

A Study to Assess the Knowledge of Road Safety Measures among School Childrens in Selected School at Guduvancherry Chennai

AR. Bharathi*

Department of Nursing, Affiliated to Bharath Institute of Higher Education and Research, Chennai, Tamil Nadu, India

Abstract

Road traffic accidents are one of the main causes of death and injury to children of school age. Accidents tragically are often due to ignorance, carelessness, thoughtlessness and overconfidence. The consequences of accidents affect seriously the children's health and growth, interfere in their study and future.

Objectives: To assess the knowledge regarding road safety measures among these school children. **Methods:** The total sample size for this study is 30 school students. They used descriptive research design, & Purposive sampling technique was used.

Inclusion Criteria: Students who are studying in VI, VII, VIII classes.

Inclusion Criteria: Students who are aware about the road safety measures, & those who are not present during the time of data collection.

Results: Majority of the school children 14 (46.6%) are having the mode of transportation to school by walk. Majority of school children 13 (43.3%) are having distance of travel from home to school. Findings related to knowledge of road safety measures. According to knowledge level of school children 23 (76.6%) had adequate knowledge. According to association between knowledge and demographic variable there is a significant association between age and gender.

Key words: Road traffic accidents • Assess • Knowledge • School children

Introduction

The world Health Day 2004 focused on this rapidly growing public health problem of accidents. The "Road Safety is no accident" is a message to the public that the solution to this grave problem lies in their own hands. Action can be taken on many fronts to prevent these needless deaths and disabilities, and the immense loss and suffering they cause. Many programmes and policies exist to prevent road traffic crashes. They include strategies to address rates of speed and alcohol consumption, promotion of helmets and seat belts and other restraints, and greater visibility of people walking and cycling.

Theme for World Health Day 2004 was road safety. On this day around the globe, hundreds of organizations were host events to help raise awareness about road traffic injuries, their grave consequences and enormous costs to society. They were also contributing to spreading the word that such injuries can be prevented. As adults, we are responsible for young children's safety around traffic whether they are pedestrians or passengers. "The aim of road safety is to convey information to road users so as to enhance their knowledge about road safety issues, influence their behavior on the road and / or prepare them for new safety measures.

Seventy six people under the age of thirty were killed in road traffic accident in 2007, down by nine from the previous year. In total 233 people lost their lives. The number of children road traffic fatalities increased when compared with 2006. On average, twenty children have died each year during 2000. In 2006, fifty three persons killed (45–54 years) in road traffic accidents. April 19th, 2007, GENEVA-road traffic crashes were the leading cause of death among

**Address for Correspondence:* Bharathi AR, Department of Nursing, Bharath Institute of Higher Education and Research, Selaiyur, Chennai Tamil Nadu, India. E-mail: bharathiar.75@gmail.com

Copyright: © 2021 Bharathi AR. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Received 20 July 2021; **Accepted** 23 August 2021; **Published** 30 August 2021

young people between ten and twenty four years, according to a new report published by World Health Organization as part of the first United National Global road safety week 23–29 April 2007.

Current figures are alarming enough. Even more alarming are trends. If they continue by 2020, the number of people killed and disabled every day on the world's roads will have grown by more than 60% making road traffic injuries a leading contributor to the global burden of disease and injury. Today they account for 90% of the deaths and disabilities resulting from road traffic injuries. Soon, that will rise to 95%. By taking action now and by working together, we can reverse the current trends and save millions of adults and children from death and disability between now and 2020, and many millions more people in the years beyond. Now-a-days only a few children walk to school compared to previous generation. This is because parents feel safe to drive their children to school resulting in poor road crossing skills among children. Hence, children should be given awareness regarding road safety. There is less number of research studies done on knowledge of primary school children regarding road safety measures [1-20].

When the investigator was posted in Guduvancherry found that many school children were lack of knowledge regarding road safety measures. Most of the school children they were not aware of road traffic accidents. This made the investigator to do a study "to assess the knowledge of road safety measures among school children at selected school at Guduvancherry in Chennai

Materials and Methods

The total sample size for this study is 30 school students. They used descriptive research design, & Purposive sampling technique was used.

Inclusion Criteria

Students who are studying in VI, VII, VIII classes.

Exclusion Criteria

Students who are aware about the road safety measures, & those who are not present during the time of data collection.

Before data collection, the researcher got formal permission from principal of girl's higher secondary school at Guduvancherry by submitting an application giving assurance to abide by the rules and regulations. The data collection period was 3 days. The investigator selected the subjects who fulfilled the inclusion criteria. Brief explanation was given about the purpose of study. Assurance was given that the data collected from the school children will be utilized only for the purpose of the study. The investigator introduced her to the subjects and collected demographic variables. The investigator used structured questionnaire method to collect data from subjects to assess the level of knowledge by using modified questionnaire. The duration of the questionnaire for each subject was about 15 to 20 minutes. Each day around 5 to 10 subjects were questioned.

Results

Table 1 shows the distribution of subjects according to their mode of transportation to the school. 16.6% (5) of students belongs to bicycle, 46.6% (14) of students belongs to by walk.

Figure 1 shows distribution of subjects according to their mode of transportation to school. 16.6 % (5) of students belongs to bicycle, 36.6 % (11) of students belongs to bus, 46.6 % (14) of students belongs to by walk.

Table 2 and Figure 2 shows the distribution of subjects according to their distance of travel from your home to school. 16.6% (11) of students belongs to >1km, 20% (6) of students belongs to >2km, 43.3% of students to >3km.

Table 3 and Figure 3 shows the distribution of subjects according to what type of vehicle is there in your house. 86.6 % (26) of students belongs to 2 wheeler, 3.3% (1) of students belongs to 4 wheeler, 10 % (3) of students belongs to both.

Table 4 and Figure 4 shows the distribution of subjects according to how much traffic is there on your area. 46.6% (14) of students belongs to no traffic, 46.6 % (14) of students belongs to mild, 0% of students belongs to moderate, 6.6% (2) of students belongs to heavy.

Key note

- ✓ Inadequate knowledge: 0-7 marks.
- ✓ Moderately knowledge: 8-15 marks.
- ✓ Adequate knowledge: 16-20 marks.

Table 5 and Figure 5 describe the knowledge level of students. On the basis of knowledge score 0 (0%) had inadequate knowledge, 7(23.3%) had moderately adequate knowledge and 23 (76.6%) had adequate knowledge.

Table 1: Frequency and Percentage distribution of subjects according to Mode of transportation to school.

S.no	Mode of transportation to school	Frequency (n)	Percentage (%)
a	Bicycle	5	16.60%
b	Bus	11	36.60%
c	By walk	14	46.60%

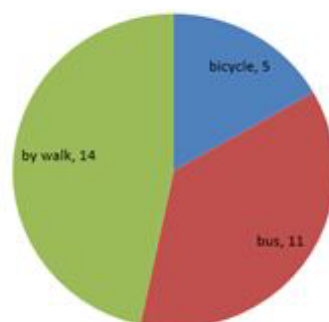


Figure 1. Frequency and percentage distribution of subjects according to mode of transportation to school.

Table 2: Frequency and percentage distribution of subjects according to the distance of travel from your home to school.

S.NO	Distance of travel from your home to school	Frequency (n)	Percentage (%)
a.	>1km	11	16.60%
b.	>2km	6	20%
c.	>3km	13	43.30%

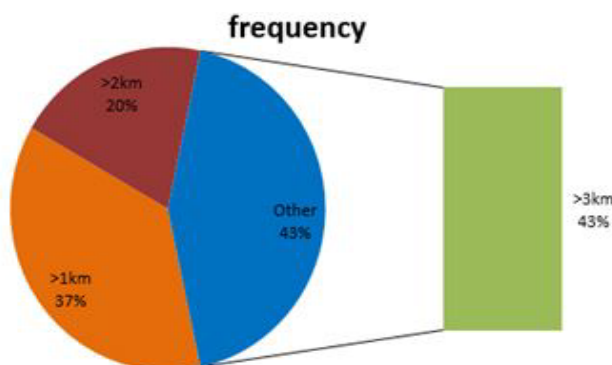


Figure 2. Frequency and percentage distribution of subjects according to distance of travel from your home to school.

Table 3: Frequency and Percentage distribution of subjects according to what type of vehicle is there in your house.

S. no	What type of vehicle is there in your house	Frequency (n)	Percentage (%)
a.	2 Wheeler	26	86.60%
b.	4 Wheeler	1	3.30%
c.	Both	3	10%

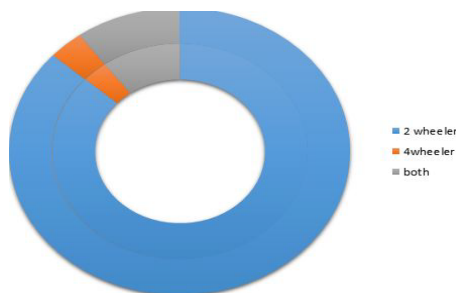


Figure 3. Frequency and percentage distribution of subjects according to what type of vehicle is there in your house.

Table 4: Frequency and percentage distribution of subjects according to how much traffic is there on your area.

S. no	How much traffic is there on your area	Frequency (n)	Percentage (%)
a.	No traffic	14	46.60%
b.	Mild	14	46.60%
c.	Moderate	0	0
d.	Heavy	2	6.60%

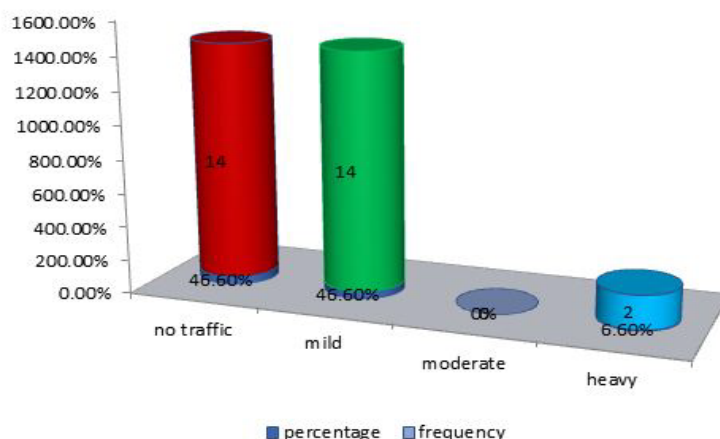


Figure 4. Frequency and percentage distribution of subjects according to how much traffic is there in your area.

Table 5: Distribution of subjects according to the knowledge scores.

S.no	Knowledge level (score)	Frequency (n)	Percentage (%)
1	Inadequate	0	0%
2	Moderately adequate	7	23.30%
3	Adequate	23	76.60%

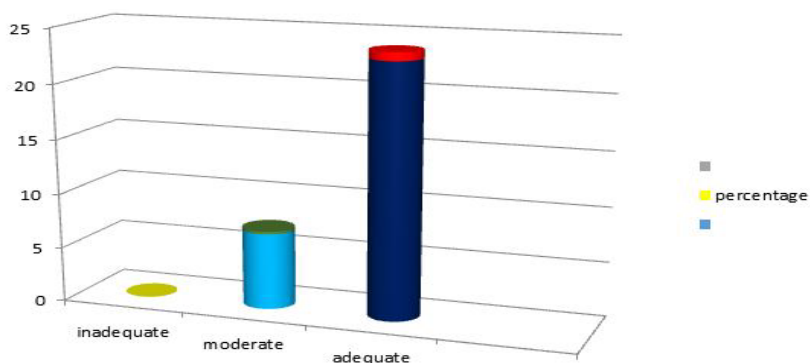


Figure 5. Frequency and percentage distribution of subjects according to the knowledge scores.

Discussion

The distribution of students according to their age. 26.6% (8) of students belongs to 10-11years. 33.3% (10) of students belongs to 11-12 years. 40% (12) of students belongs to 12-13years. The distribution of subjects according to their gender. 100% (30) of students belongs to females. According to their class studying. 33% (10) of students belongs to 6th, 33% (10) of students belongs to 7th. 33% (10) of belongs to 8th. Their mode of transportation to the school. 16.6% (5) of students belongs to bicycle, 46.6% (14) of students belongs to by walk. The distribution of subjects according to their distance of travel from your home to school. 16.6% (11) of students belongs to >1km, 20% (6) of students belongs to >2km, 43.3% of students to >1km. shows the distribution of subjects according to what type of vehicle is there in your house. 86.6% (26) of students belongs to 2 wheeler, 3.3% (1) of students belongs to 4 wheeler, 10% (3) of students belongs to both. How much traffic is there on your area? 46.6% (14) of students belongs to no traffic, 46.6% (14) of students belongs to mild, 0% of students belongs to moderate, 6.6% (2) of students belongs to heavy. The level of knowledge on students, shows 0 (0%) had inadequate knowledge, 7 (23.3%) had moderately adequate knowledge and 23 (76.6%) had adequate knowledge. Association between knowledge and demographic variables shows, there is no association between age, gender, class studying, mode of transportation to school, distance of travel from your home to school, what type of vehicle is there in your house, how much traffic on your area.

Nursing Practice

The vital role of the nurse in practical implication to promote health, to prevent illness, to restore health, to rehabilitate the defects, to alleviate suffering. The study implicates that the existing knowledge and practice regarding road safety measures which helps to prevent the road accidents among school students. When we create awareness among the school students. The school children apply their knowledge and practice and also added responsibility in educating school children in regard to road safety measures and help in prevention of road accident by modification of life style.

Nursing Education

In nursing education the study give valid information for students regarding road safety measures. It provides opportunity to the students to organize and conduct health education program regarding road safety measures in various health setting. This study provides the wide knowledge about road safety measures to the school students. So that they are able to inculcate and deliver the excellent knowledge to the students.

Nursing Administration

Nursing administration should take foot step to create awareness about road safety measures through education program. Nursing personnel should conduct awareness program to school students regarding road safety measures. It is also an important to nurse administrators to formulate adequate policy in providing student education and also plan for manpower, money, material, method and time to conduct successful program with adequate student educational material.

Nursing Research

Nursing research is an important tool for developing body of professional knowledge. Nursing research could help the nurses to promote evidence based practice. The findings of the study can be utilized or motivating the nurse researcher to conduct further research study to assess the effectiveness of structured teaching program on evidence based practice of road safety measures among school children in order to get scientific knowledge.

The main objective of the study was to evaluate the effectiveness of structured teaching program on evidence based practice of road safety measures in terms of knowledge and practice among school children in selected school, at Guduvancherry. Majority of the school children 14 (46.6%)

are having the mode of transportation to school by walk. Majority of school children 13 (43.3%) are having distance of travel from home to school. Findings related to knowledge of road safety measures. According to knowledge level of school children 23 (76.6%) had adequate knowledge. According to association between knowledge and demographic variable there is a significant association between age and gender. The knowledge of school teachers helps to identify lack of knowledge on road safety measures among school children and it may reduce the occurrence of accident. A nurse can alleviate the problem of school children, which one of the main causes for accident and injure. Nurse plays an importance role in guiding teachers to gain knowledge on road safety measures and to achieve maximum level of health and wealth [21-34].

Conclusion

The knowledge of school teachers helps to identify lack of knowledge on road safety measures among school children and it may reduce the occurrence of accident. A nurse can alleviate the problem of school children, which one of the main causes for accident and injure. Nurse plays a importance role in guiding teachers to gain knowledge on road safety measures and to achieve maximum level of health and wealth.

Funding

No funding sources.

Ethical Approval

The study was approved by the Institutional Ethics Committee.

Conflict of Interest

The authors declare no conflict of interest.

Acknowledgment

The encouragement and support from Bharath University, Chennai is gratefully acknowledged. For provided the laboratory facilities to carry out the research work.

Reference

1. Afukaar FK, Antwi P, Ofosu-Amaah S. "Pattern of road traffic injuries in Ghana: Implications for control." *Injury Control Safety Promotion* 10 (2003): 69-76.
2. Zimring C, Joseph A, Choudhary R. "The role of the physical environment in the hospital of the 21st century: A once-in-a-lifetime opportunity." *Concord, CA: The Center for Health Design* (2004): 311.
3. Mathew TA. "A study on effectiveness of structured teaching program on road safety measures among primary school children in selected school at Bangalore." *Asian J Nurs Educ Res* 4 (2014): 207-211.
4. Albert RR, Dolgin KG. "Lasting effects of short-term training on preschoolers' street-crossing behavior." *Acci Analy Prevent* 42 (2010): 500-508.
5. Andrade SM, de Mello Jorge MH. "Road accidents in a city of southern Brazil." *Revista Saude Publica* 35 (2001): 318-20.
6. Rathinam C, Nair N, Gupta A, and Joshi S, et al. "Self-reported motorcycle riding behaviours among school children in India." *Acci Analy Prevent* 39 (2007): 334-339.

7. Balogun JA, Abereje OK. "Pattern of road traffic accident cases in a Nigerian university teaching hospital between 1987 and 1990." *J Trop Med Hyg* 95 (1992): 23-29.
8. Coles CD, Strickland DC, Padgett L, and Bellmoff L. "Games that "work": Using computer games to teach alcohol-affected children about fire and street safety." *Res Develop Disabilities* 28 (2007): 518-530.
9. Raj CP, Datta SS, Jayanthi V, and Singh Z, et al. "Study of knowledge and behavioural patterns with regard to road safety among high school children in a rural community in Tamil Nadu, India." *Indian J Med Specialities* 2 (2011): 110.
10. Dandona R, Mishra A. "Deaths due to road traffic crashes in Hyderabad city in India: Need for strengthening surveillance." *National Med J India* 17 (2004): 74-79.
11. Sainath C and Ahmed KM. "An epidemiological study of road traffic accidents in a South Indian." *City*.
12. Lee JW. "World health day theme 2004: Road safety is no accident." *Nurs J India* 95 (2004): 74.
13. Corden TE, Tripathy N, Pierce SE, and Katcher ML. "The role of the health care professional in bicycle safety." *Wisconsin Med J* 2005; 104:35-38.
14. Corden TE, Tripathy N, Pierce SE, and Katcher ML. "The role of the health care professional in bicycle safety." *Wisconsin Med J* 104 (2005): 35-38.
15. Ghosh PK. "Epidemiological study of the victims of vehicular accidents in Delhi." *J Indian Med Assoc* 90 (1992): 309-312.
16. Rossi PG, Farchi S, Chini F, and Camilloni L, et al. "Road traffic injuries in Lazio, Italy: A descriptive analysis from an emergency department-based surveillance system." *Annals Emergency Med* 46 (2005): 152-157.
17. Gorden JE. "Epidemiological of road traffic accidents." *Am J Public Health* (1949): 504.
18. Ghosh PK. "Epidemiological study of the victims of vehicular accidents in Delhi." *J Indian Med Assoc* 90 (1992): 309-312.
19. Gururaj G. "Alcohol and road traffic injuries in South Asia: challenges for prevention." *J College Physicians Surg* 14 (2004): 713-718.
20. Gururaj G, and Suryanarayana SP. "Burden and impact of injuries: results of population-based survey." In proceedings of the 7th world conference on injury prevention and control, Vienna (2004) 275-276.
21. Mukhopadhyay J. "Road safety awareness among college students in a North Indian Town." *J Med Sci Clin Res* 5 (2017): 1853-1855.
22. Jha N. "Road traffic accident cases at BPKIHS, Dharan, Nepal. One year in retrospect." *J Nepal Medical Assoc* 35 (1997): 241-244.
23. Jin HQ, Li YC, Zhang SL, and Yu WS. "Evaluation on the effects of education regarding road safety among middle school students." *Zhonghua Liuxingbingxue Zazhi* 30 (2009): 797-801.
24. John D. "Study on evaluate the long term severely injured patients." *J Academic child Adolescent Psychiatr* 11 (2003): 26-32.
25. Ian J. "Action to reduce road casualties." In *World health forum* 13 (1992): 154-162.
26. Koushki PA, Bustan MA, Kartam N. "Impact of safety belt use on road accident injury and injury type in Kuwait." *Acci Analysis Prevent* 35 (2003): 237-241.
27. Jipmer P. "Road traffic accidents: A narrative review." *Ann SBV* 7 (2018).
28. Lawrence T. "Parental risk perceptions of childhood pedestrian road safety: A cross cultural comparison." *J Safety Res* 36 (2005): 181-187.
29. Lamb R, Joshi MS, Carter W, and Cowburn G, et al. "Children's acquisition and retention of safety skills: The Lifeskills program". *Injury Prevention* 12 (2006): 161-165.
30. Landolt MA, Vollrath M, Timm K, and Gnehm HE, et al. "Predicting posttraumatic stress symptoms in children after road traffic accidents." *J Am Academy Child Adolescent Psychiatr* 44 (2005): 1276-1283.
31. Larsson EM, Mårtensson NL, Alexanderson KA. "First-aid training and bystander actions at traffic crashes: A population study." *Prehospital Disaster Med* 17 (2002): 134-141.
32. Martin JL, Lafont S, Chiron M, and Gadegbeku B, et al. "Differences between males and females in traffic accident risk in France." *J Epidemiol Public Health* 52 (2004): 357-367.
33. Marcusson H, Oehmisch W. Accident mortality in childhood in selected countries of different continents, 1950-1971. *World Health Statistics Report* 30 (1977): 57-92.
34. McIlvenny S, Al Mahrouqi F, Al Busaidi T, and Al Nabhani A, et al. "Rear seat belt use as an indicator of safe road behaviour in a rapidly developing country". *J Royal Society Promotion Health* 124 (2004) 280-283.

How to cite this article: Bharathi, AR. "A Study to Assess the Knowledge of Road Safety Measures among School Childrens in Selected School at Guduvancherry Chennai". *Adv Practice Nurs* 6 (2021): 215.