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RESEARCH ARTICLE **OPEN ACCESS**

TRAFFIC EDUCATION, PUBLICITY AND TRAINING IN ROAD SAFETY: BASIS FOR ROAD SAFETY AND ACCIDENT AWARENESS PROGRAM

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ABSTRACT

This research aimed at discovering how motorcycle riders received traffic education, publicity, and training in road safety. Qualitative research design was used thru content analysis. Through purposive sampling, twenty (20) motorcycle riders in WVSU-LC were chosen as participants. Data were collected through a semi-structured interview and were thematically analyzed. Results revealed that the most common form of traffic education they received is from the examination given by the Land Transportation Office, comprehension of traffic signs and symbols, social media, personal observation and experience and through the instructions of peers and relatives. The results also revealed that the publicity of road safety awareness on highways were in the form of traffic signs and symbols, police checkpoints, social media platform, streamers, and through pavement markings.Consequently, there is a supreme necessity to reevaluate the way the government provides traffic education to its people.

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INTRODUCTION

Rapid growth in the use of motorized two-wheeled vehicles in the country has been accompanied by increases in injuries and fatalities among users. This notion is supported by W.H.O.'s status report on road safety. Every year, 1.25 million people around the world die due to road crashes – a global problem that the World Health Organization (WHO) says is both predictable and preventable (Sy, 2017). Francisco (2015) reported that 53% of those who die in road accidents are motorcycle riders which also corresponds to the road safety report of the World Health Organization (WHO) in its Global Status Report on Road Safety in 2015, that half of the reported road traffic fatalities in the Philippines are riders of motorized two- or three-wheeler vehicles. Most of the victims come from low and middle-income families. Those in the prime of their lives are particularly vulnerable, with road injuries the leading cause of death among those 15-29 years old.

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The Philippines is also seeing worrying figures, with data from the Philippine Statistics Authority (PSA) (Sy, 2017) showing that the number of deaths due to road crashes has been increasing since 2006.According to the latest available data, 10,012 people died due to road crashes in 2015 – a 45.76% increase from 6,869 deaths recorded in 2006. Based on data from the PSA, motorcycle-related injuries comprise 69% of the total identified transport incidents nationwide. While our country has laws regulating speed limit, mandating the use of motorcycle helmets and seatbelts, and prohibiting drunk driving, these laws have not been sufficiently implemented and disseminated. This is no surprise considering the total number of vehicles and road users in the Philippines. According to statistics from the Land Transportation Office (LTO), more than half of the vehicles nationwide are motorcycles. Of the total 8.7 million vehicles registered with the LTO for 2015, 4.8 million are motorcycles. Motorcycle riders have also been the top victims of road crashes in the Philippines since 2010 (Francisco, 2015). This study however focuses only to students of WVSU-LC who drives a motorcycle or any two or three wheeled vehicle that happens to have no formal traffic and driving education background. According to the US report in 2009, eight teens aged 16 to 19 died every day from vehicular injuries. Comparing teen drivers aged 16 to 19 with older drivers, teens are four times more likely to crash.

Fig. 1. Photos show improper installation of traffic signs and symbols

Fig. 2. Photo shows no warning signs on roads with slippery surface and sharp curve

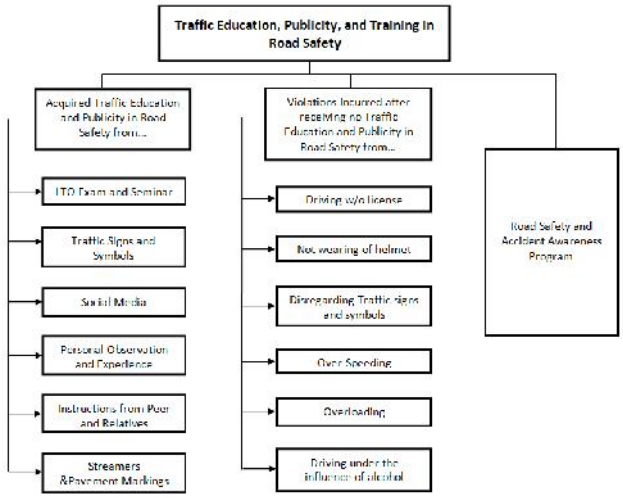

Figure 3. The form of education, publicity, and training received in road safety with the violations incurred after receiving no traffic education, publicity, and training. The dotted line points to the proposed extension program to be conducted for the concerned participants

It is postulated that teens are more likely than older drivers to underestimate dangerous situations or not be able to recognize hazardous situations (Castillo, 2011). From the foregoing theoretical constructs, the researchers deemed it necessary to discover how motorcycle riders in WVSU-LC acquires traffic education, publicity, and training in road safety that will serve as a basis in designing a program related to road safety and accident awareness.

Review of Related Literature: People in the Philippines have a strong feeling of desire to own and ride a motorcycle. This feeling often results to penny-pinching amongst low earner groups in the society but for some, this is fulfilling their dreams to own and excitingly ride a two-wheeled beast.

General Studies on Road Safety: An enormous range of documents, reports and books has been published in this area. A number of these focus upon human factors responsible for road accidents. For example, Macdonald (1985) provides a comprehensive review and suggests a range of research needs associated with behaviors of vehicle drivers, license tests, child cyclists, motor cycling behavior, pedestrian behavior and alcohol-related issues. Hampson (1984) examines human factors but extends this to consider important social factors.

A volume by Trinca (1988) provides a global perspective on road safety. It provides a fascinating historical and contemporary account of motorization, traffic safety and personal safety. Various strategies and program options for injury reduction are described in some detail. The monograph "Road Trauma: The National Epidemic" (Lander, Herbert and Trinca (1983)) is a more graphic depiction of the problems associated with road accidents. Designing appropriate strategies and cost-benefit analyses in road safety have been the focus of a number of studies. For example, Drummond and Hall (1986) did a cost-benefit analysis of programs in Victoria and estimated that a "break- even" point for expenditure on road safety education would be reached if a reduction of 3.4% in casualties occurred. Haque (1987) proposed that a comprehensive range of disaggregated road accident data should be collected to enable early intervention strategies to be applied to problem areas and districts including schools.

Community attitudes to road safety have implications at all levels from political priorities to the nature and range of specific programs. Reark (1987) point to the low priority accorded to road safety by the majority of community members. A McNair (1988) study provides more specific information on community attitudes to road safety correlated with levels of occupation and education of respondents. The media also has a major impact on community attitudes to road safety. Several important studies have been undertaken on the role of television. For example, Noble and Noble (1987) reviewed such aspects as the implications of program content, the portrayal of anti-social behavior, and the influence of aggressive role models in various television programs. Bell (1987) examined traffic-related incidents in programs viewed by school-age children. He raises a number of issues such as the negative, counter-productive messages of some programs; the relatively unexciting and didactic format of road safety promotions compared to product advertisements; and the effects of vicarious driving/cycling/motor-cycling experiences provided in some programs. Studies on Driver Safety and Driver education programs have been operating for several decades in a number of countries, such as the USA.

The research literature consists of major empirical studies, evaluation studies of individual training programs and statistical studies relating accident rates to training programs. One of the most widely cited studies was conducted in De Kalb County, Georgia by the National Highway Traffic Safety Administration between 1978-1981. The project involved 16,000 students who were allocated to one of three groups. One group undertook the Safe Performance Curriculum (80 hours tuition including simulators and off and on road instruction); another group did the standard course (30 hours tuition) and the third group of students acted as a control group and received no formal driver education through a school system. The conclusions from this study were that the standard course of 30 hours was effective; that the 80 hours course was not effective; and that accident rates between the groups were not statistically different. However, a follow-up data collection of the three groups produced evidence that certain categories of the standard course students had significantly fewer crashes in years of driving after the first year of driving. Overseas experts such as Jolly (1988) have argued that driver education programs cannot be evaluated by basic road accident statistics. He criticized writers who use standard pre-/post- and control group methods to evaluate driver education programs. He states that:

There is a multiplicity of factors which influence the behavior of the road user. Road accident reduction is, of course, the ultimate criteria upon which our total road safety policy must be judged. It is not however, necessarily the most appropriate criteria for the short-term assessment of individual methods of achieving the overall reduction. The use of raw accident data as a means of evaluating the effect of traffic education is about as realistic as using the balance of payments as a measure of the effectiveness of the teaching of business studies. The literature on road safety is very extensive and although it is far from conclusive, there are significant implications for government agencies charged with the responsibility of producing road safety education programs. A number of studies on road safety point to target groups and target concepts that should be given a high priority. The evaluative studies undertaken to date on individual road safety programs reveal a number of successes but also some deficiencies in scope, design and emphasis, which need to be addressed immediately.

METHODOLOGY

Content Analysis was the research tool used to investigate participants' traffic education, publicity, and training in road safety. The study employeda semi-structured interview with the aid of an open-ended questionnaire for data collection. Interview was then carried out to collect non-numerical data and was thematically analyzed using codes to further summarized the data.It was carried out in the Municipality of Lambunao at different times in 6 months and has focused on motorcycle rider's acquired traffic education, publicity, and training in road safety.

Semi-Structured Interview: A seven - item questionnaire was developed for the purpose of semi-structured interview to solicit data on traffic education, publicity, and training in road safety among motorcycle riders in WVSU-LC. The questionnaire was validated by traffic management investigation experts to determine the appropriateness and relevance to the study. The duration of the interview depends on the ability of participants to give answer to each of the given open-ended questions. To ensure proper comprehension of questions and clarity of responses, interview questions were converted to Hiligaynon and were spoken twice to participants before they were given the opportunity to answer.

Participants: The participants of this study were 20purposively selected college students of WVSU-LCwho drives a motorcycle either for hire or personal use. These students had been enrolled in the university for at least 2 years. The researcher personally invited the interviewees to participate in this study using purposive sampling. They were interviewed one by one at random locations within the campus.

Data Analysis: The research methodology employed in this study was content analysis. It is a research method in which features of textual, visual, or aural material are systematically categorized and recorded so that they can be analyzed (Coe &Scacco, 2017). In this research, interview transcripts were the material used to analyzed the data on acquired traffic education, publicity, and training in road safety of motorcycle riders in WVSU-LC. The data were collected using a semi-structured interview approach. Each interview was recorded using an electronic recording device and was later transcribed

into scripts. The semi-structured interview was beneficial because it allowed the participants to give truthful answers, which may not be attained in a survey questionnaire or pre-defined checklist. The data were then analyzed thematically using codes that focused on acquired Traffic Education, Publicity and Training in Road Safety of every participants. The discussion has focused on two themes that are related to the research questions namely: 1.) How motorcycle riders in WVSU-LC acquires traffic education, publicity, and training in road safety? and 2.) What violation did the participants incurred after acquiring no or less traffic education, publicity, and training in road safety?Dependability was achieved through a systematic process (Patton, 2002) in data collection and analysis. The process involved peer-review and after each interview, the authors discussed preliminary findings. As coded pattern emerges, authors came to consensus about the accuracy and definition of codes. They were then subjectively listed and ranked in highest to lowest order.

RESULTS AND DISCUSSION

The results of this study were analyzed specifically to focus on participants traffic education, publicity and training in road safety. The objectives of this study were: To discover how motorcycle riders in WVSU-LC receives traffic education, to document the publicity of road safety awareness on highways and to develop a program that will cause awareness in road safety to persons who rides a motorcycle or any motorized vehicle. Twenty (20) purposively selected participants who drive motorcycle were interviewed.

How do motorcycle riders in WVSU-LC received traffic education?

Land Transportation Office Exam: The primary form of education that the participants had received regarding traffic is from the LTO-given examination. Those who want to obtain non-professional and professional license are required to take the exam. This examination is limited only to traffic rules and regulations and identification of traffic signs and symbols. Most of the participants answer LTO as the source of their education with regards to traffic. Road safety education should be integrated in the curriculum of the Department of Education and cascaded on a national level because most of traffic law violators are younger people. They don't even know what they are violating. As Jolly (1988) have argued that driver education programs such as short-term assessment like LTO exams are not adequate to suffice the need to educate road users.

Traffic Signs and Symbols: Road traffic signs and symbols can be very helpful in assisting motorists and pedestrians. It will give you enough and valuable information as you pass by to keep you aware of certain road conditions and limitations. They represent rules that are in place to keep you safe and help to communicate messages to drivers and pedestrians that can maintain order and reduce accidents. All participants mentioned traffic signs and symbols as second form of education they receive to keep them aware of their surroundings while traversing the road. William (2012), reports that traffic signs and symbols are the silent speakers on the road. Be it the person behind the wheel or a pedestrian, having a sound knowledge about road safety is absolute necessary for all before hitting the roads.

Social Media: Social media are an important intermediary for interaction between governments, governments and people, and between people of different races. It is also a useful platform to inform people of new discoveries or happenings. With regards to traffic education, social media has played an important role in connecting people's ideas as well as solutions in maintaining traffic safety among road users. Noble and Noble (1987) reviewed such aspects as the implications of program content and the influence of aggressive role models in various television programs and social media sites. People who tend to become busy on their job or has no time attending seminars and training in road safety prefers to surf on social media accounts and applications on the internet to suffice knowledge they should have gotten in attending regular sessions given by LTO.

Personal Observation and Experience: The validity of Driver's license, regardless of classification are now extended to 5 long years. With no additional knowledge or training from LTO, people are relying only on their personal observation and experiences to become familiar with traffic rules and regulations. Participants states that they just observed what other motorists do and objectively comprehend what they think is right and normal. Strong observation skills are an advantage, specially to people who are new to places or environment. It can help you learn new things or acquire brand-new knowledge and may even get you out of certain situations without saying a single word.

Peer and Relatives: There's nothing more reliable of getting simple and straight to the point traffic education than your peers and relatives. They can provide you valuable information and ideas about safe driving and road safety awareness based on their own personal knowledge and observation too. Peer and relatives might be your first teacher concerning traffic education. Their eagerness to teach young people about road safety is unmatched. Families with car or motorcycles teach their children at a very young age, the basic mechanics of driving, how to behave in roads, the meaning of common traffic signs, symbols and pavement markings, and how to act in cases of emergencies.

Publicity of Road Safety Awareness on Highways: Publicity is the public visibility or awareness of any concerns of the government for its people. It is the movement of information from its source to the general public. It is an activity of increasing the awareness of people about the condition of something or to grab the attention of persons who might need immediate information about unfamiliar places or road condition. Notifying the public is a challenge for the government. Not because of lack of budget, but because, most of the people cannot understand the publicity being posted by the government or simply cannot comprehend the meaning of signs, symbols, and markings along the road. There are sufficient number of traffic signs and symbols installed in different areas of the municipality, especially along the national highways and in more populated areas. Some of them are installed properly while some are just placed there for the sake of formality without even considering if it's conspicuous enough for the motorists to see (see photos below).As Castillo (2011) postulated that more drivers underestimated dangerous situations or not be able to recognize hazardous situations.

Police checkpoints are there to make the motorists aware of the traffic rules and regulations, but for the short period of time only and can operate only on a single operation at a time. Some of the motorists avoid police checkpoints by seeking an alternate route or by stopping just a hundred meter before the checkpoint. Thus, avoiding apprehension and citation charge for their violations. Demanding schedule of people who works full-time or part-time are the obvious reason why they can't attend seminars or training to enhance their knowledge about traffic rules and regulations. Motorists seemed to forget to substantially improve their knowledge and skills in driving or be able to know new rules and regulations on the road because of hectic work schedule. And to suffice their incapability to enhance their knowledge and skills by not attending seminars or training, they just lean towards the availability of information on social medias. Social medias are excellent source of information, but they are limited only to those who have WIFI's and internet connection in their houses. Aside from that, information from social medias are not guaranteed to be truthful and reliable.

Traffic Education, Publicity, and Training in Road Safety

Summary of Findings

The findings of the present study were the following:

- People rely only on the examination and seminar given by the Land Transportation Office (LTO) prior to obtaining driver's licenses as a form of education. This assessment by the LTO weren't enough to cover all areas of concern on traffic rules and regulations that people should have in order to adequately know all the information regarding traffic rules and regulations specially on road safety.
- Outside the LTO, motorists rely heavily on traffic signs and symbols including pavement markings as a source of information along the roads. Traffic signs and symbols make them aware for certain limitations and regulations on the road or make them cautious about road conditions and other road users.
- People who doesn't have time to attend seminars or trainings, make use of social media to expand their little knowledge about traffic and road safety.
- People who doesn't have access to social media and those who obtained student license only, relies deeply on their personal observation and experience about traffic rules and regulations.
- Others get their basic traffic education from their peers and relatives who have adequate knowledge about traffic rules and regulations based also from their personal observation and experience.

Conclusion

- The reliance of people from LTO given exams as form of education in traffic and road safety is a testament that no other source of education is available.
- With the absence of institutions offering education in traffic and road safety,traffic signs and symbols are the closest thing a motorist can depend on instructions and information concerning traffic regulation and road safety.
- The use of social medias and other information and communications technology platform of some motorists to acquire basic education in traffic and road safety are a sign of eagerness of people to learn and discover things related to their usual activities like driving a motor vehicle safely.
- Other motorists who relieson personal observation and experience or depends mostly on the instructions given to them by their peer and relatives might have no access to social medias and/or are not eligibleto take LTO exams.

Recommendations

Based on the aforementioned findings and conclusions, the following recommendations were given:

- There is a supreme necessity to reevaluate the way the government provides traffic education to its people. To avoid future problems or widespread breakdown of traffic safety, the government should educate well the people who uses roads, highways and the like. Prevention is better than cure, so we educate them first before allowing them to use roads and highways. As Haque (1987) proposed that a comprehensive range of disaggregated road accident data should be collected to enable early intervention strategies to be applied to problem areas and districts including schools.
- An adequate volume of installed traffic signs and symbols on public roads and highways is strongly suggested. It should be installed properly on easily noticeable location so that motorists and pedestrians will see them effortlessly while traversing the road.
- The government offices who are tasked to inform people of new laws, rules and regulations concerning traffic are encouraged to create a social media accounts that are always available for the people to have an alternative form of receiving or acquiring information regarding road safety.
- People are encouraged to attend seminars/trainings given by either government or non-government organizations to make them well-updated of the rules and regulations on road safety.
- To further validate the findings of this investigation, the researcher recommends further research related to this study. As Macdonald (1985) suggested that a range of research should be conducted relative to behaviors of vehicle drivers, license tests, motor cycling behavior, pedestrian behavior and alcohol-related issues.

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