

Prevalence of Road Traffic Accident among Food delivery workers in Southern Chennai

Vijayasankari A^{1*}, Indra S², Kalpana S³

Corresponding Author: Vijayasankari A
Department of Epidemiology,
The Tamil Nadu Dr MGR Medical University

Abstract

Aims and Objective: The purpose of the study is to assess the prevalence of road traffic accident among food delivery workers.

Methods: A Cross-sectional study design was used in this study. 170 participants who are working as food delivery work in Chennai were surveyed for the study. A semi structured questionnaire was used in this study.

Results: Among the 173 food delivery workers, 56 workers were met with an accident. In our study, it was found that most vulnerable for the accident is 20-29 years of age. And the major risk factors was identified for road traffic accident was mobile phone use while driving.

Conclusion: Even the professionals are working as food delivery works due to unemployment. This will be avoided in future. Due to unemployment most of the professional are working this food delivery work without any hesitation because of money.

Keywords: Food delivery workers, Road Traffic Accident, Stress, Mobile Phone usage, Prevalence, incentives.

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I. Introduction

Road traffic accidents (RTAs) are an important public health issue that requires urgent attention in developing countries like India, which has the highest proportion of deaths in South East Asia due to RTAs. Almost 1.3 million people who are killed every year on the road and 50 million are get injured.(1) Every year nearly 1.3 million people lose their lives on the road and as many as 50 million others are injured.(2). The main aim of the study is to estimate the prevalence of road traffic accident among doorstep food delivery suppliers in South Chennai and to assess the common risk factors for road traffic accidents among food delivery workers in South Chennai. Road traffic accidents are ranked as the 11th leading cause of death in the world and the main source of disability in developing countries.(3) The Global status report on road safety 2018, launched by WHO in December 2018, highlights that the number of annual road traffic deaths has reached 1.35 million. Road traffic injuries are now the leading killer of people aged 5-29 years. The burden is disproportionately borne by pedestrians, cyclists and motorcyclists, in particular, those living in developing countries.(1) As per the Global status report on road safety 2015, 1.25 million road traffic deaths occurred every year. The most common cause of death among those aged 15-29 years was road traffic accidents. Three out of four deaths due to road traffic accidents were among men. 49% of all road traffic deaths were among pedestrians, cyclists and motorcycles.(4) Online food ordering is the process of food delivery or takeout from local restaurants or food cooperative through a web page or app.(5) Therefore, as per this system, the customer visits the restaurant's app or website, browses through the various food items, combos and cuisines available there and goes ahead and selects and purchases the items he or she needs. These items will then be delivered to the customer at his or her doorstep at the time they choose by a delivery person. Payments for such online orders can be made through debit cards, credit cards, cash or card on delivery, or even through digital wallets.(6) With just nothing but a bike and a smartphone, many a youth are now attracted to the incentive laced job of food delivery, where some of them earn on an average Rs 1500 per day. Each delivery-based incentive encourages them to do more work with some of them ending up with working more than 12 hours at a stretch. With national as well as international food apps competing with each other in the metropolitan cities like Chennai, those with basic knowledge of handling smartphones and familiarity with locations are keenly opting for hassle-free earning. On each delivery, the bike-borne worker gets around Rs 50 if it is within the radius of 5 km and if the specified weight and distance increases there will be an additional incentive. The boy gets the incentive of Rs 30 once he reaches that particular restaurant; even if the order is canceled it does not affect his commission. It came to light that there are people who are earning up to Rs 1 lakh by working 24-hours.(7) In a rat race to provide food to customers faster than their competitors, delivery boys, attached to food aggregators such as Zomato, Uber Eats,

and Swiggy, show little regard to traffic rules and public safety. They are frequently seen driving rashly, talking on their mobile phones while riding and drive on the wrong side of the road. Delivery boys drive dangerously. They not only block roads in front of restaurants and eateries but also drive on the wrong side. Frequent accidents involving food delivery boys have created panic among the residents. Though these mishaps take place throughout the city, a very few are reported. At least 73% of delivery boys attached to online apps have been found driving without helmets, using earphones, over-speeding and jumping traffic signals in the process of supplying food to a customer.(8) In India, roads are an important means of transport. India has 3.34 million km of road network consisting of national highways, state highways, major and district roads and village roads. National highways account for 2% of the road network but carry 40% of road traffic.(9)

II. Methods:

The community based descriptive cross-sectional study was carried out in the food pickup centres or hotels in south Chennai. The study was carried out from April to June 2019. A sample size of 171 food delivery workers were included in the study. The convenient sampling method was used to recruit the samples in the study. A semi-structured questionnaire will be distributed to the study participants after explaining them about the study. Informed consent was obtained from the participants. The questionnaire included that the demographic data of the participant and their nature of the work, use of a helmet while driving, traffic rules and regulations, mobile use, monthly income and incentives per delivery, etc., and also the socioeconomic status of an individual also included. Socioeconomic status of the participant will be assessed. All the data were entered in SPSS ver.24. The analysis of the data was planned based on the objective of the study. Both descriptive and inferential statistics were used for data analysis and interpretations. The data obtained were tabulated, organized and analysed based on the objectives of the study using descriptive statistics.

III. Results:

A total of 173 Food delivery workers were interviewed during the period of study. Analysis and interpretation of the data of this study were done using descriptive and inferential statistics.

Table 1: Distribution of Study participants based on Socio-demographic profile.

Variables	Sub category	Frequency (n)	Percentage (%)
Age	<20 years	2	1.2
	20-29 years	103	59.5
	30-39 years	60	34.7
	40-49 years	7	4.1
	>50 years	1	0.6
Marital Status	Married	62	35.8
	Unmarried	111	64.2
Educational Qualification	PG Degree	12	6.9
	UG Degree	114	65.9
	Diploma	18	10.4
	School	29	16.8
Monthly income of the family	<10,000	5	2.9
	11,000-20,000	10	5.8
	21,000-30,000	34	19.7
	31,000-40,000	60	34.7
	>40,000	64	37.0

The above Table 1 depicts that out of the 173 participants, majority 103 (59.5%) were under the age group of 20-29 years. 111 (64.2 %) were unmarried. Most of the workers >40,000 salary per month while compared with other workers.

Table 2: Distribution of the Variables based on the Frequency and Percentage.

VARIABLES	Frequency and Percentage	
	YES (%)	NO(%)
Do you have a driving license?	171 (98.8%)	2 (1.2%)
Do you wear a helmet all the time?	140 (80.9%)	33 (19.1%)
Is night driving difficult?	145 (83.8%)	28 (16.2%)
Do you know the traffic rules?	163(94.8%)	10(5.8%)
Do you ever ignore the traffic rules and paid any fine?	38 (22%)	135 (78%)
Do you look for speed limit indications?	158 (91.3%)	15 (8.7%)
Have you used a mobile phone while driving?	103(59.5%)	70(40.4 %)
Do you find hand signals from other drivers confusing?	112 (64.7%)	61(35.2%)

The above table 2 depict that majority of the food delivery workers 171(98.8%) had driving license. And most of the workers 163 (94.8 %) know the traffic rules and also they follow the traffic rules while delivering the food orders.140 (80.9%) of them were wore helmet all the time. Among the participants, 38(22%)

of them were ignore the traffic rule while delivering the order and also they paid for the ignorance of the traffic rules. 103 (59.5%) were used mobile phone while delivering the food order by driving.

Table 3: Distribution of the variables based on the Chi square value.

VARIABLES		Ever met with a road accident on duty?			Chi square value
		Yes	No	Don't know	
Do you look into the rear view mirror before starting to overtake?	Yes	43	9	4	0.006
	No	106	11	-	
Is Night Driving Difficult?	Yes	27	7	22	0.050
	No	79	4	34	
Do you look for speed limit indications	Yes	40	7	9	0.006
	No	105	8	4	
Have you had minor accidents/mishaps involving other people or vehicles?	Yes	37	14	5	0.005
	No	84	33	0	
Have you been caught for not following traffic rules and paid any fine?	Yes	25	29	2	0.000
	No	11	106	0	

The Above table 3 described that the chi square value of the variables. The calculated chi square value is less than 0.05 level of significance. So, it reveals that there is association between the ever met with an accident with the other variables.

IV. Discussion:

Road traffic accidents are routine occurrences throughout the world. Thousands of people lose their lives on the roads every day. Many more left with disabilities or emotional scars that they will carry for the rest of their lives. The future of a country is its young people. Road traffic accidents are the leading causes of death globally among 15-19 years while for those in 12-14 they are the second leading cause of death. Speed is the single biggest factor contributing to road deaths. Over 40% of fatal collisions are caused by excessive or inappropriate speed. Excess speed is defined as exceeding the speed limit. Inappropriate speed is defined as driving at a speed unsuitable for the prevailing road and traffic conditions. Road traffic accidents affect youth worldwide. RTAs are considered one of the main causes of morbidity and mortality around the world. Youngsters are the main victim of accidents. This will be a global burden in the coming years if it isn't resolved soon. In this study. Among the 173 food delivery workers, 56 workers were met with an accident. In our study, it was found that most vulnerable for the accident is 20-29 years of age. Most of the workers are married and their monthly family income belongs to 20,000 to 4,000. Among the Road traffic accident, even though the food delivery workers using indicators properly when turning, 49 of them met with an accident. And then, even though they look into the rear view mirror before starting to overtake, 43 of them met with an accident. Most of the food delivery workers had their speed limit is 40-70 km. Among them, 56 were met with an accident while compared with others. Food delivery workers 79 of them were using mobile phones while driving, among them, 26 were met with an accident. Many of the food delivery workers were going in the wrong direction and then cross over the road.

The “Global Report on Urban Health” released by the UN-Habitat and WHO says that the number of persons killed per lakh population due to RTAs in Chennai was the second highest across the major selected cities, at 26.6%. Motorcycle accidents only account for approximately 50% of all traffic- related injuries. The incidence of facial injuries in motorcycle and foot-powered cycling accidents is predictably significant. In developing nations, where wearing helmets are not compulsory, almost 60% of head injuries related to motorcycling accidents.(10)

V. Conclusion

In our study, majority of workers are fall in the age group of 20-29years. More than 50% of them are unmarried. Around 65% of them completed their under graduation. Many of them getting the monthly income of 20-40 thousand. Many of them working as a part-time worker. Majority of food delivery workers are working 8-12hrs. An average they are delivering 11-13 orders per day. Night driving and rear view mirror before starting to overtake is playing a significant role in Road traffic accidents. Except few, most of them know the traffic rules but they said due to emergency they are not able to follow it.Appropriate knowledge of traffic rules, legally age and enough counter checks by traffic police can help to decrease the numbers of accidents among adolescents. Participation of health personnel also required to educate the adolescents in various sections of the community about traffic accidents, its causes, consequences, and traffic safety measures to bring a remarkable change in the knowledge, attitude, and practices of adolescents among traffic safety. And also the food delivering companies provide road traffic education to their workers .

VI. Recommendations

Since most of the people are not aware of the keen importance and need for traffic safety measures among adolescents. Traffic safety is one of the vital components of interventions related to a healthy & prosperous nation. Careful and adequate interventions need to be introduced and educated among adolescents to prevent traffic accidents. Besides that health personnel play an important role in educating the public about the provisions and methods of traffic safety among the young generation.

Ethical Consideration: The research included mainly access to records was performed with prior permission of the appropriate authorities.

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Informed consent : We got consent from the participants before data collection process.

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