

1<sup>st</sup> AfroSAFE Academy Conference

Dar es Salaam, Tanzania 12–14 June 2024

# Assessing the impact of night travel policy on road traffic safety for commercial passenger buses in Tanzania

MAGESA ELIA

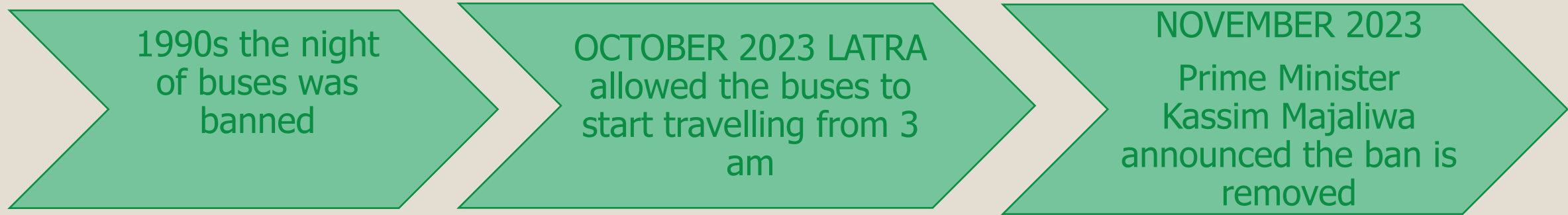
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# Background

- ❑ The recent policy changes by the Tanzanian Land Transport Regulatory Authority (LATRA) allowing commercial passenger buses to operate at night has sparked concerns regarding its potential impact on road safety.



- ❑ Night time travel presents unique challenges compared to daytime driving as reduced visibility, driver fatigue, and potentially hazardous weather conditions can significantly increase the risk of accidents



Buses at Magufuli bus terminal preparing to travel from Dar es Salaam to other regions of Tanzania a night

# Aim

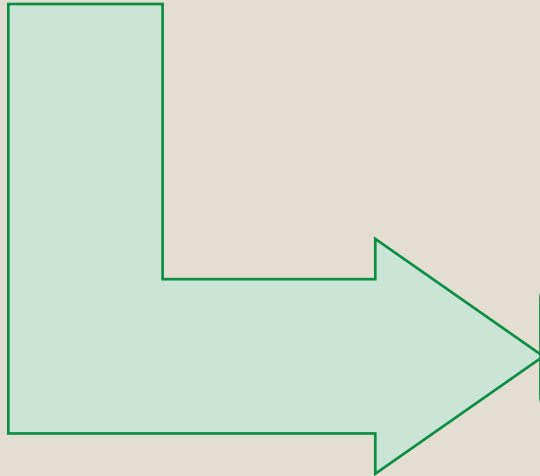
## The study aims

- i. To examine factors contributing to safety or risks associated with night travel under the existing policy
- ii. Provide recommendations to enhance the effectiveness of the night travel policy or propose alternative measures for ensuring road traffic safety for the night travel.

# Method

DATA COLLECTION

- FROM 301 BUSES DRIVER
- BY QUESTIONNAIRE



DATA ANALYSIS

- SPSS VERSION 22
- LOGISTIC REGRESSION

# SAMPLE OF QUESTIONNAIRE

## SECTION A: Demographic and Professional Background

Please put a tick on the appropriate answer

Gender

[ ] Male. [ ] Female.

Age

[ ] 18 – 29 yrs. [ ] 30– 35 yrs. [ ] 36 years old and above.

Educational Attainment

[ ] Primary level [ ] Secondary level [ ] College/ postgraduate  
[ ] High level above college

License Type

[ ] C [ ] C1 [ ] C2

Mode of Training

[ ] Driving School. [ ] Apprenticeship [ ] Self-taught

Years Driving

[ ] 1 – 5 years [ ] 6 – 10 years [ ] 11 – 15 years [ ] 15 – 20 years

[ ] 20 years above

# SAMPLE QUESTIONNAIRE

**What was the cause of the accident or near miss you have been involved in from the route you're taking. Choose from the mentioned causes below.**

- i. Driving while drunk
- ii. violating the red traffic lights
- iii. changing of lanes without signaling
- iv. over speeding
- v. bribing police officers
- vi. Inadequate and Improper location of the road signs and markings
- vii. Poor visibility at night
- viii. Driver fatigue
- ix. poor road condition
- x. Robberies and hijacking
- xi. poor vehicle service

please provide additional information to enhance improvement for the night travel.

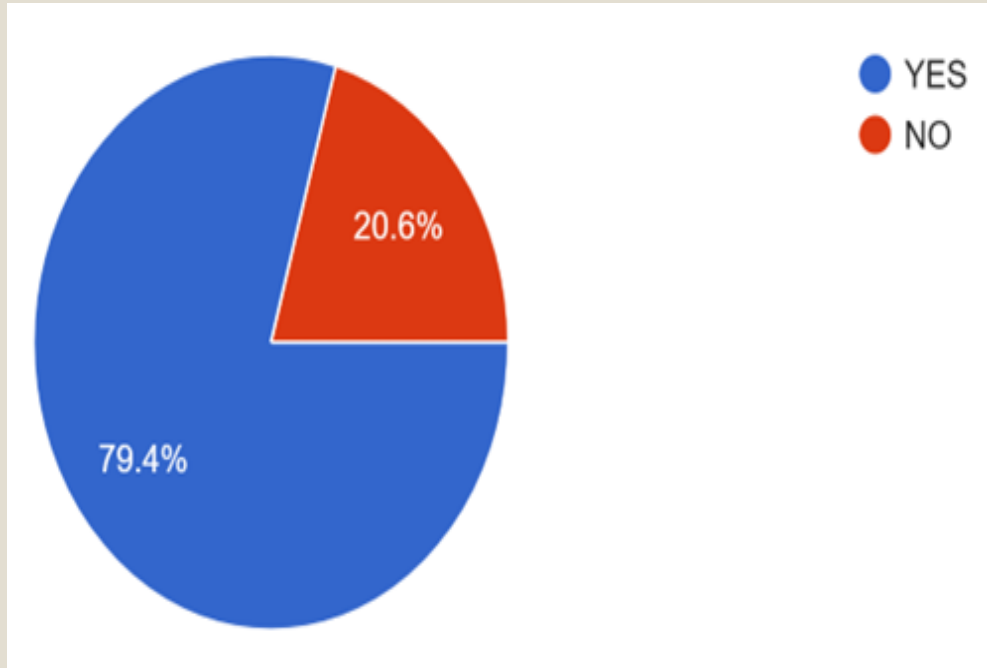
# RESULTS

		FREQUENCY(N)	PERCENTAGE (%)
<b>Gender</b>	Female.	23	7.6
	Male.	278	92.4
<b>Age</b>	18 – 29 yrs.	51	16.9
	30– 35 yrs.	61	20.8
	36 yrs old and above.	189	62.8
<b>Educational Attainment</b>	College	123	40.9
	High level above college non formal education	39	13
	Primary level	27	9.
	Secondary level	105	34.9
<b>License type</b>	C	280	93
	C1	14	4.7
	C2	7	2.3
<b>Mode of Training</b>	Apprenticeship	36	12
	Driving School.	232	77.1
	Self-taught	33	11
<b>Years Driving</b>	1 – 5 years	63	20.9
	11 – 15 years	96	31.9
	15 – 20 years	11	3.7
	20 years above	14	4.7
	6 – 10 years	117	38.9
<b>Driving frequency</b>	Daily	57	18.9
	Monthly	98	32.6
	Rarely	26	8.6
	Weekly	120	39.9
<b>Route</b>	Central Regions	73	24.3
	Eastern Regions	16	5.3
	Northern Regions	65	21.6
	Southern Regions	65	21.6
	Western Regions	82	27.2
<b>Accidents or near miss involvement since night time introduction</b>	NO	62	20.6
	YES	239	79.4
<b>time of accident or near miss occurrence</b>	during a day	78	25.9
	night	223	74.1

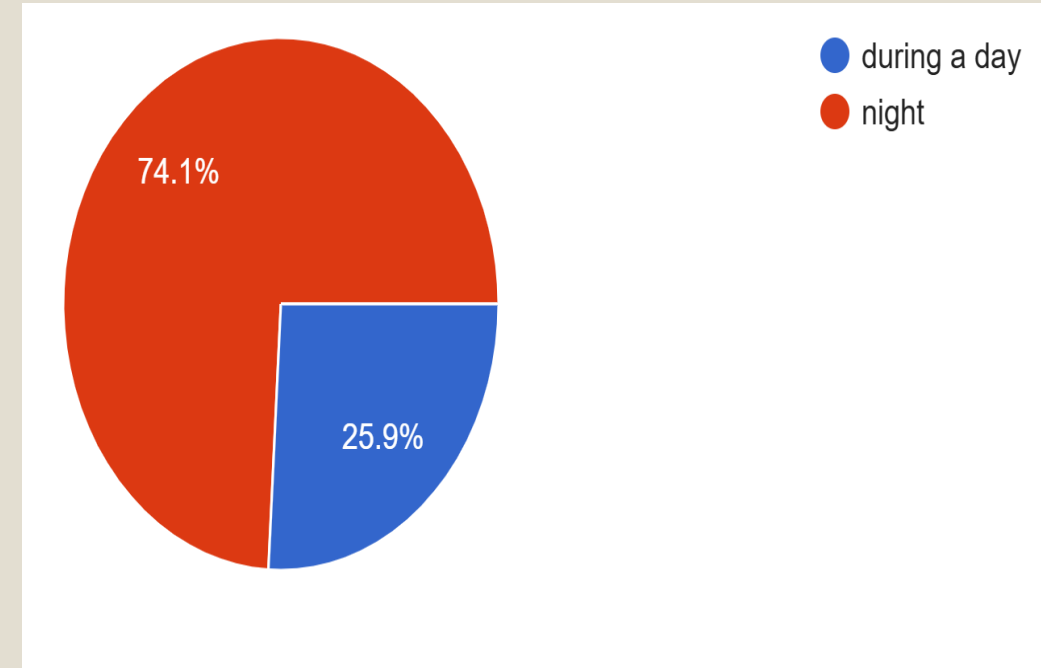


# Results

- About 79.4% of the drivers indicated that they had been involved in road accidents or near misses since night travel was introduced and, 74.1% mentioned that the accidents occurred during night.



Percentage of buses driver involved in accident or near misses



Time of the day the accident occurred

# Results

- ❑ Multivariate analysis, was used to assess the combined effect of multiple independent variables from the bivariate analysis which indicated there was a significant association between them with experiencing accidents or near misses since the night travel was introduced( $p < 0.05$ ).
- ❑ After adjusting for confounders, The significant associated factors for near-miss incident

	P-value	cOR	95% CI		P-value	aOR	95% CI	
			Lower	Upper			Lower	Upper
<b>1-5 Years of Driving experience</b>	0.002	0.87	0.4	1.9	0.008	0.72	0.2	1.31
<b>changing of lanes without signaling</b>	0.003	0.62	0.313	1.23	0.021	0.81	0.313	1.32
<b>Inadequate and Improper location of the road signs and markings</b>	0.002	0.34	0.171	0.68	0.002	0.34	0.71	0.8
<b>Poor visibility at night</b>	0.005	0.16	0.545	2.49	0.006	0.64	0.545	2.89
<b>Driver fatigue</b>	0.001	1.85	0.832	4.13	0.004	2.53	0.52	5.13
<b>poor road condition</b>	0.008	0.76	0.377	1.54	0.038	0.76	0.567	1.85
<b>poor vehicle service</b>	0.001	0.29	0.139	0.61	0.002	0.29	0.139	0.61
<b>Driving for more than 8 hours</b>	0.007	0.52	0.261	1.05	0.04	0.94	0.81	1.95

# RESULTS

We analyzed the countermeasures drivers used to keep themselves awake and see their effectiveness on the drivers not experiencing near misses since the night travel was introduced,

- taking adequate rest
- eating light meals
- drinking caffeine
- sharing driving duties

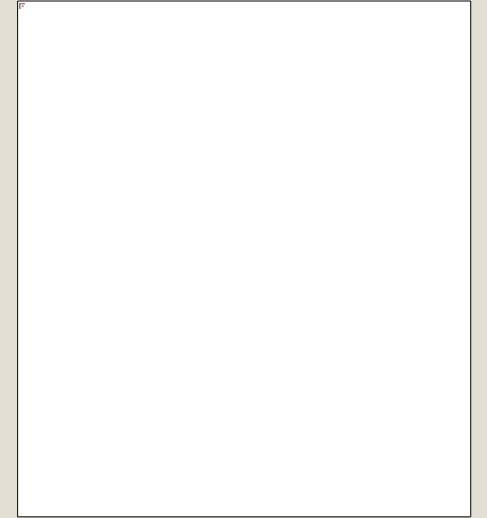
# Conclusions

- ❑ There is a notable number of drivers who experienced near misses or accidents since night travel was introduced as about 79.4% of the drivers indicated that they had been involved in a road accident or near miss and, 74.1% mentioned that the accidents occurred during night.
- ❑ The analysis revealed driving experience of 1-5, changing lanes without signaling, Inadequate and Improper location of the road signs and markings, Poor visibility at night, Driver fatigue, poor road condition, poor vehicle service, and Driving for more than 8 hours were risks factors associated with night travel under the existing policy
- ❑ There is a notable difference between drivers who used to take adequate rest, eat light meals, drink caffeine, sharing driving duties in experiencing near misses or accidents and those who did not use those countermeasures.

# Recommendation

- Ensuring strict rest regulations for night travel:** Limit driving hours at night and require mandatory rest breaks at designated locations.
- Enhanced driver training:** Provide specialized training on fatigue management, night driving techniques, and defensive driving.
- Promote countermeasures education:** Educate drivers and companies on the importance of rest, healthy meals, and shared driving responsibilities during night travel.
- Improve enforcement:** Strengthen law enforcement to ensure compliance with rest regulations and safe driving practices.
- Vehicle maintenance:** Increase focus on regular and thorough vehicle maintenance to minimize breakdowns and improve safety.
- Infrastructure improvements:** Advocate for improved road infrastructure, lighting, and signage, on night travel routes.
- Explore technological solutions:** Consider implementing technologies like driver monitoring systems or improved vehicle lighting for night travel.

THANK YOU



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