

SOCIOLOGICAL ANALYSIS OF THE ROAD SAFETY SITUATION IN CAMBODIA: HISTORICAL, CULTURAL AND POLITICAL ASPECTS

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ABSTRACT

The objective of the study is to explore the conceptual understanding of road crashes as a social issue among the general road users and to understand better the behavioural determinants of motorcycle helmet wearing among young people.

One of the conclusions is that the target population was very much aware of the fact that wearing a helmet protects them from head injuries (i.e. knowledge about the benefits of helmet wearing). The actual wearing of a helmet, though, was linked to the perceived risks and not all situations were considered risky by the road users. Therefore, further effort needs to focus on changing the perception of which situations constitute a risk, namely that all situations without a helmet are risky. The aim will be to make wearing a helmet a habit at all times by raising public awareness, targeting youth and strengthening helmet law enforcement.

Keywords: motorcycle accidents in Cambodia, helmet use behaviour

INTRODUCTION

Road traffic injuries are a huge public health and development issue, killing more than 3,000 people and disabling for life more than 15,000 every day in the world. They are the second leading cause of death globally among young people aged 5 to 29. About 90 per cent of fatalities related to road crashes occur in low- and middle-income countries (WHO, 2004). Whereas in recent decades, high-income countries have steadily and systematically reduced the number and severity of road crashes by implementing coordinated multisector prevention programmes, their numbers have increased in developing countries.

Cambodia's relative stability and growth in recent years has been characterized by a rapid increase in the volume of road traffic (20 per cent per

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year, on average). The growth in vehicle numbers, insufficient law enforcement, the lack of road safety (RS) education, speed increases and the inadequacy of health services have led to a rapidly rising number of road fatalities and injuries.

In 2007, according to Cambodia's Road Traffic Accident and Victim Information System (RTAVIS), more than four persons died and many others were injured daily on the roads of Cambodia. Between 2001 and 2007, the number of fatalities has more than tripled. With fatalities at 17 per 10,000 registered vehicles, Cambodia has the highest fatality rate in the Association of Southeast Asian Nations (ASEAN) region.

Motorcycles are the most common mode of transport in Cambodia and head injuries from motorcycle accidents account for more than 80 per cent of all fatalities. Data from RTAVIS show that only 3 per cent of victims of fatalities involved in a road crashes were wearing motorcycle helmets, while 19 per cent of the casualties suffered from fractures and more than 50 per cent suffered from serious cuts/wounds.

I. OBJECTIVE AND METHODOLOGY OF THE STUDY

Objective

The objective of this study was twofold. The first objective was to understand better the attitude of Cambodian citizens towards road safety when compared to other social problems, the confidence that Cambodians have in government agencies to do something about road safety, their confidence and support for particular countermeasures and their personal road safety experiences. The second objective was to measure the behavioural determinants of motorcycle helmet wearing among young people between the ages of 16 and 25. The study should reveal elements that can be adopted in setting up awareness-raising campaigns and educational and enforcement activities with respect to helmet wearing.

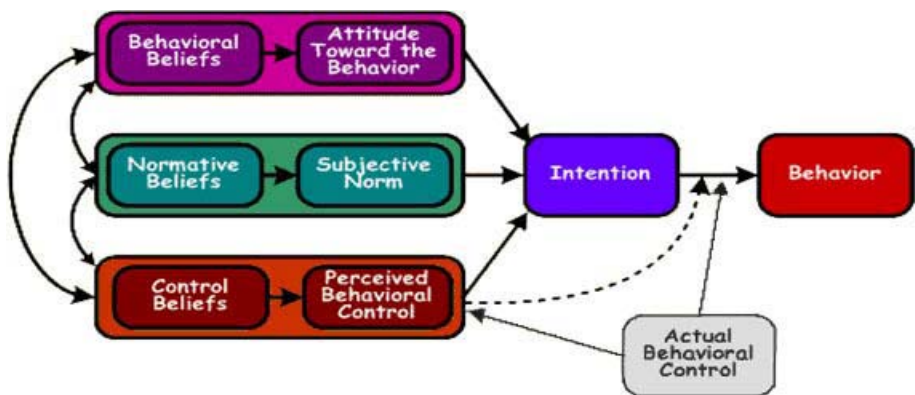
B. Methodology

In order to fulfil the first objective, a road user survey was carried out among a random sample of 729 road users in Phnom Penh city and Battambang province. For the second part of the study on the behavioural determinants of helmet wearing, 344 adolescents within Phnom Penh city were interviewed. The general road user survey consisted of several parts. The first part focused on the importance of road safety compared with other social problems, such as domestic violence, unemployment, drug use, HIV/AIDS and traffic congestion. It also enquired about the confidence that Cambodians had in government-sponsored measures to address those problems. In the second part of the survey, road users were probed about their attitudes toward particular road safety problems (such as drunk driving, speeding, not wearing a helmet, talking

on a cell phone while driving and running red lights) and the perceived effectiveness of and support for several road safety countermeasures (such as awareness campaigns, stricter enforcement, stricter laws, infrastructural improvements and improved road safety education). The interview questionnaire was pre-tested. Based on this pre-test, the questionnaire was slightly changed and the interview procedure was improved to minimize the influence of the interviewer. It was, for example, not mentioned that the interviews dealt with road safety. The general road user survey was specifically adapted to the local Cambodian situation by adding extra options related to motorcycle use and rephrasing the questions in a way that they were understandable to Cambodians.

The helmet questionnaire targeting the young people focused on the beliefs, attitudes and behavioural intentions towards helmet use and its design was based on the theory of planned behaviour (Ajzen, 1991)

Figure 1. Theory of planned behaviour



Source: Ajzen, 1991.

The theory states that behaviour (for example, wearing a helmet) is determined by people's intentions to carry out the desired behaviour and the individual's perceived behavioural control (in this case, the individual's perceived ease or difficulty of wearing a helmet). Intentions to wear the helmet, in turn, are dependent on people's attitude towards helmet wearing (positive and negative attitudes), subjective norms (the individual's perception of how important others' thoughts are about whether he/she should wear a helmet) and perceived behavioural control. The basic theory of planned behaviour model was, however, expanded using concepts from other theories, which include the protection-motivation theory (Rogers, 1975 and 1983) and the health-belief model (Rosenstock, 1966 and 1974). These additional concepts were related to:

- perceived vulnerability (does the individual consider himself

vulnerable to the risk of having a motorcycle crash?)

- perceived severity (does the individual think that the consequences of having a motorcycle crash while not wearing a helmet are severe enough?)
- response cost (the effort/cost associated with wearing a helmet)
- response efficacy (perceived effectiveness of wearing a helmet)
- behavioural willingness (to what extent the individual is willing to wear a helmet in specific circumstances)

Before designing the interviews, in-depth interviews were conducted with key stakeholders, such as the National Road Safety Committee (NRSC), the Cambodian Red Cross (CRC), the Japan International Cooperation Agency (JICA), a local non-governmental organization (the Coalition for Road Safety), the Ministry of Education, Youth and Sports (MoEYS) and the Office of the Municipal Traffic Police, in order to get an overview of the road safety situation in Cambodia. The results of the interviews were discussed with a focus group consisting of a mix of people of different ages and professions and the stakeholders mentioned above.

II. RESEARCH RESULTS

General road user survey

The majority of the people interviewed lived in a town/city (44 per cent) or along a national road (42 per cent) and only 14 per cent lived in rural areas. The numbers of women and men were almost the same. More than half of the interviewees (58 per cent) were younger than 25. The overall educational level of women was lower than that of men. Only 17 per cent of the young females and 8.6 per cent of the women older than 25 had at least a high school degree compared to 27 per cent of the young males and 37.3 per cent of the men older than 25.

The perceived importance of road safety compared with other social problems was quite high. About 64 per cent of Cambodian road users expressed that they were extremely concerned about road crashes. The importance of drug use, crime and unemployment were similar. Traffic congestion and global warming were considered important by 24 and 18 per cent of those interviewed, respectively. Other problems, such as domestic violence, petrol price and HIV, were considered important by 38-55 per cent of those interviewed. It was remarkable that respondents were more positive about the abilities of the government to address road safety and traffic problems than to address the other problems.

About 80-90 per cent of the people interviewed perceived speeding,

drunk driving, driving through the red lights, dangerous overtaking and driving while not alert as very serious problems. The interviewees were aware of the fact that they should wear a helmet to protect themselves from injury. Stricter traffic laws (57 per cent), reduction of speed (73 per cent) and helmet use (69 per cent) were considered the most effective ways to prevent accidents.

The presence of pedestrians on the street and the bad condition of roads were considered serious problems by less than half of the people. The interviewees also stated that the government should mainly focus on motorized modes of transport and not on cyclists and pedestrians. In considering the most effective way to prevent injuries from road accidents, it was found that almost all proposed measures were supported by more than 65 per cent of the interviewees, with the exception of the increase of fines, which was supported by only 20 per cent. Two types of measures received stronger support: those dealing with wearing quality helmets and those dealing with education and awareness. A State-approved driving course received the support of almost 100 per cent of those interviewed. Generally, there was a rather high level of awareness about the need to wear a helmet. This may have been the result of a recent change in law which made wearing a helmet by drivers compulsory and of media campaigns to communicate the new law. Although the general level of awareness was rather high, only 50 per cent of the interviewees answered that driving without a helmet was unacceptable. On the other hand, speeding, driving through red lights and driving when not attentive were considered unacceptable by more than 80 per cent of the interviewees. The survey results clearly demonstrated the difference in attitudes towards measures that had to be undertaken by the interviewees and those that have to be undertaken by others. The study also indicated that family had more influence on behaviour than friends or colleagues.

The research also examined general knowledge and perceptions of traffic accidents. About 40 per cent of survey participants stated that they considered the probability of getting personally involved in an accident to be very small or small, and another 41 per cent considered the risk as medium. At the same time, more than half of them stated that they had no or limited control over whether they would be involved in an accident or not. Only 15 per cent stated they had good or total control. A general perception was that accidents happen sometimes and not much can be done by an individual to prevent them from happening but that wearing a helmet reduced the severity of the injuries.

B. Helmet survey

The helmet survey focused on students and, consequently, most of the persons interviewed were younger than 25 and had a relatively high level of education; about 60 per cent of them had a Bachelor's degree. The survey was based on the theory of planned behaviour (see methodology) and aimed at gaining a better insight in perceptions about helmet wearing. Different analyses, including factor analyses and calculation of means and regressions, were carried

out on the data. The findings from the analyses highlighted a number of factors associated with observed helmet use and the actual intention of wearing a motorcycle helmet.

Behavioural intentions are considered to be an important step towards actual behaviour. Therefore, it was interesting to note that the interviewees expressed a very strong *intention* to wear a helmet the next time they would drive a motorcycle. The study also showed that there was a high correlation of *attitudes* and *perceived behavioural control* to *behavioural intention* (see Figure 2).

Figure 2. Most important behavioural intentions regarding helmet wearing

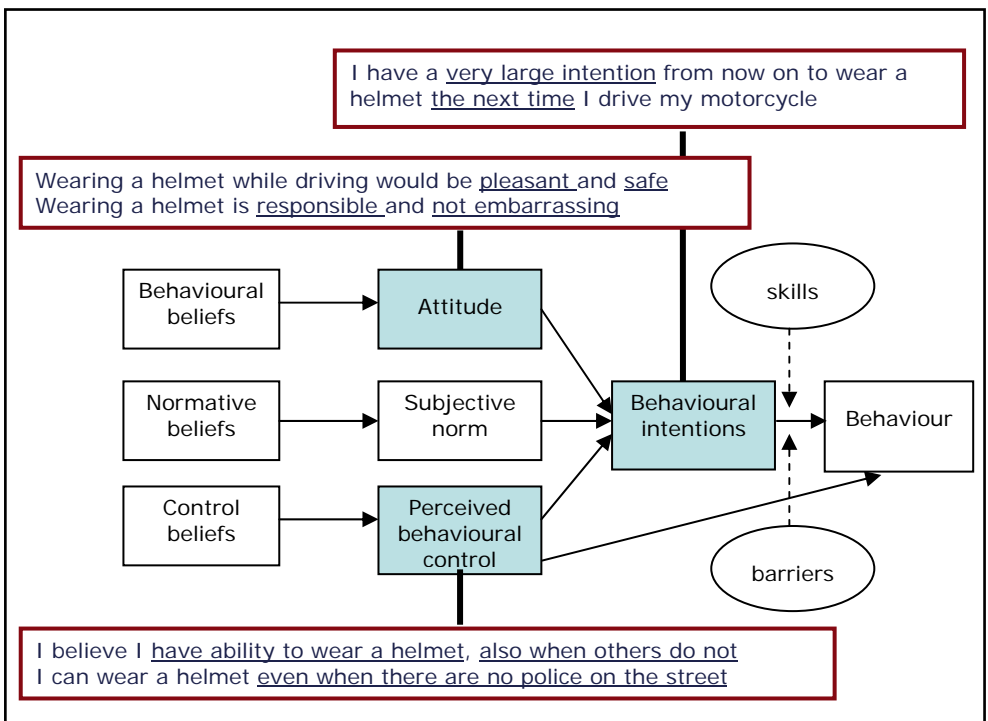
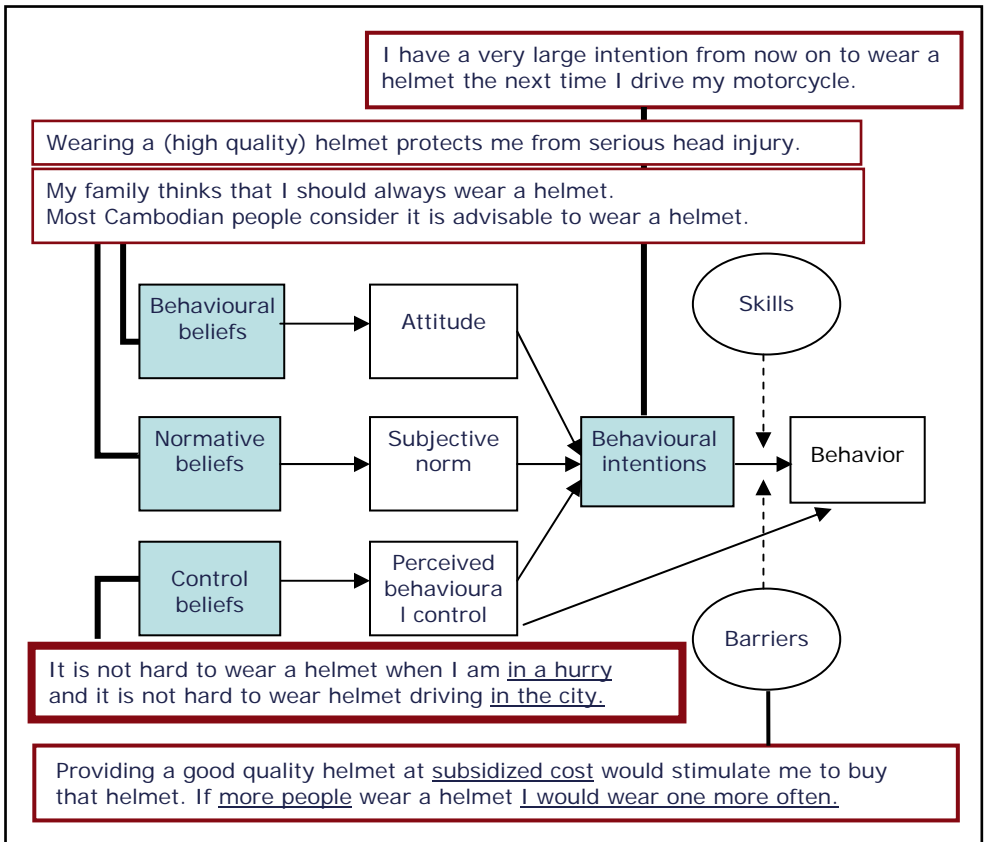


Figure 3. Most important behavioural beliefs regarding helmet wearing



Attitude is influenced by *behavioural beliefs* (figure 3). The factor analyses on responses to behavioural beliefs provided two clearly different groups of answers: one group dealing with positive attitudes and one with negative attitudes. More than 50 per cent of the respondents had a positive attitude towards the behavioural intention to wear a helmet while driving their motorcycle. The positive beliefs played a more important role than the negative beliefs, but the predicting power was not very high. Therefore, the details of the responses to individual questions dealing with positive attitudes were also examined. It was confirmed that wearing a good quality helmet to protect from head injury was more important than getting into trouble with police or protection from dust. It may be concluded that most interviewees have a good general awareness about the risks of getting injured when driving a motorbike and the fact that wearing a helmet protected them from head injuries. This was also supported by the results of responses to questions about the perceived vulnerability and severity of injuries when not wearing a helmet.

With a factor analysis on *perceived behavioural control*, a set of three related questions was found to have a high explanatory value that we related to a strong internal ability to wear a helmet even if others did not or if there was no police presence on the street. The examination of the *control beliefs* revealed that the interviewees considered it easy to wear a helmet when driving in the city and when they were in a hurry. These responses had a strong correlation with the perceived behavioural controls. On the other hand, it seemed to be more difficult to wear a helmet when driving slowly, or for a short distance, or when it seemed inconvenient, such as when the interviewees were formally dressed up, or during the night. This could mean that wearing a helmet was related to a perceived risk and that not all situations were perceived to be equally risky. Being in a hurry, for example, could be considered more dangerous than driving slowly or only on a short distance.

The third element having an influence on behavioural intentions were *subjective norms* and *normative beliefs* (see figure 3). Here, the pattern was not as clear as with behavioural beliefs and perceived behavioural controls. Two tendencies were noticed. The first one dealt with normative beliefs about the opinion of the family and Cambodian society in general. There was a correlation between the opinion that one should wear a helmet and the *behavioural intentions*, meaning that the interviewees stated that the opinion of their family and society in general was important. However, when one looks at the relation between the *normative beliefs* and the *subjective norm*, it seemed that the behaviour of friends played a more important role. The effect of what others do can also be found if one looks at the barriers to effectuating behavioural intentions into actually wearing a helmet. The two elements perceived as a barrier were whether other people were using helmets and the cost of buying a high quality helmet.

III. DISCUSSION

The analysis of the survey results from the two surveys showed some interesting similarities about what the interviewees thought about wearing a helmet. Both surveys revealed that there was good understanding of why one should wear a helmet and the respondents had a positive attitude towards helmet wearing. Moreover, the helmet questionnaire showed that most of the people surveyed believed that they were able to wear a helmet.

Although people expressed the intention to wear a helmet, in practice, there were many people not wearing helmets. From the helmet research, it was learned that there were a few important reasons for not wearing helmets. Although respondents agreed on the fact they should wear a helmet, they also stated that there were specific situations in which they found it more difficult to wear a helmet, including situations that were perceived as safe (driving slowly or for a short distance) and when it was not convenient (formally dressed up). Another important matter was the fact that the opinion of the family was important for the intention to wear a helmet but that the actual behaviour of

friends often played a stronger role in the final decision to wear a helmet. It was likely that, although family was very important, people mirrored the behaviour of their friends and, more generally, people on the street. Seeing more people wearing a helmet can encourage others to wear a helmet. The general awareness of the need to wear a helmet was very high but wearing a helmet was not a habit, but rather part of a decision-making-process. This could explain the difference between the intention of people and the actual helmet wearing rate.

CONCLUSION

The study clearly indicated that the majority of the respondents had a high level of awareness of the importance of wearing a helmet. The respondents had a positive attitude towards helmet wearing and they believed they were able to wear a helmet. Still, the rate of wearing a motorcycle helmet was low among young people. It was linked with perceived risk and not all situations were considered risky by road users. Therefore, in order to increase the helmet wearing rate, efforts need to focus further on changing the perception of the target population - the young motorcycle drivers and riders - of which situations constitute risk, namely that all situations without a helmet are risky and dangerous. The aim will be to make helmet wearing a habit at all times through public awareness-raising targeting youth and strengthening helmet law enforcement. The role of peers (friends) in an awareness-raising campaign must be further studied since the survey showed that young people were more influenced by the opinions of their close friends.

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