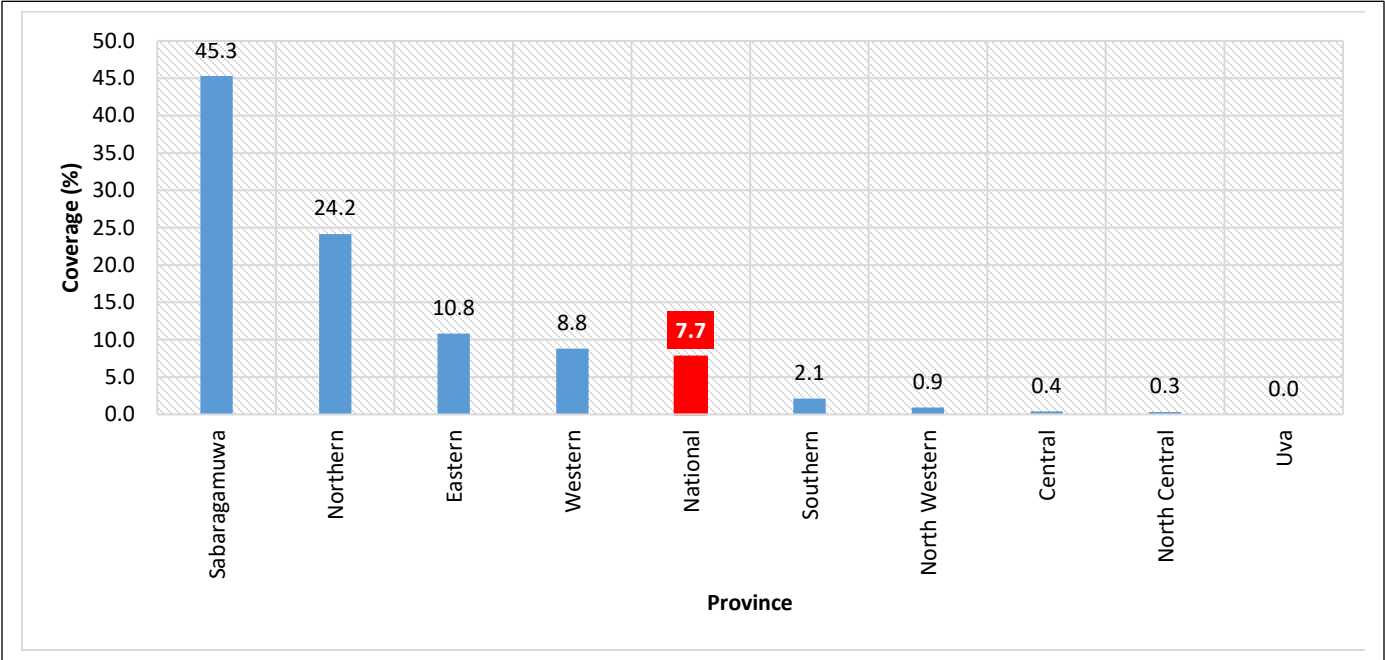


Table 1.2: Number and coverage of Outpatient, inpatient, and death surveillance of Sentinel Hospitals - 2018

Province	Health Region	Hospital	Number & Coverage (%)					
			Outpatient		Inpatient		Deaths	
			No	%	No	%	No	%
Central	Kandy	Dental Hospital Peradeniya	0	0.0	2	1.0	0	0.0
		Gampola	0	0.0	117	1.2	0	0.0
		Kandy	0	0.0	0	0.0	0	0.0
		Nawalapitiya	0	0.0	372	5.5	0	0.0
		Peradeniya	1	0.0	1408	13.5	0	0.0
		Sirimavo Bandaranayaka Children's' Hospital	0	0.0	1634	46.2	0	0.0
		Teldeniya	0	0.0	1760	53.4	0	0.0
	Matale	Dambulla	0	0.0	2342	12.0	0	0.0
		Matale	0	0.0	921	6.2	0	0.0
	Nuwara Eliya	Dikoya	415	5.2	354	9.0	0	0.0
		Nuwara Eliya	866	3.5	4322	34.6	0	0.0
Rikillagaskada		66	0.9	2246	59.3	5	62.5	
Eastern	Ampara	Ampara	171	1.0	877	10.3	0	0.0
		Dehiattakandiya	712	7.1	3106	62.3	0	0.0
		Mahaoya	398	31.1	357	55.8	0	0.0
	Batticaloa	Batticaloa	2508	8.1	7031	45.3	47	37.9
		Eravur	1300	14.9	1540	35.2	0	0.0
		Kaluwanchikudy	1438	24.2	520	17.5	0	0.0
		Kattankudy	696	6.7	1143	21.9	0	0.0
		Valachenai	240	3.6	877	26.4	0	0.0
	Kalmunai	Akkaraipattu	137	0.7	703	7.2	7	12.5
		Ashraff Memorial	441	3.6	5648	93.0	0	0.0
		Kalmunai North	706	7.6	1143	24.6	0	0.0
Nintavur		1662	27.3	804	26.4	2	66.7	
Pottuvil		0	0.0	1079	70.8	0	0.0	
Sammanthurai		1152	24.1	3057	128.0	0	0.0	

Province	Health Region	Hospital	Number & Coverage (%)					
			Outpatient		Inpatient		Deaths	
			No	%	No	%	No	%
	Trincomalee	Kanthale	734	8.5	2079	48.1	6	16.7
		Kinniya	173	3.7	2566	110.7	0	0.0
		Mutur	499	7.4	2517	74.2	0	0.0
		Trincomalee	491	3.2	22065	286.2	0	0.0
North Central	Anuradhapura	Anuradhapura	1091	1.9	12	0.0	0	0.0
		Kebithigollewa	0	0.0	256	22.6	1	33.3
		Padaviya	0	0.0	180	8.0	0	0.0
		Thambuttegama	29	0.3	553	10.9	0	0.0
	Polonnaruwa	Medirigiriya	853	7.3	2057	35.4	3	75.0
		Polonnaruwa	0	0.0	6	0.0	0	0.0
Welikanda		156	4.8	281	17.2	0	0.0	
North Western	Kurunegala	Dambadeniya	201	1.5	204	3.1	6	15.0
		Galgamuwa	1389	18.3	1324	35.0	7	58.3
		Kuliyapitiya	0	0.0	2	0.0	0	0.0
		Kurunegala	4177	5.5	9	0.0	0	0.0
		Nikaweratiya	0	0.0	227	4.6	0	0.0
	Puttalam	Chilaw	0	0.0	59	0.8	0	0.0
		Marawila	0	0.0	482	6.3	0	0.0
Puttalam		1127	8.1	606	8.7	0	0.0	
Northern	Jaffna	BH Point Pedro	154	1.2	1319	20.6	0	0.0
		BH Thellippalai	0	0.0	1397	21.8	0	0.0
		Chavakachcheri	570	7.0	1859	45.7	14	350.0
		Jaffna	2207	5.5	20080	99.8	159	27.4
		Kayts	1923	92.2	492	47.2	0	0.0
	Kilinochchi	Kilinochchi	1	0.0	1615	17.4	25	41.7
		Mulankavil	190	12.4	204	26.5	0	0.0

Province	Health Region	Hospital	Number & Coverage (%)					
			Outpatient		Inpatient		Deaths	
			No	%	No	%	No	%
	Mannar	Mannar	140	1.6	1714	39.2	0	0.0
	Mullaitivu	Mallavi	200	18.6	153	28.5	0	0.0
		Mankulam	226	20.0	141	24.9	0	0.0
		Mullaitivu	3	0.0	426	8.1	3	8.3
		Puthukkudiyiruppu	363	13.8	163	12.4	0	0.0
	Vavuniya	Cheddikulam	83	4.7	147	16.7	0	0.0
Vavuniya		3495	17.8	2111	21.6	29	16.5	
Sabaragamuwa	Kegalle	Karawanella	135	1.1	497	8.1	0	0.0
		Kegalle	1577	4.7	5722	34.3	200	138.9
		Mawanella	393	3.1	2001	31.6	1	12.5
		Warakapola	711	6.6	913	16.8	0	0.0
	Ratnapura	Balangoda	1794	12.9	2145	30.9	40	111.1
		Embilipitiya	637	2.4	1323	9.8	0	0.0
		Kahawatta	1190	8.7	1276	18.6	43	358.3
		Ratnapura	3779	8.9	1998	9.5	0	0.0
Southern	Galle	Balapitiya	0	0.0	1428	13.2	0	0.0
		Elpitiya	0	0.0	642	7.3	0	0.0
		Karapitiya	9019	16.3	5	0.0	0	0.0
		Udugama	0	0.0	68	2.3	0	0.0
	Hambantota	Hambanthota	63	0.2	86	0.6	0	0.0
		Tangalle	1928	14.1	1741	25.4	22	22.9
		Tissamaharama	126	1.2	16	0.3	0	0.0
		Walasmulla	15	0.3	155	7.1	0	0.0

Province	Health Region	Hospital	Number & Coverage (%)					
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			Outpatient		Inpatient		Deaths	
			No	%	No	%	No	%
	Matara	Deniyaya	239	3.7	306	9.6	0	0.0
		Kamburupitiya	6	0.1	2	0.1	0	0.0
		Matara	2881	5.6	287	1.1	18	5.4
Uva	Badulla	Badulla	2957	9.6	2	0.0	0	0.0
		Diyathalawa	1278	9.1	5088	72.2	0	0.0
		Mahiyanganaya	192	1.5	6	0.1	0	0.0
		Welimada	1366	24.7	1934	69.8	0	0.0
	Monaragala	Bibile	351	4.0	1170	26.7	0	0.0
		Monaragala	0	0.0	169	1.4	0	0.0
		Siyabalanduwa	580	13.7	1705	80.7	0	0.0
Wellawaya		178	3.4	19	0.7	0	0.0	
Western	Colombo	Awissawella	0	0.0	4408	19.9	0	0.0
		Colombo East	0	0.0	292	6.0	0	0.0
		Colombo South	2049	5.1	7694	38.6	0	0.0
		Dental Institute	0	0.0	0	0.0	0	0.0
		Homagama	0	0.0	6291	37.8	0	0.0
		Lady Ridgway Hospital	0	0.0	4474	48.6	0	0.0
		National Eye Hospital	0	0.0	1	0.0	0	0.0
		National Hospital of Sri Lanka	0	0.0	9	0.1	0	0.0
	Gampaha	Gampaha	1196	2.9	6584	32.1	0	0.0
		Kiribathgoda	665	5.7	4307	73.9	9	75.0
		Mirigama	32	0.4	2836	64.4	15	34.1
		Negambo	134	0.3	25102	95.6	83	39.2
		Ragama	496	1.0	6723	26.3	0	0.0
Wathupitiwala		67	0.2	7069	43.4	0	0.0	

Province	Health Region	Hospital	Number & Coverage (%)					
			Outpatient		Inpatient		Deaths	
			No	%	No	%	No	%
	Kalutara	Horana	684	2.0	8368	49.9	114	285.0
		Panadura	0	0.0	11199	64.3	1	5.0
		Pimbura	0	0.0	0	0.0	0	0.0
	NIHS Kalutara	Kalutara	210	0.5	1604	7.1	0	0.0
National			70314	3.8	238658	25.8	860	7.7

In addition to the above hospitals, following specialized institutions and district hospitals have contributed for National Injury Surveillance System in 2018

Table 1.3: Number and coverage of Outpatient, inpatient, and death surveillance of Specialized institutions - 2018

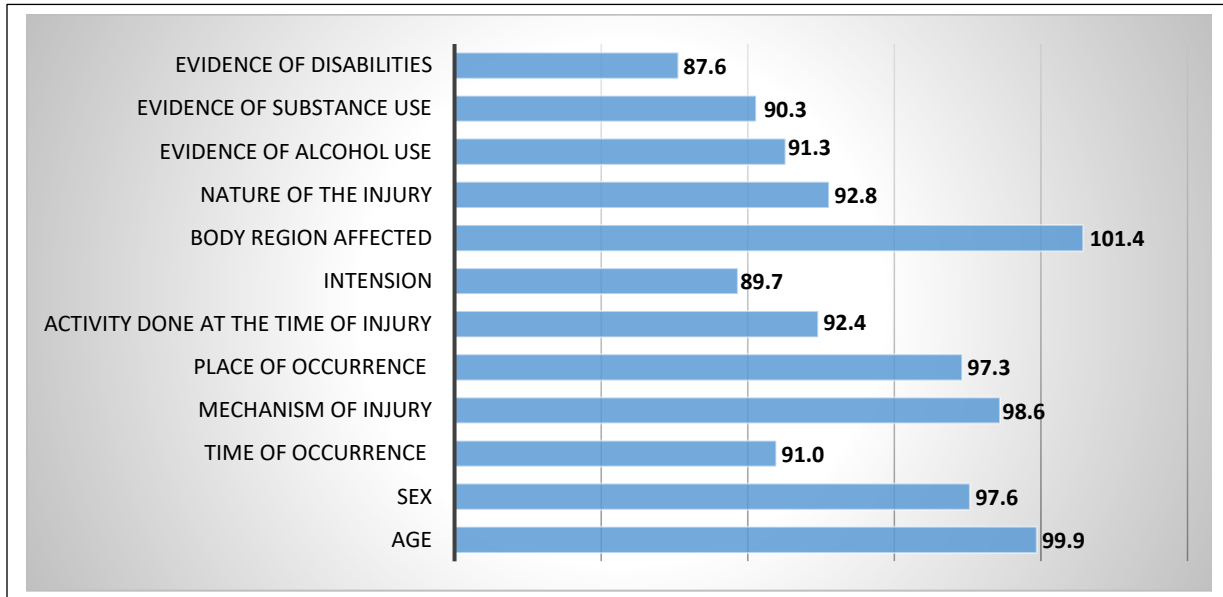
Province	Health Region	Hospital	Number & Coverage (%)			
			Outpatient		Inpatient	
			No	%	No	%
Southern	Galle	Mahamodara	89	890.0	18	360.0
Western	Gampaha	NHRD Welisara	0	0.0	1	3.4
		Rehabilitation - Ragama	0	0.0	16	6.4

Table 1.4: Coverage of Outpatient, inpatient, and death surveillance of non-Sentinel Hospitals - 2018

Province	Health Region	Hospital	Number & Coverage (%)					
			Outpatient		Inpatient		Deaths	
			No	%	No	%	No	%
North Central	Anuradhapura	Elayapattuwa	0	0.0	325	37.3	0	0.0
		Galkiriyagama	0	0.0	185	20.3	0	0.0
		Mihinthale	21	0.7	239	16.1	0	0.0
		Nelubewa	116	5.6	723	70.4	0	0.0
		Rambewa	0	0.0	196	20.1	0	0.0
	Polonnaruwa	Aralaganwila	654	23.6	0	0.0	0	0.0
		Aththanakadawala	59	2.6	252	22.3	0	0.0
		Bakamuna	193	7.4	985	76.0	3	100.0
		Hingurakgoda	52	1.0	861	34.4	1	12.5
		Manampitiya	186	10.0	408	43.8	0	0.0
		Pulasthigama	188	9.3	715	70.4	0	0.0
Rehabilitation Hospital Jayanthipura	351	24.9	168	23.9	0	0.0		
North Western	Puttalam	Anamaduwa	1026	27.0	1324	69.6	10	50.0
		Dankotuwa	211	3.7	1146	40.2	0	0.0
		Kalpitiya	0	0.0	320	31.4	0	0.0
Northern	Jaffna	Atchuveli	0	0.0	96	6.4	0	0.0
		Chankanai	0	0.0	262	21.4	0	0.0
		Karainagar	0	0.0	50	10.1	0	0.0
		Valvettithurai	0	0.0	33	3.6	0	0.0
Western	Kalutara	Ingiriya	0	0.0	503	31.4	0	0.0
		Mathugama	0	0.0	136	5.8	0	0.0

Completeness of filling of identified items in H 1258 injury information form

Figure 1.13: Completeness of reporting of each data element identified in outpatient injury surveillance by percentage



Filling of identified data element in outpatient injury surveillance was ranged from minimum of 87.6% (evidence of disability at the time of discharge) to a maximum of 101.4% (body region affected).

Figure 1.14: Completeness of reporting of each data element identified in inward injury surveillance by percentage

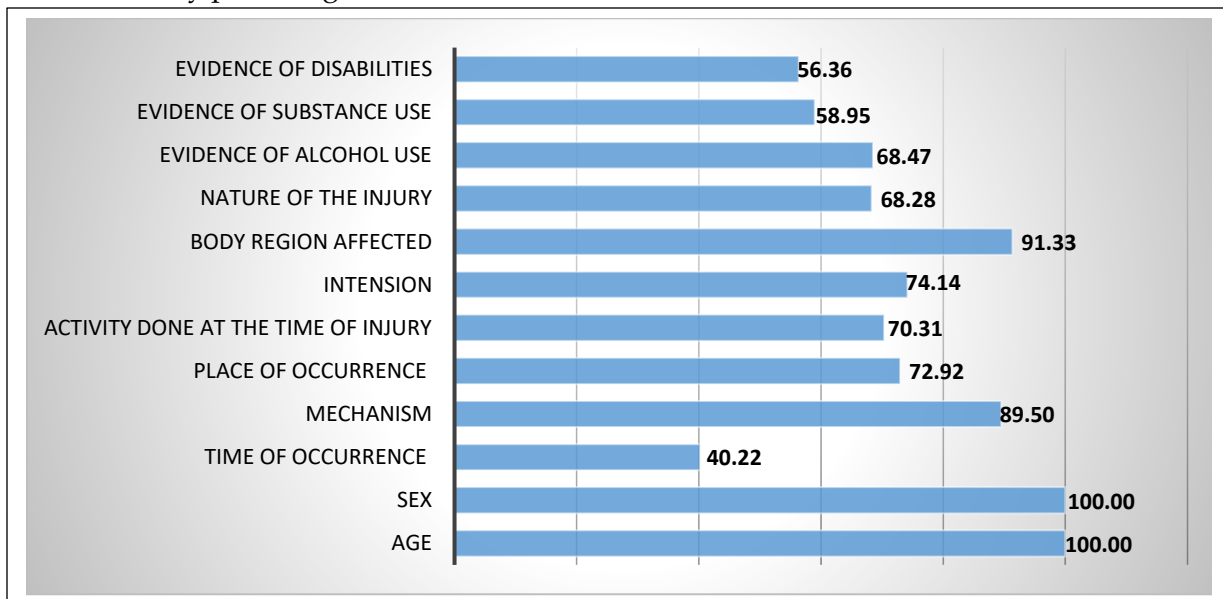
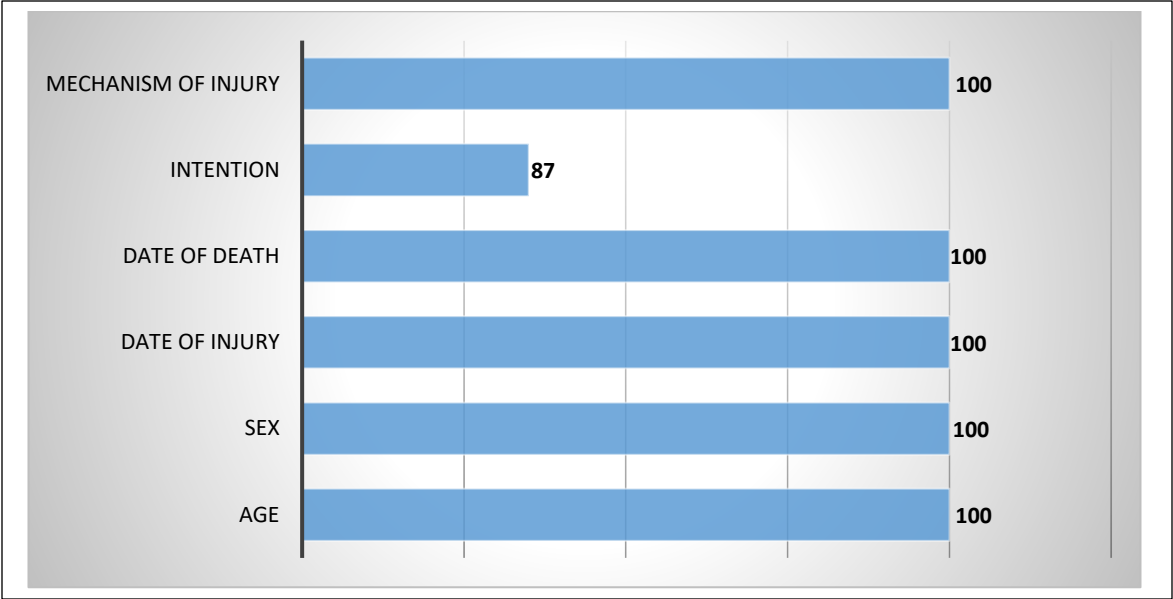


Figure 1.15: Completeness of reporting of each data element identified in injury death surveillance by percentage



Except intent (87%), filling of all the other elements was 100%.

2. Current status of injuries (Inpatient)

- 3/4 of injury victims had inward care for one day
- Male to female ratio of the victims was 2:1
- Of both sexes, children, adolescents and young adults were mostly affected
- Most of the injuries occurred on Mondays and during the day time.
- A downward trend was observed in occurrence of injuries from 6 am to 12 noon during the weekends. Upward trend was observed in occurrence of injures from 12 noon to 6 pm and 6 pm to 12 midnight during the weekends.
- Leading mechanism of injury was falls (24.7%) followed by animal bites (19.1%) and transport injuries (17.7%)
- Most injuries occurred at home (40.4%) followed by street/ road/highways (26.8%)
- Home and residential institution injuries were common among children and adults. Injuries at street/ road/ highways were common among adolescents, youth, and young adults.
- Most injuries occurred while travelling (25%); 21% occurred while engaged in leisure activity and 16.7% occurred while engaged in household activity
- Most injuries were unintentional.
- Most injuries due to poisoning and stuck/ hit by person were intentional (71% and 64% respectively).
- Limbs were mostly affected (Lower limbs – 30.5% and upper limbs ~28%) and more than 50% of victims had superficial injuries.
- In 4% of injuries, alcohol was involved; in 1% of injuries substance use was evident
- 91% of the victims were left with some kind of disability at the time of discharge

236471 injury victims admitted to government hospitals were reported through national injury surveillance system in 2018 until the date of analysis.

Table 2.1: Summary of the number of inpatient days at hospitals*

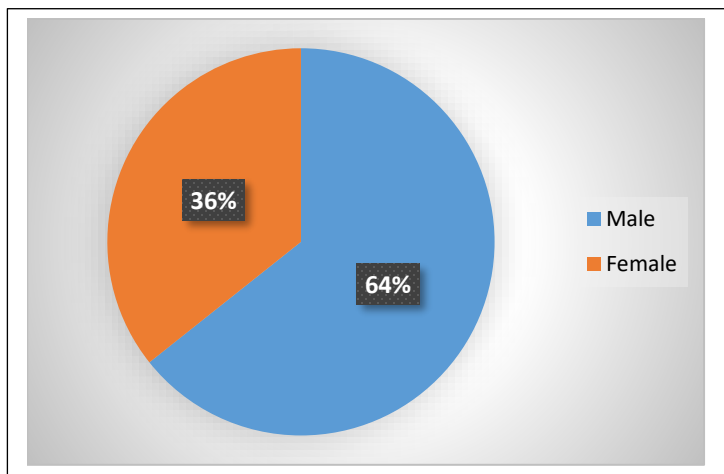
	Mean	Mode	Minimum	Maximum	Std. Deviation
Patient Days	1.65	1	1	143	2.628

Average number days of hospital stay by an injured victim was 1.65 days. 78% of the victims had inward care for 1 day.

*In some of the hospitals, patients are initially treated at emergency treatment unit (ETU) or accident and emergency (A and E) unit or primary care unit (PCU) etc. Usually, a bed head ticket (BHT) is started for any patient treated at any of the above unit. Therefore, even if a patient is treated and sent home on same day (within 24 hours; as in case of most of the animal bites), the BHT goes to the medical record office (MRO) and the details are entered to eIMMR along with the information collected through H 1258. This could be the most probable reason for above.

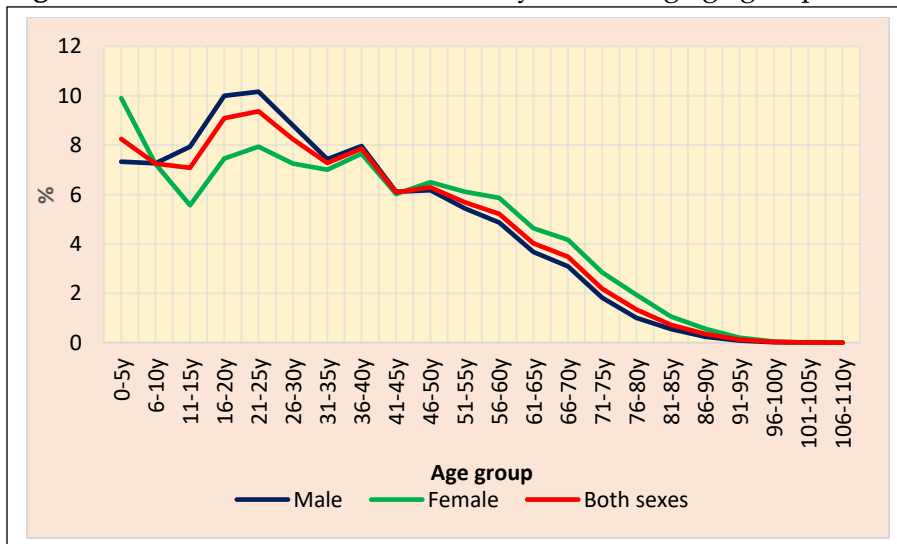
A. Sex and age distribution of victims

Figure 2.1: Sex distribution of the victims



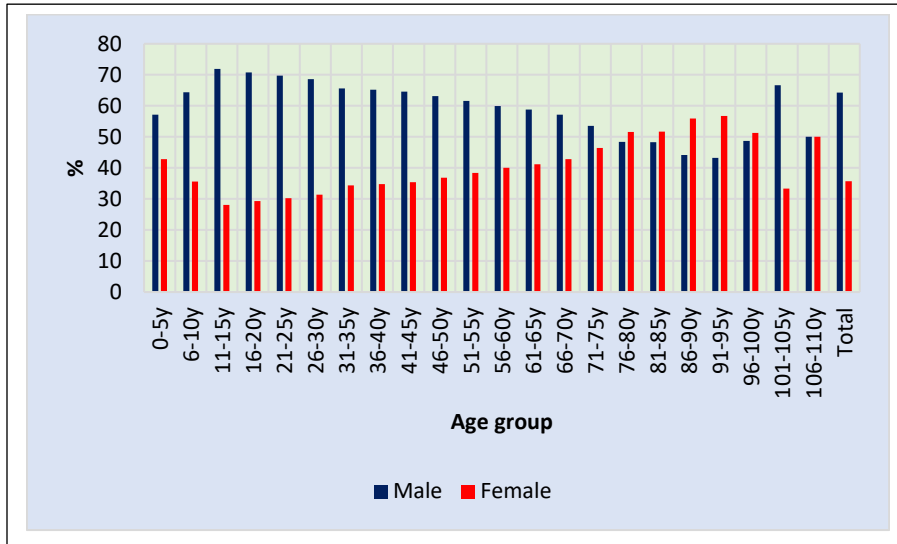
Male to female ratio of the victims was 2:1,

Figure 2.2: Distribution of the victims by sex among age groups



Children less than 5 years and adolescents, youths and young adults belonged to 16 to 40 years of ages were mostly affected in both sexes (67% of males, 60% of females and 64% of both sexes)

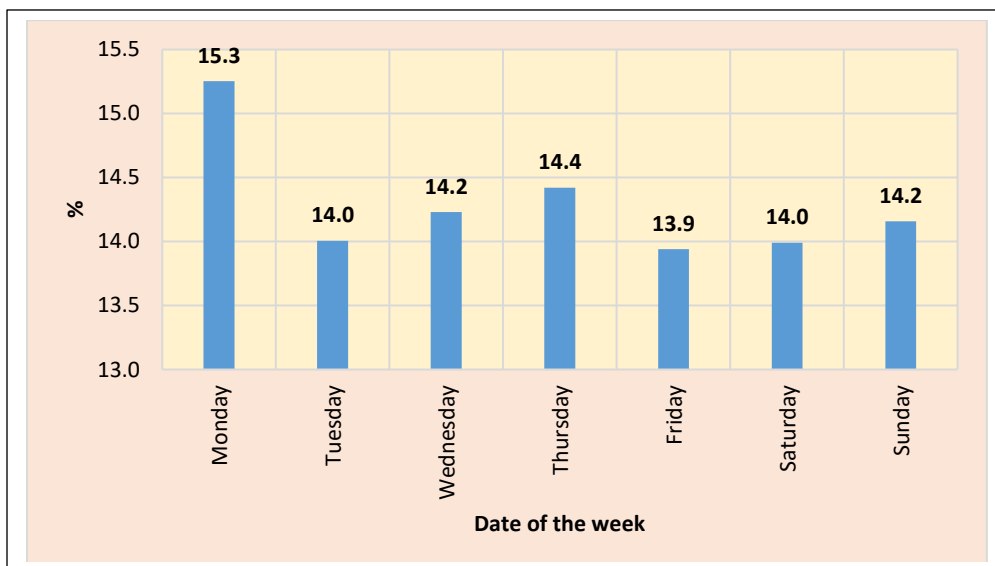
Figure 2.3: Age specific distribution of victims by sex



Males were mostly affected in all age groups except in elders of 76 – 100 years of age in which females were mostly affected.

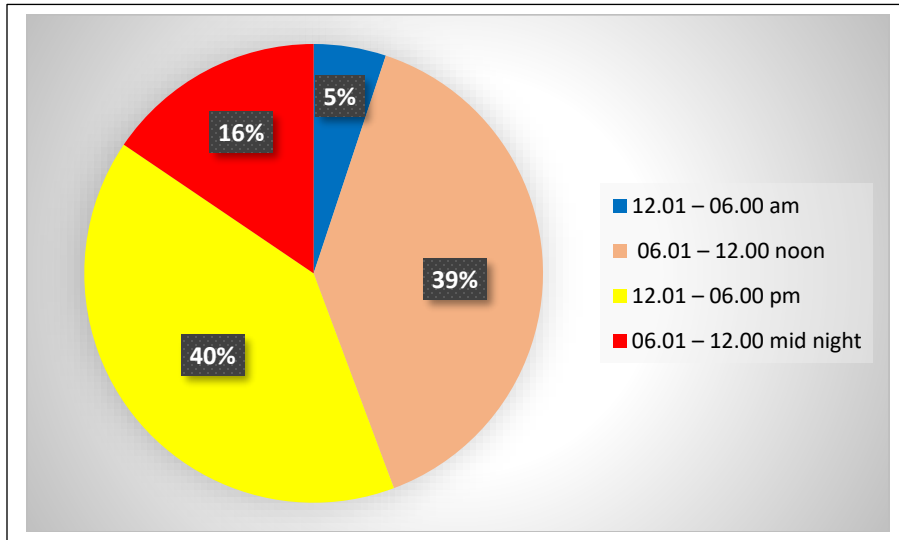
B. Date and time of occurrence of injuries

Figure 2.4: Distribution of injuries according to the date of the week



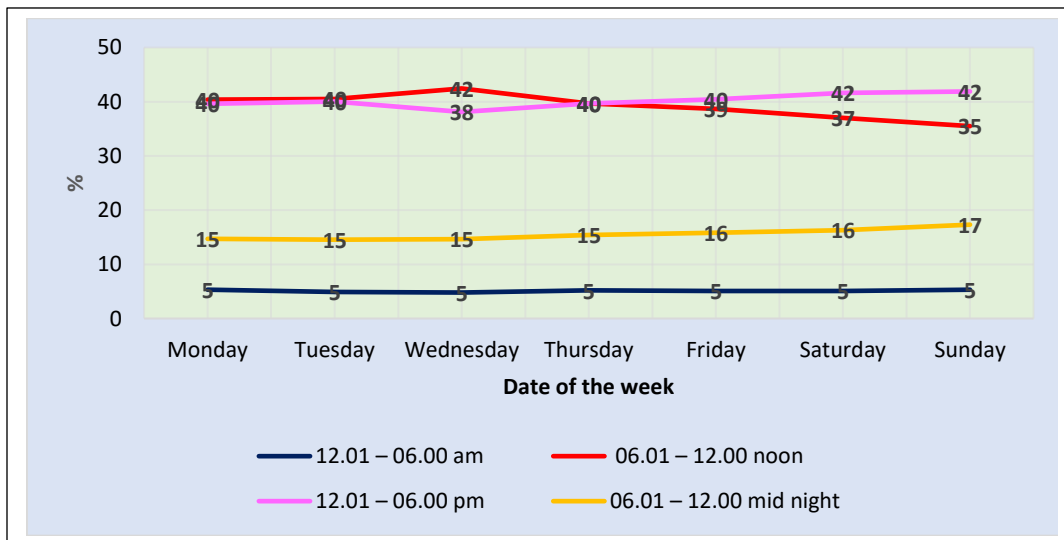
While most of injuries occurred on Mondays (15.3%), least number of injuries occurred on Fridays (13.9%).

Figure 2.5: Time of occurrence of injuries



80% of the injuries occurred during the day time. But 20% occurred from 6 pm to 6 am in which 16% occurred from 6 pm to mid night.

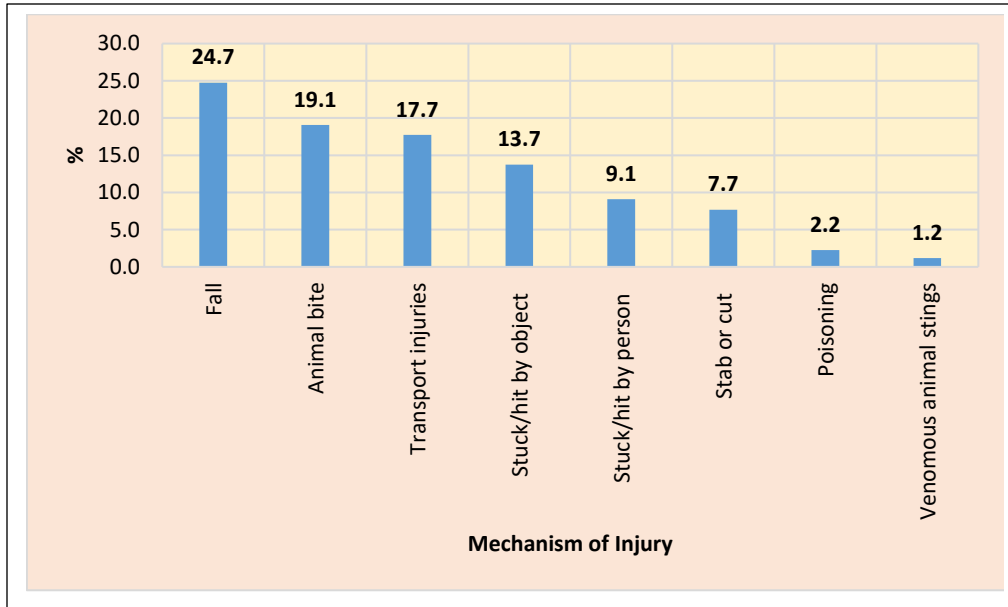
Figure 2.6: Distribution of injuries during the week by time of occurrence



There was no change was observed in frequency of occurring injuries during 12 mid night to 6 am throughout the week. Though there was an increase of occurring injuries from 6 am to 12 noon were observed on Wednesdays, a downward trend was observed towards the weekends. Occurrence of injures during 12 noon to 6 pm and 6 pm to 12 midnight have also increased towards the weekends.

C. Mechanism of injury

Figure 2.7: Leading mechanisms of injury



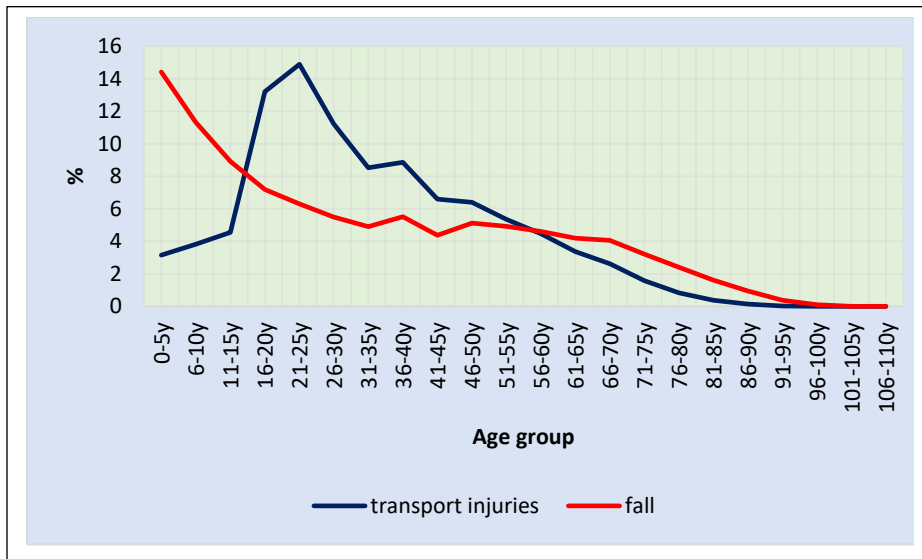
Leading mechanism of injury was falls (24.7%) followed by animal bites (19.1%), transport injuries (17.7%), stuck of hit by object (13.7%) and person (9.1%), stab or cut (7.7%), poisoning (2.2%) and venomous animal stings (1.2%).

- ❖ **Distribution of common injury mechanisms by age groups (Figures: 2.8, 2.9, 2.10), time (Figure 2.11) and date (Figure 2.12)**

Mechanism of Injuries considered in this analysis were,

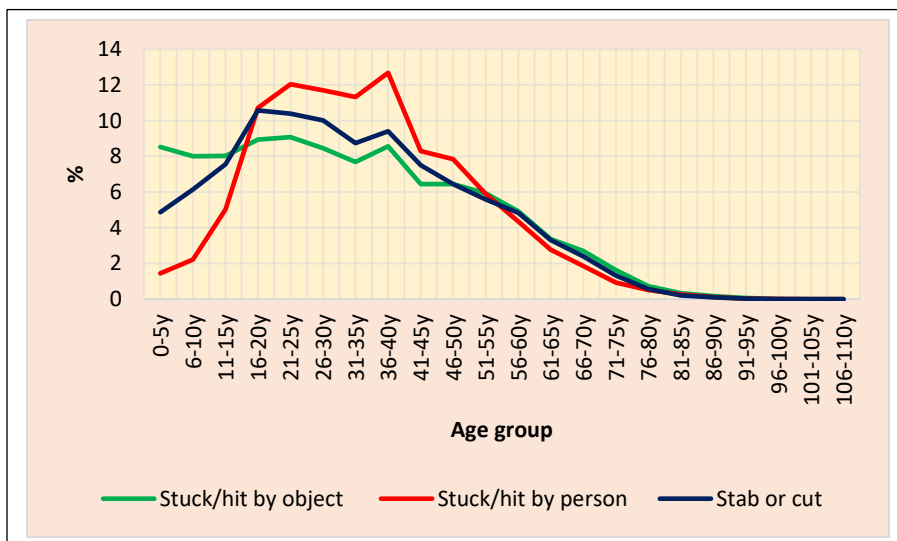
Falls, transport accidents, stuck/ hit by object and by person, stab/ cut injuries, animal bites, poisoning and venomous animal stings.

Figure 2.8: Distribution of falls and transport injuries by age groups



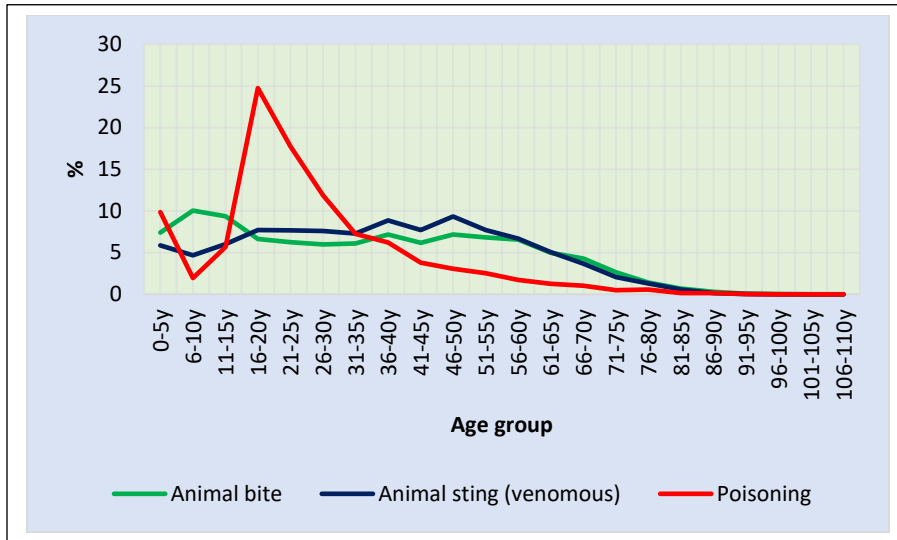
Transport injuries were commonest among 16 – 25 years age group. Falls were highest among children less than 5 years of age and gradually reduced with age.

Figure 2.9: Distribution of injuries due to stuck/ hit by object, and by person and by stab/cut injuries by age groups



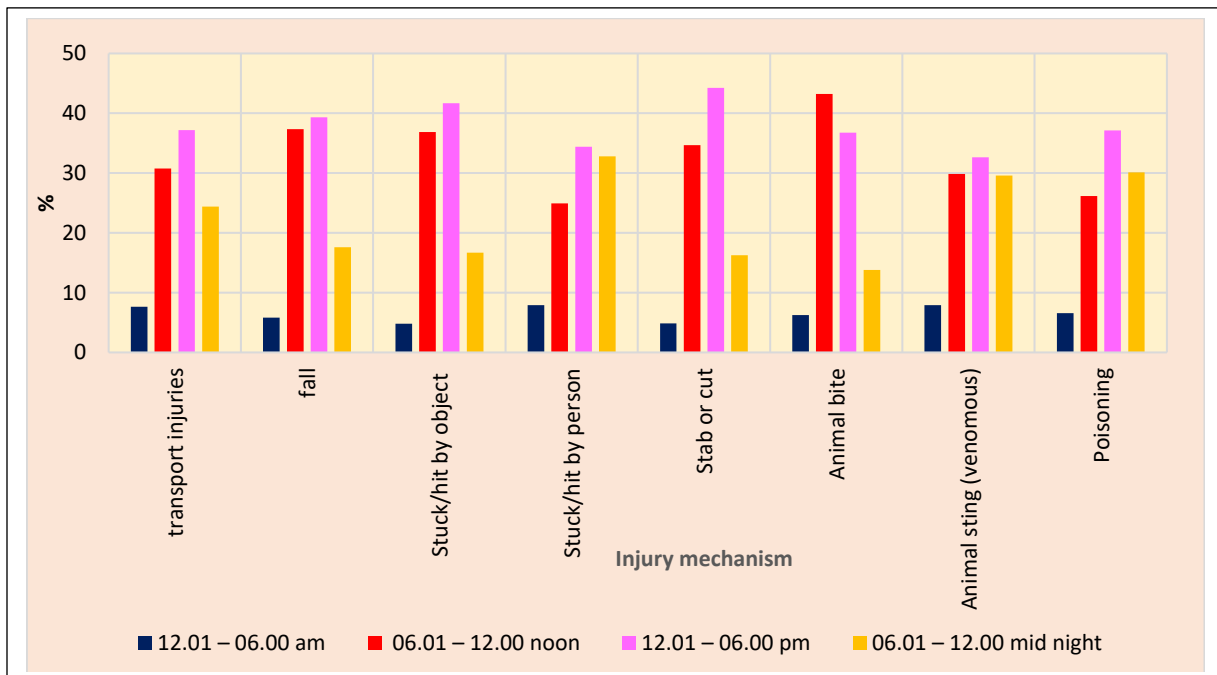
Stuck/ hit by object, by person and stab or cut injuries were common among 16 – 40 year age group.

Figure 2.10: Distribution of animal bites, venomous animal stings and poisoning by age groups



Animal bites were commonest among children between 6 to 15 years of age and then it was similar among all the other ages below 60 years. Poisoning was commonly reported among preschoolers, adolescents, youth and young adults.

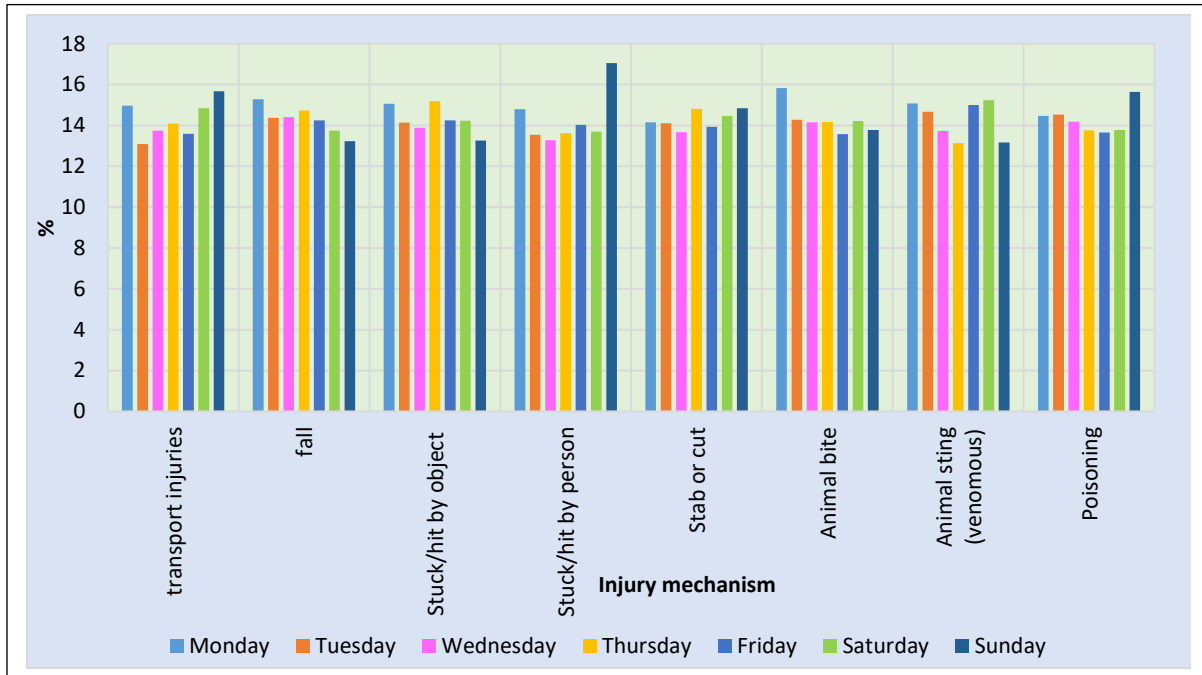
Figure 2.11: Distribution of occurrence of selected injuries at different time period during the day



Even though, most of the injuries were occurred during the day time (from 6.01 am to 6.00 pm), injuries due to stuck/ hit by person, venomous animal stings and poisoning related injuries

occurred during the latter part of the day especially after 12 noon to 12 midnight. 24% of transport injuries were also occurred from 6 pm to 12 midnight.

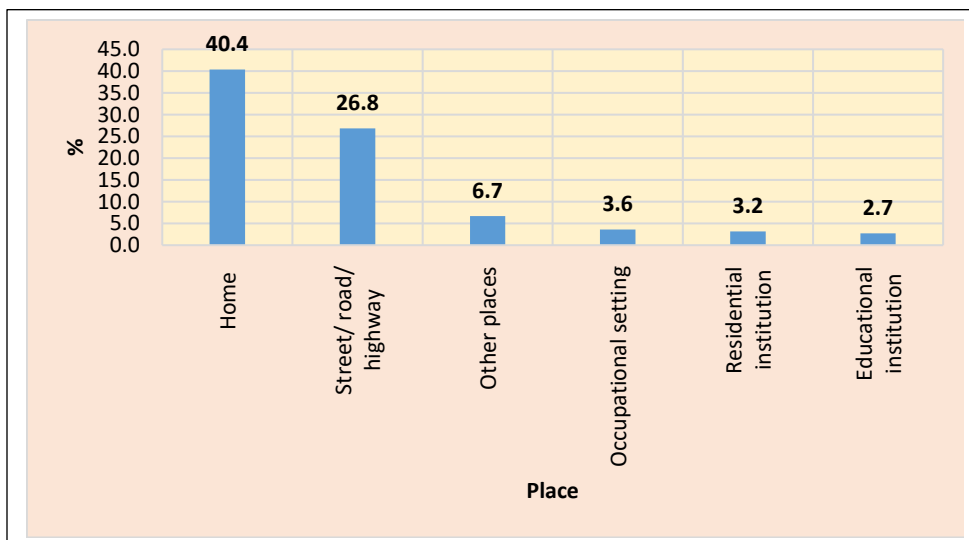
Figure 2.12: Distribution of occurrence of selected injuries according to the date of the week as a percentage



Transport injuries were mostly occurred during weekends. Almost all injuries were commonly occurred on Mondays. Struck/ hit by person and poisoning were common on Sundays.

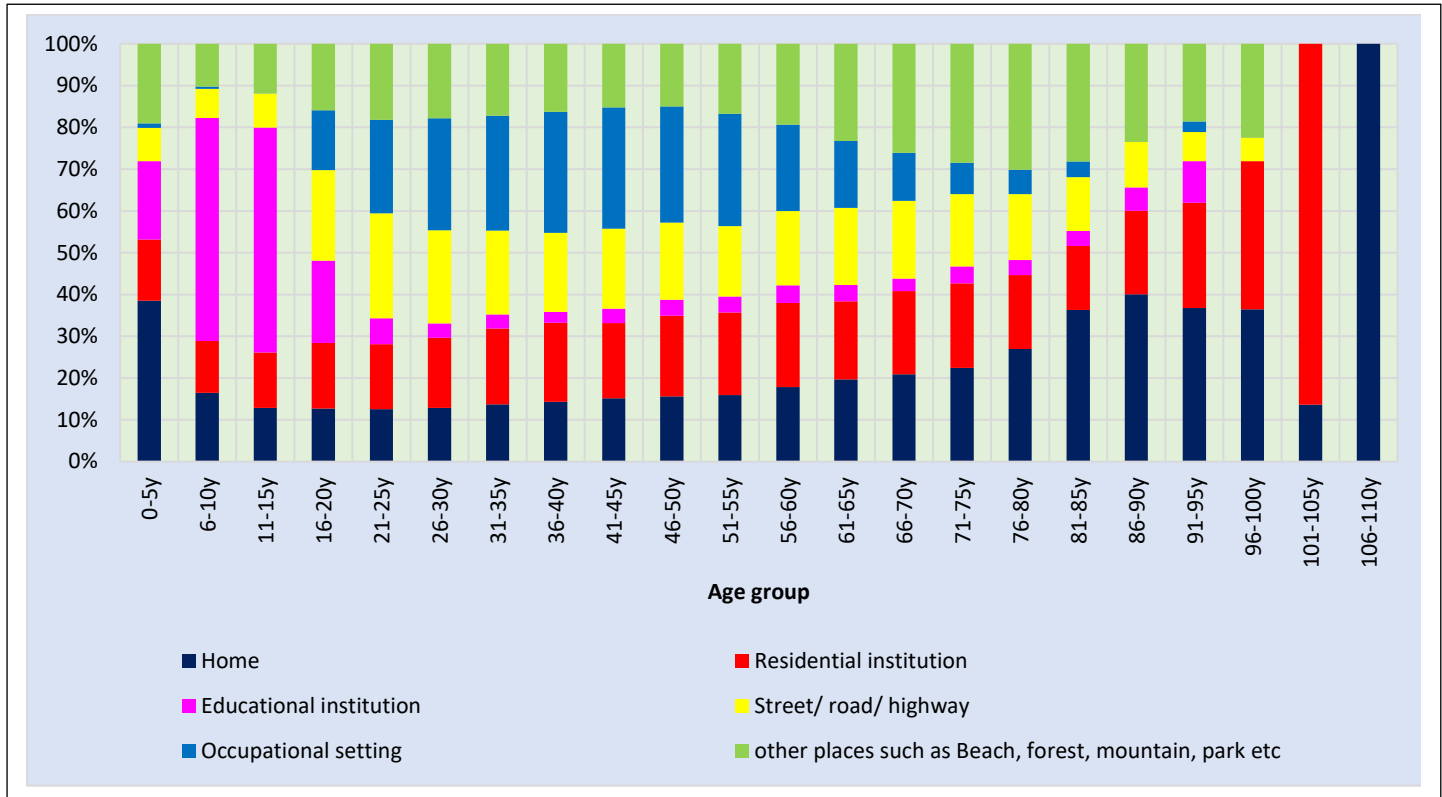
D. Distribution of injuries by place of occurrence

Figure 2.13: Leading places of occurrence of injuries



Most injuries occurred at home (40.4%) followed by street/ road/highways (26.8%), other places such as Beach, forest, mountain, park etc. (6.7%), occupational setting (3.6%) and residential institution (3.2%).

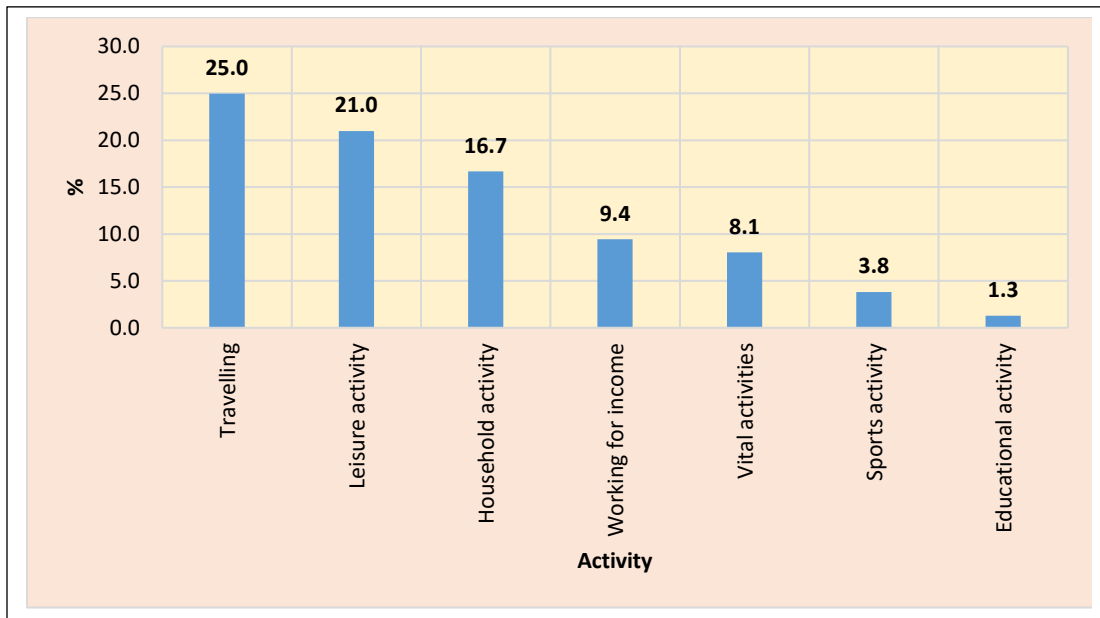
Figure 2.14: Distribution of leading places of occurrence of injuries by age



Occurrence of injuries at home and residential institution were common among children and adults. Injuries at street/ road/ highways increased with age and were common among adolescents, youth, and young adults.

E. Activity done at the time of injury

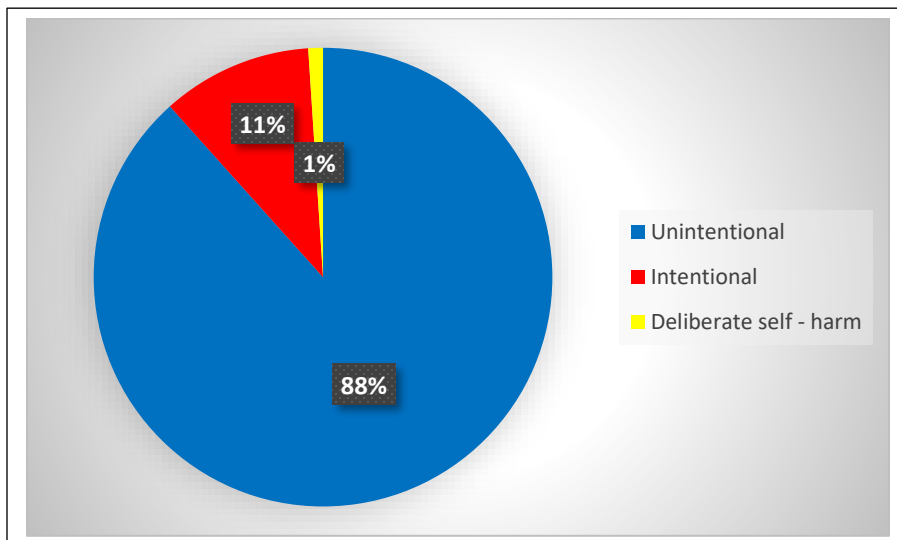
Figure 2.15: Distribution of injuries by leading activity done at the time of injury



Most injuries occurred while travelling (25%), 21% occurred while engaged in leisure activity, 16.7% occurred while engaged in household activity (cooking, sweeping, gardening etc.), 9.4% occurred while working for income and about 8% occurred while engaged in vital activities (eating, bathing, sleeping etc.).

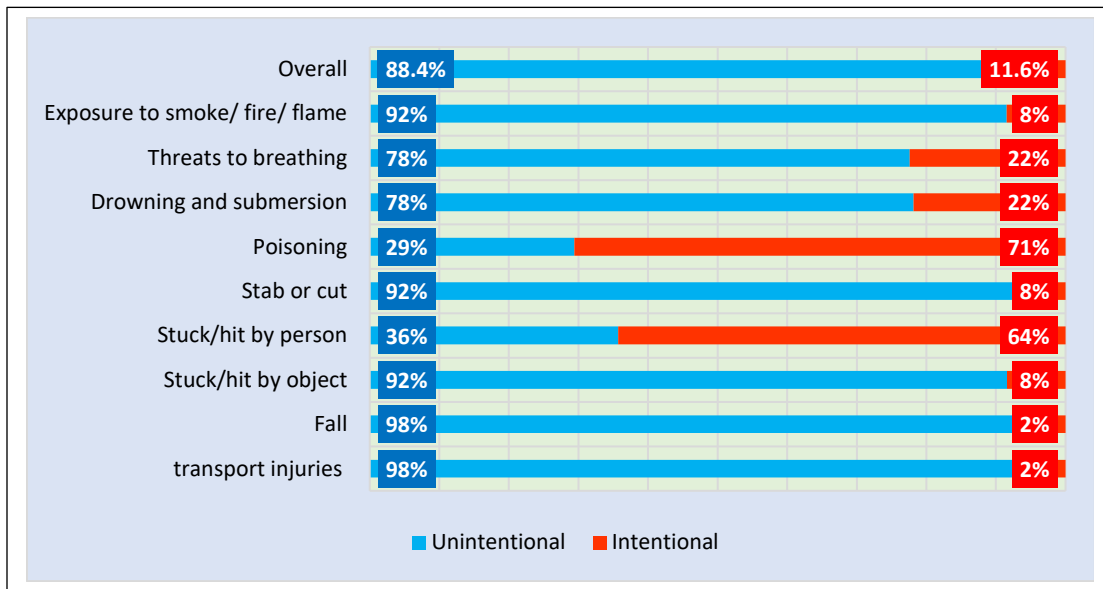
F. Intention of injuries

Figure 2.16: Distribution of Intention of the injuries



Most injuries were unintentional.

Figure 2.17: Intention* of injury by percentage according to selected injury mechanism

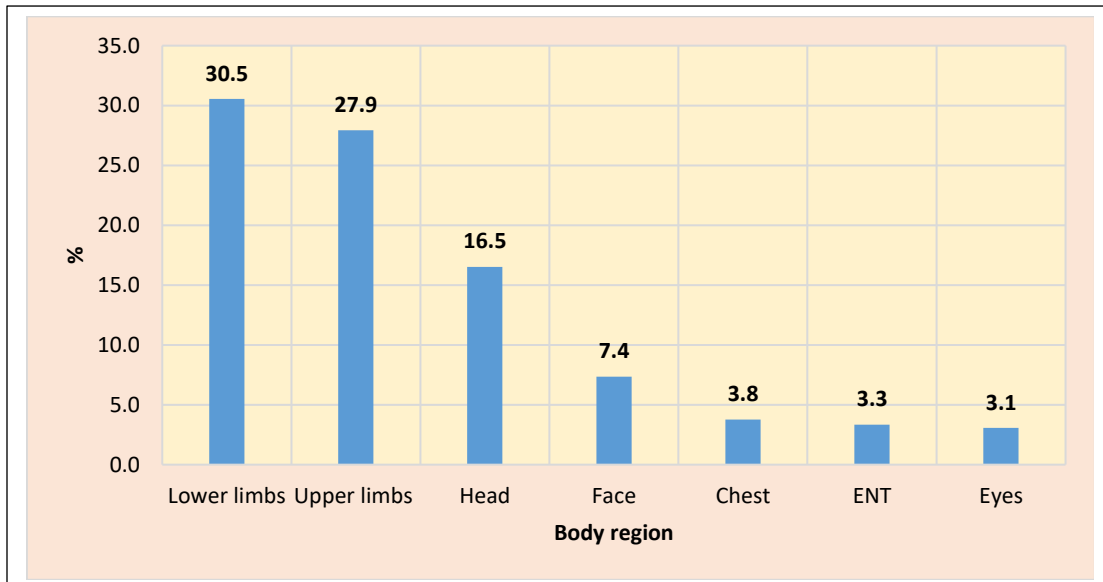


*Number of injuries due to intentional and deliberate self-harm were amalgamated as both are intentional injuries.

Most of the poisoning and stuck/ hit by person were intentional injuries (71% and 64% respectively)., Intentional injuries were 22% for both threats to breathing and drowning and submersion.

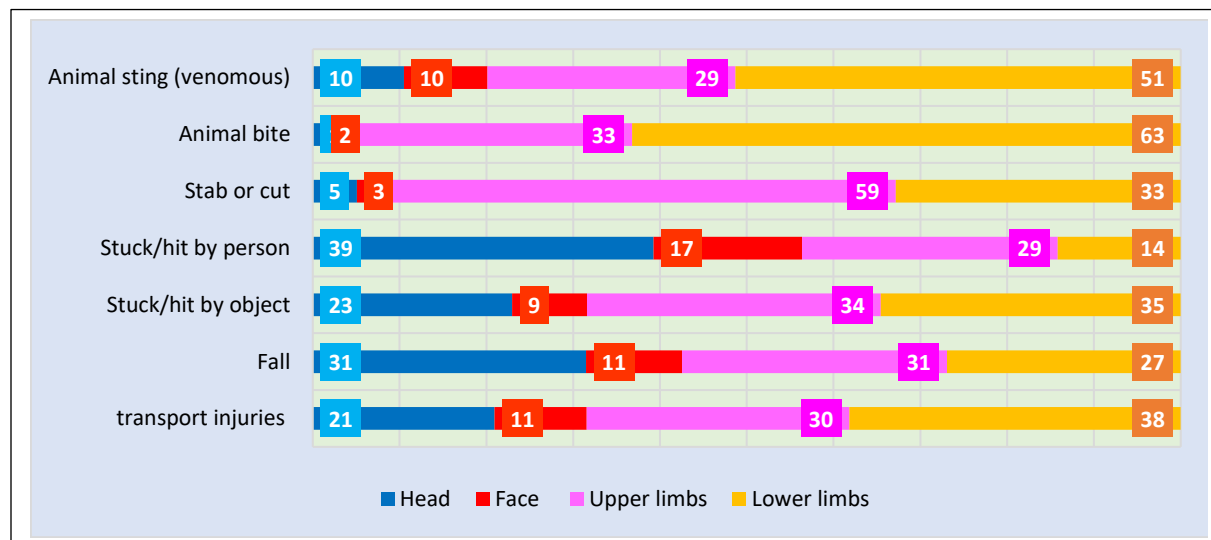
G. Body region affected

Figure 2.18: Common body regions affected by injuries



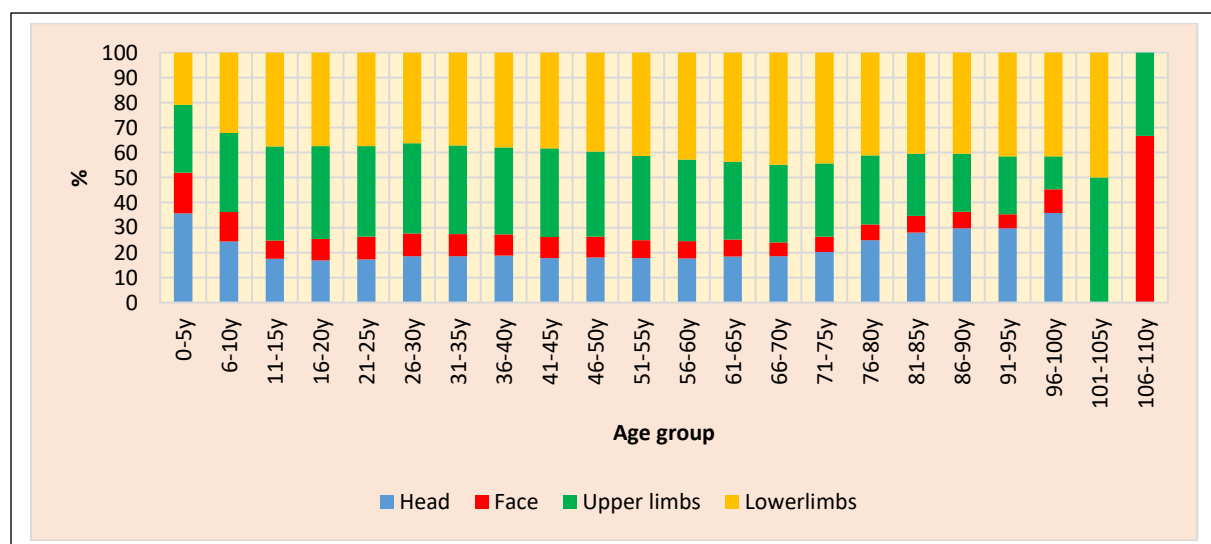
Limbs were mostly affected (Lower limbs – 30.5% and upper limbs ~28%) followed by head (16.5%), face (7.4%), chest (~4%) and ENT (Ear, Nose, Throat) (3.3%).

Figure 2.19: Affected body region (head, face, upper limbs and lower limbs) by selected type of injury mechanism



Head injuries were common in transport, falls, struck/ hit by object and by person. Facial injuries were commonest in stuck/ hit by person. While upper limbs were mostly affected in stab or cut injuries, lower limbs were mostly affected in animal bites.

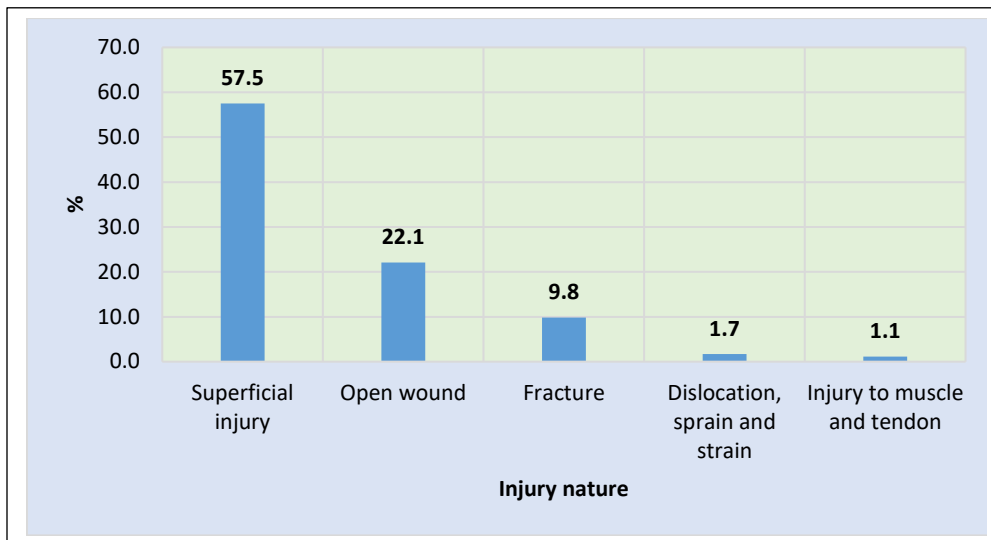
Figure 2.20: Distribution of affected body region by age group as a percentage from total injuries occurred in that age group



Head injuries were common among children and adults. Facial injuries were common among children and also at the latter part of life. Upper limb injuries were common among adolescents and young adults. Lower limb injuries increased with age.

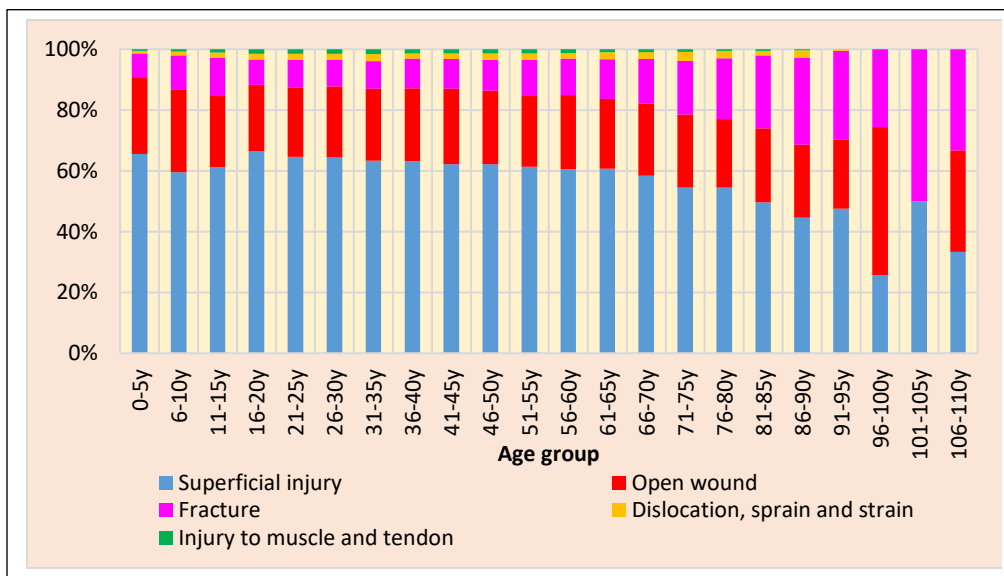
H. Nature of injury

Figure 2.21: Leading natures of injury



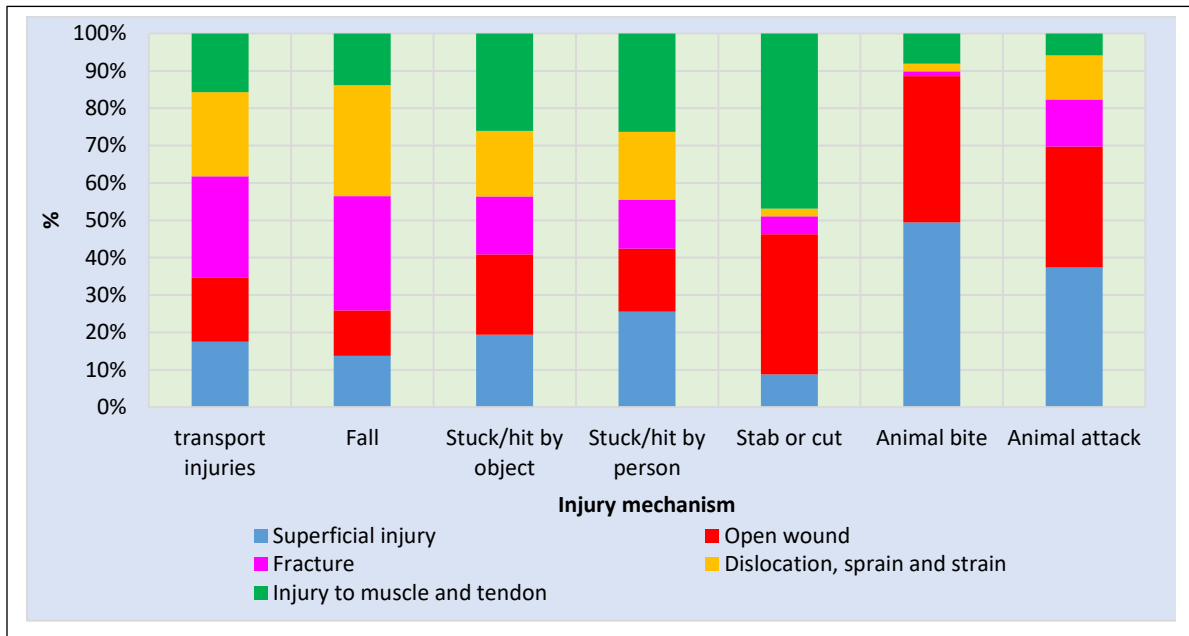
Most (57.5%) of the victims had superficial injuries; but 22% had open wounds while 10% reported with fractures.

Figure 2.22: Age specific distribution of nature of injuries by percentage



Superficial injuries were the commonest across all age groups. Open wounds were increased with age. Fractures were common in adults especially after 60 years of age.

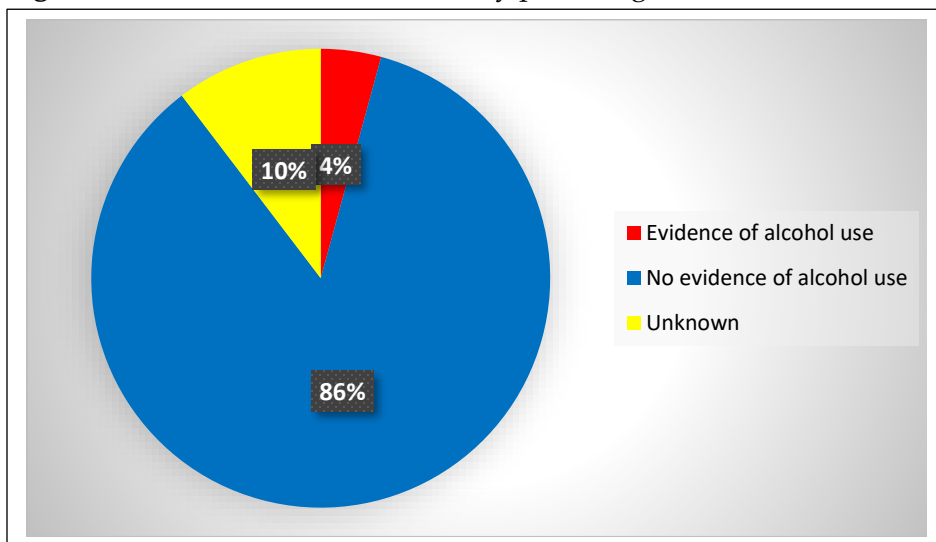
Figure 2.23: Nature of injury according to selected injury mechanism by percentage



Superficial injuries and open wounds were common in animal bites and animal attacks. Open wounds were also common in stab/ cut injuries. Fractures and dislocation were common in transport injuries and falls. Injury to muscle and tendon was commonest in stab/ cut injuries.

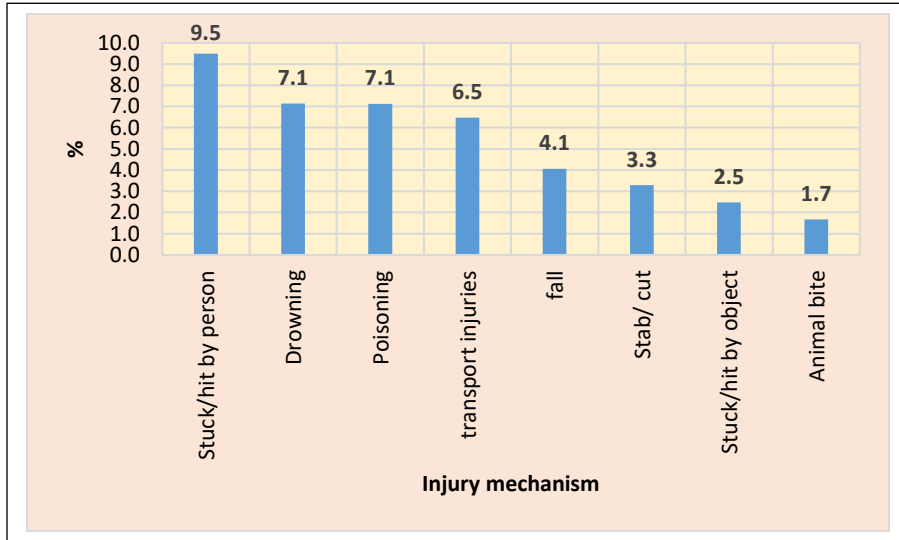
I. Evidence of alcohol and substance use at the time of injury

Figure 2.24: Evidence of alcohol use by percentage



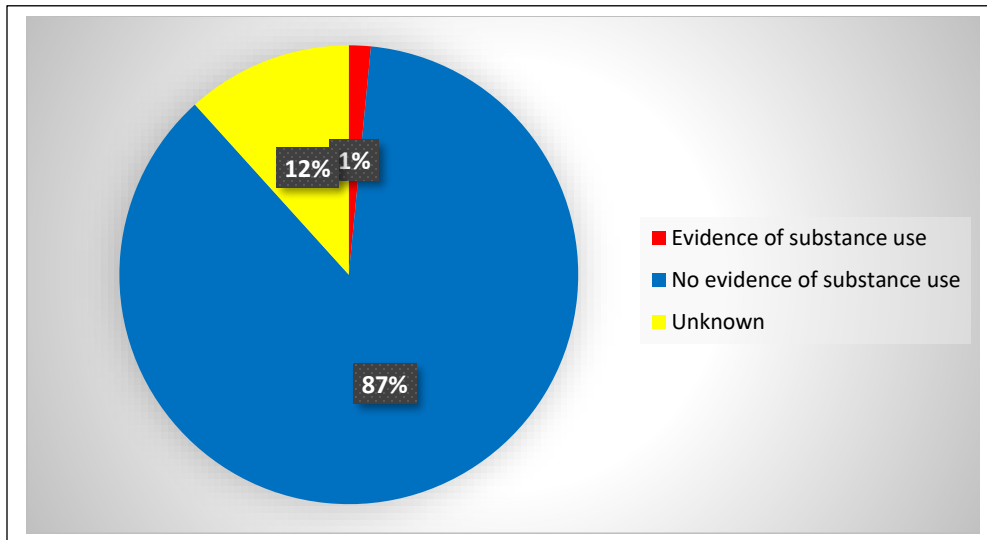
Though in 86% of cases there was no reported evidence of alcohol for the incidence, in 4% of injuries, alcohol was involved.

Figure 2.25: Association of evidence of alcohol use with selected injury mechanisms



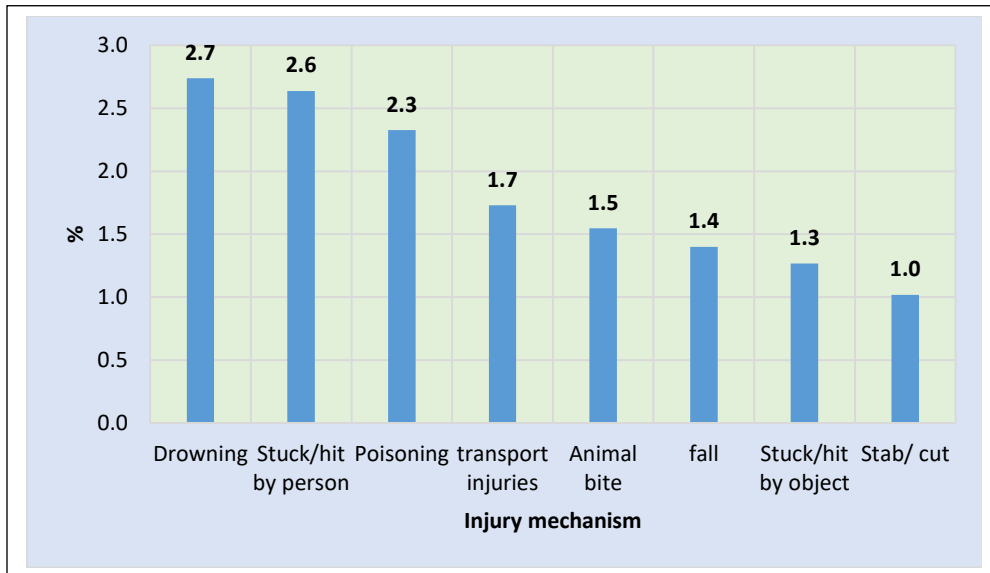
9.5% of injuries due to struck/ hit by person were associated with evidence of alcohol use. About 7% of injuries due to drowning and poisoning each and 6.5% of transport injuries were also associated with evidence of alcohol use.

Figure 2.26: Evidence of substance use



Only in 1% of the injuries, there was an evidence of substance use.

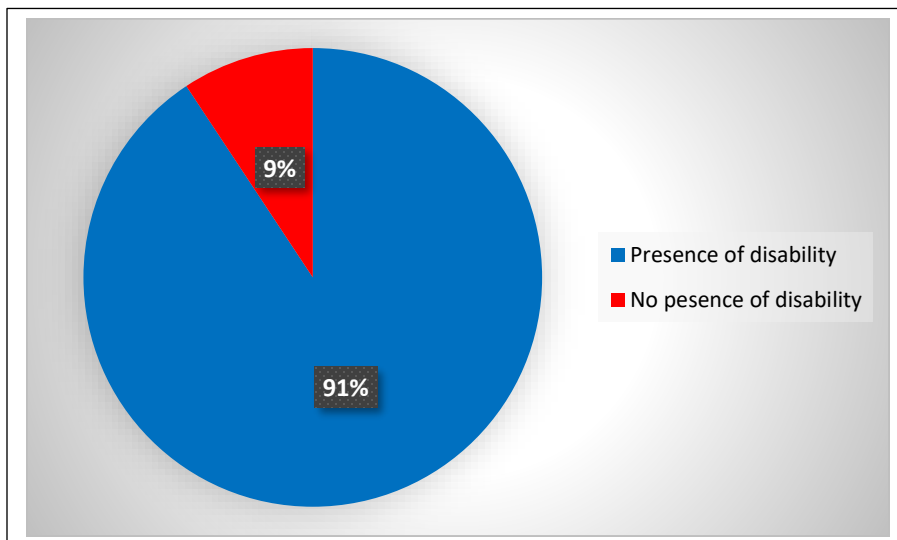
Figure 2.27: Association of evidence of substance use with selected injury mechanisms



2.7% of drowning and 2.6 of injuries due to struck/ hit by person were associated with evidence of substance use. 2.3% of poisoning were also associated with evidence of substance use.

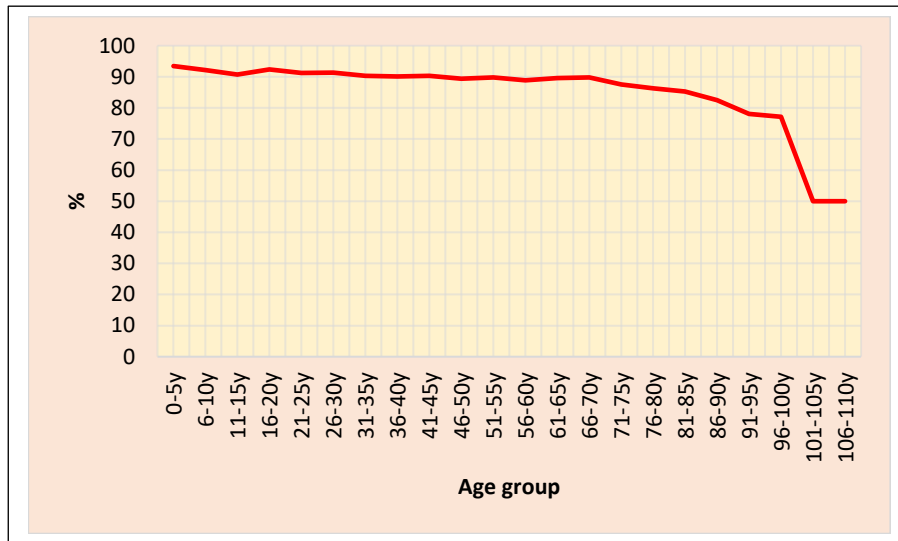
J. Evidence of disability at the time of discharge

Figure 2.28: Evidence of disability at the time of discharge



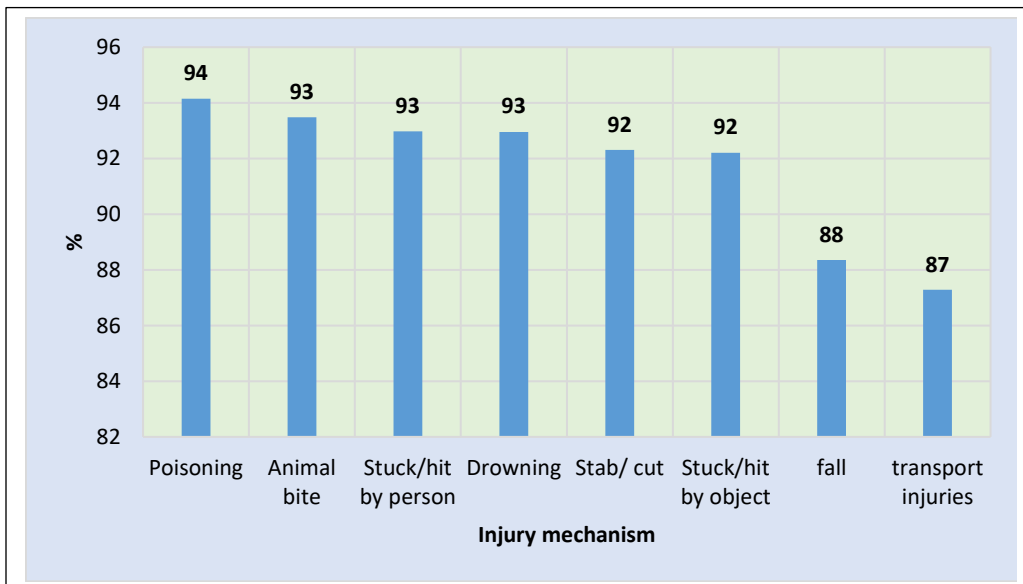
91% of victims admitted had some kind of disability (permanent or temporary) at the time of discharge

Figure 2.29: Age specific presence of disability rate by percentage



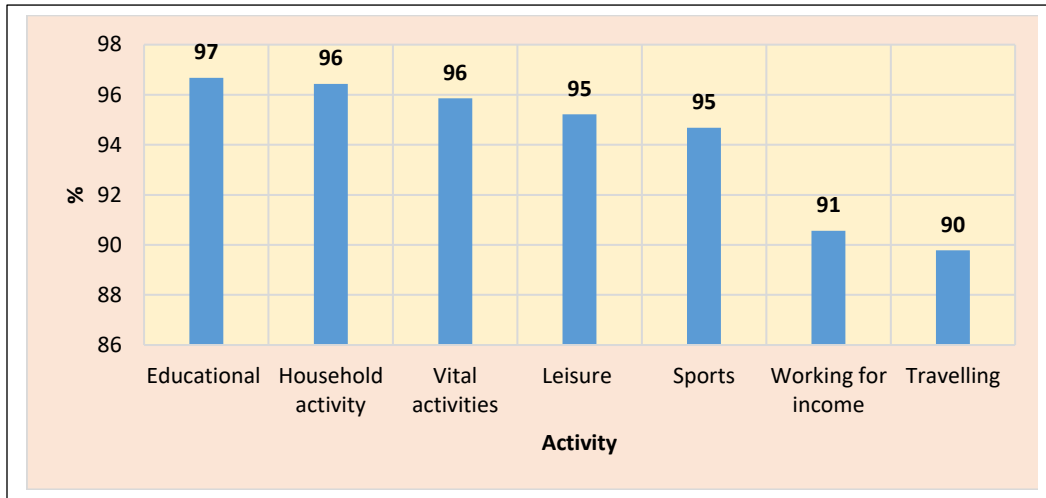
With increase of age, presence of disability at the time of discharge gradually decreased. Until 70 years of age, more than 90% of victims were discharged either with temporary or permanent disability.

Figure 2.30: Association of disability with selected injury mechanism



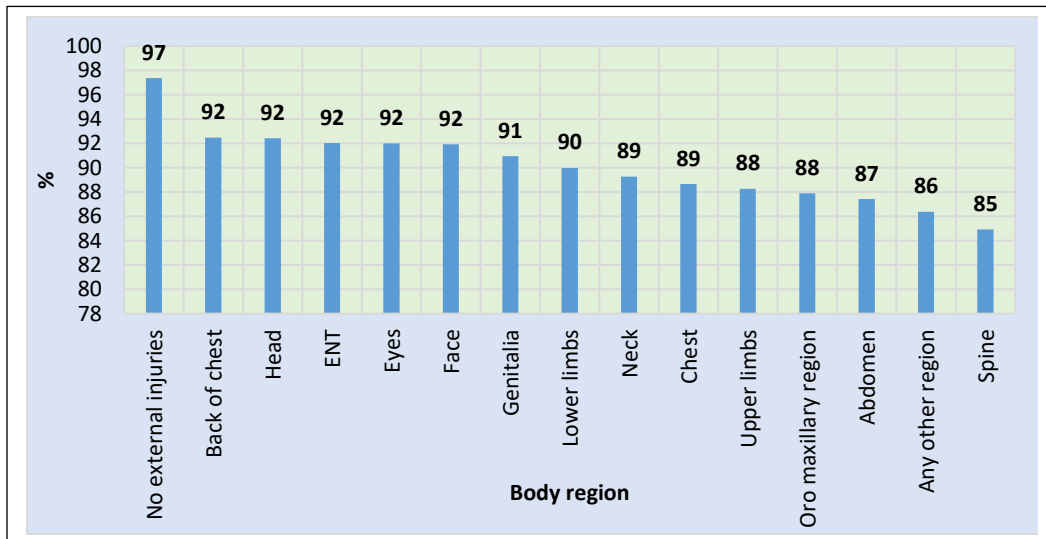
Almost all leading mechanisms of injuries were associated with disability at the time of discharge. More than 90% of the victims with poisoning, animal bites, struck/hit by person and object, drowning and stab/ cuts had some kind of disability at the time of discharge.

Figure 2.31: Activity specific presence of disability



Injuries occurred during educational, household, vital, leisure and sports activities affected mostly on presence of disability (>95% of the victims).

Figure 2.32: Association of affected body region with presence of disability.



No visible external injuries (hence no affected body region) was mostly associated with presence of disability.

3. Transport injuries

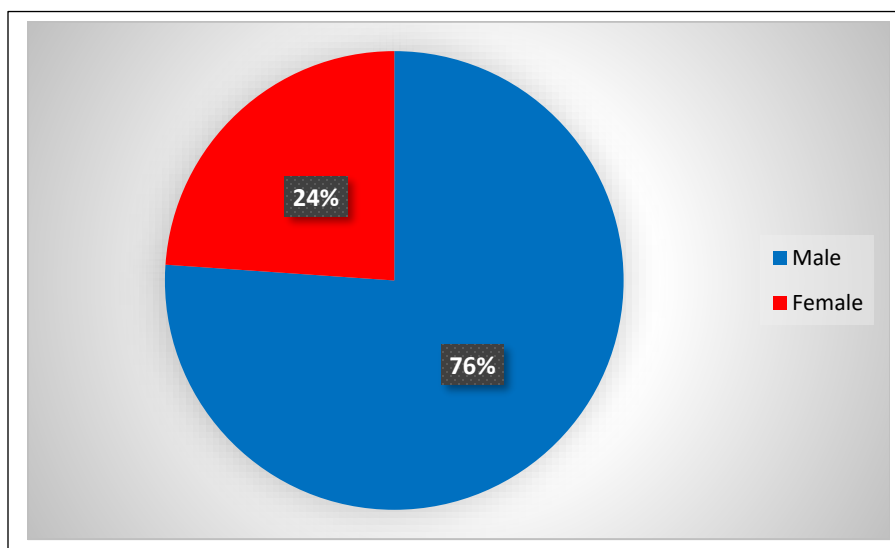
- Almost all reported transport injuries (TI) occurred on street/ road/ highways
- 3/4 of the victims were males
- Adolescents, youths and young adults were affected mostly in both sexes.
- Deaths were common among children less than 5 years, youths of 21 – 25 years and adults of 66 – 70 years of age.
- Most transport injuries occurred on Sundays
- Majority of them (68%) occurred during day time from 6 am to 6 pm.
- Occurrence of TI from 12 noon to 12 mid night was common during week days. However, on Sundays and Mondays, transport injuries were common from 12mid night to 6 am
- Most had superficial injuries and upper and lower limbs were mostly affected.
- 80% of alcohol related and 75% of substance related transport injuries occurred

In 2018, information on 37500 transport injuries (TI) victims admitted for inward care of government hospitals was reported through National Injury Surveillance system.

Of all transport accidents, 99.1% occurred on street/ road/ highways. Only 0.9% occurred in other transport areas such as water and air.

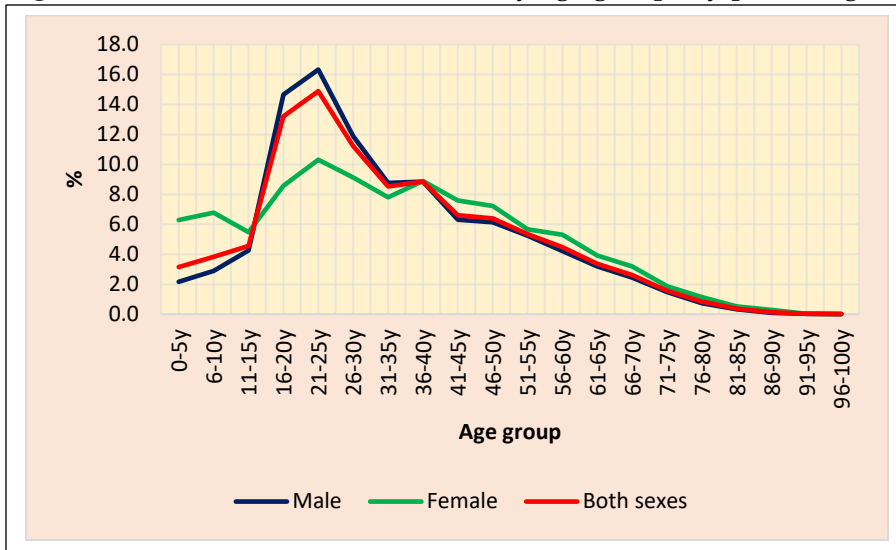
K. Sex and age distribution of victims due to transport injuries

Figure 3.1: Sex distribution of the TI victims



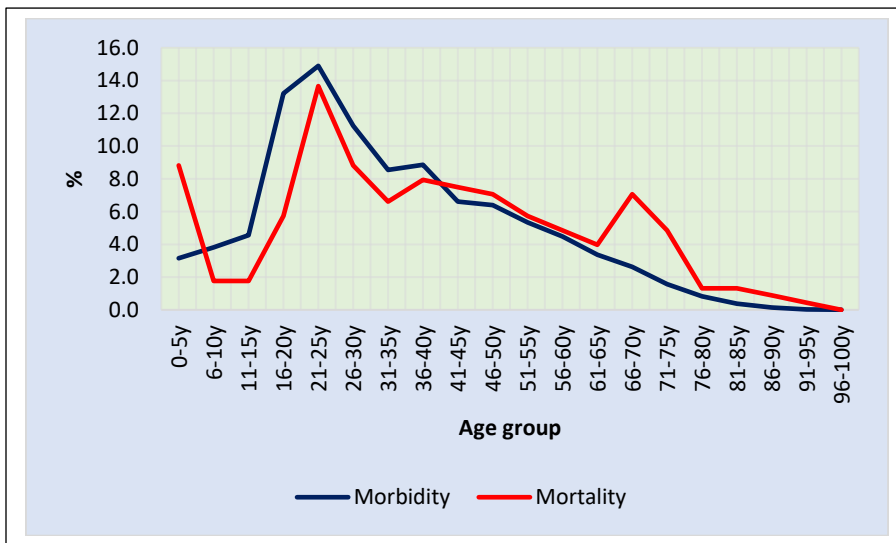
Male to female ratio of the victims was 3:1,

Figure 3.2: Distribution of the victims by age groups by percentage



Adolescents, youths and young adults are affected mostly in both sexes (about 78% and 60% respectively of all TI victims).

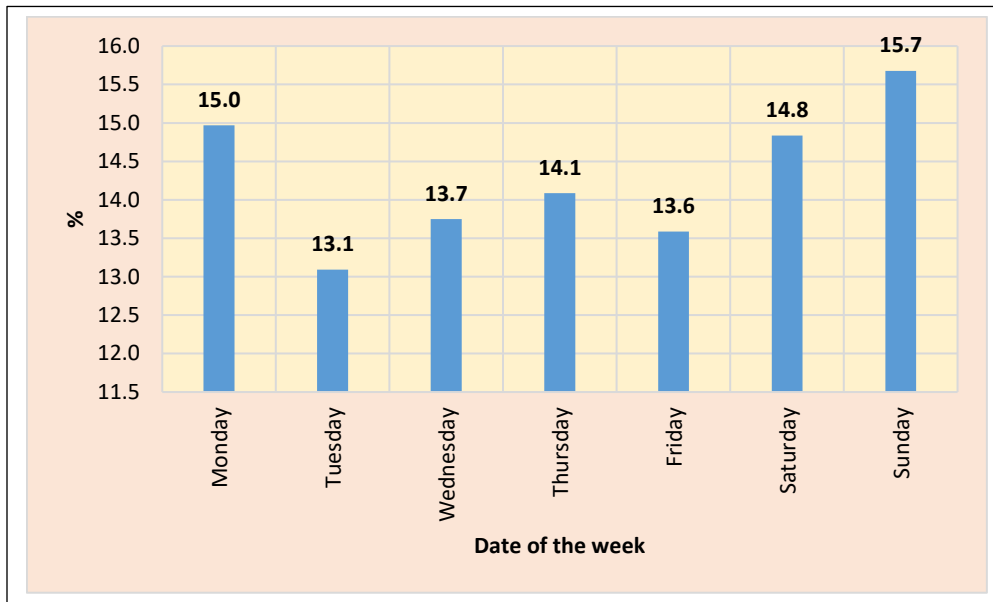
Figure 3.3: Morbidity and mortality pattern due to TI according to age group by percentage



Though morbidity due to TI was more common among adolescents, youths and young adults, deaths were common among children less than 5 years, youths of 21 – 25 years and adults of 66 – 70 years of age group.

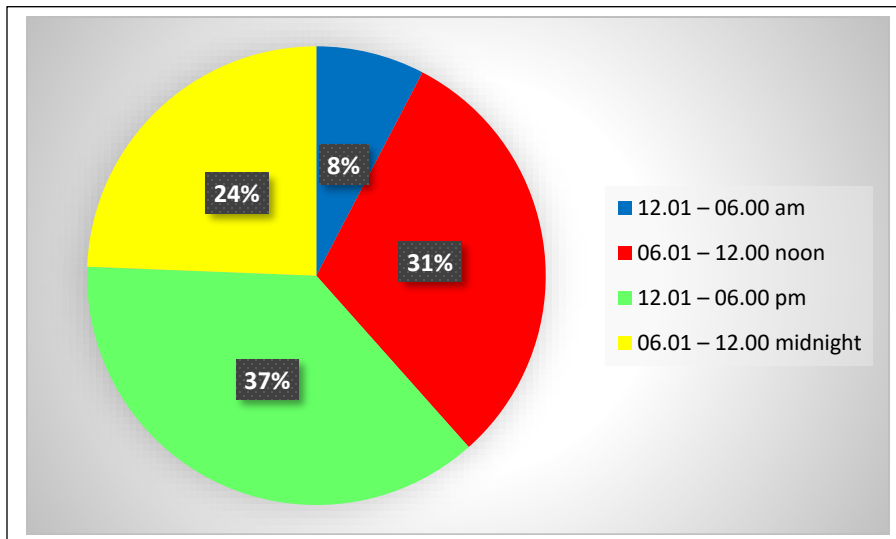
L. Date and time of occurrence of TI

Figure 3.4: Distribution of injuries according to the date of the week



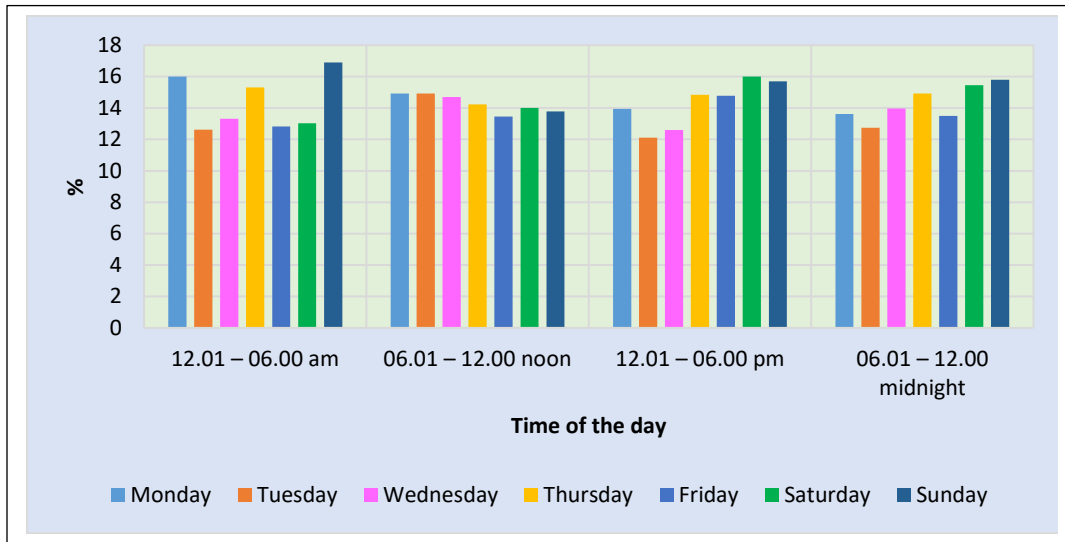
Occurrence of TI increased towards the weekends and it was highest on Sundays. More TI also occurred on Mondays too.

Figure 3.5: Distribution of TI by time of occurrence



Most of TI (68%) occurred during the day time. But 32% occurred from 6pm to 6am in which 24% occurred from 6pm to 12.00 mid night.

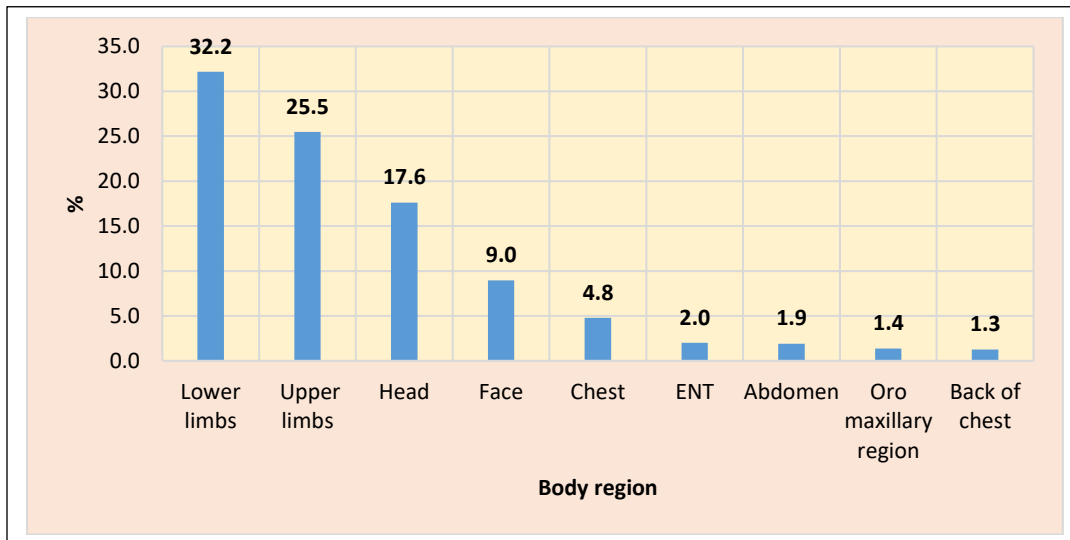
Figure 3.6: Distribution of TI during the week by time of occurrence by percentage



While occurrence of TI from 12 midnight – 6 am was more common on Mondays and Sundays, occurrence of TI from 12 noon – 6 pm and from 6 pm – 12 mid night was common during weekends.

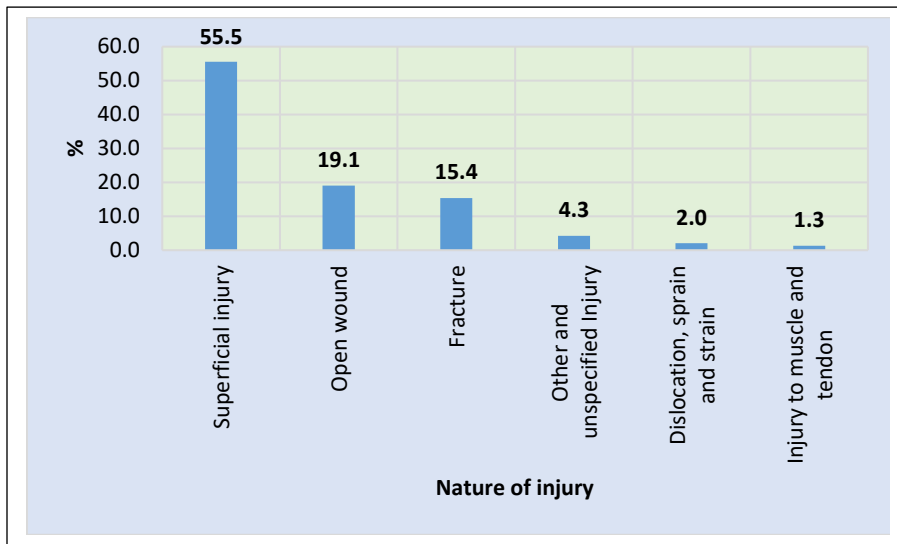
C. Body region affected and nature of injury due to TI

Figure 3.7: Common body region affected due to TI



Lower limbs (32.2%) and upper limbs (about 25.5%) were mostly affected due to TI. But, head (17.6%) and face (9%) were also affected due to TI.

Figure 3.8: Common nature of TI by percentage

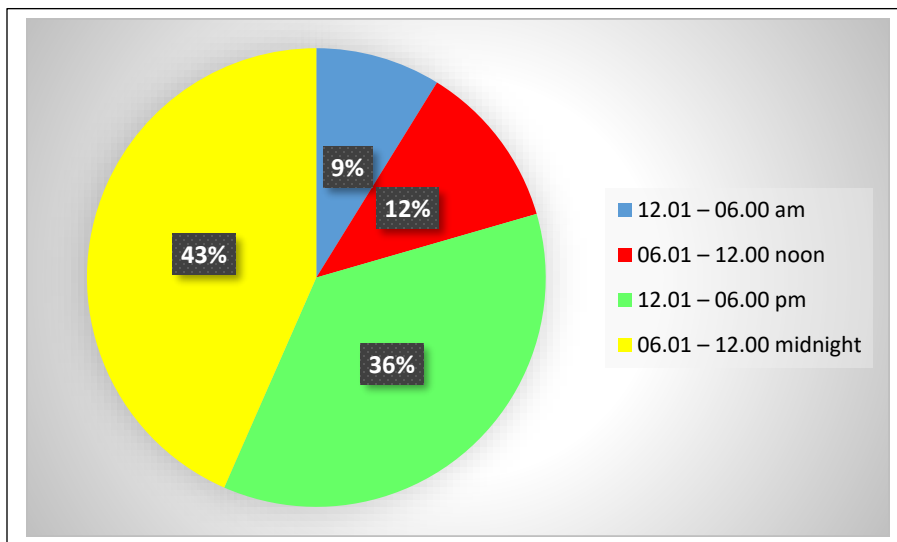


Most (55.5%) of the victims had superficial injuries; but about 19% had open wounds and 15.4% had fractures.

D. Evidence of alcohol and substance use for TI

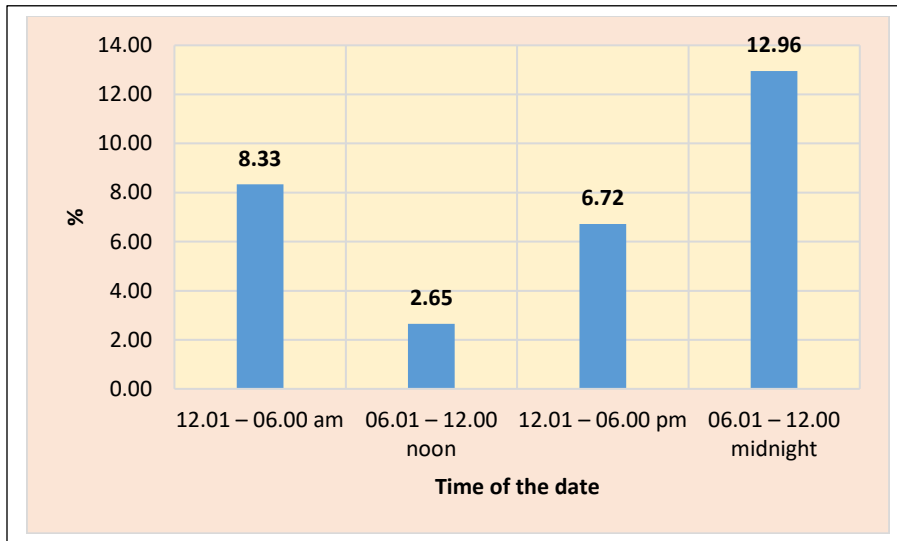
Of all reported TI for evidence of alcohol use, only 6.5% were associated with alcohol while of all reported TI for evidence of substance use, only 1.7% were associated with substance use

Figure 3.9: Association of alcohol with TI according to the time of occurrence of TI



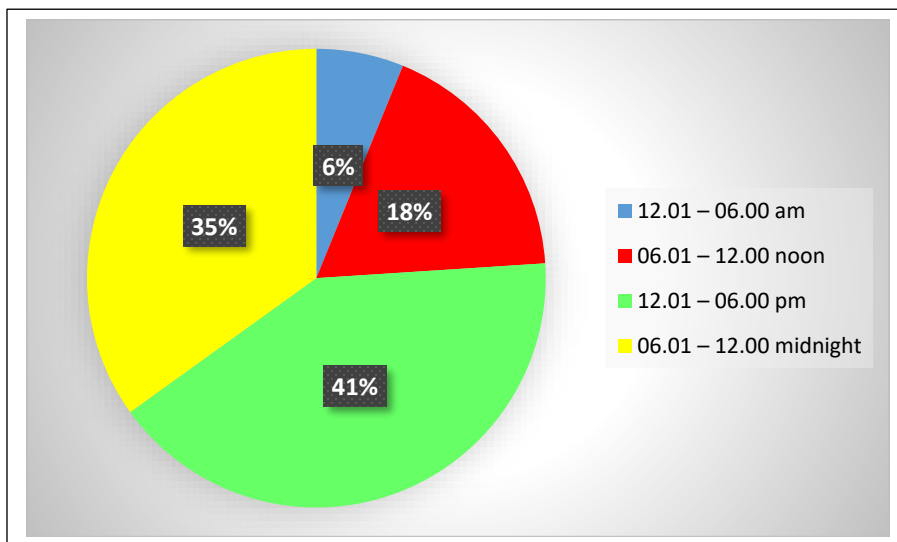
80% of alcohol related TI were occurred from 12.00 noon to 12.00 mid night. Of that, most (43%) were occurred from 6.00 pm to 12.00 mid night. Further, 52% of all alcohol related TI occurred from 6 pm to 6am though only 32% of TI occurred during the specified period (figure 3.6).

Figure 3.10: Association of TI with alcohol from total injuries reported for evidence of alcohol use during the specified time



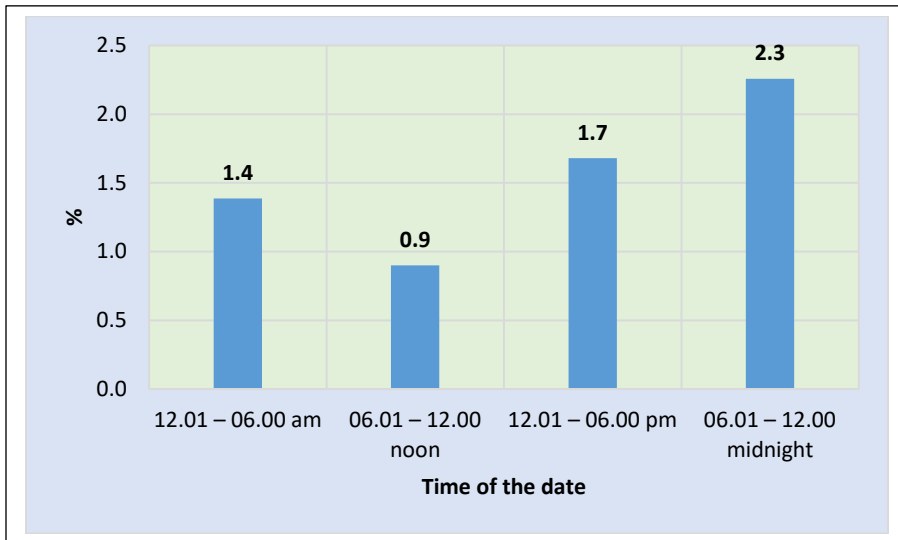
Of all the injuries reported for evidence of alcohol use from 6.00 pm to 12.00 midnight, 13% of TIs had some association with drugs.

Figure 3.11: Association of substance use with TI according to the time of occurrence of TI



3/4 of substance related TI were occurred from 12.00 noon to 12.00 mid night. Of that, most (41%) were occurred from 12 noon to 6.00 pm.

Figure 3.12: Association of TI with substance from total injuries reported for evidence of substance use during the specified time



Of all the injuries reported for evidence of substance use from 6.00 pm to 12.00 midnight, 2.3% of TIs had some association with drugs.

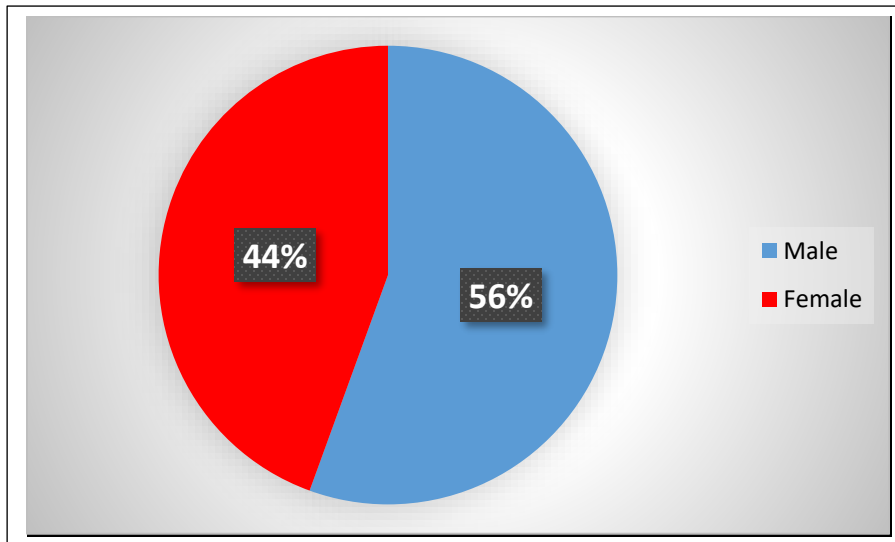
4. Home injuries

- About 65% of home injury victims were children, adolescents, youths and young adults
- Of all injuries occurred among children of 0 - 10 and adults over 70 years of age group, more than 50% were home injuries
- 75% of home injuries occurred at day time from 6 am to 6 pm; however, injuries due to struck/ hit by person, venomous animal stings and poisoning were common even from 6 pm to 12 midnight
- Leading mechanism of home injuries was falls (31%)
- Most injuries occurred while victims engaged in leisure activities
- Most victims were reported with upper and lower limb injuries and superficial injuries were observed in 50% of home injury victims.

In 2018, information of 69612 home injury victims admitted for inward care of government hospitals was reported through National Injury Surveillance system.

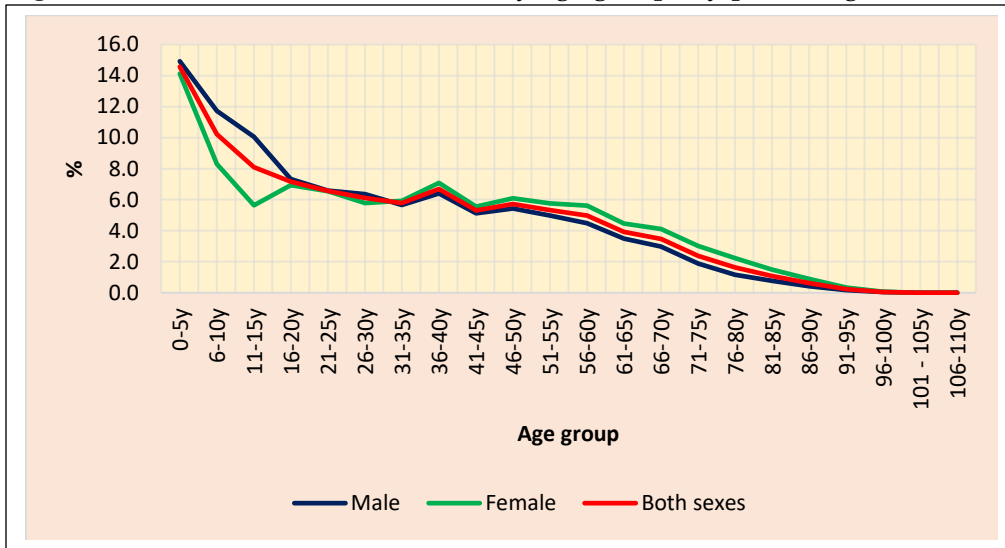
O. Sex and age distribution of victims due to home injuries

Figure 4.1: Sex distribution of the victims of home injuries



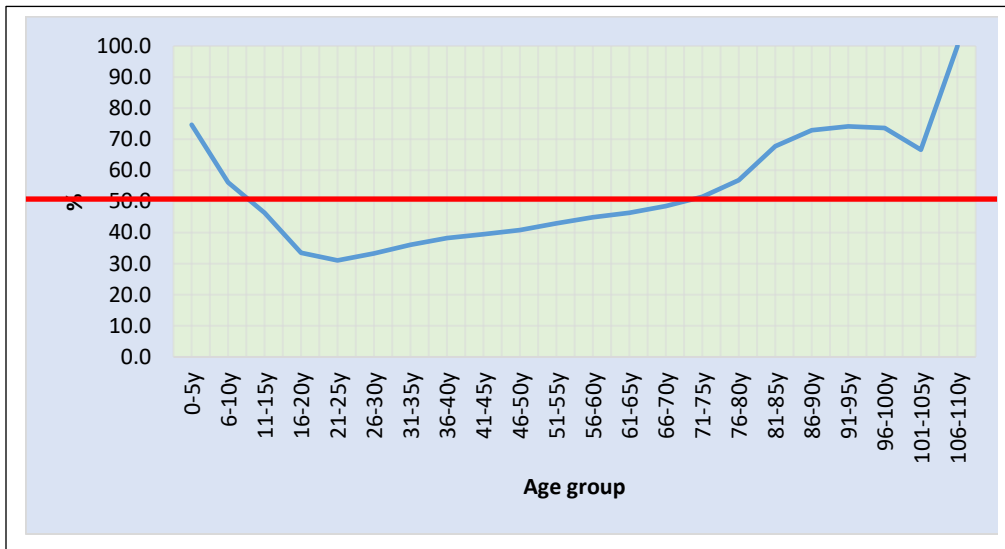
Male to female ratio of the victims was 1.3:1

Figure 4.2: Distribution of the victims by age groups by percentage



Children, Adolescents, youths and young adults are affected mostly in both sexes (about 70% and 60% of males and females respectively).

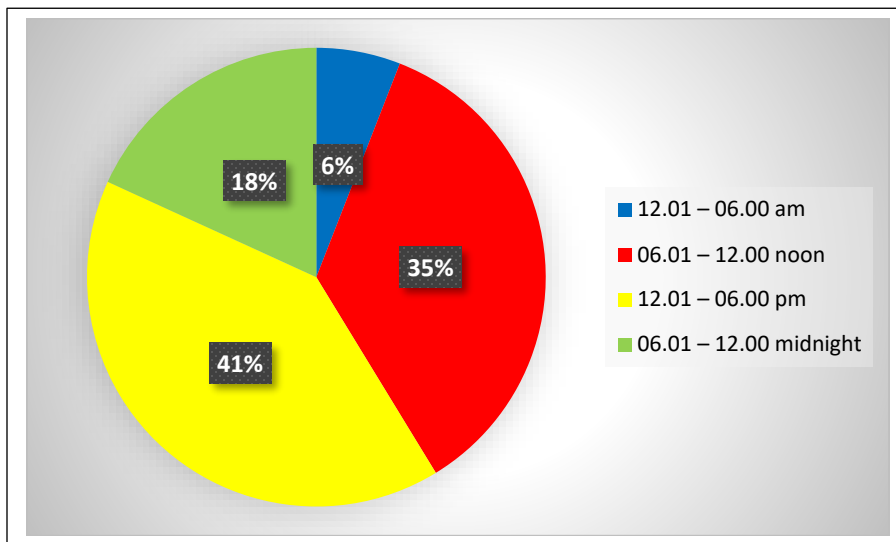
Figure 4.3: Age specific rates of home injuries by percentage



More than 50% of all injuries among 0 - 10 years of age group and adults over 70 years of age group occurred at home.

P. Time of occurrence of home injuries

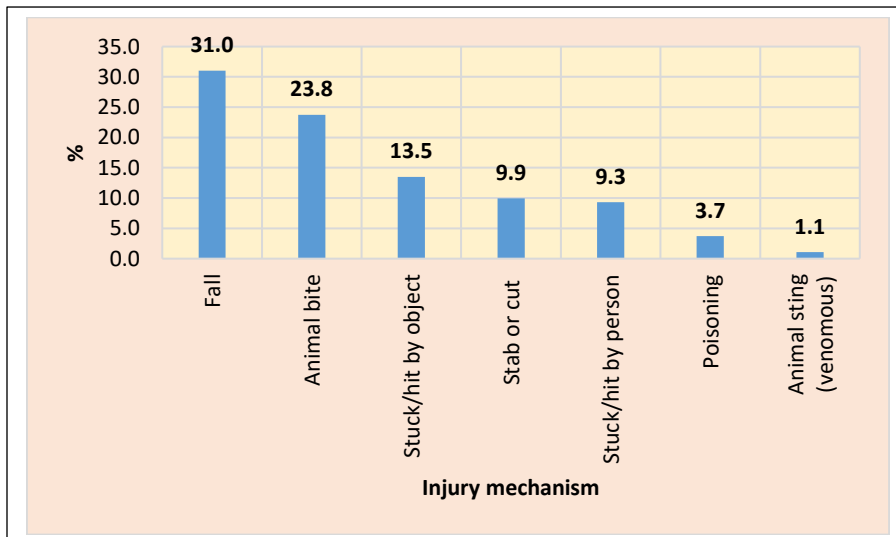
Figure 4.4: Time of occurrence of home injuries



75% of reported home injuries occurred during the day time. However, 25% occurred from 6pm to 6am of which 18% occurred from 6 pm to mid night.

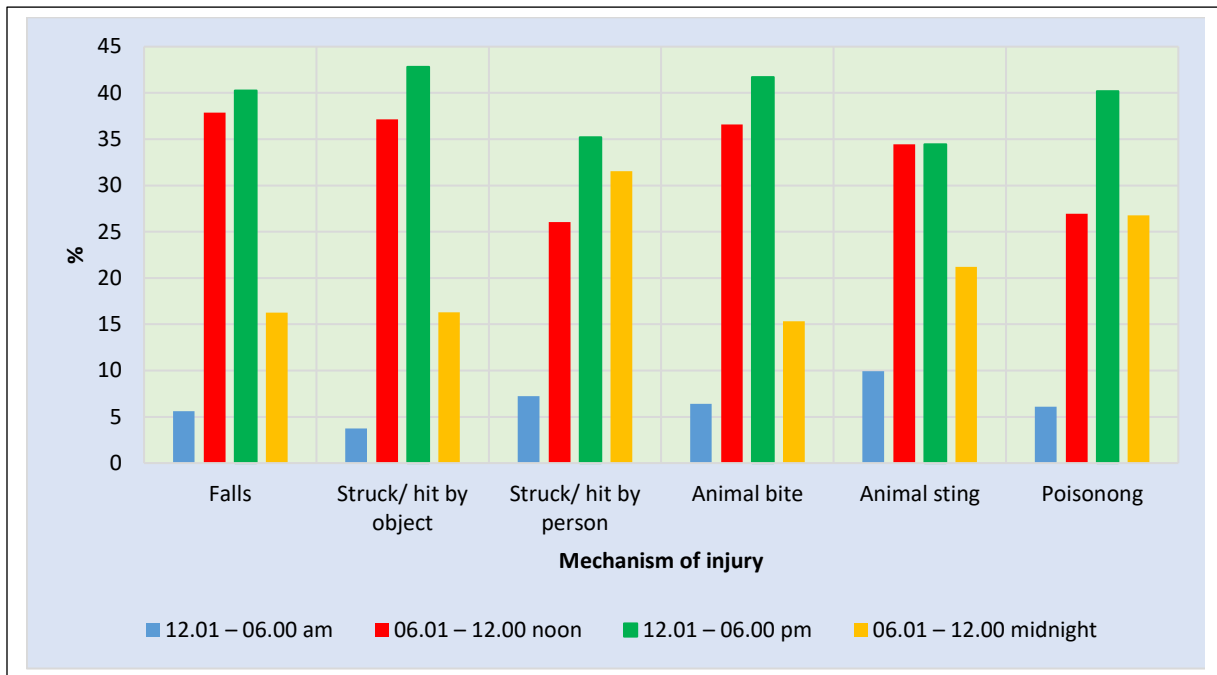
Q. Mechanism of injury

Figure 4.5: Leading mechanisms of injuries occurred at home setting by percentage



Leading mechanism of home injuries was falls (31%) followed by animal bites (23.8%) and stuck/hit by object (13.5%). Others were stab/ cut injuries, struck/ hit by person, poisoning and venomous animal stings.

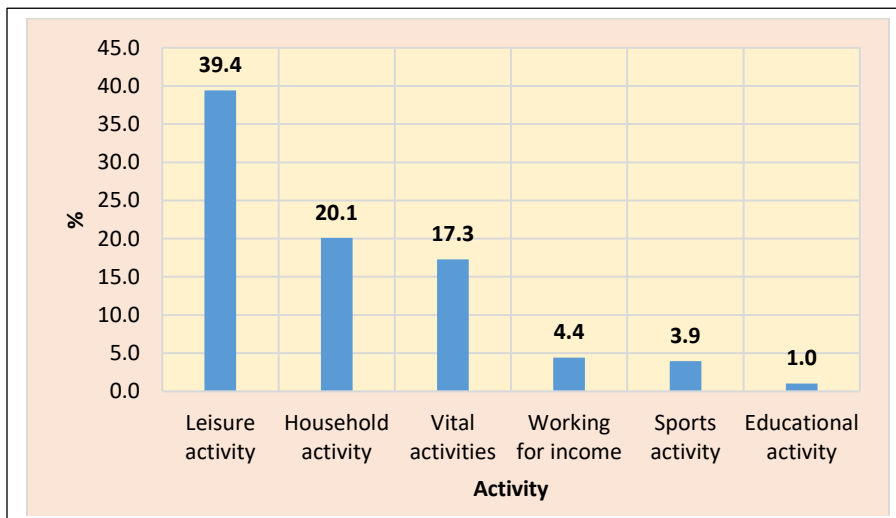
Figure 4.6: Distribution of occurrence of selected injuries at different time period during the day



Even though, most of the injuries were occurred during the day time (from 6.01 am to 6.00 pm), injuries due to stuck/ hit by person, venomous animal stings and poisoning related injuries occurred during the latter part of the day especially after 6.00 pm to 12 mid night.

R. Activity done at the time of injury

Figure 4.7: Leading activities done at the time of injury occurred at home



About 2/5th of home injuries occurred while victims engaged in leisure activities. 1/5th of victims injured while engaged in household activities.

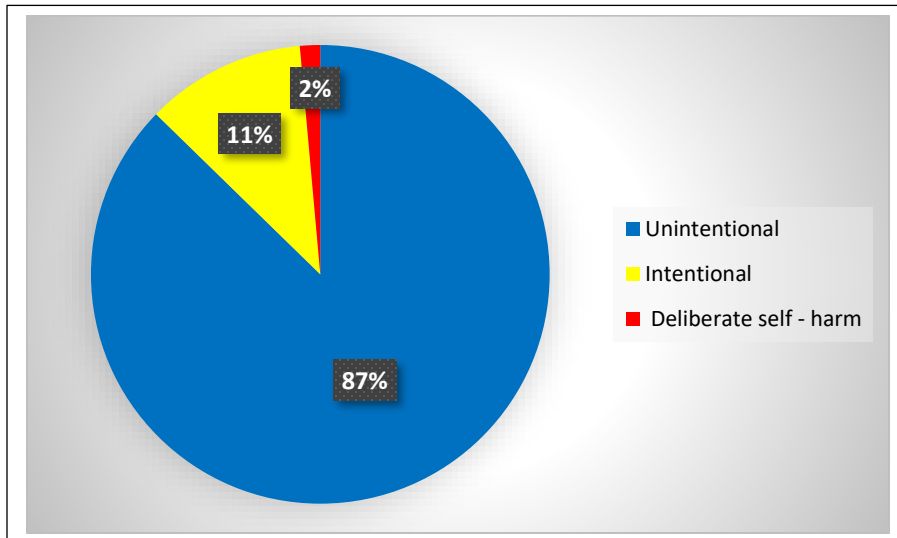
Figure 4.8: Injury mechanisms when doing the specific activity at home



Falls was the commonest injury mechanism while doing a specific activity at home. But animal bites were also common in all main activities. Poisoning was common while doing vital and household activities.

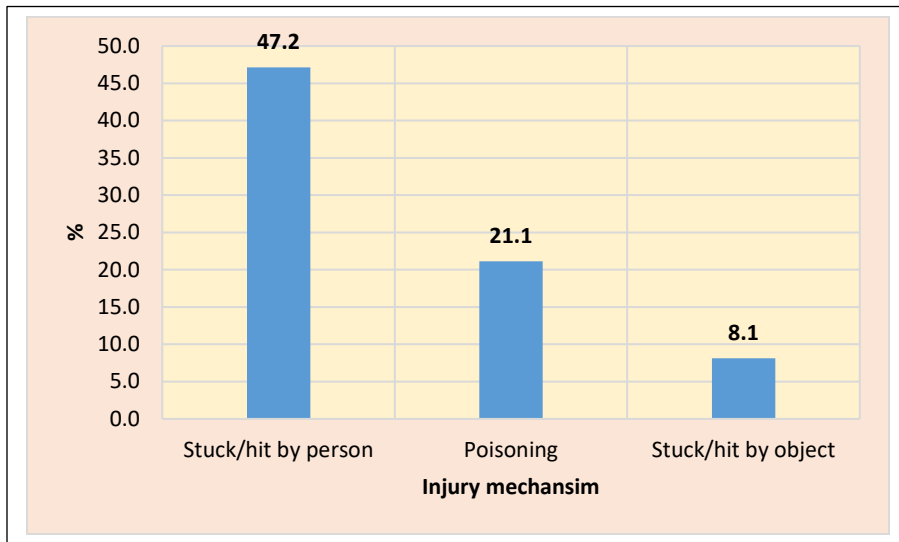
E. Intention of home injuries

Figure 4.9: Association of home injuries with intention



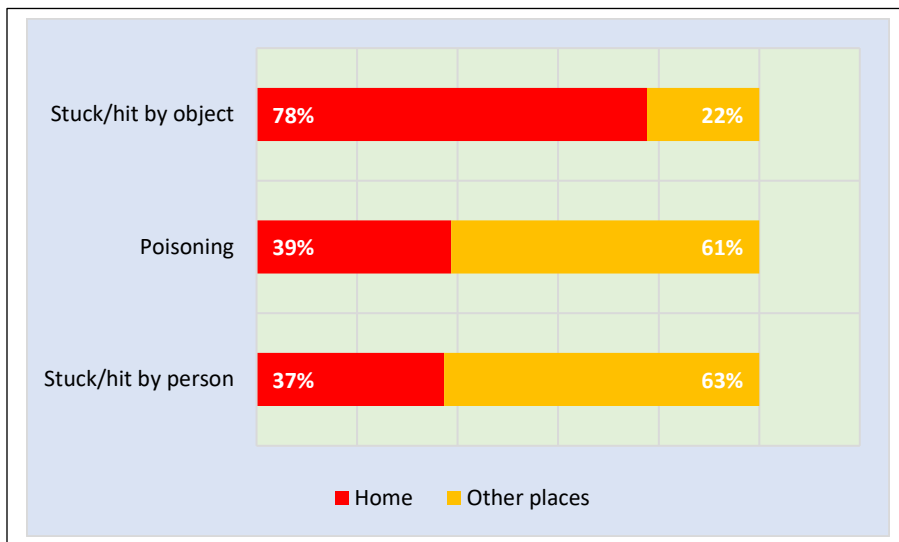
Majority of home injuries were unintentional.

Figure 4.10: Leading intentional injuries (intentional and deliberate self-harm) occurred at home



Majority (75%) of intentional home injuries were due to struck/hit by person (~47%) followed by poisoning (~21%) and struck/hit by object (~8%).

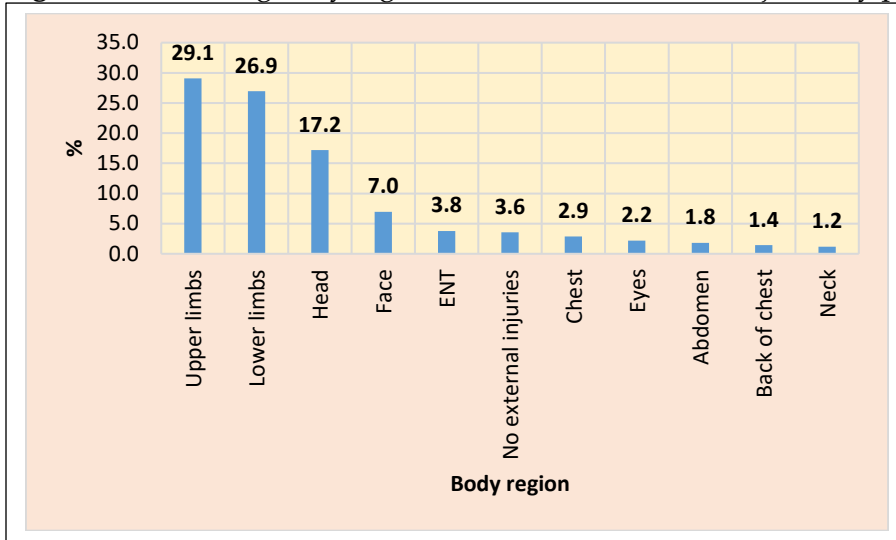
Figure 4.11: Home as a place for leading intentional injuries



Of all intentional injuries due to struck/ hit by object, 78% occurred at home., Intentional poisoning and struck/ hit by person occurred at home were 39% and 37% respectively.

S. Body region affected

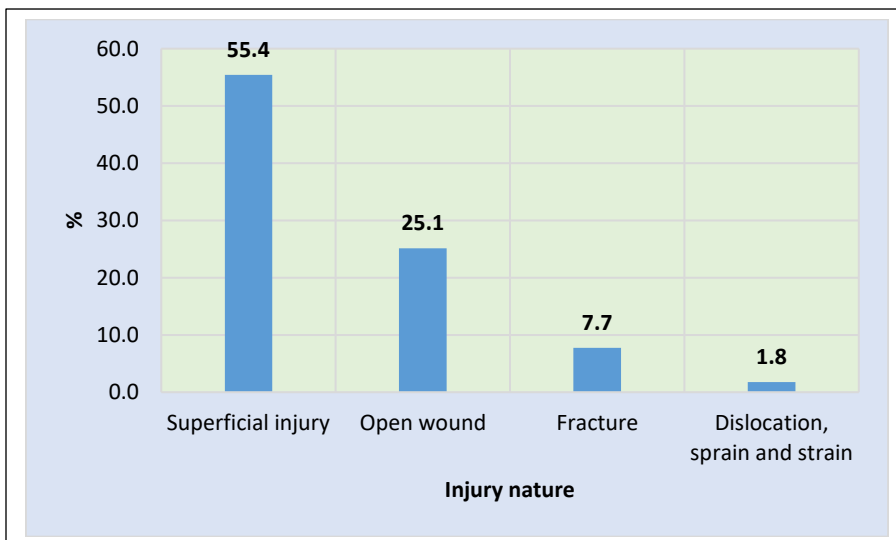
Figure 4.12: Leading body regions affected due to home injuries by percentage



Upper and lower limbs were affected in most of the victims. However, head injuries were also commonly reported.

T. Nature of injury

Figure 4.13: Leading nature of injuries occurred at home by percentage



55% of the victims had superficial injuries while 1/4th of victims had open wounds.

5. Injuries among children and adolescents

- More than 70% of injury victims were between 6 – 19 years of age group
- Children were mostly affected during the day time; majority were injured on Mondays and Thursdays
- Leading mechanism of injury was falls (about 1/3rd of all injuries)
- Leading place of occurrence of injuries was home (50% of all injuries) at any age group
- Most of the children were affected while engaged in leisure activities
- Most intentional injuries (both intentional and deliberate self-harm) were also occurred at home

For this analysis, children and adolescents up to 19 years of age admitted for inward care were considered. Children were grouped in to 7 main age categories viz infants (≤ 1 years), 2 – 3 years, 4 – 5 years, 6 – 10 years, 11 – 15 years and 16 – 19 years.

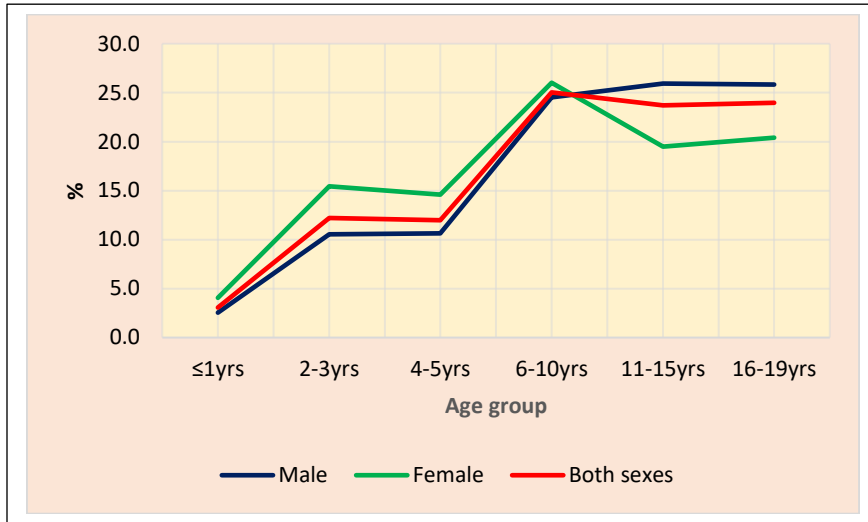
Below table (Table 5.1) shows the number of children reported through national injury surveillance in 2018 in different age categories.

Table 5.1: Number of children admitted with injuries by different age categories reported through national injury surveillance system

Age category (years)	Number reported	% from all injuries reported in children
Infants (≤ 1 years)	2181	3.07
2 – 3 years	8696	12.22
4 – 5 years	8529	11.99
6 – 10 years	17809	25.03
11 – 15 years	16878	23.72
16 – 19 years	17052	23.97
Total	71145	100.00

A. Sex distribution of children and adolescents

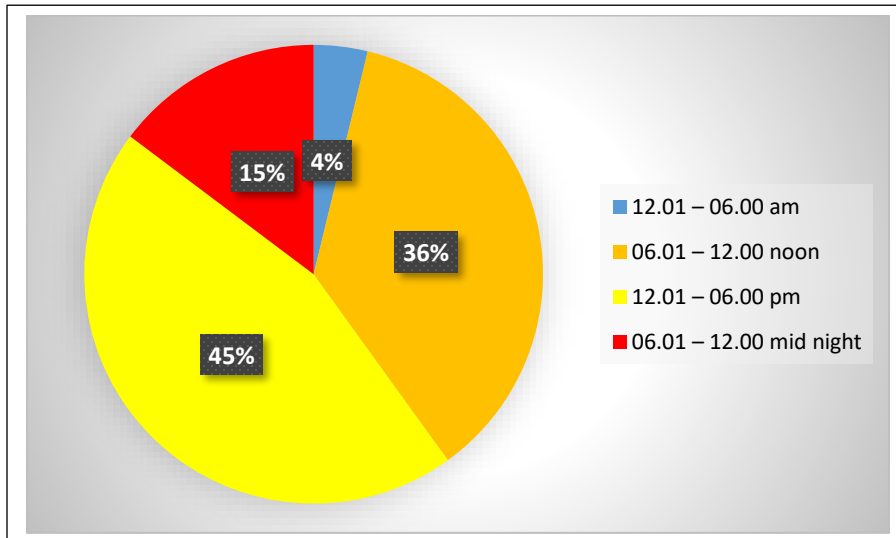
Figure 5.1: Distribution of victims by age and sex by percentage



Even though both males and females were equally affected during younger age more males were affected than females with the increase of age.

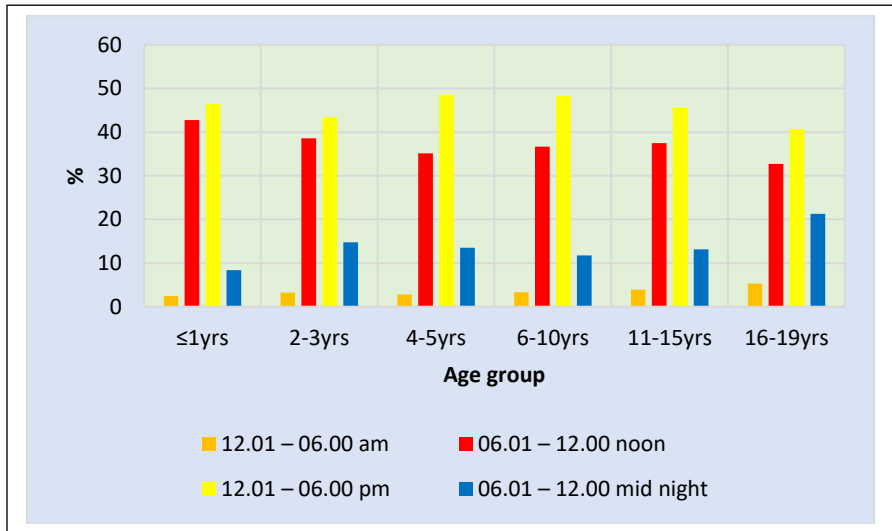
B. Time and date of occurrence of injuries among children

Figure 5.2: Time of occurrence of injuries among children



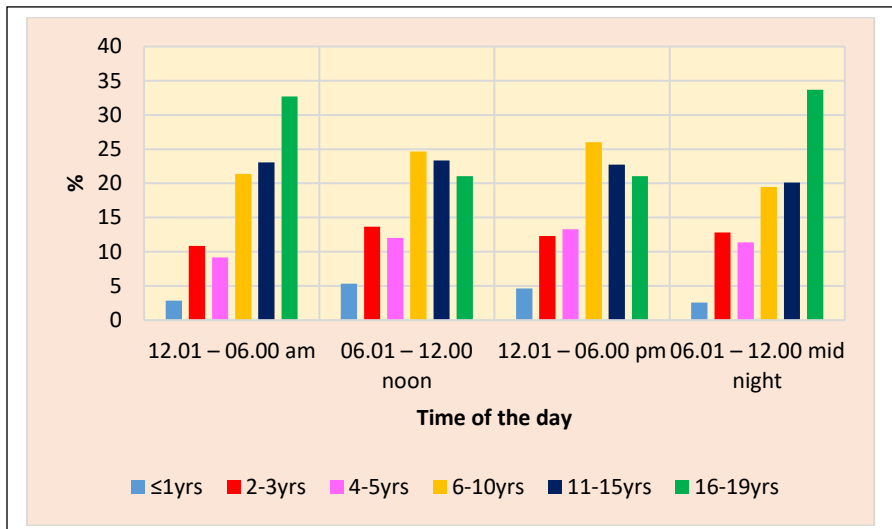
80% of the injuries occurred during the day time. But 20% occurred from 6 pm to 6 am in which 15% occurred from 6 pm to mid night.

Figure 5.3: Time of occurrence of injuries among age groups of children



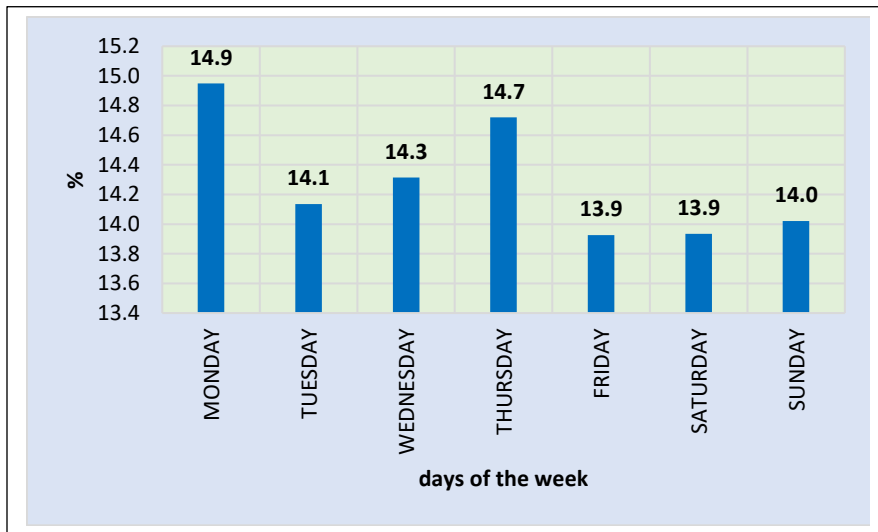
Children were mostly affected during the day time from 6 am to 6 pm. But injuries among children 16 - 19 years of age were also common from 6 pm to 12 mid night.

Figure 5.4: Distribution of the injuries among children during the specific times of the day



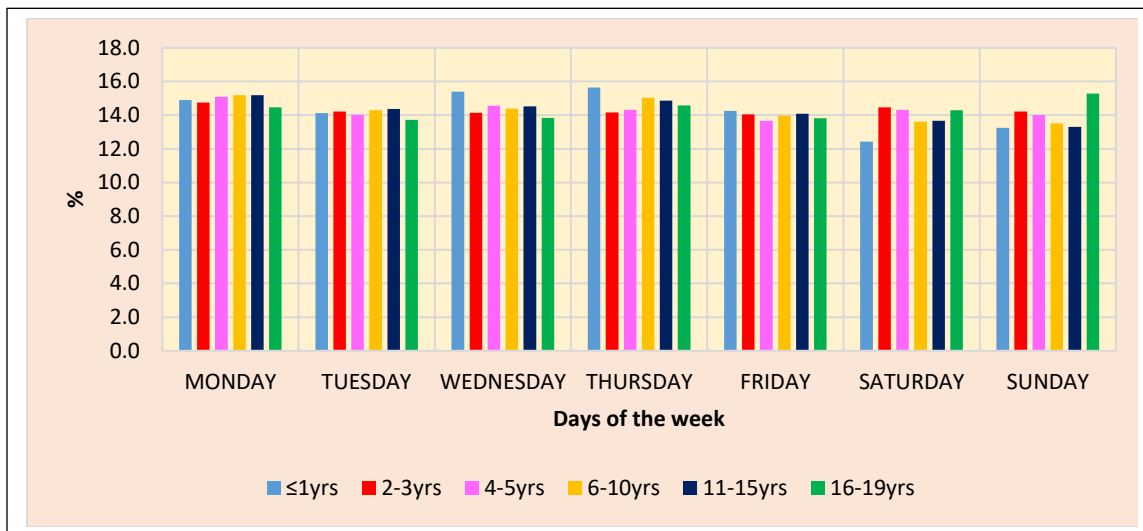
Injuries were common throughout the day among children above 6 years of age. However, children of 16 to 19 years were mostly affected from 6 pm to 6 am.

Figure 5.5: Occurrence of accidents among children by percentage during the days of the week



Majority of injuries occurred on Mondays and Thursdays.

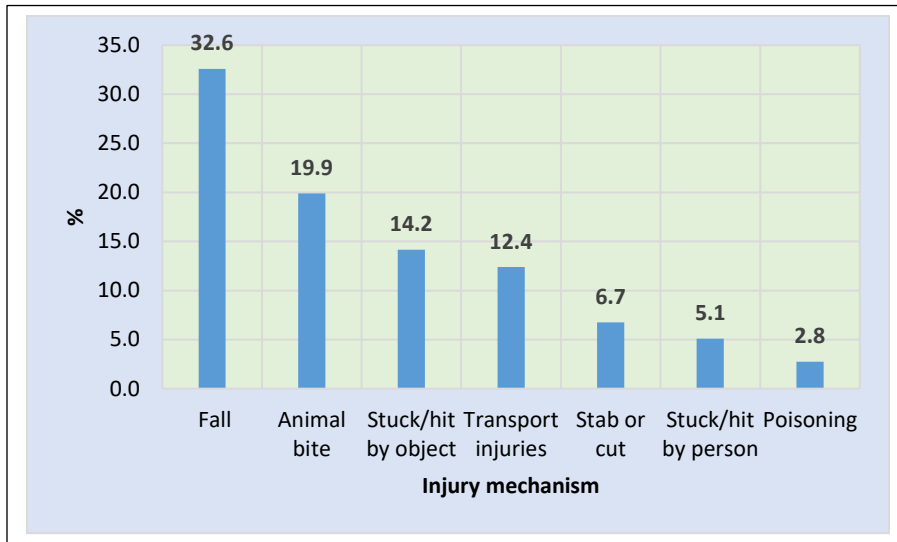
Figure 5.6: Occurrence of injuries indifferent age groups during the days of the week



In general, there is no much difference in occurrence of injuries among all ages of children during the week days. However, , injuries among infants were predominant during the middle of the week. , Injuries among children in the age group of 16 - 19 years occurred mostly on Sundays.

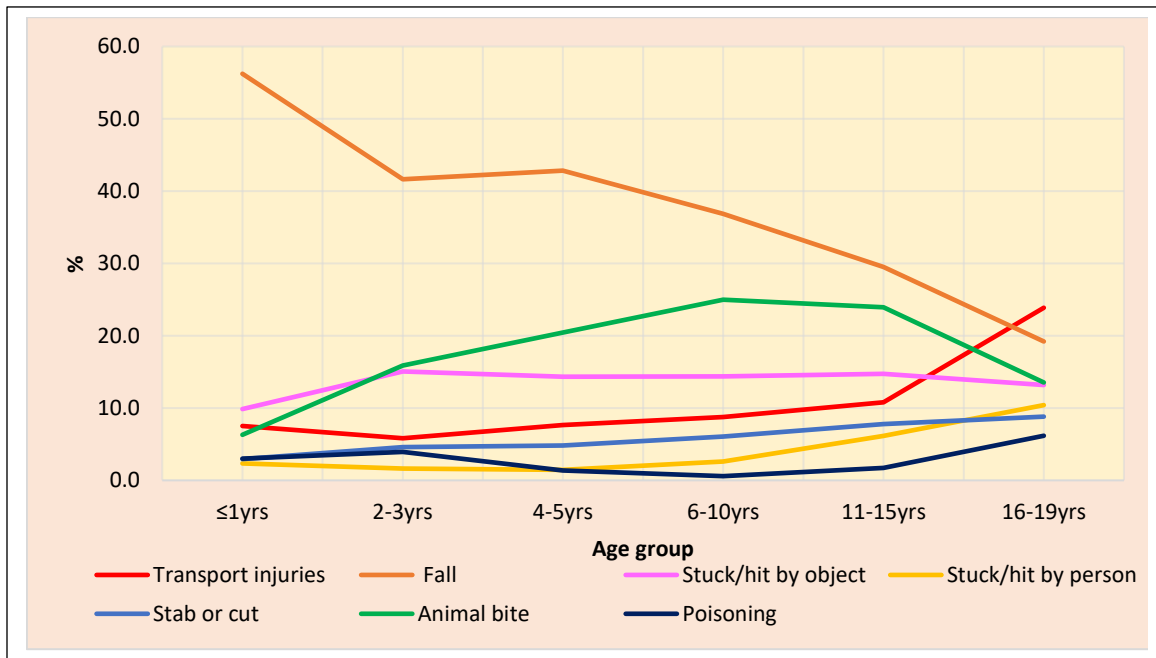
C. Mechanism of injury

Figure 5.7: Leading mechanisms of injuries among children



Leading mechanism of injury was falls (32.6%) followed by animal bite (19.9%), stuck/ hit by object (14.2%), transport injuries (12.4%) and stab or cut injuries (6.7%).

Figure 5.8: Age specific trends of common mechanisms of injury among children

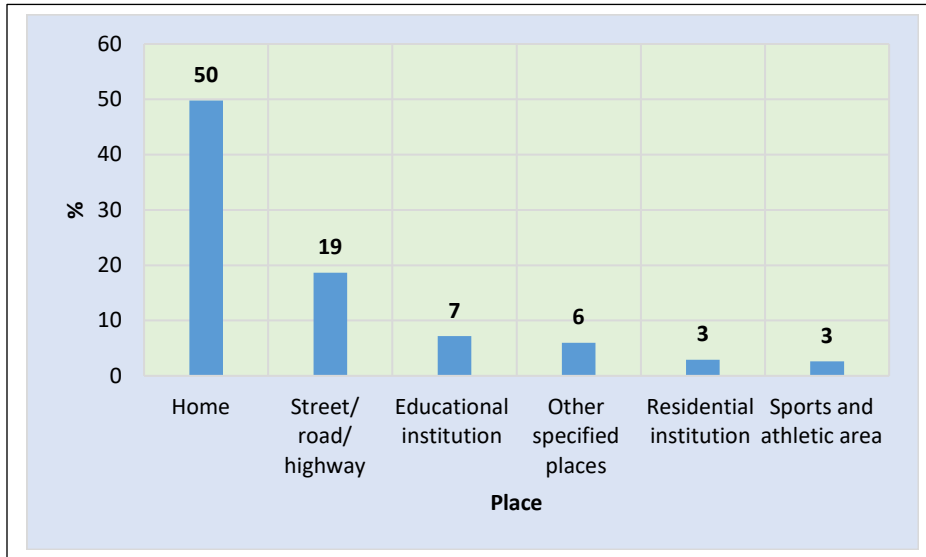


Incidence of falls was reduced with increase of age. Incidence of animal bite was increased with age until 10 years but after 15, it was reduced. Stuck/ hit by object and person, transport injuries,

and stab or cut injuries were increased with age. Poisoning was increased with age and it was highest among children in 16 - 19 years of age

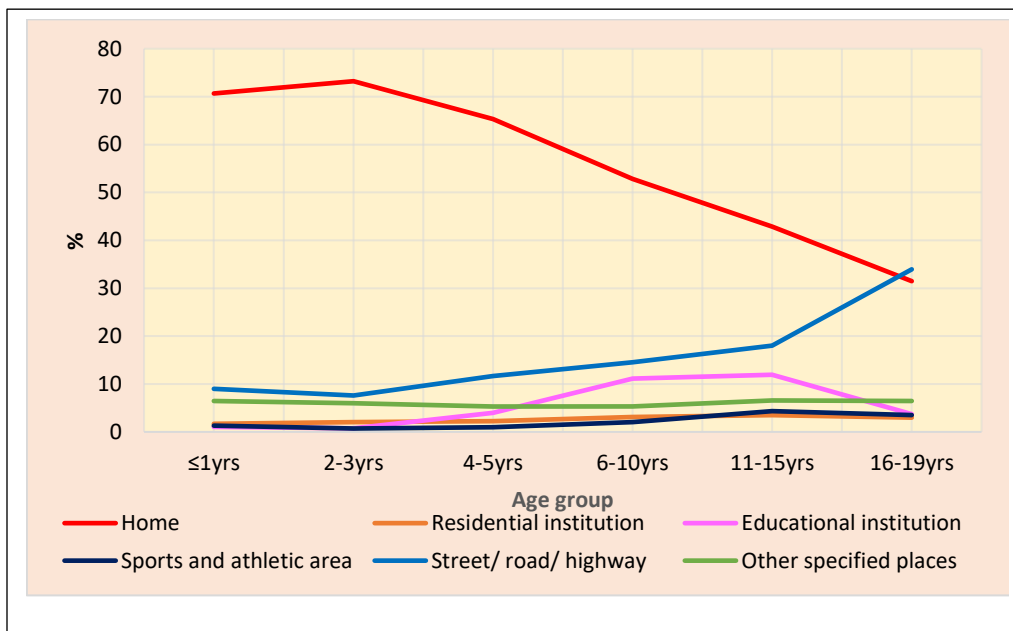
D. Place of injury

Figure 5.9: Leading places of occurrence of injuries among children



Leading place of occurrence of injuries was home (50%) followed by street/ road/ highway (19%) and education institution (7%).

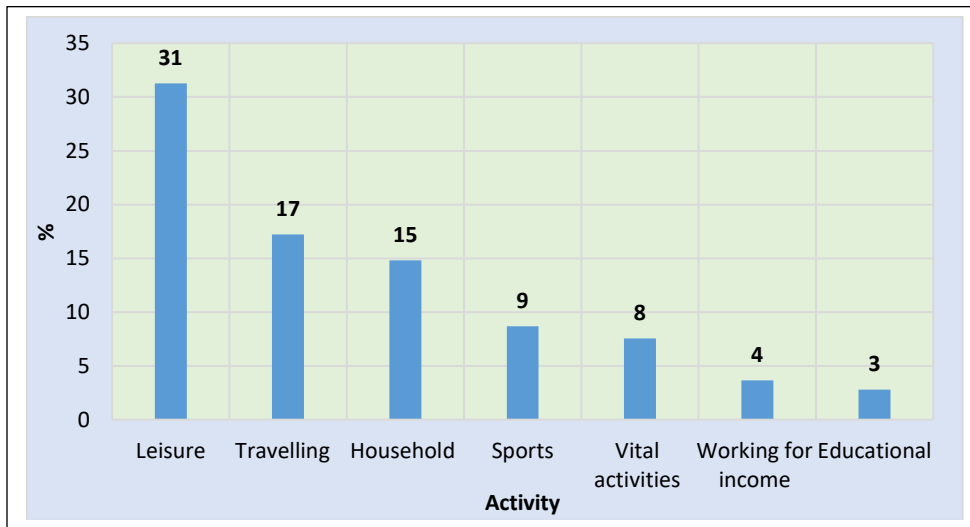
Figure 5.10: Age specific trends of common places of occurrence of injuries among children



Most of the injuries occurred at home across all age groups except among children between 16 – 19 years of age. However, the % of home injuries declined with increase of age. Occurrence of injuries at street/ road/ highway was high among older children and mostly seen among children above 11 years of age. Occurrence of injuries at educational institutions was common among children older than 4 years of age and declined after the age of 15 years.

E. Activity done at the time of injury

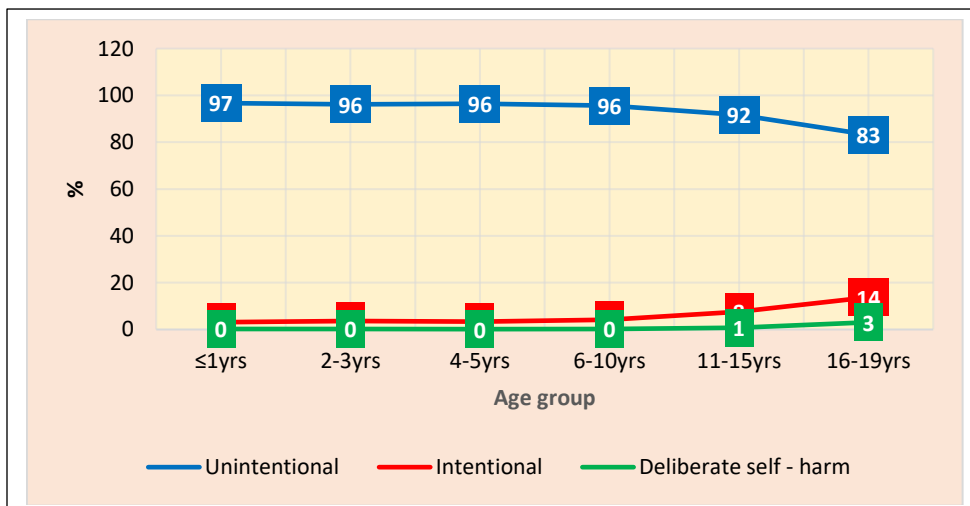
Figure 5.11: Leading activities done by children at the time of injury



Most of the Children got injured while engaged in leisure activities (31%) followed by travelling (17%) and doing household activities (15%).

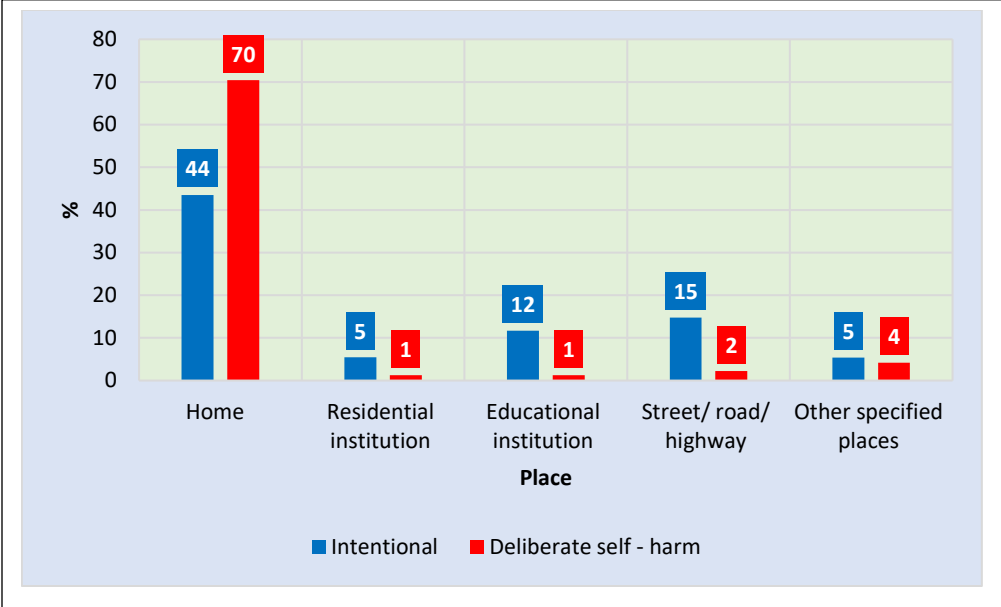
F. Intention of injury

Figure 5.12: Intention of injury among age groups of children by percentage



97% of injuries among children were unintentional. However, 2% and 1% were intentional and deliberate self-harm respectively. Even though unintentional injuries decreased with the increase of age (from 97% in infants to 83% in adolescents of 16 – 19 years of age), injuries due to intentional and deliberate self-harm increased with age (altogether 17% intentional and deliberate self-harm in adolescents of 16 – 19 years of age).

Figure 5.13: Common place of occurrence of intentional and deliberate self-harm among children



Majority of intentional injuries and deliberate self-harm occurred at home (44% and 70% respectively). Other than home, intentional injuries commonly occurred at educational institution (12%), street/ road and highways (15%).

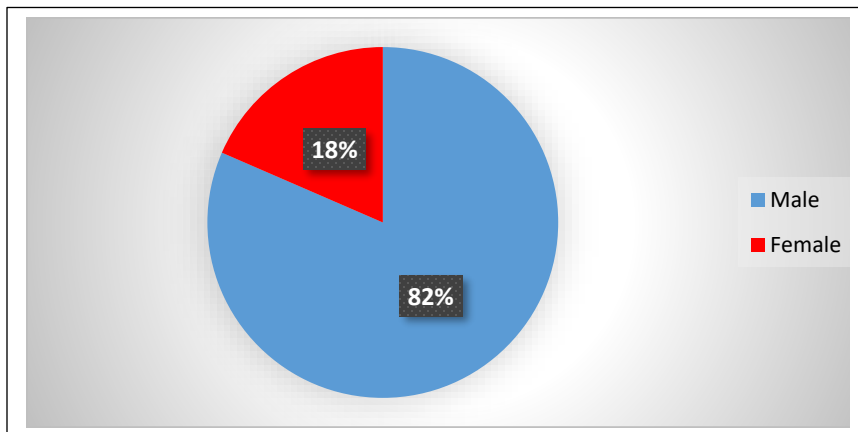
6. Occupation related injuries

- Male to female ratio of the victims of occupation related injuries was 4:1
- 4/5th of injuries were occurred among workers aged 16 - 55 years
- 80% of injuries were occurred during the day time.
- Leading mechanism of injury was stuck/ hit by object (24%)
- Even though 1/3rd of injuries occurred at occupational setting, 2/3rd of such injuries occurred at places other than occupational settings.
- Workers were mostly affected with limb injuries as well as superficial injuries
- Majority (91%) left with a kind of disability at the time of discharge

Of all reported injuries, 9.4% occurred while working for income (Figure 2.15) and 3.6% occurred at occupational settings (Figure 2.13). Therefore, number of victims reported with injuries while working for income were considered as victims due to occupational injuries for this analysis.

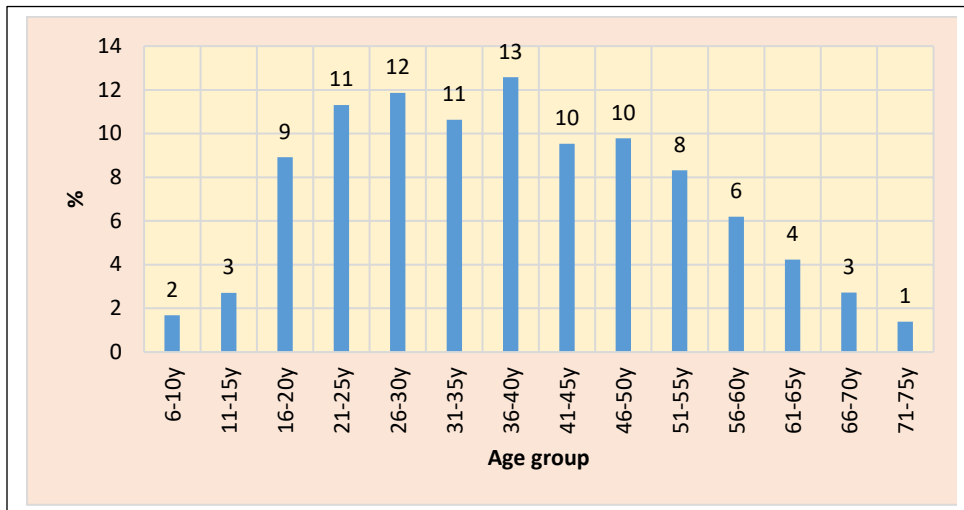
U. Sex and age distribution of victims due to occupational injuries

Figure 6.1: Sex distribution among injured workers by percentage



Male to female ratio of the victims was 4:1

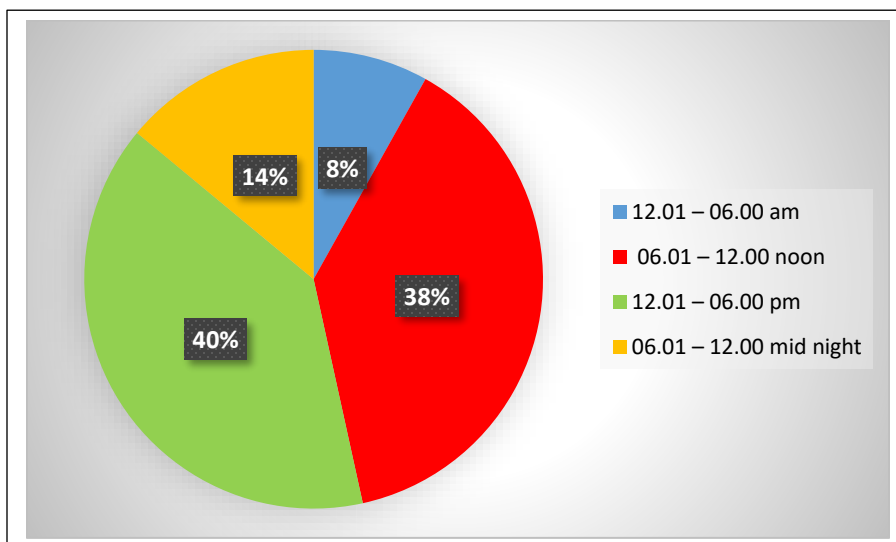
Figure 6.2: Distribution of victims of occupational injuries by age



Occupational injuries were reported in the age group of 6 to 75 years. About 80% of injuries occurred among workers of 16 – 55 years of age.

V. Time of occurrence of occupational injuries

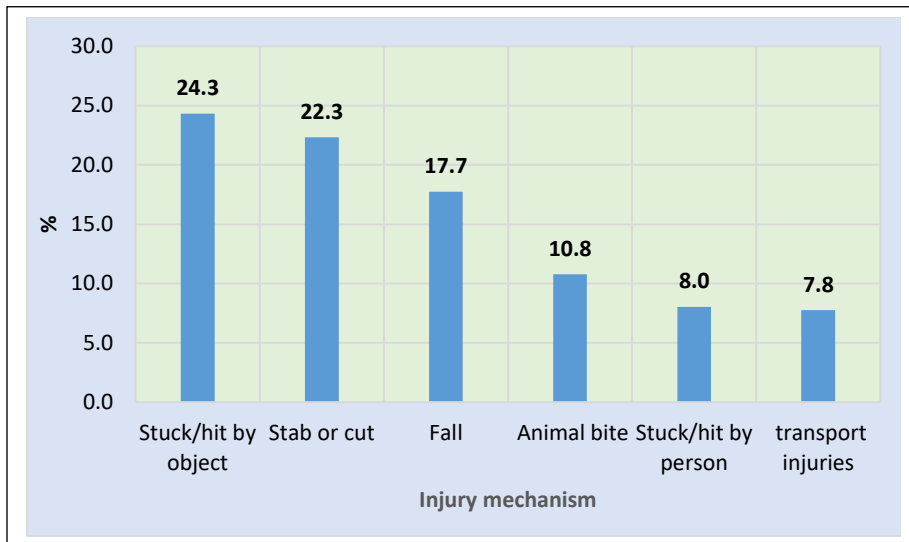
Figure 6.3: Time of occurrence of occupation related injuries by percentage



About 80% of injuries occurred during the day time i.e. from 6 am to 6 pm. But 20% occurred from 6pm to 6 am of which 14% occurred from 6 pm to mid night.

W. Mechanism of injury

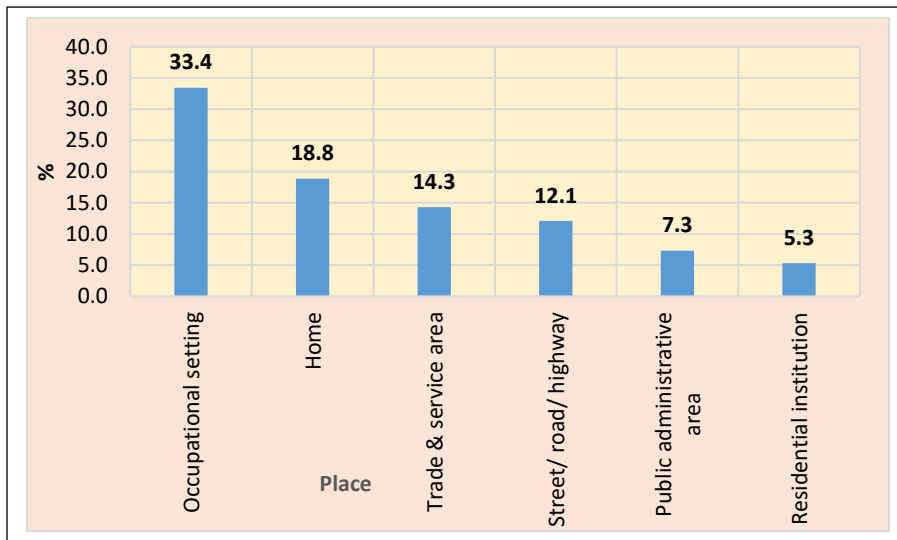
Figure 6.4: Leading mechanisms of occupation related injuries by percentage



Leading mechanism of injury was stuck/ hit by object (24%) followed by stab/ cut (22%), fall (18%), animal bites (11%), stuck/ hit by person (8%) and transport injuries (8%).

X. Place of occurrence of injury

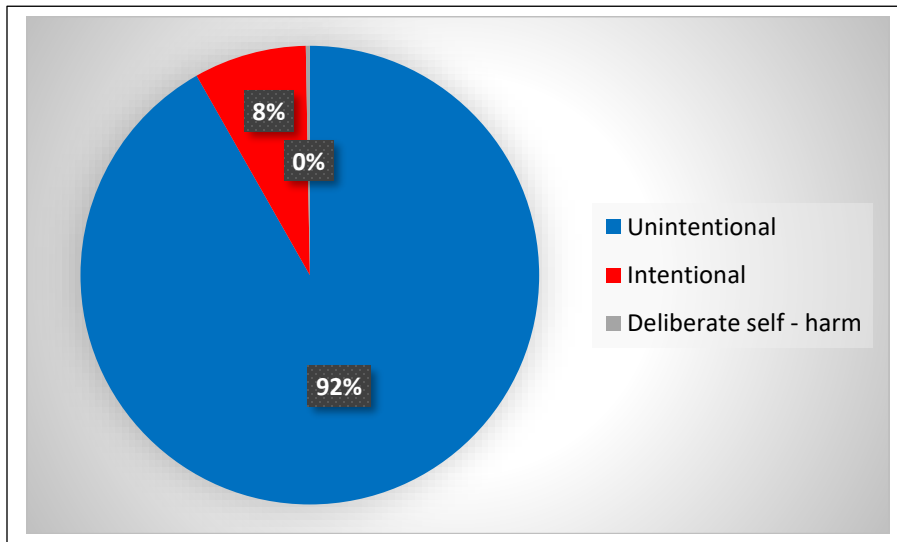
Figure 6.5: Leading places of occurrence of occupational injuries by percentage



Even though about 1/3rd of occupation related injuries occurred at an occupational setting, 2/3rd of such injuries occurred at places other than occupational setting.

Y. Intention of injuries

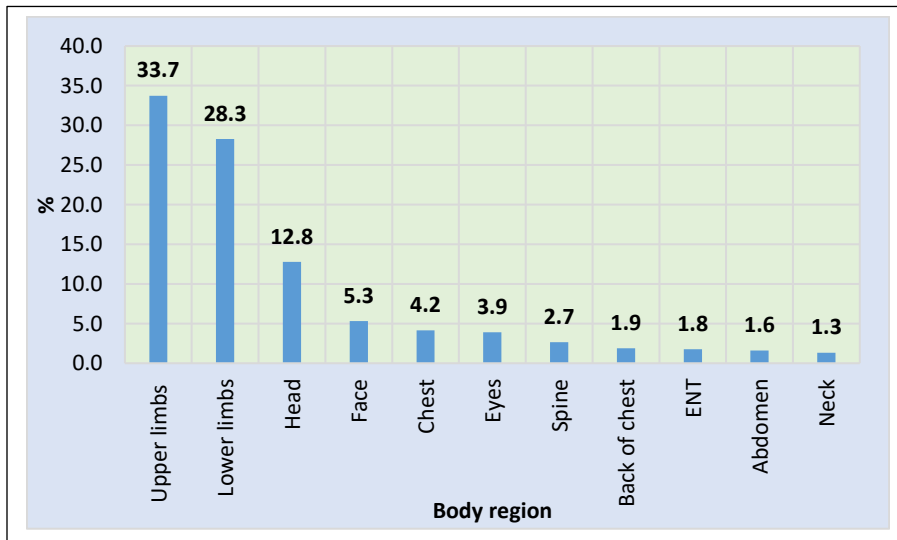
Figure 6.6: Intention of occupation related injuries by percentage



92% of injuries were unintentional and about 8% were intentional. 40 victims were reported as deliberate self-harm though it is negligible (0%)

Z. Affected body region

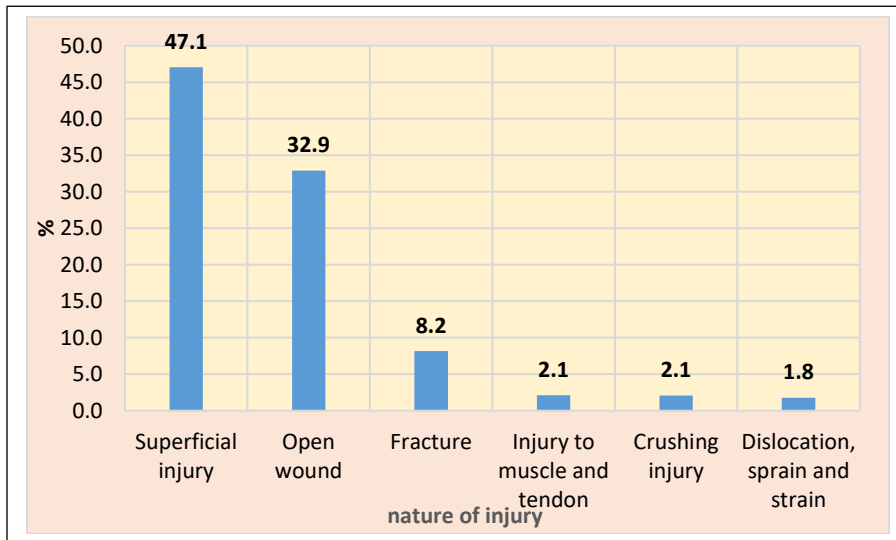
Figure 6.7: Common body regions affected due to occupation related injuries by percentage



Out of reported injuries, upper and lower limbs were mostly affected. However, other regions such as head, face, chest, eyes were also commonly affected.

AA. Nature of injuries

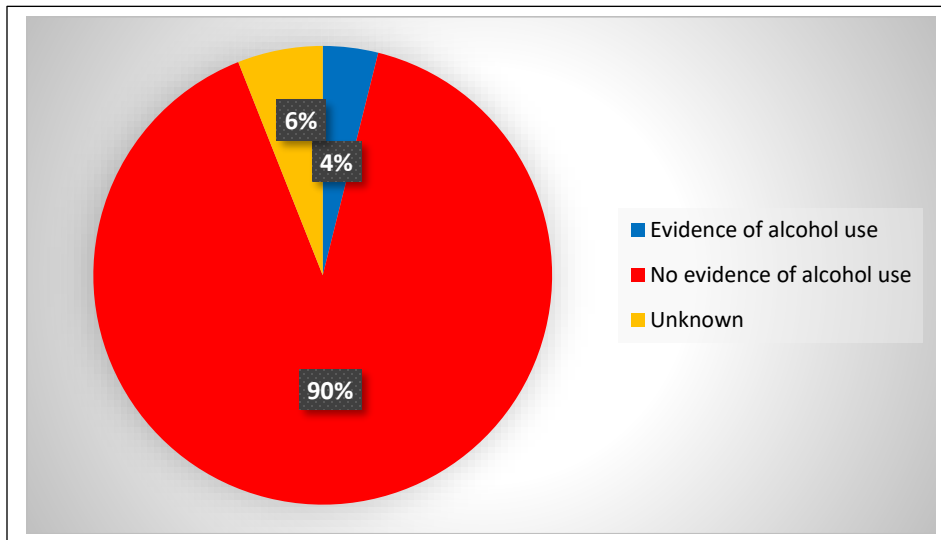
Figure 6.8: Leading natures of occupation related injuries by percentage



About 47% of victims had superficial injuries. In addition, open wounds (32.9%), and fractures (8.2%) were also reported.

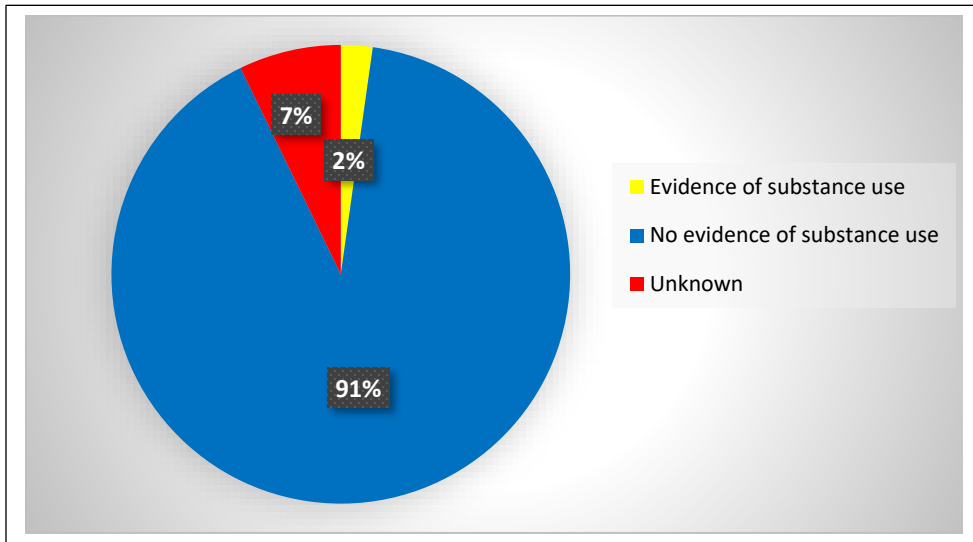
BB. Evidence of alcohol and substance use

Figure 6.9: Evidence of alcohol use by percentage



In 4% of the injuries, there was an evidence of alcohol use.

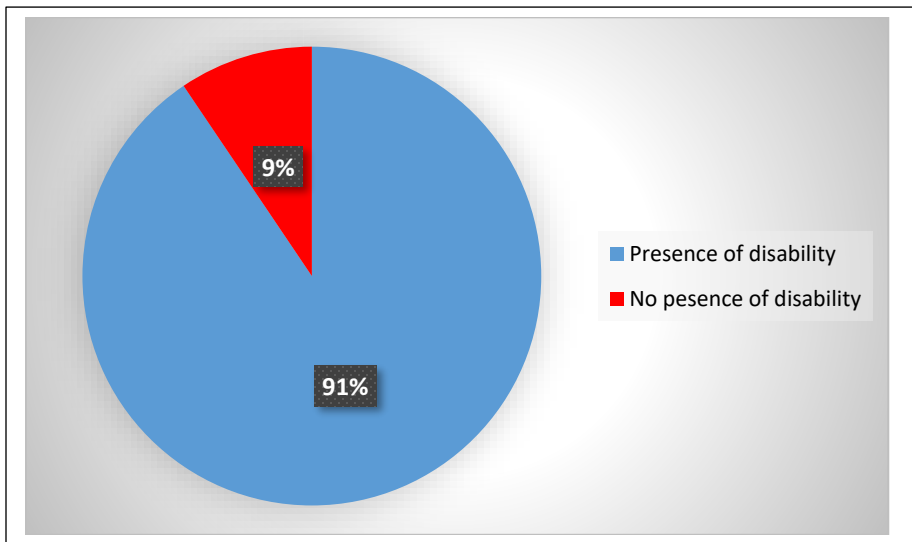
Figure 6.10: Evidence of substance use by percentage



In 2% of the injuries, there was evidence of substance use.

CC. Evidence of disability at the time of discharge

Figure 6.11: Presence of disability at the time of discharge



91% of the victims reported having a kind of disability at the time of discharge.