

3

CHAPTER

VICTIMS OF
ROAD ACCIDENTS

Vulnerable road users account for more than half of all road traffic deaths globally:

Pedestrians, cyclists, and riders of motorized Two Wheelers and Three wheelers and their passengers are collectively known as "vulnerable road

users" and account for half of all road traffic deaths around the world. A higher proportion of vulnerable road users die in low-income countries than in high-income countries (WHO: 10 facts on global road safety)



The prominence of vulnerable road users in many parts of the world, many of whom cannot afford or do not have access to the safest vehicles, they are still largely ignored in the planning, design and operation of roads. In many countries, roads still lack separate lanes for cyclists or adequate crossings for pedestrians and allow motor vehicle speeds that are too high. (Source: WHO: Global Status Report on Road Safety 2018)

Vulnerable road users are at additional risk where their needs have not been taken into consideration during the planning of land use or road engineering. In most countries, roads are planned and built to allow motor vehicles to travel faster while insufficient thought is given to the needs of pedestrians and cyclists, thus forcing them to face increasing risk in use of roads and road crossings. (Source: WHO: Global Status Report on Road Safety 2013)

- **21.73 % of the total road accident victims lost their lives** (19.3 % in the year 2017). **The fatality rate amongst all road accident victims which has been decreasing steadily for the last few years, has seen a change this year, as the fatality rate has increased.** (Table 3.1)
- **Pedestrians are the most vulnerable victims in fatal road mishaps.**
- **Pedestrians continued to suffer the highest casualties as victims of road accidents.** During the year 2018, a total of **775 pedestrians lost their lives and 2160 were injured as compared to 702 pedestrians who lost their lives and 2283 pedestrians who were injured during the year 2017.** This represents **45.85 % of all victims killed** in the year 2018 as compared to 44.31% in 2017. Proportions for the injured pedestrians were higher at 35.49 % in 2018 against 34.56% in 2017 (Table 3.2).

- 2283 (34.56%) pedestrians were injured and 702 (44.31%) were killed in 2017. The trend in the deaths of pedestrians shows that the share of pedestrian deaths range between 40% and 46% of the total victims in fatal accidents. (Table 3.2).
- The share of cyclists as victims of road accidents has remained around 3% to 6% during last 6 years. In the case of cyclists injured, this percentage has been reducing gradually over last 15 years and has come down from 6.32% in 2004 to 2.54% in 2018 (Table 3.2).
- The **Electric rickshaw**, was involved in 12 fatal accidents and 110 simple accidents during the year 2018. 12 persons were killed and 149 persons were injured in these accidents.

REASONS:-

- **Lack of proper and sufficient numbers of pedestrian crossings, Foot Over Bridges (FOB), subways and non-continuous, intentionally encroached, un-friendly and poorly maintained footpaths etc., ignorance of road safety rules, disregard to other road users' rights by vehicle drivers are the major reasons of such accidents.**
- **The condition of road crossing facility is generally poor and not pedestrian friendly. Faulty designing of FOBs, lack of accessible escalators and footpaths for persons with disabilities, dark and dingy subways, lack of thought regarding requirement of FOBs/Subways including long distances and connectivity with arterial roads, lack of signages useful for pedestrian safety- all lead to unsafe pedestrians crossing.**

TABLE – 3.1
VICTIMS (KILLED and INJURED)

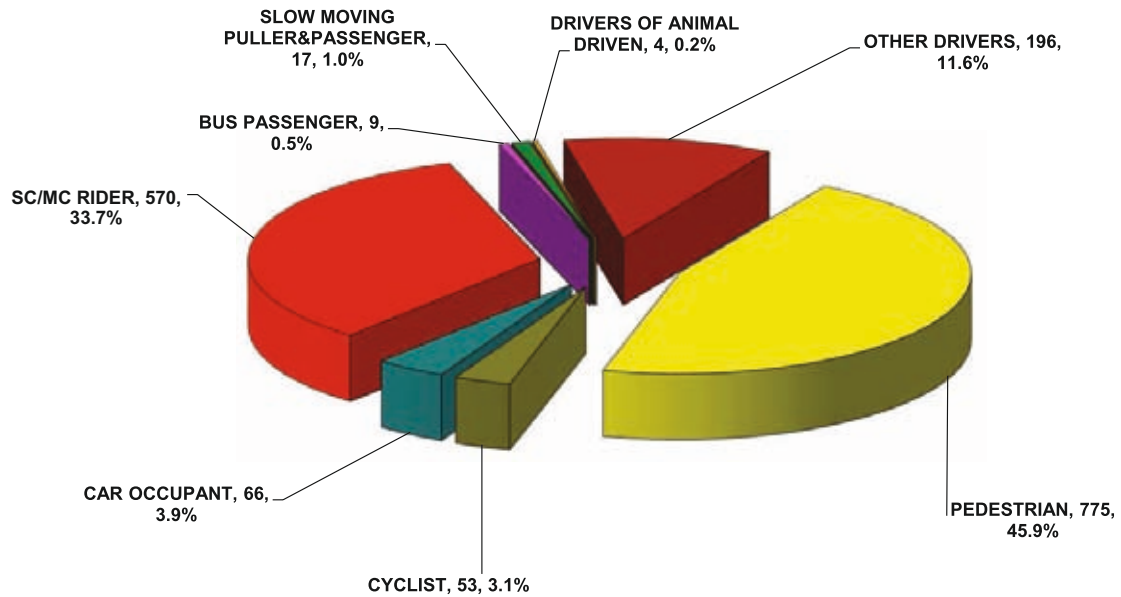
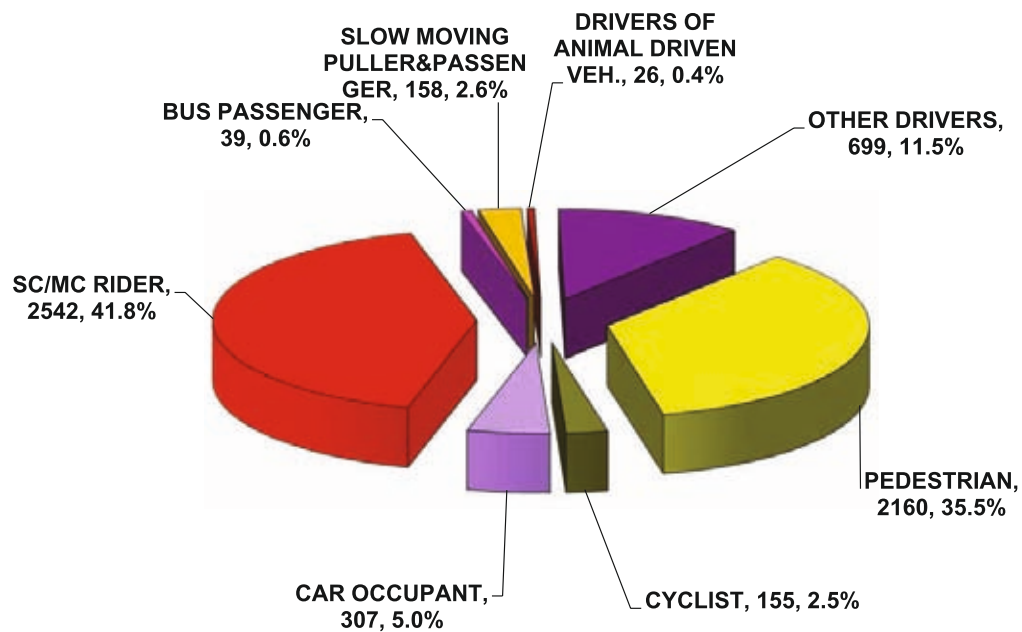
YEAR	PEDESTRIANS		CYCLISTS		CAR OCCUPANTS		SCOOTER / M. CYCLE RIDERS		BUS PASSENGERS		*SLOW MOVING PULLER AND PASSENGERS		DRIVERS OF ANIMAL DRIVEN VEHICLE		OTHER DRIVERS		TOTAL	
	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ
2004	979	3096	181	506	42	684	467	2244	49	209	44	295	1	14	214	949	1977	7997
2005	935	3406	179	528	57	525	568	2293	60	303	46	255	1	12	203	960	2049	8282
2006	1030	3194	154	451	57	611	614	2485	66	269	41	276	0	7	207	987	2169	8280
2007	1071	2831	128	390	64	580	594	2536	44	148	29	198	5	29	205	998	2140	7710
2008	1043	3015	107	353	41	549	641	2355	31	136	19	166	7	24	204	744	2093	7342
2009	1170	2677	121	261	58	444	691	2350	37	121	29	170	6	20	213	893	2325	6936
2010	960	2465	137	309	48	493	705	2438	27	97	37	171	2	14	237	1121	2153	7108
2011	961	2387	107	295	66	423	676	2396	25	96	32	198	1	15	242	1165	2110	6975
2012	828	2261	114	249	64	482	577	2236	16	91	26	121	1	12	240	1181	1866	6633
2013	749	2568	92	305	77	522	613	2573	20	111	32	188	2	28	235	803	1820	7098
2014	749	2949	64	313	51	524	569	3136	7	66	24	296	3	20	204	979	1671	8283
2015	684	2862	71	297	80	632	567	3270	11	53	23	255	2	28	184	861	1622	8258
2016	682	2551	53	218	66	431	572	2911	4	51	34	244	5	37	175	711	1591	7154
2017	702	2283	67	154	53	404	557	2680	7	71	24	198	3	18	171	796	1584	6604
2018	775	2160	53	155	66	307	570	2542	9	39	17	158	4	26	196	699	1690	6086

* Hand Cart, Electric rickshaw and Cycle Rickshaw.

TABLE – 3.2
VICTIM PROFILE (% OF TOTAL IN THE YEAR)

YEAR	PEDESTRIANS		CYCLISTS		CAR OCCUPANTS		SCOOTER / M. CYCLE RIDERS		BUS PASSENGERS		*SLOW MOVING VEHICLES' PULLER AND PASSENGERS		DRIVERS OF ANIMAL DRIVEN VEHICLE		OTHER DRIVERS	
	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ	KLD	INJ
2004	49.51	38.71	9.15	6.32	2.12	8.55	23.62	28.06	2.47	2.61	2.22	3.68	0.05	0.17	10.82	11.86
2005	45.63	41.13	8.74	6.37	2.78	6.34	27.72	27.68	2.93	3.66	2.24	3.08	0.05	0.14	9.91	11.60
2006	47.48	38.57	7.2	5.44	2.62	7.37	28.30	30.01	3.04	3.24	1.89	3.33	0.00	0.08	9.72	11.92
2007	50.06	36.71	5.98	5.05	2.99	7.52	27.75	32.89	2.05	1.91	1.35	2.56	0.23	0.37	9.57	12.94
2008	49.88	41.07	5.11	4.85	1.95	7.54	30.63	32.37	1.48	1.86	0.90	2.28	0.33	0.32	9.74	10.22
2009	50.32	38.59	5.20	3.76	2.49	6.40	29.72	33.88	1.59	1.74	1.24	2.45	0.25	0.29	9.16	12.87
2010	44.58	34.67	6.36	4.34	2.23	6.93	32.74	34.29	1.25	1.36	1.72	2.40	0.09	0.19	11.01	15.77
2011	45.55	33.59	5.07	4.15	3.07	6.20	32.06	34.67	1.30	1.29	1.48	2.80	0.04	0.22	11.40	17.10
2012	44.37	34.08	6.10	3.75	3.43	7.27	30.92	33.71	0.86	1.37	1.39	1.82	0.05	0.18	12.9	17.8
2013	41.15	36.17	5.05	4.29	4.23	7.35	33.68	36.24	1.09	1.56	1.75	2.64	0.10	0.39	12.91	11.31
2014	44.82	35.60	3.83	3.77	3.05	6.32	34.05	37.86	0.41	0.79	1.43	3.57	0.17	0.24	12.20	11.81
2015	42.17	34.65	4.37	3.59	4.93	7.65	34.95	39.59	0.67	0.64	1.41	3.08	0.12	0.33	11.34	10.42
2016	42.86	35.65	3.33	3.04	4.14	6.02	35.95	40.69	0.25	0.71	2.13	3.41	0.31	0.51	10.99	9.93
2017	44.31	34.56	4.22	2.33	3.34	6.11	35.16	40.58	0.44	1.07	1.51	2.99	0.18	0.27	10.79	12.05
2018	45.85	35.49	3.13	2.54	3.90	5.04	33.72	41.76	0.53	0.64	1.00	2.59	0.23	0.42	11.59	11.48

* Hand Cart, Electric rickshaw and Cycle Rickshaw.

FIGURE-3.1 VICTIMS KILLED IN 2018 (1690)**FIGURE-3.2 VICTIMS INJURED IN 2018 (6086)**

Trend in the case of two wheelers (scooter and motor cycle) riders.

- This is the next most vulnerable category of victims and accounted for 570 (33.72%) of all fatalities in accidents in Delhi and 2542 (41.76%) of all injured victims in 2018. The figure of two wheeler victims deaths in road accidents shows an increase from 2017. The number of two wheeler rider victims injured in road accidents decreased from 3270 (2017) to 2542 (2018).
- Accident data thus suggests that **two-wheeler riders have been involved in 1 of every 3 deaths or injuries**. One important fact that can be noted from Table 3.2 is that the share of two-

wheelers as victims (fatalities and injuries) is gradually increasing.

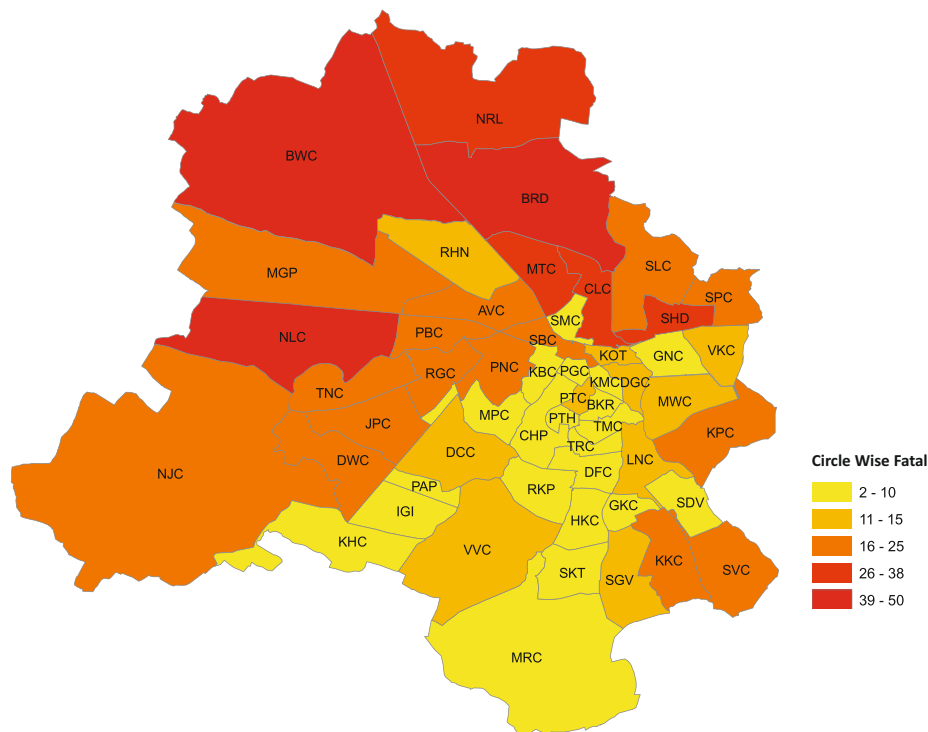
Over the years, the share of deaths of car occupants out of total fatalities has remained between 3% and 5%.

- The share increased from 3.34 % (2017) to 3.90% (2018). In case of non-fatal injuries, it has remained between 6% and 9% over the years.
- The **bus travellers (passengers) are the safest among the road users** (Table 3.1).

Map 3.1(a) to Map 3.3(b) shows the traffic circle wise concentration of pedestrians, cyclists and two wheeler victims.

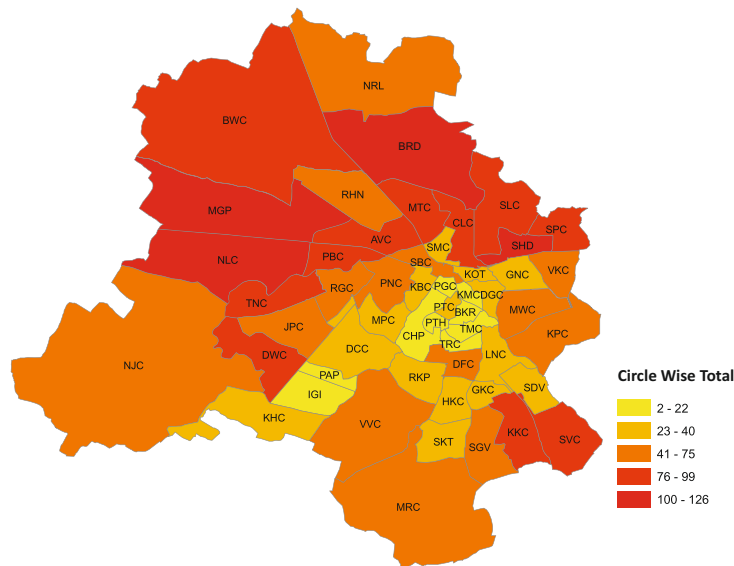
- **More pedestrian fatalities were reported in West, Northwest, Outer and Southeast regions of Delhi** (Map 3.1a).

TOP CIRCLES IN PEDESTRIANS ACCIDENTS FATAL ACCIDENTS



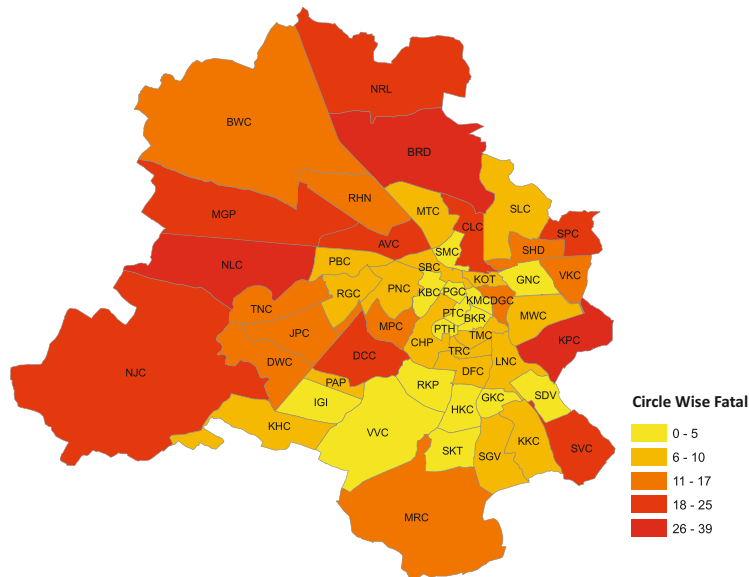
Map 3.1(a) (for area refer to Map 1.3)

TOTAL ACCIDENTS



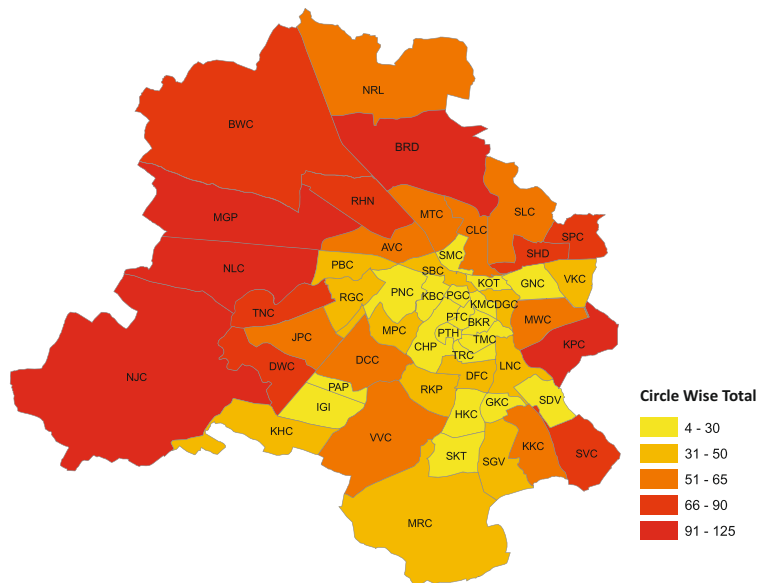
Map 3.1(b) (for area refer to Map 1.3)

- Vulnerability of **two-wheeler victims is more in Burari, Nangloi, Kalyanpuri, Mangolpuri, Delhi Cantt and Narela areas.** (Map 3.2a).
- The total number of accidents of two wheelers are higher in Mangol Puri, Burari, Nangloi, Kalyanpuri, Najafgarh, Tilaknagar, Rohini, Dwarka and Shahadra regions (Map 3.2(b))

TOP CIRCLES IN TWO-WHEELERS ACCIDENTS
FATAL ACCIDENTS

Map 3.2(a) (for area refer to Map 1.3)

TOTAL ACCIDENTS

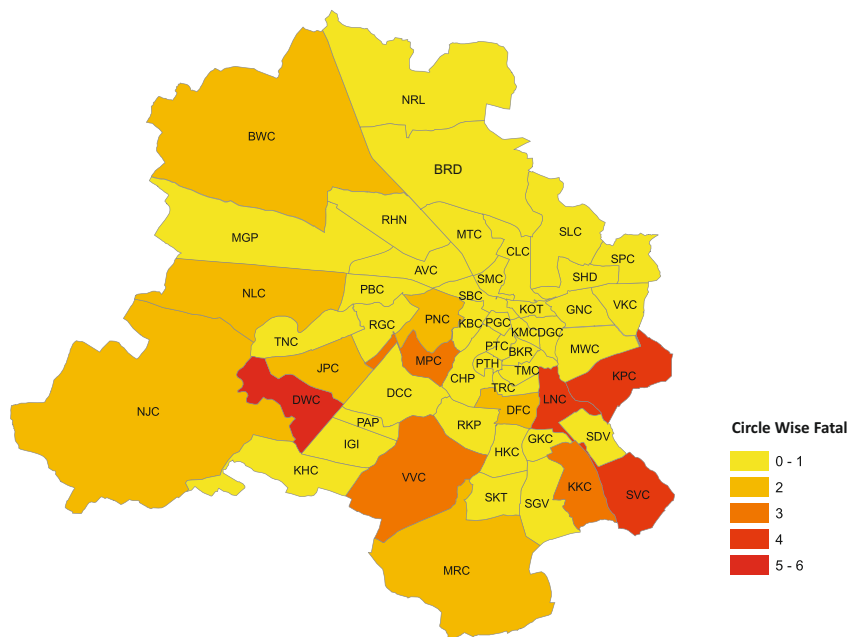


Map 3.2(b) (for area refer to Map 1.3)

- Cyclists are more vulnerable in Dwarka, Sarita Vihar, Kalyanpuri, Lajpatnagar and Mayapuri region (Map 3.3a).

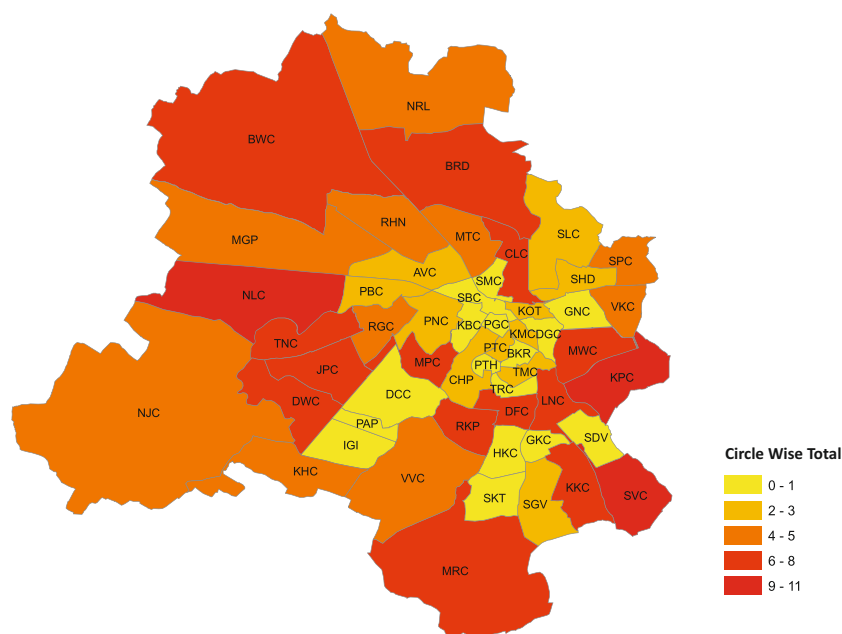
TOP CIRCLES IN CYCLIST ACCIDENTS

FATAL ACCIDENTS



Map 3.3(a) (for area refer to Map 1.3)

TOTAL ACCIDENTS



Map 3.3(b) (for area refer to Map 1.3)

Demographic classification of all victims:

TABLE – 3.3
CHILDREN AND ADULTS (SEX-WISE) KILLED / INJURED IN ACCIDENTS

YEAR	CHILDREN				ADULTS			
	KILLED		INJURED		KILLED		INJURED	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
2004	65	24	205	112	1797	91	7224	460
2005	51	22	195	92	1854	122	7523	472
2006	39	21	206	114	2004	105	7385	575
2007	120	22	458	117	1891	107	6678	457
2008	136	45	508	122	1790	122	6140	572
2009	131	43	464	144	1993	158	5563	765
2010	111	38	482	138	1835	169	5738	750
2011	107	50	534	160	1772	181	5344	937
2012	119	39	515	148	1553	155	5056	914
2013	83	27	518	140	1548	162	5431	1009
2014	106	32	573	153	1388	145	6522	1035
2015	111	33	570	174	1347	131	6455	1059
2016	98	27	553	142	1336	130	5577	882
2017	91	38	514	141	1318	137	5104	845
2018	88	29	418	142	1439	134	4862	664

Note: - Children means persons up to the age of 18 years

SEX RATIO OF PERSONS KILLED

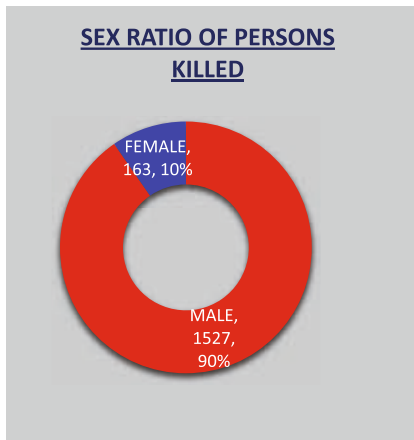


Chart - 3.3 (A)

SEX RATIO OF PERSONS INJURED

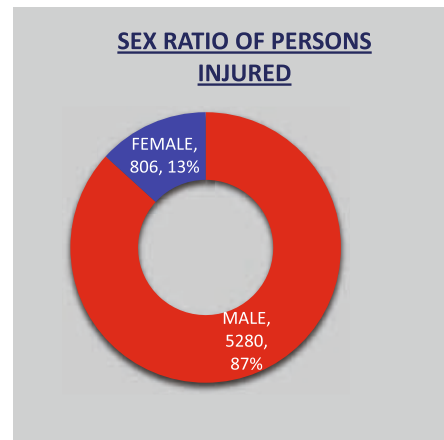


Chart - 3.3 (B)

TABLE – 3.3 (A)

AGE GROUP (SEX-WISE) KILLED / INJURED IN ROAD ACCIDENTS- 2018

AGE GROUP	PERSONS KILLED			PERSONS INJURED		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
<10 YEARS	28	20	48	122	71	193
11-18 YEARS	61	9	70	296	71	367
19-30 YEARS	421	28	449	1474	178	1652
31-40 YEARS	252	30	282	813	124	937
>40 YEARS	394	55	449	1116	197	1313
UNKNOWN AGE	371	21	392	1459	165	1624
TOTAL	1527	163	1690	5280	806	6086

TABLE – 3.3 (B)

AGE GROUP (SEX-WISE) KILLED / INJURED IN ROAD ACCIDENTS- 2017

AGE GROUP	PERSONS KILLED			PERSONS INJURED		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
<10 YEARS	39	25	64	166	77	243
11-18 YEARS	52	13	65	348	64	412
19-30 YEARS	369	32	401	1593	218	1811
31-40 YEARS	238	25	263	830	136	966
>40 YEARS	333	55	388	1222	251	1473
UNKNOWN AGE	378	25	403	1459	240	1699
TOTAL	1409	175	1584	5618	986	6604

AGE PROFILE OF PERSONS KILLED

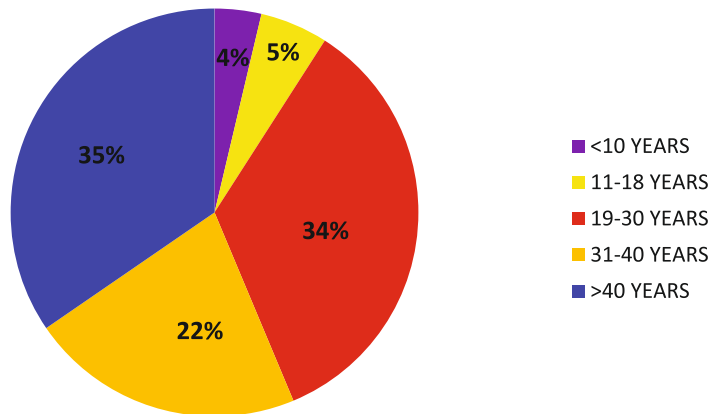


Chart - 3.4 (A)

AGE PROFILE OF PERSONS INJURED

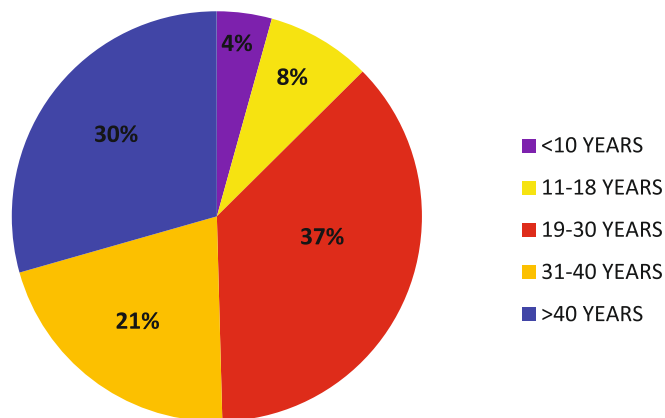


Chart - 3.4 (B)

Demographic classification of all victims:

- Males outnumber females as victims of road accident. In all, 1439 male adults and 134 female adults were killed while 4862 male adults and 664 female adults were injured. (Table 3.3)
- Out of the total child victims of fatal crashes, **88 were boys and 29 were girls, whereas 418 boys and 142 girls were injured.** (Table 3.3).
- **In 2018, 90% of the male victims of various ages were killed while in the year 2017, the figure stood at 89%.**
