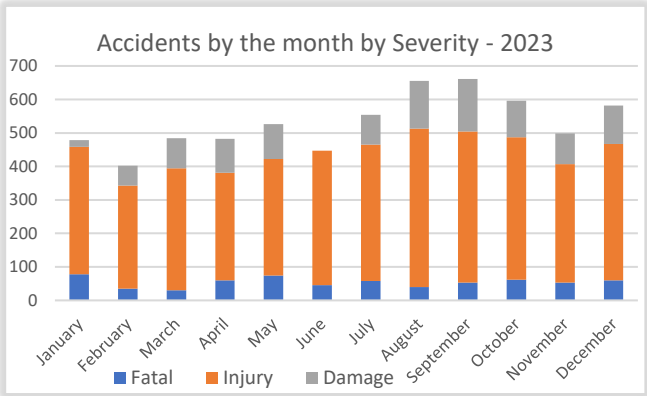
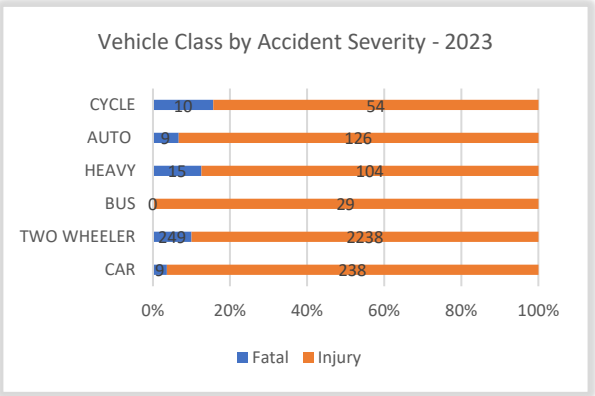
Amavasya and Road Accidents: A Statistical Analysis of Accident Trends

Road accidents have become a major concern in Bengaluru City, impacting not only the administration and law enforcement departments but also the general public. The alarming rise in road accidents in recent years has highlighted the need for urgent attention and action. This blog aims to shed light on the increasing trend of road accidents, the growing proportion of fatal accidents, and an investigation into the belief that accidents are more frequent on Amavasya.

Bengaluru has witnessed a concerning increase in road accidents over the years. The proportion of fatal accidents has shown a consistent rise from 12.6% in 2011 to 19.6% in 2022. This trend is indicative of not just an increase in the number of accidents, but also in the severity of these incidents.

In 2023 alone, by the end of November, Bengaluru recorded a total of 4,499 accidents. Out of these, 794 were fatal crashes resulting in 823 deaths. The non-fatal accidents numbered 3,705, with 3,802 people sustaining injuries. These figures underline the critical situation on the city's roads, necessitating immediate measures to enhance road safety.





A significant concern is the high fatality rate among Vulnerable Road Users (VRUs). VRUs include pedestrians, cyclists, and motorcyclists who share the same road space with larger, motorized vehicles. Their increased susceptibility to accidents is due to their limited protection compared to occupants of cars and other larger vehicles. The statistics reveal a dire need to improve safety measures for VRUs to reduce their risk of accidents.

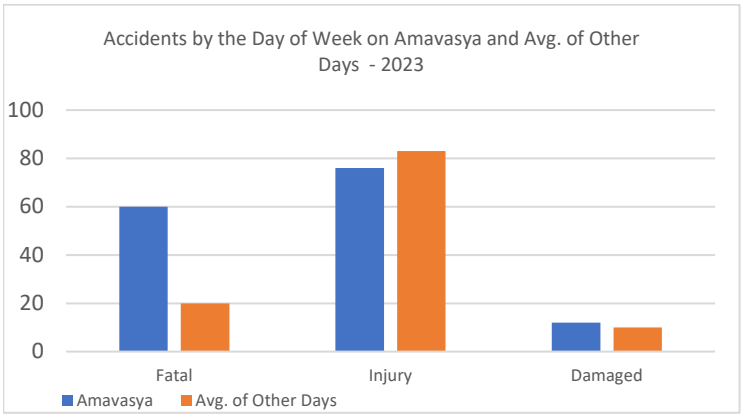
Examining the Amavasya Myth

Cultural beliefs and superstitions often shape our perceptions of various events, including road safety. One such belief is that unfortunate events tend to happen on Amavasya, and road accidents are among these occurrences. Despite the widespread acceptance of this notion, empirical evidence supporting a direct correlation between Amavasya and an increase in road accidents has been lacking. To investigate this claim, a comprehensive analysis was conducted to determine whether there is any potential link between Amavasya and the frequency of road accidents.

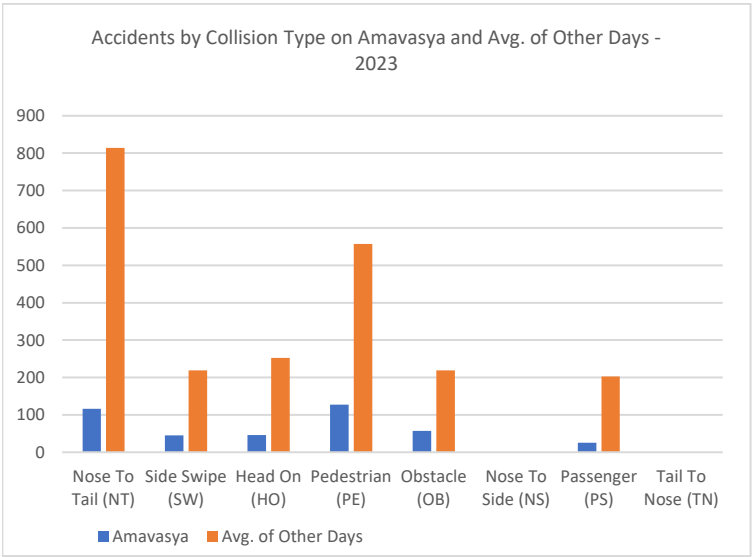
Accident data from 2022 and 2023 were meticulously collected, and the dates of Amavasya during this period were identified. The number of accidents on Amavasya was compared with the number of

accidents on other days using statistical methods. This analysis aimed to determine if there is a significant difference in accident rates on Amavasya compared to other days.

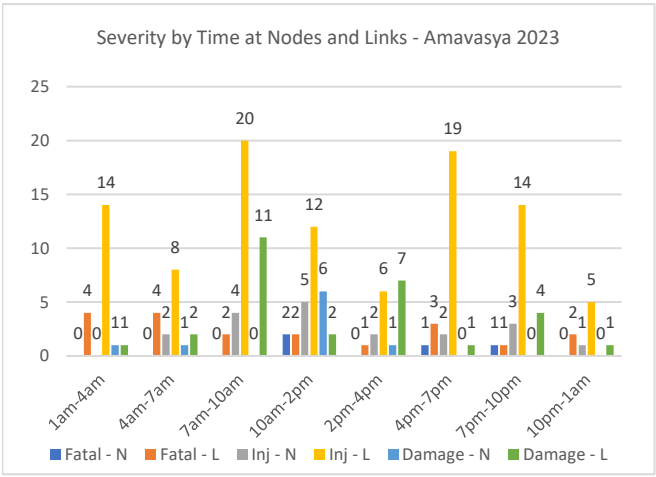
Accidents by the Day of Week - 2023		
	Amavasya	Avg. of Other Days
Fatal	60	20
Injury	76	83
Damaged	12	10



Accidents by Collision Type on Amavasya and Avg. of Other Days - 2023		
Collision Type	Amavasya	Avg. of Other Days
Nose To Tail (NT)	116	814
Side Swipe (SW)	45	219
Head On (HO)	46	252
Pedestrian (PE)	127	557
Obstacle (OB)	57	219
Nose To Side (NS)	0	0
Passenger (PS)	25	203
Tail To Nose (TN)	0	0



Severity by Time at Nodes and Links - Amavasya 2023								
Severity	1am-4am	4am-7am	7am-10am	10am-2pm	2pm-4pm	4pm-7pm	7pm-10pm	10pm-1am
Fatal - N	0	0	0	2	0	1	1	0
Fatal - L	4	4	2	2	1	3	1	2
Inj - N	0	2	4	5	2	2	3	1
Inj - L	14	8	20	12	6	19	14	5
Damage - N	1	1	0	6	1	0	0	0
Damage - L	1	2	11	2	7	1	4	1



A total of 148 accidents have happened on Amavasya days in the year 2023, as against 113 accidents happening on average of other days. Out of 148 accidents, 60 have turned to be fatal, mostly involving two-wheelers and cars. Most number of accidents (116) have occurred by nose to tail type collision and accidents involving pedestrians are 127 in number and time of occurrence is almost equally distributed through the day.

The statistical analysis of the data revealed no notable difference in the number of accidents on Amavasya compared to other days. This finding suggests that the notion of increased accidents on Amavasya is not backed by empirical evidence.

Conclusion

The growing number of road accidents in Bengaluru, especially the rise in fatal accidents, is a grave concern that demands immediate and effective action. While addressing road safety, it is crucial to base policies and measures on empirical data rather than cultural myths. Improving infrastructure, enforcing traffic laws, and raising public awareness about road safety can significantly reduce the incidence of accidents.