

SEATBELT USE AMONG VEHICLE OCCUPANTS IN ACCRA AREA, GHANA

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OUTLINE OF PRESENTATION

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INTRODUCTION

- Seatbelt use is proven to reduce the risk of death or injury severity in the event of a road traffic crash (RTC) by about 80-90%.
- In Ghana, wearing of seatbelt by vehicle occupants is mandated by the Road Traffic Regulations 2012 (L.I. 2180).
- Almost 60% of RTCs in Ghana for 2018 were vehicular occupants. 22.7% of all road traffic casualties occurred in the Greater Accra Region.
- Seatbelt use rate among vehicle occupants in the Accra Area is not documented.
- The study will help design appropriate strategies to improve the seatbelt use rates in the Accra Area in order to reduce the road traffic casualties drastically.



METHODOLOGY

- Cross-sectional, unobtrusive observation study for drivers and front-right seat passengers for wearing of seatbelts
- Stratified, Random Sampling
- Mainly locations where traffic come to a halt or slow down eg. Signalised intersections, roundabouts, speed humps, etc.
- Data collected in December 9-21, 2015
- Repeated 90 mins observations for morning/afternoon sessions



RESULTS

Descriptor	Driver		P-Values
	Percent Belted	No. Observed	
Overall	74.7	19466	
Gender			<0.001
Female	79.2	1801	
Male	74.3	17665	
Age Group			0.026
Less than 26	74.4	816	
26 - 50	74.9	17756	
50 and older	70.9	894	
Location Setting			<0.001
Accra city	84.2	10601	
Outskirts of Accra	59.7	6272	
Major highways	72.4	2593	

RESULTS

Descriptor	Driver		P-Values
	Percent Belted	No. Observed	
Vehicle Type			<0.001
SUV/Pickup	80.1	3776	
Sedan	79.5	4918	
Truck	72.4	2039	
Minibus	71.6	3747	
Taxi	69.6	4657	
Bus	63.5	329	
Vehicle Usage			<0.001
Private	79.2	9283	
Government	77.4	579	
Company	71.9	1631	
Commercial	69.9	7973	

RESULTS

Descriptor	Front-Right Passenger		P-Values
	Percent Belted	No. Observed	
Overall	24.7	9608	
Gender			<0.001
Female	29.6	3462	
Male	21.9	6146	
Age Group			<0.001
Less than 26	29.7	516	
26 - 50	24.0	8683	
50 and older	31.3	409	
Location Setting			<0.001
Accra city	27.0	5203	
Outskirts of Accra	22.0	2937	
Major highways	21.7	1468	

RESULTS

Descriptor	Front-Right Passenger		P-Values
	Percent Belted	No. Observed	
Vehicle Type			<0.001
SUV/Pickup	49.6	1578	
Sedan	43.5	1899	
Truck	19.3	1105	
Minibus	9.3	2812	
Taxi	13.1	2015	
Bus	11.1	199	
Vehicle Usage			<0.001
Private	40.1	3907	
Government	45.6	272	
Company	28.7	841	
Commercial	9.6	4588	

RESULTS

- Driver Versus Passenger Seatbelt Use in Accra Area

Category	Percent Belt Use	Total Observed	P - Value
Driver	74.7	19466	<0.001
Front-Right Passenger	24.7	9608	

- Front-right Passenger Seatbelt Use in relation to Driver Seatbelt Use

Driver Seatbelt Use	Female pax use % (n)	Male pax use % (n)	P-Values
No	14.9 (891)	9.3 (1420)	<0.001
Yes	34.7 (2571)	25.3 (4726)	
Weighted Total	29.6 (3462)	21.9 (6146)	

CONCLUSIONS

- Generally, seatbelt use for drivers in Accra Area is low and even lower for front-right passengers
- Drivers are 3 times more likely to wear their seatbelt than front-right passengers in Accra Area.
- Front-right passengers are about 2.7 times more likely for males and 2.3 times more likely for females to wear seatbelt when a driver is in seatbelt.
- Seatbelt use rates are significantly higher within Accra city and major highways than at the outskirts of Accra city ($P < 0.001$).
- Vehicle occupant seatbelt use in Accra Area is a function of gender, age, location setting, vehicle type and vehicle usage.

RECOMMENDATIONS

- The National Road Safety Authority and the Ghana Police Service should embark on continuous education and enforcement of seatbelt use for passengers and drivers especially in the outskirts of Accra.
- Males especially should be targeted and educated on the benefits of seatbelt use and the Police should enforce the use of seatbelt among male vehicle occupants.
- The public must be educated on the mandatory nature of seatbelt use for all vehicle occupants as provided in the L.I. 2180.
- The NRSA should collaborate with the driver unions such as GPRTU, PROTOA, etc. to educate commercial drivers (especially bus drivers) at their respective terminals on the safety benefits in the use of seatbelt.
- Further research should be conducted to understand the low seatbelt wearing rates in Accra Area, particularly among male vehicle occupants

