Road Safety Situation in Dhaka North

An analysis of fatal crash data from 2023

APRIL 2025

ACKNOWLEDGEMENTS

INTRODUCTION

Worldwide, 7 people die from road crashes every 3 minutes.[1] Low and middle-income countries, which account for roughly 60% of the world's vehicles, experience 92% of global road fatalities.[1] In Bangladesh, the World Health Organization (WHO) estimates that at least 86 people die each day from road crashes [1] which depicts the severity of the road safety situation in Bangladesh.

Dhaka, the capital city of Bangladesh is rapidly growing in terms of population, density, and economy. City dwellers rely on bus (35%), walking (23%), rickshaw (20%), motorcycles (5%), and cycling (1%) as their primary modal choice.[2] This indicates that a significant proportion of road users are vulnerable and at heightened risk of crash injuries and deaths.

The Bloomberg Philanthropies Initiative for Global Road Safety (BIGRS) has been working with Dhaka North City Corporation (DNCC) to help support the government in reducing road fatalities in Dhaka. A key aspect of this partnership is to gain insights into the city's road safety situation and challenges by analyzing and using crash data. This routine follow-up report aims to inform the road safety situation, identify vulnerable road user groups, map the high-risk locations, and present evidence-based recommendations.

This effort signifies the collaboration and shared vision of the Dhaka North City Corporation (DNCC) and the Dhaka Metropolitan Police (DMP) in reducing deaths and injuries on Dhaka's roads.

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1. Global status report on road safety, World Health Organization, 2023

2. Rahman, Faysal Ibna. "Analysing the factor influencing travel pattern and mode choice based on household interview survey data: a case study of Dhaka city, Bangladesh." Silesian University of Technology 109 (2020).

METHODOLOGY

The data for this analysis were obtained from the Dhaka Metropolitan Police (DMP) Headquarters following a formal request made by the Dhaka North City Corporation (DNCC) in October 2024. The The data were extracted from the First Information Report (FIR) and written complaint (ejahars) of each fatal road crash case filed in the 25 police stations that fall within the jurisdiction area of the DNCC.

Following a road crash, the investigating officer (IO), of the relevant police station, records the general details of that crash in an FIR while taking into consideration the written complaint (ejahar) of the victim's relatives. Where fatalities occur and/or victims could not be identified, the IO produces both the written complaint and the FIR. These two documents are considered one and attached together for further legal procedures and actions. These documents are stored as hard copies in monthly registers at the police station and shared with the Crime unit of the DMP Headquarters and the Traffic Management unit of the Bangladesh Police Headquarters.

The first wave of data collection required each police station to share all road crash FIRs and ejahars to the Traffic Unit of DMP Headquarters. After receiving these documents, a few data reporting issues were identified such as missing FIRs and ejahars. To address this, the team worked with the DMP headquarters to produce a list of all FIRs and ejahars filed in 2023. This list was then used to identify missing FIRs and ejahars. The team then went back to the individual police stations to retrieve the missing documents.

Data entry was completed using the Epi Info (version 7.2.6.0). The input form was based on select variables from the "Accident Report Form" (ARF) and was designed to reflect data that can be extracted from FIRs and ejahars.

Upon receipt of the data, the team assigned geo-referencing to the individual crash records, corrected errors, filled-in missing details, and prepared the dataset for analysis.

Microsoft Excel (Microsoft Office Suite 2016) was used for most of the analysis.

Spatial analysis was performed using the QGIS 3.18.3 software.
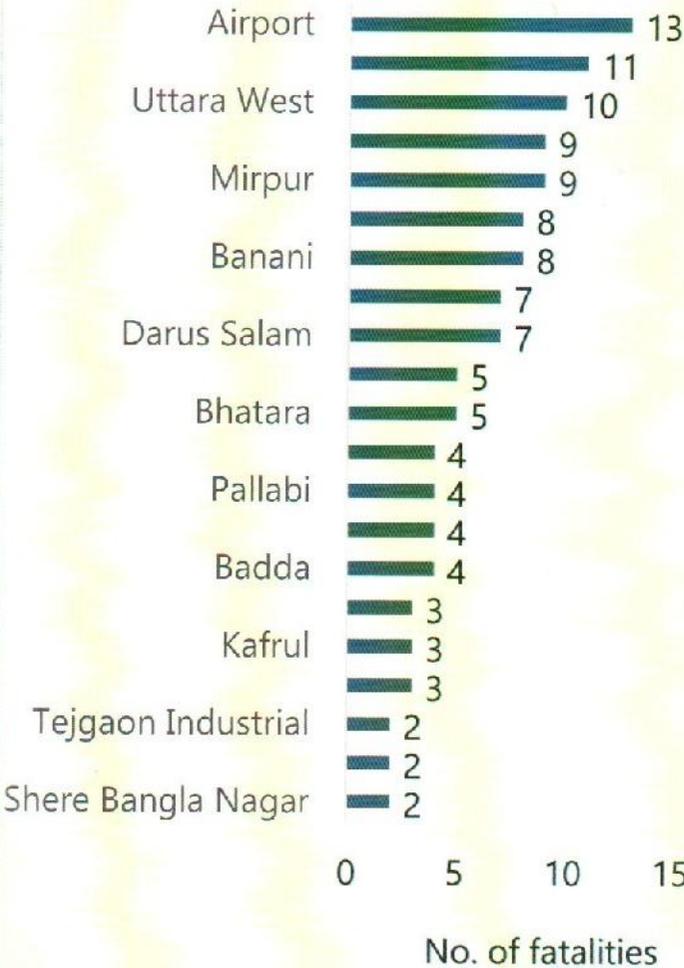
To the extent possible, the team addressed all data quality and completeness issues to produce a baseline understanding of the road safety situation in Dhaka North. It is important to note . that the data presented had limitations, such as the issue of underreporting. Nonetheless, the analyses should be enough to inform the future direction of road safety in Dhaka city.

RESULTS

FATAL CRASHES

Fatality Reporting from Police Stations: 2023

Police Station	No. of fatalities
Airport	13
	11
Uttara West	10
	9
Mirpur	9
	8
Banani	8
	7
Darus Salam	7
	5
Bhatara	5
	4
Pallabi	4
	4
Badda	4
	3
Kafrul	3
	3
Tejgaon Industrial	2
	2
Shere Bangla Nagar	2

No. of fatalities

In 2023, a total of 117 fatal crashes were reported from the 25 police stations located within the Dhaka North City Corporation (DNCC) jurisdiction area.

No Fatal crashes reported from 4 Police stations

**BHASANTEK
DAKSHINKHAN
GULSHAN
UTTARKHAN**
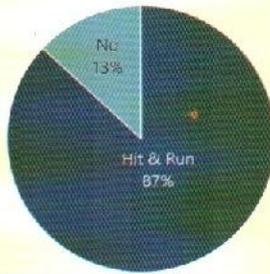
55% FATALITIES WERE REPORTED FROM **7** POLICE STATIONS

Hit & Run in Fatal Crashes: DNCC 2023 (n=117)

87%

Fatal crashes were Hit & Run

Three types of collisions predominantly led to these fatal crashes

Type of Collisions leading to fatal crashes (n=113): DNCC 2023
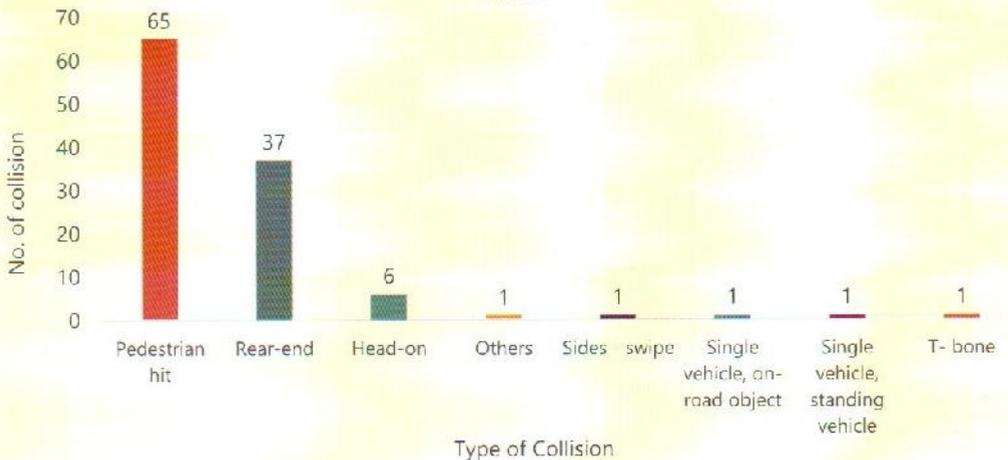
58%

OF ALL THE COLLISIONS WERE PEDESTRIAN HIT

65%

MOTORCYCLISTS DIED IN REAR-END COLLISIONS

CRASH FATALITIES

123 PEOPLE DIED IN
117 FATAL CRASHES

61% OF ALL ROAD
DEATHS
ARE
PEDESTRIANS

Deaths by road user types: DNCC 2023 (n=123)

No. of deaths

Road User Types	No. of deaths
Pedestrian	75
Motorcyclist	29
Rickshaw	8
CNG 3W	6
Vehicle Occupant	3
Bicycle	2
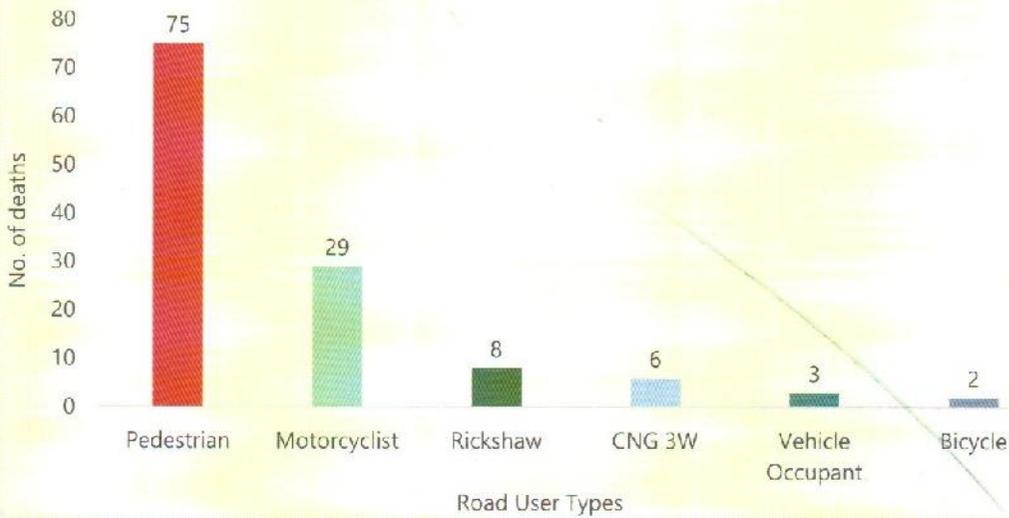
Pedestrians were the most vulnerable road user on Dhaka streets

THREE OUT OF FIVE ROAD CRASH
DEATHS INVOLVED **PEDESTRIANS.**

MOTORCYCLISTS ACCOUNTED FOR
ONE OUT OF EVERY FOUR FATALITIES.

DEATH BY SEX

83%

% OF ALL
DEATHS WERE
MALES

All Deaths by Sex: DNCC 2023 (n=118)

No. of deaths

120	
100	**98**
80	
60	
40	
20	**20**
0	
	Male Female

Pedestrian Deaths by sex: DNCC 2023 (n=70)

No. of deaths

60	
50	**50**
40	
30	
20	**20**
10	
0	
	Male Female
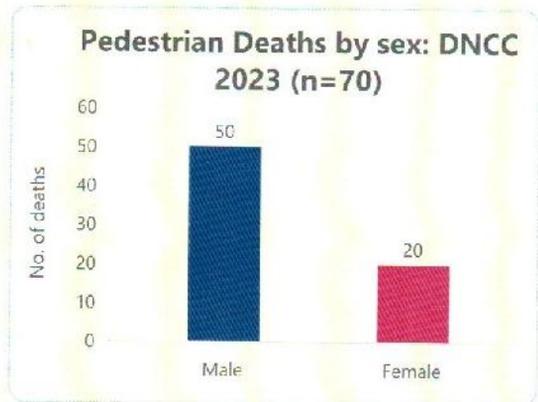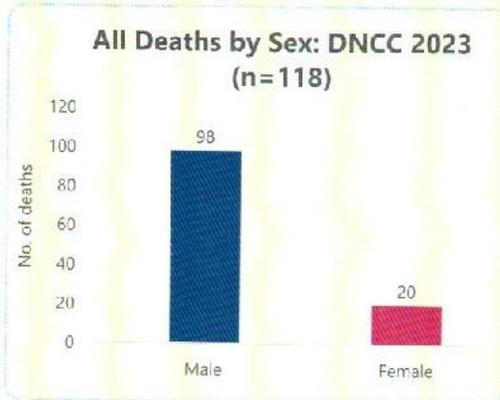
FOUR OUT OF FIVE
FATALITIES IN
CRASHES INVOLVED
MALES

TWO IN EVERY FIVE
PEDESTRIAN
FATALITIES
INVOLVED FEMALES

All the females who died in 2023 Dhaka North road crashes were pedestrians.

DEATH BY AGE

All deaths by age groups: DNCC 2023 (n=113)
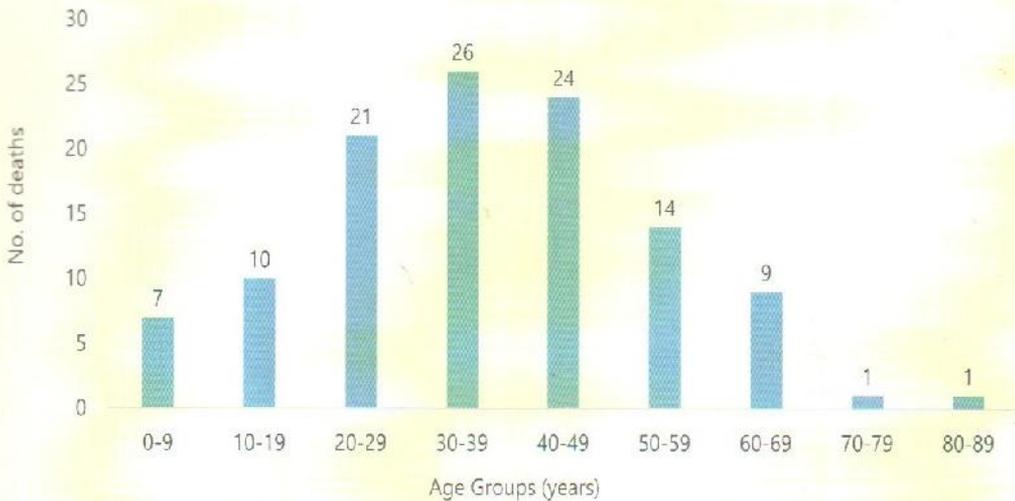
OF ALL THE AGE GROUPS, THE 20-49 AGE GROUPS HAD THE HIGHEST NUMBER OF FATALITIES IN 2023.

DNCC 2023 Deaths by age groups: All vs Pedestrians
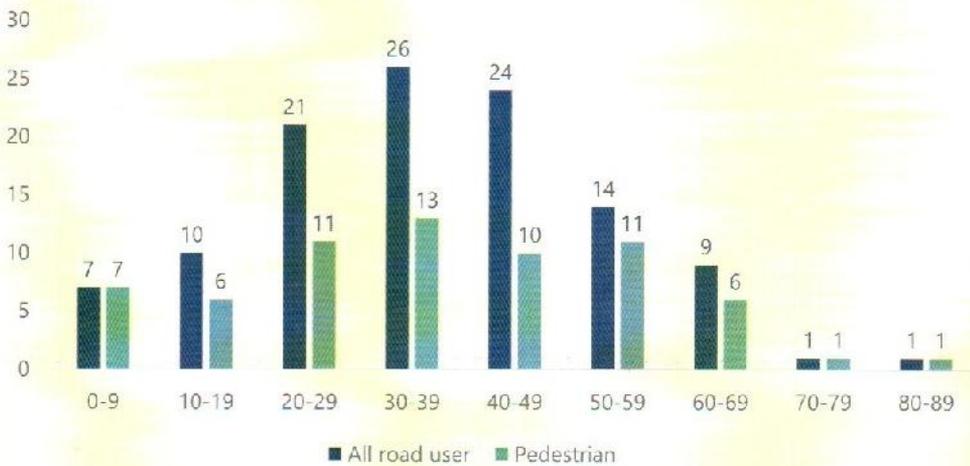
PEDESTRIAN FATALITIES WERE REPRESENTED ACROSS ALL AGE GROUPS.

DEATH RATE BY AGE & SEX

Death Rates by sex and age groups: DNCC 2023 (n=113)

Death rate per 100000 pop.

Age Group	Male	Female
0-9	0.4	0.3
10-19	0.9	0.0
20-29	1.9	0.2
30-39	2.6	0.4
40-49	3.3	0.6
50-59	2.1	1.0
60-69	1.8	1.1
70 +	1.0	0.0

Legend: ■ Male ■ Female

Age Groups
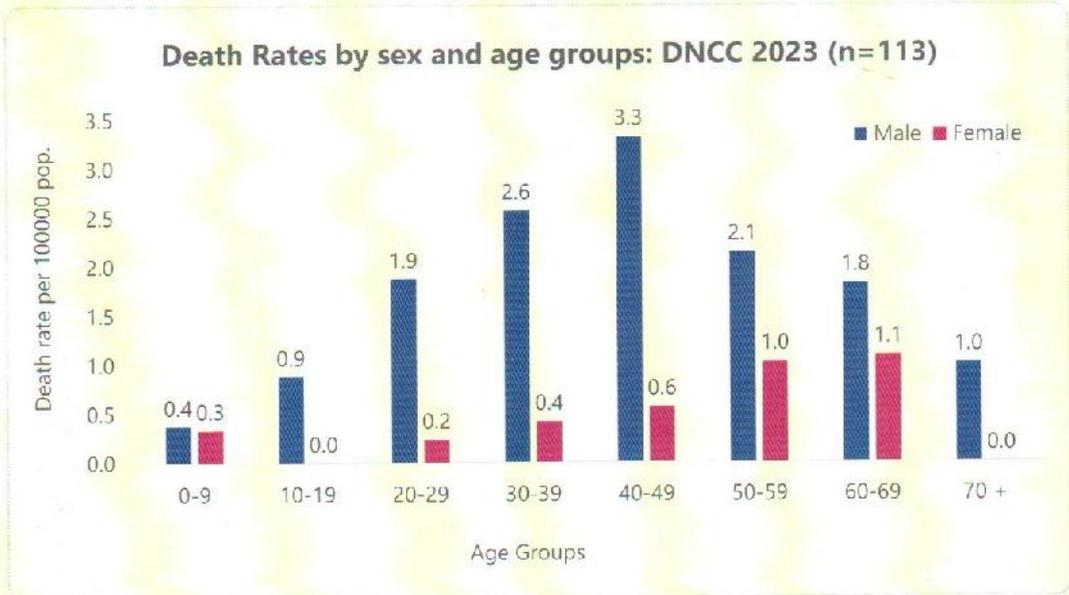
MALE AGED 40-49 YEARS HAD THE HIGHEST DEATH RATE OF **3.3**

TIME-OF-DAY, DAY-OF-WEEK

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Hourly Total
00:00 -00:59			1		2	1	2	6
01:00 - 01:59			1			2	1	4
02:00 -02:59	2		1					3
03:00 - 03:59	2	2	1	1		1		7
04:00 -04:59	1		1	1		1		4
05:00 -05:59			1					1
06:00 - 06:59	2				2			4
07:00 -07:59		1			1			2
08:00 -08:59		1			2	1		4
09:00 - 09:59	2		1			1		4
10:00 - 10:59	1	1	1			1	1	5
11:00 - 11:59	2	1	1				1	5
12:00 - 12:59	2	1			1	2		6
13:00 - 13:59			2				1	3
14:00 - 14:59			1					1
15:00 - 15:59				1		1		2
16:00 - 16:59	1			2	1	2	1	7
17:00 - 17:59			1	2		2		5
18:00 - 18:59	2		1	1				4
19:00 - 19:59			2	2			1	5
20:00 - 20:59			2	2	3	2		9
21:00 - 21:59				2		2	1	5
22:00 - 22:59		1		3		1	1	6
23:00 - 23:59		2	2	1	4	1	2	12
Day Total	17	10	20	18	16	21	12	114

THE AVERAGE NUMBER OF FATALITIES PER HOUR AT NIGHT WERE HIGHER THAN THAT OF DAYTIME IN DHAKA.

Average Fatal Crashes per hour: Day vs Night, Dhaka North 2023 (n=114)

Time of day

Nighttime (6 pm - 5:59 am) 5.33

Daytime (6 am - 5:59 pm) 4

0   1   2   3   4   5   6

Avg. no. of fatal crashes per hour
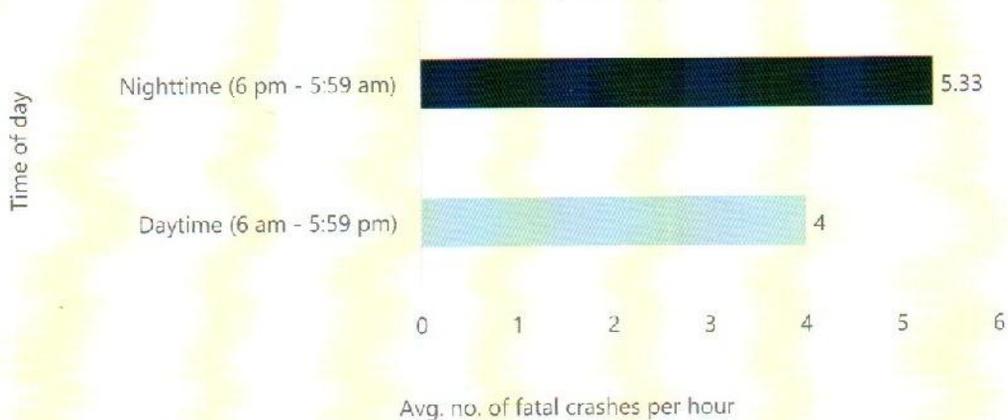
Avg. no. of fatal crashes: Weekends vs Weekdays

Avg. no. of fatal crashes

16.2	16.5
Weekdays	Weekends
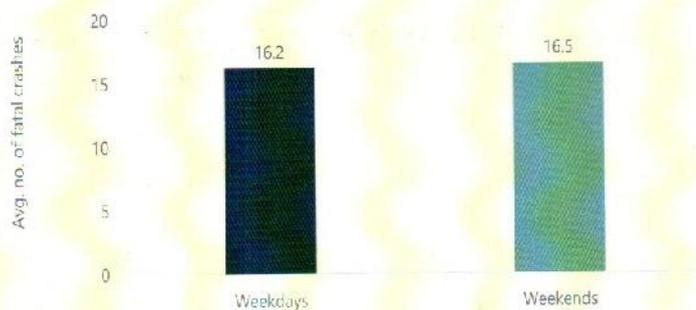
THE AVERAGE NUMBER OF FATAL CRASHES REPORTED DURING WEEKENDS AND WEEKDAYS WAS ALMOST THE SAME.

Fatal Crashes by month: DNCC 2023 (n=117)

No. of fatal crashes

Month	No. of fatal crashes
January	13
February	7
March	12
April	11
May	7
June	5
July	13
August	13
September	7
October	10
November	6
December	13

NO DISCERNIBLE PATTERNS WERE OBSERVED IN THE FATAL CRASHES PER MONTH.

WHO HIT WHOM

	Pedestrian	Bicycle	Bus	Truck	4 Wheeler	Autorickshaw	Motorcycle	Rickshaw/Van
Bus	17	1	4			2	5	
4 Wheeler	7						2	1
Autorickshaw	4	1				1		3
Truck	15			1		3	17	4
Motorcycle	6		1		1			
Rickshaw/Van							1	

BUSES AND **TRUCKS** WERE THE DEADLIEST VEHICLES ON THE DHAKA STREETS

PEDESTRIAN DEATH BY VEHICLE INTERACTION

Pedestrian deaths (n=49) by vehicle interaction: DNCC 2023

No. of deaths

Vehicle Type	No. of deaths
Bus	17
Truck	15
4 Wheeler	7
Motorcycle	6
CNG 3W	4
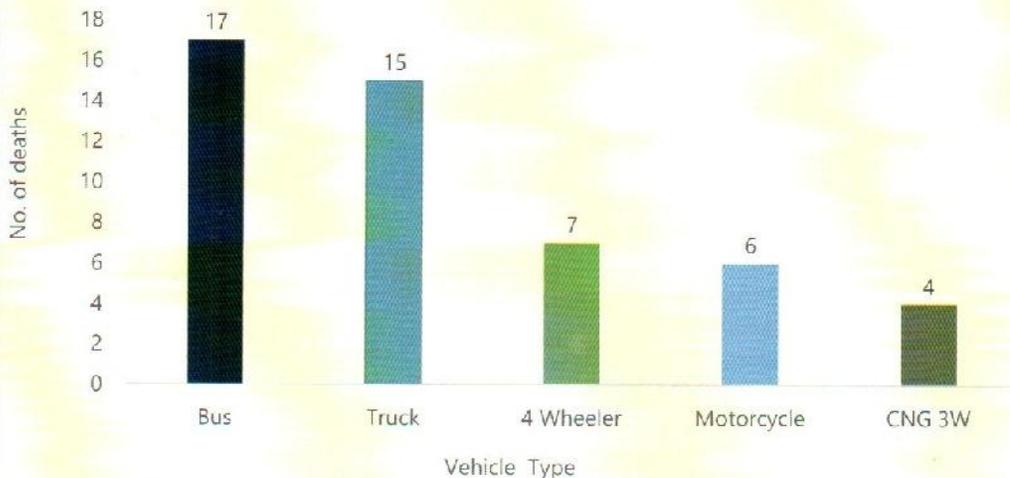
MOST PEDESTRIAN DEATHS WERE CAUSED BY BUSES

EVERY **1 IN 3 PEDESTRIANS** WERE KILLED BY BUSES
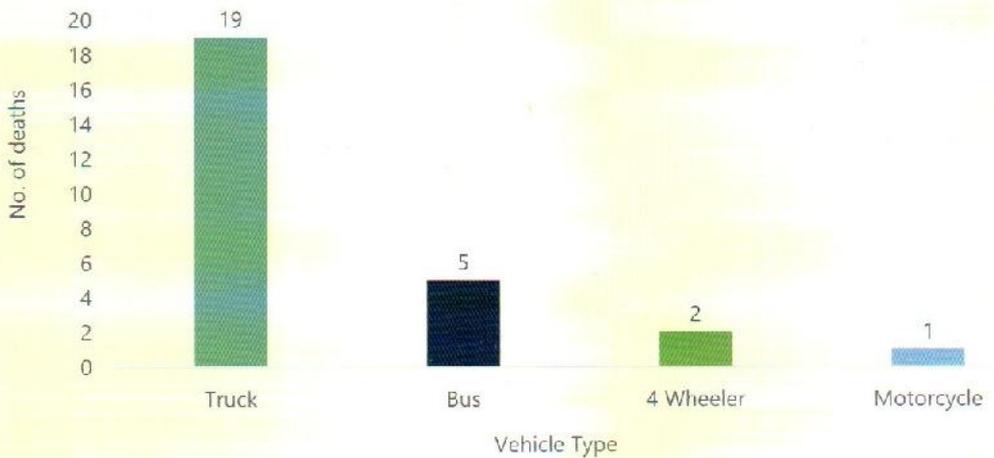
TRUCKS RANKED **SECOND** IN TERMS OF DEADLINESS

*Buses include Bus, Minibus
**Trucks include Heavy, Small, Pick-up trucks and Tankers
4 Wheelers include Sedan, SUV & Microbus

MOTORCYCLIST DEATH BY VEHICLE INTERACTION

Motorcyclist deaths (n = 27) by vehicle interactions: DNCC 2023

No. of deaths

Vehicle Type	No. of deaths
Truck	19
Bus	5
4 Wheeler	2
Motorcycle	1

TRUCKS WERE INVOLVED IN MOST MOTORCYCLIST DEATHS

2 OF 3 MOTORCYCLISTS DIED FROM CRASHES WITH **TRUCKS**

HIGH-RISK LOCATIONS

Location Description	No. of Fatality	250m radius cluster coordinates
East side of Airport Flyover, Next to Airport Zone Traffic Police Box, Dhaka - Mymensing Hwy, Airport.	5	23.850127, 90.409021
Mirpur 1 Intersection, Next to foot overbridge, Mirpur 1	5	23.798558, 90.353116
On the Dhaka - Natore Highway, below the Dhaka - Gazipur BRT, opposite of RSR CNG refuelling centre, Abdullahpur	4	23.879923, 90.401091
On Mirpur Road, opposite of Kalyan Bhaban & Shyamoli NR Bus Counter, Kalyanpur	3	23.778630, 90.359933
Next to Nikunja Bus Stop, opposite of Dhaka Regency Hotel, Khilkhet	3	23.828791, 90.420034
On Mirpur Road, next to Dhour Beribandh Intersection, Dhour	3	23.891891, 90.361601

HIGH-RISK LOCATIONS FOR PEDESTRIANS

| Location Description	No. of Fatality	250m radius cluster coordinates
East side of Airport Flyover, Next to Airport Zone Traffic Police Box, Dhaka - Mymensing Hwy, Airport.	5	23.850127, 90.409021
Mirpur 1 Intersection, Next to foot overbridge, Mirpur 1	4	23.798558, 90.353116
On the Dhaka - Natore Highway, below the Dhaka - Gazipur BRT, opposite of RSR CNG refuelling centre, Abdullahpur	3	23.879923, 90.401091
In front of Scholastica School, Dhaka - Mymensing Hwy, Uttara Sector 4	3	23.778630, 90.359933
Next to Nikunja Bus Stop, opposite of Dhaka Regency Hotel, Khilkhet	3	23.828791, 90.420034

For all road users, considering the total number of fatalities occurring within a 250 meters radius area on road (intersections or mid-blocks), 6 high-risk locations were identified. These high-risk locations are common loading and unloading spots for local buses. Many pedestrian fatalities occurred in these designated and informal bus stops.
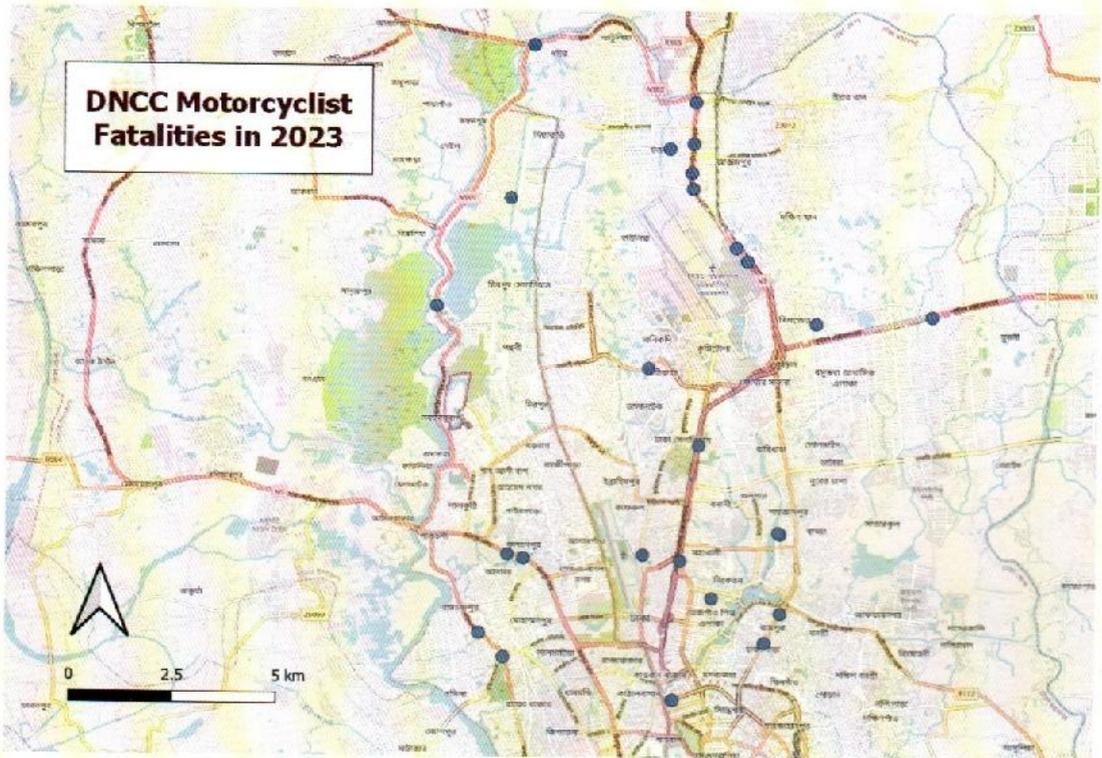
FATALITY MAP

All Fatalities within DNCC in 2023

Heat Map of All Fatalities within DNCC in 2023
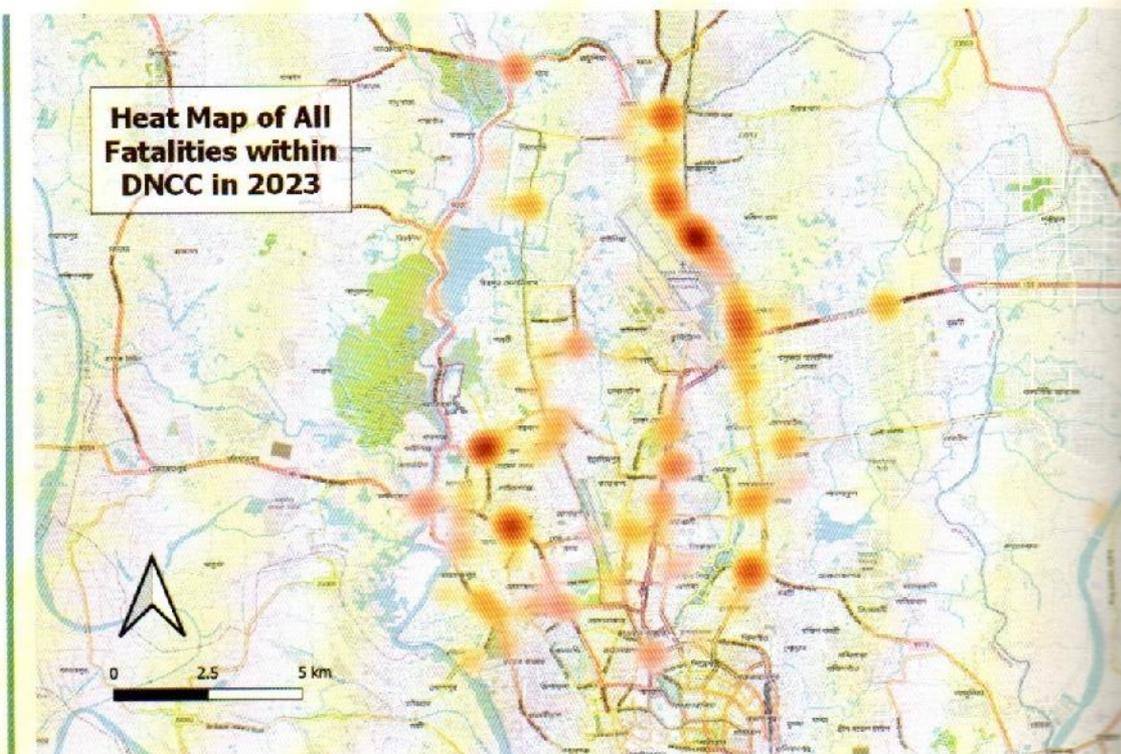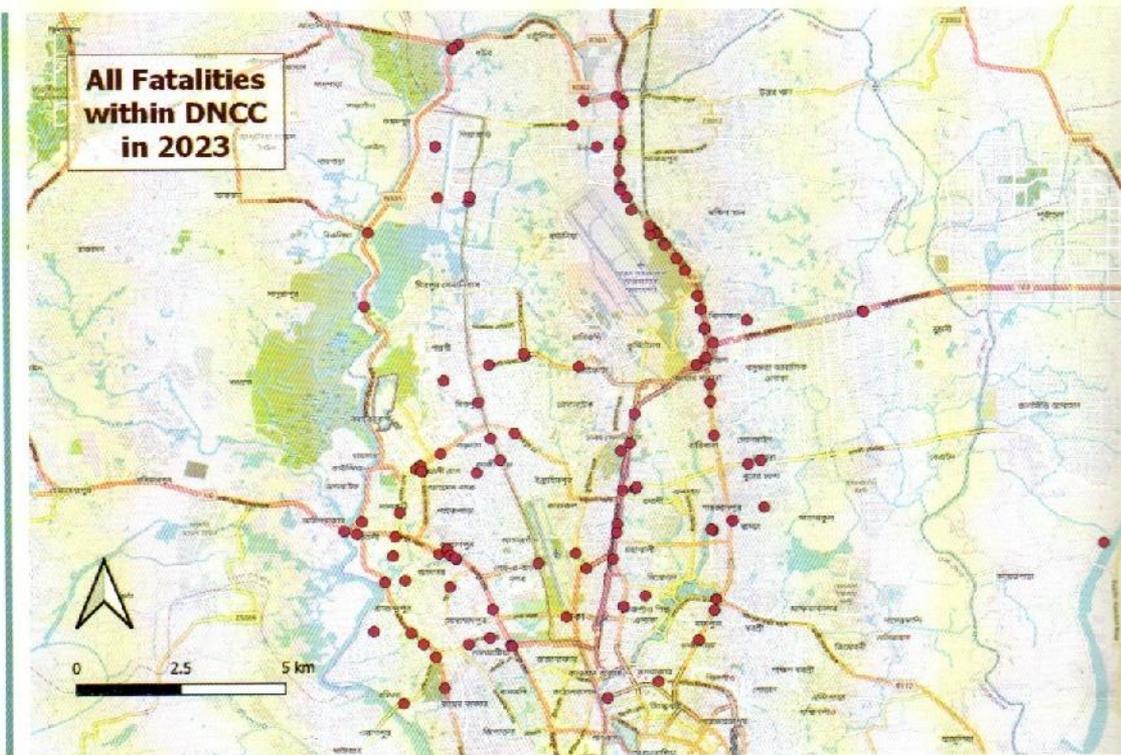
FATALITY MAP

DNCC Pedestrian
Fatalities in 2023
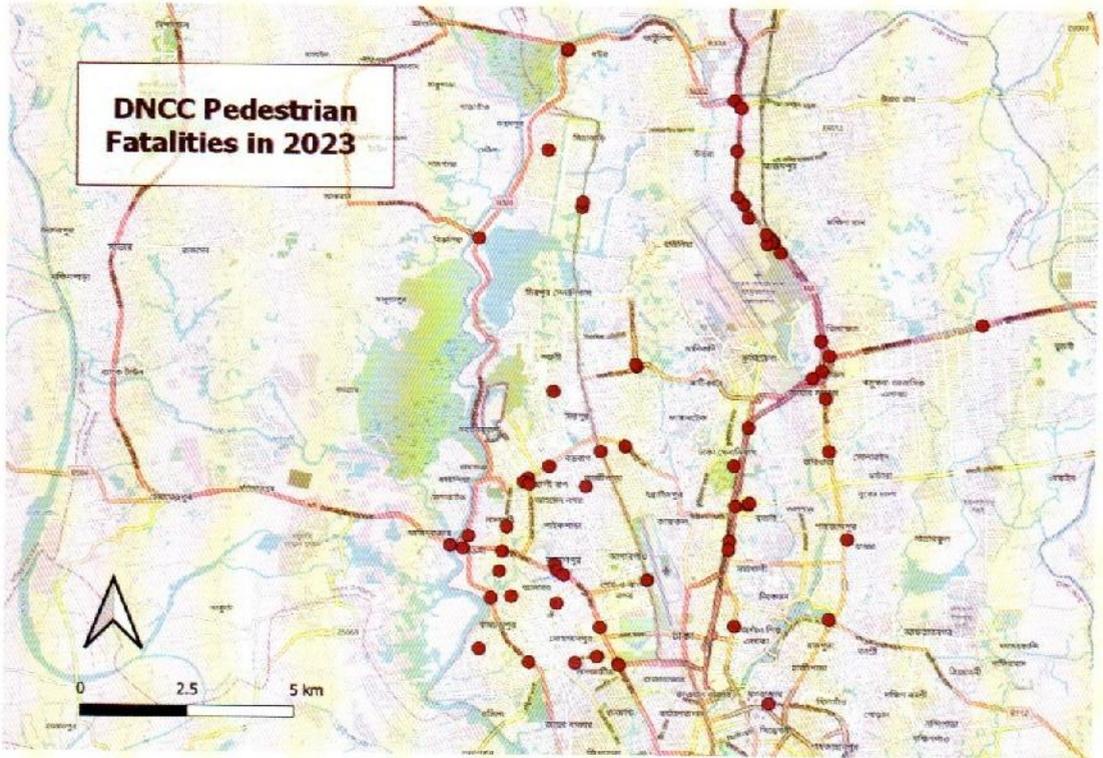
DNCC Motorcyclist
Fatalities in 2023

SUMMARY

- 123 People died in 117 fatal road crashes in 2023 within DNCC.
- 87% of fatal crashes were hit-and-run crashes.
- Pedestrians had the largest share of fatalities (61%). They were followed by motorcyclists (24%).
- 83% of crash fatalities were males.
- All of the female fatalities were pedestrians.
- Pedestrians and Motorcyclists were often killed by buses and trucks.
- The average number of fatalities at night were higher than that during the day
- There was no discernible temporal pattern for fatalities during the week or the month.
- The East side of the Airport Flyover and the Mirpur 1 Intersection recorded the highest number of fatalities (5) within DNCC in 2023.

RECOMMENDATIONS

Prioritize Pedestrian Safety

1

The priority of the city should be to improve pedestrian safety, accessibility, and mobility. Improving pedestrian safety in the city will drastically improve the whole road safety situation of the city. Pedestrian safety interventions can come in the form of adequate and well-connected sidewalks, raised crossings, speed humps, pedestrian refuge islands, narrowed lanes, and lower speed zones especially around schools and other pedestrian-heavy areas.

Focus on High-risk Locations

2

Given constraints in resources, interventions can start in the highest-risk locations. Interventions can be focused on infrastructure in the form of raised crosswalks, pedestrian refuge islands, narrowed lanes, expansion of designated bus stops, constructing modified bus-bays etc.

Address the risk posed by Buses and Heavy Vehicles

3

Given that most pedestrian and motorcyclist fatalities were due to collisions with heavier vehicles, it is critical to reduce the risk and harmposed by these vehicles. One way is through infrastructure measures to manage speeding such as intersection treatments, road narrowing, and traffic calming to reduce speeds by design

4

Train police to improve investigative ability to catch hit-and-run fatal crash drivers

If drivers know they can get away with vehicular manslaughter, they will have less of a deterrent against dangerous driving. In this report, it was found that 87% of fatal crashes were Hit and Runs.

5

Improve the Quality of Data and Institutionalize the Analysis and Use of Data in Road Safety

The government should ensure that reliable and accurate data are collected, analyzed, and routinely shared with all relevant stakeholders. This begins by clarifying and defining institutional arrangements on data collection and by identifying a database system to be used in the city. A further step includes setting standardized operating procedures in completing and storing FIRs, ejahars, and ARFs. This will also require the creation of teams who will lead the sharing and production of analysis and reports in the city.

Road Safety Situation in Dhaka North

An analysis of fatal crash data from 2023