

ORIGINAL ARTICLE

ROAD SAFETY AWARENESS AMONG SCHOOL TEACHERS: A TRAINING REQUIREMENTS ASSESSMENT INVOLVING SCHOOLS IN KELANTAN

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ABSTRACT

Road Safety remains one of the most important issues affecting educational institutions especially the school. The prevalence of road accidents in recent news reports underlines the importance of this issue. Such accidents involving school pupils have further escalated this concern. As such, safety awareness among school teachers is crucial in order for them to identify the suitable methods to prevent more road accidents in future. This study was conducted to analyse teachers' awareness of road safety in school to gauge the training requirements on road safety. Road safety education and training in school is just as important as improving safety for road users outside schools. For this study, a set of survey questionnaire was distributed to 400 school teachers from 111 schools randomly selected from the 10 District Education Offices in Kelantan. Results were then analysed using Statistical Package for the Social Sciences (SPSS). From the results, 40% of respondents were male and 60% of them were female. Descriptive analysis showed that school teachers understood road safety as 90% of them possessed basic safety knowledge, while 10% of them lacked basic knowledge on road safety. However, they did not implement safety practice that may have contributed to unfortunate events happening outside of school including road accidents as reported in the news. This study suggests that school teachers must undergo road safety training to promote and improve road safety in school. With higher awareness and more information about the road safety, the teachers could create a safer environment in their school. Undoubtedly, teachers have a vital role to ensure safety of their pupils and their commitment will likely reduce the number of road accidents.

Keywords: Road, Safety, Accident, Awareness, Teachers, Training

INTRODUCTION

Road safety has become a serious concern due to the spate of accidents occurring within the last few years. In general, road safety deals with the quality aspect of road traffic and such an aspect has to be parallel with the level of awareness, access to information and environmental influence¹. Without doubt, road traffic injuries and deaths have a significant impact on individuals, communities and countries. In fact, the World Health Organization (WHO) has often discussed road safety which is an issue that affects everyone², especially because we all use the road either as pedestrians, cyclists, car drivers or passengers. Thus, it is essential to ensure everyone can travel as safely as possible.

In South Africa, pedestrian injury is identified as the highest among children, with 22% of all pedestrian deaths involving children below 15 years old³. Meanwhile, studies have also indicated the number of people killed annually in road crashes is around 1.3 million, along with 50 million injury cases and around 260,000 fatalities involving children⁴. Besides that, about one million have been permanently disabled. In another study, 133,938 people were found to

have perished in road crashes in India⁵. The same report suggested that due to under-reporting, and actual figure of road deaths could be around 231,000². Thus, it is without doubt that managing road safety is of utmost importance to prevent road fatalities.

It must be emphasised that schools must also play a prominent role in order to implement road safety because accidents have also become a commonplace around the school vicinity, where students, teachers and staff spend most of their time. In Turkey, a study reported that students spend about 180 days per year in school around 6 hours per day⁶. A school is therefore considered as a place of work. Here, "place of work" is defined as premises where individuals work or premises used for the storage of plant and substance⁷. Thus, the probability of the risk and hazard happening in or around school is quite high.

In recent years, more and more road traffic crashes have taken place around educational institutions such as the school⁸, with some of them being featured on the front page of the local newspaper. On 14 January 2016, a student was killed upon being hit by a trailer in front of

Sekolah Menengah Kebangsaan Bandar Permai Perdana, Kajang⁹. In a separate tragedy, another student from Sekolah Kebangsaan Teluk Medan, Bagai Serai, Perak was killed after being mowed down by a trailer while crossing the road in front of the school. Apart from these, statistics of road deaths near schools were reported to be hovering at 48 cases from January to July 2016¹⁰ although road accidents near schools have not been widely investigated compared to those occurring in residential areas or highways¹¹. However, the importance of instilling awareness of road safety among school students cannot be brushed aside. One of the methods to increase such knowledge and awareness is through training. In addition, road safety education and training for teachers is just as important as ensuring the safety of students or road users outside schools alike¹².

ROAD SAFETY TRAINING

Various government agencies provide a wide range of public programs and services, including human and social services, economic development, public research and development (R&D) and public education. These programs aim to curb social problems and fulfil social needs¹³. Researchers have pointed out that a majority of road crashes are due to human error¹⁴. However, the probability of accidents can be reduced through different ways including education and proper training of school children. The main cause of road deaths and injuries involving school children is the lack of knowledge on road safety measures. Besides that, studies have also highlighted the importance of close cooperation between the school community in order to deliver relevant and desired knowledge¹⁵. Knowledge of teachers and road safety experts regarding road safety in school must be amplified and they must be more willing to provide workplace-based learning (WPL) for the pupils. Through this, the pupils will be more aware of road safety issues at school¹⁵. Another study has also identified that communication between pupils, teacher, and their supervisor is the best way to meet the training goals¹⁶. Therefore, this study will assess awareness of school teachers in order to understand the training requirements on road safety in school.

Here, training is defined as “the systematic of knowledge, skills and attitudes in order to develop competencies for effective performance of people in the work environment and the importance of road safety training to be included in workplace-based learning (WPL)¹⁷. Such training can be incorporated in the learning method as well as the course content.

Previous studies have also pointed out that education and awareness strategies for preventing injuries and accidents among young people especially students had been widely

described in scientific literature¹⁸. Additionally, safety training programs have been conducted to address the attitude or behaviour of students that tend to lead to injury in school¹⁹. Several research studies have revealed that most of the current road safety training approaches are based on a behavioural educational paradigm, oriented to ensure the students' attitude or behaviour follow OSH rules²⁰. These approaches focus on the trainer's role and unidirectional knowledge exchanges from the trainer to the trainee. According to the World Health Organization (WHO), occupational health education, which is an essential component of holistic care, is a method for promoting health and preventing occupational disease. It provides workers the right to know about potential hazardous risk factors within the work environment and helps empower self-health management by making individuals aware of their health problems²¹.

Moreover, road safety education can also help meet health and environmental targets and objectives. There is also considerable scope for the development of cross-curricular linkages between subjects such as Geography, Science and Maths and Road Safety, hence enabling road safety skills and knowledge to be reinforced²².

Apart from the above, the increasing level of knowledge reflects the improvement of school education⁷. Previous studies have also found that communication between students, teachers, and supervisors in the workplace is an important part to achieve well-functioning training²³. According to the previous Minister of Transport, Datuk Seri Kong Co Ha, the Malaysia Government would introduce road safety education in secondary schools in line with efforts to raise awareness of young people²⁴. He also said that introduction of the relevant syllabus was aimed to provide education on the importance of road safety as awareness among Malaysians was still low. The government therefore had taken various measures relating to road safety and would continue to seek the best way to ensure such measures taken could be applied immediately to reduce road accidents. As such, road safety education had been introduced in primary schools. Finally, there has been a lack of information and studies are required to produce a syllabus on road safety training which focuses on young people, in order to make them more cautious, while on the road²⁴.

METHODS

This study employed a quantitative approach to assess the level of road safety awareness among school teachers in the state of Kelantan, Malaysia. Kelantan is a state located to the north east of Peninsular Malaysia with a total number of 592 schools under the care of ten (10) District

Education Offices. A survey questionnaire was adopted from Fleet Forum Association which has been conducting Road Safety Education in School Impact Assessment⁴. Later, the questionnaire was distributed to 400 teachers from 111 schools, randomly selected from the ten District Education Offices in Kelantan. The purpose of the questionnaires was to measure the level of school teachers' awareness of road safety in school. The survey questionnaire was divided into two parts. Section A was to determine the respondents' demographic background. Section B was to gauge their level of understanding of road safety in school. Closed-ended questions were developed using 4 Likert Scale. Respondents were needed to answer the questions by indicating: 1- Strongly Disagree, 2- Disagree, 3- Agree or 4- Strongly Agree. The questionnaire underwent expert validation to assess the content validity in terms of item suitability for each construct, language use and level of understanding of the question asked. In addition, a pilot study was completed to ensure that the survey questionnaire was acceptable to be used in the study.

RESULTS AND DISCUSSION

This section presents the result of the survey. Upon undergoing expert validation, the survey questionnaire was deemed suitable to use in this study. The results were then analyzed using Statistical Package for the Social Sciences (SPSS). Figure 1(a) shows the percentage of respondents according to their gender. Forty percent (40%) were male and 60% were female. Figure 1(b) shows the percentage of road safety knowledge among school teachers. From the result, most of them (90% of respondents) were found to have basic knowledge regarding safety and health aspects while only 10% did not have basic safety knowledge. This study will, therefore, discuss the basic knowledge pertaining to respondents' awareness of road safety.

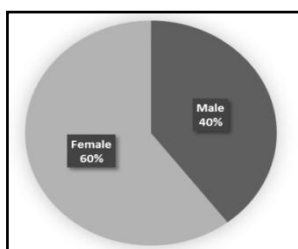


Figure 1 - (a) Percentage of respondents' gender

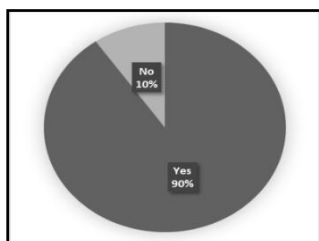


Figure 1-(b) Percentage of respondents' safety knowledge

Table 1 shows the reliability statistics for the questions used in the study. The result shows that Cronbach's Alpha is 0.91, thus considered reliable for the data²⁵. Meanwhile, this study also measured the validity of each question. The alpha value for total correlation is lower than Cronbach's Alpha If Item Deleted, which means the questions used in this study are valid and accepted²⁶.

Table 1- Reliability Statistic for Questions

Cronbach's Alpha	No of Questions
0.91	6

In this study, all the questions deal with respondents' understanding of road safety. Table 2 indicates the questions posed to the respondents regarding road safety.

Table 2- List of Road Safety Question

No	Question
Q1.	Security guards must ensure that students do not play in parking area
Q2.	All drains near student waiting area should be secured and tightly closed
Q3.	After school time, students must gather in the waiting area provided
Q4.	Students crossing the road under supervision of traffic control security guard when in and out from school
Q5.	Signage "CAUTION, children crossing" in front of the school and safety signage at waiting area must be in place
Q6.	Food from outside school also affects health of students and must be monitored

In addition, Table 3 shows the data of road safety awareness and basic safety knowledge among school teachers. From Table 3, results of Q1 to Q6 were compared between the respondents who possessed safety knowledge and without the safety knowledge. According to survey, 90% of respondents stated they had already been exposed to safety in school.

Table 3 - Data regarding road safety awareness and basic safety knowledge of respondents

Safety Awareness Question	Mean	Standard Deviation (SD)	Basic Safety Knowledge of Respondent		
			Disagree	Agree	Strongly Agree
Q1	3.60	0.52	5	127	229
Q2	3.52	0.55	20	135	206
Q3	3.59	0.53	4	140	217
Q4	3.55	0.53	12	141	208
Q5	3.61	0.51	8	125	228
Q6	3.57	0.50	4	141	216

Based on Table 3, the mean score for each question is between 3 and 4, indicating that the respondents agreed with the question given in terms of road safety. The highest awareness was regarding Q5, which stated that the signage 'CAUTION, Children crossing the road' must be placed in/near school. From the result of the teachers who possessed basic safety knowledge, 228 of them strongly agreed, 125 agreed while 8 of them did not agree with the given statement. However, for the teachers who did not have basic knowledge regarding safety and health, all of them agreed with this statement. This shows that respondents were already aware of the need for school safety zone signage. Safety signage is an important element to maintain safety environment in each workplace. In fact, a study reported that safety signage are displayed to warn drivers to reduce speed limit when approaching a school zone²⁷. Besides that, the Road Transport Act also states that every road near the school area should be equipped with signage to remind drivers they are approaching a school area and must reduce their vehicle speed²⁸.

Besides that, Q3 proposed that students must stay within the waiting area while waiting for their parents to pick them up. From the result, 217 of respondents strongly agreed, 140 agreed while 4 of them disagreed with this. All of them stated they possessed basic safety knowledge. This result also suggests that most school teachers are aware of this issue. According to Datuk Ahmad Fauzi Zahari (Setiawangsa Member of Parliament), the waiting area provided in school would be better organized, thus reducing traffic congestion and preventing accidents in school²⁹.

Additionally, Q4 stated that students should only cross the road under the supervision of a traffic warden. Most respondents also agreed with this statement. The students are also required to use the zebra crossing to cross the road. A Senior Lecturer from University Sains Malaysia was

quoted to stress the importance to teach students proper road etiquette. He also said that students especially below 12 years old can be difficult to spot by drivers. It is therefore better to have an adult in charge to help or assist students when crossing the road. Through this, road accident can perhaps be avoided in school areas³⁰. Besides that, previous studies have also pointed out that students should be accompanied by parents and monitored by traffic warden³¹. Moreover, the guidelines in Minnesota Safe Routes to School (MN SRTS) states that too many students could affect the warden's attention in ensuring all students safely cross the road, thereby students themselves must strictly follow the rules and use the zebra crossing or pedestrian road. But, the warden must monitor the students and control the traffic flow³².

Apart from these, various studies have highlighted the court will rule that children below the age of 13 will not be liable, legally, in their involvement in road traffic accidents. Nevertheless, to prevent such mishaps, it is critical that pupils are all aware of the Green Cross Code whereas older children should be made aware of the Highway Code, especially those who cycle to and from school. Thus, the school administration should consult the relevant bodies such as the Road Transport Department and incorporate road safety education into their school curriculum. On the other hand, parents and guardians alike should be encouraged to shoulder this responsibility beyond the classroom³³. As such, it is the adults that must allocate time to teach road safety to the children.

Unfortunately, although teachers were aware of road safety, they failed to implement the necessary measures, especially in schools prone to road traffic accidents. Thus, training is definitely needed to drive home the message among teachers to enhance their awareness and be responsible to ensure safety environment in the school. Training is therefore needed to

improve their performance. It might also reduce stress through supporting the development of psychological flexibility at the jobsite. Here, psychological flexibility is the ability to be in mindfully aware of thoughts and emotions, and be committed to achieve the valued goals in school.

CONCLUSION

The study has shown that most school teachers involved in the survey understand and are aware of the issue revolving road safety in school. Road safety is an aspect of road traffic which must be given equal consideration in the decision-making of infrastructure. At best, traffic risks are only considered implicitly and qualitatively in the current decision making process on infrastructural projects, which means that the consequences for road safety are not carefully looked at.

Clearly, road safety is an issue that affects everyone be they pedestrians, cyclists, drivers or car passengers especially those going to and coming back from school. Prioritizing road safety is a must not just to meet statutory requirements but to ensure personal development and well-being.

Good practice in Road Safety Education is developmental, progressive and relates to the stage of child development. The most effective Road Safety Education is jointly developed by class teachers, parents and Road Safety Officers, with each supporting the other.

However, the recent spate of accidents occurs due to lack of road safety implementation. Thus, improvement of road safety training is required in order for teachers to increase their awareness and become more responsible. Such training must include new exposure situations. With higher awareness and more information about road safety, teacher can promote and ensure the safest environment in school. Besides that, they will be able to teach students the importance of road safety thereby reducing the number of accidents. Undoubtedly, knowledge regarding road safety is of utmost importance to prevent or minimize road mishaps. It is hoped that the number of road accidents in school also can be significantly reduced with the unwavering commitment of the school community.

ABBREVIATIONS

OSH-Occupational Safety and Health, WHO-World Health Organization, SD-Standard Deviation

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COMPETING INTERESTS

There is no conflict of interest.

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