

A STUDY ON SOCIO-DEMOGRAPHIC PROFILES OF ROAD TRAFFIC ACCIDENT CASES ATTENDING EMERGENCY OF A TERTIARY CARE HOSPITAL AT UDAIPUR.

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ABSTRACT:

Objectives: In the present scenario, accidents are now considered as one of major epidemics of Non-Communicable Diseases which become major health problem of developing countries like India. Road traffic accidents are not only a major but also a neglected global public health problem, requiring concerned efforts for effective and sustainable prevention. In India, road traffic accident is a major contributory factor in mortality and morbidity of people. **Materials & Methods:** The present study was a cross-sectional descriptive study, conducted at Maharana Bhupal (M.B.) Hospital, Udaipur (Rajasthan) involving all cases of motorized vehicle road traffic accidents during the period of 1 July 2010 to 31 December 2010. A total 400 cases were selected randomly for study among total reported 3975 cases in emergency during the selected period. **Results:** Among all selected road traffic accident cases (400), majority (81%) were males while 19% cases were females. The majority of road traffic accident cases 133 (33.25%) were found to be in age group of 15-25 years followed by 120 (30%) in age group of 25-35 years. In this study, it was found that majority of cases 227 (56.75%) belonged to urban area while 173 (43.25%) belonged to rural area. **Conclusion:** Road traffic accidents are a huge public health and developmental problem, contribute a large proportion of the national burden of total deaths and serious injuries. Despite the growing burden of road traffic accidents, road safety received insufficient attention at both the national and international levels.

Key Words: Socio-demographic, Road Traffic, Accidents, Emergency, Motorized vehicle.

INTRODUCTION

The importance of accidents as health problem is perhaps not sufficiently recognized by lay public; even enough weightage is not given by health planners also. In present century, accidents represent a major epidemic of non –

communicable disease. (1) Every accident is the outcome of a chain of causes that's why prevention can be made possible. Road traffic injuries are a major but neglected global public health problem, requiring concerned efforts for

effective and sustainable prevention. Road traffic accidents are projected to become second leading cause of deaths in the world by 2020. (1) The road traffic accident represents only the tip of iceberg of the total waste of human and societal resources from road injuries. Road traffic injuries alone are ranked as the primary cause of disease among children in the age group of 5-14 years and third leading cause among people between the ages of 15-29 years. (2) Road crashes not only place a heavy burden on national and regional economy but also on households. (3) Road traffic mortality rates are higher in men than women in all regions regardless of income level and also across all age groups. (4) Accidents are definitely on increase in India, due to increasing mechanization in agriculture and industry, induction of semiskilled and unskilled workers in various operations and rapid increase in vehicular traffic have resulted in an increase in morbidity and mortality due to accidents. (1) Overcrowding, lack of awareness and poor implementation of essential safety precautions result in an increasing number of accidents. Deaths, disabilities and hospitalization due to injuries continue to have impact of socio-economic loss to individuals, families, society and infrastructure. (1)

MATERIALS & METHODS:

A cross-sectional descriptive study was conducted at the Maharana Bhupal (M.B) Hospital, attached to Rabindra Nath Tagore (R.N.T) Medical College, Udaipur (Rajasthan), a tertiary level Institute of Medical care, providing services to the people of Udaipur as well as to the neighboring districts. The study covered all cases of motorized vehicle road traffic accidents during the period of 1 July 2010 to 31 December

2010. Though 3975 cases were reported at Maharana Bhupal Hospital emergency department in the mentioned duration, only 10% of the total cases were included in the study. Thus, 400 cases as 10% of the total registered RTA cases during the study period were selected randomly. Data collection was done through semi structured interview by patient / attendant / driver / police / relative on pre designed proforma. Data collection included information pertaining to socio demographic profiles including age, sex, religion, residence (urban/rural) and socio-economic class. The patients were interviewed personally by the investigator and if the patient was not in position to respond, the attendant of the patients were asked to furnish all possible details besides getting secondary data from case sheets of individual.

Data Analysis: All data were recorded in excel sheet of MS office and data were analyzed. The appropriate statistical test was applied in the study.

RESULTS:

In present study, it was found that out of total 400 RTA cases, majority of the cases 133 (33.25%) were in age group of 15-25 years, followed by 120 (30%) in age group of 25-35 years. The least RTA cases were found in age group of < 15 years (16, 4%) and above 65 years (10, 2.5%). Out of total 400 RTA cases, 324 (81%) were males and 76 (19%) were females indicating a large majority of male preponderance. [Table: 1]

Table 1: Distribution of RTA cases according to age and sex

AGE (YEARS)	MALE	FEMALE	TOTAL NUMBER (%)
<15	11 (2.75%)	05 (1.25%)	16 (4%)
15-25	113 (28.25%)	20 (5%)	133 (33.25%)
25-35	103 (25.75%)	17 (4.25%)	120 (30%)
35-45	51 (12.75%)	17 (4.25%)	68 (17%)
45-55	24 (6%)	08 (2%)	32 (8%)
55-65	16 (4%)	05 (1.25%)	21 (5.25%)
Above 65	06 (1.50%)	04 (1%)	10 (2.50%)
Total	324 (81%)	76 (19%)	400(100%)

In this study, as per religion wise distribution, majority of RTA cases 350 (87.50%) were belong to Hindu followed by Muslims 49 (12.25%). The majority of cases 227 (56.75%) were belong to urban area compared to rural area 173 (43.25%). [Table 2]

In this study, majority of RTA cases 96 (24%) had primary education followed by graduates 64 (16%) and least in post graduate 35 (8.75%). [Table3] According to Occupation wise distribution of RTA cases, majority of cases 132 (33%) were from agriculture and labor / unskilled workers, followed by 89 (22.25%) from service class and the least 9 (2.25%) in professional. [Table 3] The study showed majority of RTA cases 129 (32.25%) were belong to socio-economic class IV followed by class V (117, 29.25%) and the least 7 (1.75%) were found in class I. [Table 4] Hence, result

showed the majority of accidents were in poor socio-economic class.

Table 2: Distribution of RTA cases according to Religion & Residence

RELIGION	NO. OF CASES	PERCENTAGE
Hindu	350	87.50
Muslim	49	12.25
Sikh	0	0.00
Christian	1	0.25
Grand total	400	100
RESIDENCE	NO. OF CASES	PERCENTAGE
Rural	173	43.25
Urban	227	56.75
Grand Total	400	100

Table 3: Distribution of RTA cases according to Education & Occupation

EDUCATION	NO. OF CASES	PERCENTAGE (%)
Illiterate	57	14.25
Primary	96	24.00
Middle	54	13.50
Secondary	42	10.50
Higher Secondary	52	13.00
Graduate	64	16.00
Postgraduate	35	08.75
Total	400	100
OCCUPATION	NO. OF CASES	PERCENTAGE (%)
Unemployed	25	6.25
Student	42	10.50
Agriculture/Laborer/ unskilled worker	132	33.00
Skilled worker	31	7.75
Business	72	18.00
Service	89	22.25
Professional	9	02.25
Total	400	100

Table 4: Socio-economic Distribution of RTA Cases based on Prasad's social classification (Source: Kumar P. IJCM. 1993; 18:2)

SOCIO-ECONOMIC CLASS	NO. OF CASES	PERCENTAGE (%)
I (Upper class)	07	01.75
II (Upper middle)	64	16.75
III (Lower Middle)	83	20.75
IV (Upper lower)	129	32.25
V (Lower)	117	29.25
Total	400	100

DISCUSSION:

In this study, male and female ratio was found to be 4:1 (81% male and 19% female) indicating males were more prone to get involved in motor vehicle accidents than females as found in the study of Wick M (5) and Wang S (6) indicating males use motorized vehicles clearly in excess of females and they were involved in outdoor activity more than females. Maximum cases, both males and females were found in the age group 15-45 years accounting 80% of the total cases. Similar finding was found in study of Lee MC where 84% of the motorized vehicle accident cases were in the age group 16-45 years. (7)

In this study, distribution of motorized vehicle accidents according to religion showed maximum RTA cases (87.50%) belonged to Hindu, followed by Muslims (12.25%). This may be due to maximum population of India is Hindu followed by Muslims. Majority (56.25%) of the motorized vehicle accident cases were from urban area as compared to rural area (43.25%) which was supported by study conducted by Mohan D revealing road crashes were more frequent in urban area, particularly as urbanization increased. (8)

In this study, it was found that majority of the motorized vehicle accident cases were illiterate and study below metric (62.25%) and very few cases (8.25%) were in post graduates indicating rate of accident inversely proportional to the literacy level of cases. This may be due to as level of education increases, level of awareness about traffic rules and safe driving increases. Similar observation was found in study of Misra B et al' where RTA cases were reported in school educated 47.50 % and less in higher educated. (9)

According to occupation of RTA cases, it was found that majority 33% of the cases were from agriculture and laborer class followed by service class (22.25%) and business class (18%). Similar finding was observed in study of Nilambar Jha et al in which 29.9% of RTA cases were from laborer class and 21.6% of cases were from service class. (10)

The socio-economic classification of RTA cases was based on B.G Prasad classification. (11)

This study also revealed that majority of RTA cases (32.25%) belonged to socio-economic class IV followed by class V (29.25%), class III (20.75%) and class II (16%). Similar results were found in the study of Misra B et al' where people

from middle and low socioeconomic class were affected more. (9)

Limitation: Sample size was small so result cannot be generalized to general population as data was collected from a single hospital of the city.

CONCLUSION:

Road traffic accident is a huge public health and emerging problem. Despite the growing burden of road traffic accidents, road safety has received insufficient attention at both the national and international levels. Road traffic accident cases contribute a large proportion of the national burden of total deaths and serious injuries. The incidence and intensity of road traffic accidents can be minimized by increasing community participation, planning efficient transport systems and imparting education and knowledge of traffic rules at school & college level.

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