17. Smith JA. Evolving issues from qualitative research. In Richardson JTE (ed.). Handbook of qualitative research methods for psychology and the social sciences (pp. 189-201). Leicester: British Psychological Society, 1996.
18. Fleiter JJ, Watson B, Lennon A, King MJ, Shi K. Speeding in Australia and China: A comparison of the influence of legal sanctions and enforcement practices on car drivers. In Australasian Road Safety Research, Policing and Education Conference, Sydney: 2009.
19. Liu C. Chinese novice drivers can receive free on-road training. Sydney: The George Institute for Global Health, 16 July 2010. Viewed 10 October 2010. http://www.georgeinstitute.org/about-us/media-centre/chinese-novice-drivers-can-receive-free-%E2%80%9C-road%E2%80%9D-training.
20. Senserrick T. Australian graduated driver licensing systems. Journal of the Australasian College of Road Safety 2009; 20:20-26.
21. World Health Organization. China novice driver training pilot study clinical trial registration ChiCTR-TRC-10000800. The George Institute for International Health. Viewed 20 January 2011. http://apps.who.int/trialsearch/trial.aspx?trialid=ChiCTR-TRC-10000800.
22. Fleiter JJ, Lennon A, Watson B. Choosing not to speed: A qualitative exploration of differences in perceptions about speed limit compliance and related issues. In Australasian Road Safety Research, Policing and Education Conference, Melbourne, 17-19 October 2007.
23. Gold T, Guthrie D, Wank D. Social connections in China: Institutions, culture, and the changing nature of guanxi. Cambridge: Cambridge University Press, 2002.
24. Yang MM. Gifts, favors, and banquets: The art of social relationships in China. New York: Cornell University Press, 1994.
25. Luo Y. Guanxi and business. Hackensack, NJ: World Scientific, 2007.

Development of a supplementary education and training program for novice drivers in China

by T Senserrick,[1] X Yu,[2] D Wei,[3] M Stevenson[4] and R Ivers[1]

[1] The George Institute for Global Health, Australia, University of Sydney, Sydney, NSW
[2] The George Institute for Global Health, China, Beijing, China
[3] Neuroscience Research Australia, University of New South Wales, Randwick, NSW
[4] Monash University Accident Research Centre, Clayton VIC

Abstract

The driver population is rapidly increasing in China and crash rates are expected to rise dramatically without effective preventative measures. The objective of this research was to develop a driver education and training program for China adapted from best practice. Based on review of the current system and stakeholder interviews, a program was developed to provide driving lessons in real-world traffic for newly-licensed drivers with a supporting educational manual. The present study aim was to evaluate whether the program could be successfully implemented with 64 pilot study participants. Post-training interviews and spot checks found the majority of participants received the program as intended, with early discrepancies readily overcome. Seventy-nine per cent completed additional recommended but not mandatory components and 100% reported benefiting from participation. It was concluded that the program was appropriate and acceptable. Further research will determine whether the program can help reduce novice driver road trauma in China.

Keywords

Novice drivers, Driver education, Driver training, China

Introduction

In recent years, China has established itself as the world's fastest growing automobile market. In the two decades between 1985 and 2005, the number of private passenger vehicles increased ninefold and motorcycles and other motorised vehicles 54-fold [1]. The World Bank has reported that Beijing alone has experienced a tenfold increase of private cars in the past decade [2].

Together with this growth, the number of licensed drivers has also increased rapidly. A 2010 publication cites 60 million new drivers in China in the previous three years [3]. The rapid pace of the transition to a private car culture has been supported by rapid growth in road infrastructure, but systems infrastructure, including effective driver education, training and licensing programs for novice drivers, is yet to match the pace of these developments [4, 5].

In accordance with this growth, road traffic crashes and mortality have likewise rapidly increased. Latest available fatality figures published in the *Ministry of Public Security annual report* cite a total approaching 68,000 deaths in 2009, although comparisons to death registration data collected by the Ministry of Health suggest this figure may be twice as high [6].

Furthermore, the rate of increase in road traffic injuries between 1985 and 2005 exceeded that anticipated against an earlier estimated increase of 92% by 2020 [1, 7]. Without effective preventive measures, both the social and economic costs for China will be excessive, with road traffic fatalities accounting for more than one-third of potentially productive life years lost from injury deaths in China due to the over-involvement of youth and young adults [8]. Insurance companies report that novice drivers (those licensed for three years or less) are over-represented in road crash statistics [9], as is true of high-income countries [10, 11]; however, no official figures or population-wide information on novice drivers in China is currently available.

The China novice driver training and licensing system

The driver licensing process is mandated by Central Government and documented by the Ministry of Communication. At the time of this study, driver licence applicants were required to undertake 58 hours of education and training at specialty off-road facilities run by local government licensing authorities [12]. (In the context of this paper, 'training' refers to in-vehicle driving by learners accompanied by an instructor or adult supervisory driver with the purpose of learning to drive.) No private supervised driving (e.g., with parents or friends) is allowed. The program includes group-based classroom education and smaller group in-vehicle training on specially built (off-road) tracks at the facility. Licence tests on completion of the program include a computer-based knowledge test and an in-vehicle parking test, also at the facility.

From 2007 an additional requirement was introduced: an on-road practical test, with 20% of tests to be conducted at night [13]. This driving now takes place on the roads immediately surrounding the driving schools. Driving school managers in Beijing report that 2-3 hours of the mandatory training program now takes place on-road; however, given that three learners are generally together in one training vehicle, it is unclear how much time an individual learner might spend behind the wheel or what proportion of this training, if any, is conducted at night.

Furthermore, the driving schools are located outside the Beijing city area. While the roads around these facilities are required to have a minimum traffic level of one vehicle per minute, this is extremely low compared to the real-world driving environments that the novices encounter once licensed. As a result, many newly licensed drivers pay for additional on-road driving lessons with professional instructors before driving unaccompanied. Specialised businesses are increasing to offer these services, which cannot be provided by driving school instructors during the learner period.

The new licence has a 12-month provisional status during which time new driver plates must be displayed on the rear of the vehicle and drivers are restricted from driving police, emergency, commercial and heavy vehicles (including commercial passenger cars, buses, tow trucks, tankers, lift trucks, engineering-wrecking vehicles, vehicles carrying dangerous goods, fire engines or ambulances). These are federal restrictions. Some cities have additional restrictions relating to certain parts of the road system; otherwise, the system is generally standard across all provinces. (For example, in Beijing, driving in fast lanes is not permitted, and in Shanghai, driving on certain roads during peak hours is restricted.) After 12 months, licences automatically update to full licence status.

New licensees in China are generally older than in high income countries (typically considered those under 25 years of age), likely due to the costs involved and issues regarding access to vehicles, although this is likely to change as vehicles become more accessible. The China Automobile Association [9], a leading driver training and roadside assistance body in China, reports that the average age of their newly licensed members is 30 years. It is also common, however, for young licensees to obtain a licence without necessarily intending to drive immediately, as it is a highly regarded addition in curriculum vitae.

Comparison to best practice

Best-practice licensing systems in developed countries include mandatory lengthy learner periods (typical minimum of 12 months [14]), comprising many and varied hours of private supervised driving with a licensed adult (such as a parent) in conjunction with several professional lessons [15, 16]. The aim is to expose the learner to increasingly complex driving conditions as experience is gained so that such complex conditions are not first encountered when driving unaccompanied on a provisional licence.

In recent years, several countries have increased supervised driving requirements to very high levels, either by distances travelled (e.g., 3000 km is mandated in several European countries [11]) or by number of hours (e.g., 100-120 hours in some Australian jurisdictions [14]). European evaluations have resulted in inconsistent findings on the effectiveness of such requirements, with some finding benefits and others no benefits (but no counterproductive findings [11]), while Australian changes are too recent to evaluate reliably. Nonetheless, research has more consistently shown that increasing the length of the learner period is protective against crashes when first licensed to drive independently [17].

In addition to these learner requirements, once drivers progress to an independent provisional licence, the most effective components are a zero blood alcohol concentration (BAC) requirement and restrictions on driving unsupervised at night or with multiple peer passengers [16, 18]. None of these measures currently apply in China, although all drivers are regulated to a 0.02% g/dl BAC [4]; however, little is known about the predominant risk factors that contribute to novice drivers' inflated crash risk in China. It is unclear therefore whether such restrictions would be appropriate for the Chinese context or whether alternative initiatives might have a greater impact on crash rates.

Aims and objectives

The long-term objective of this research program was to develop a driver education and training program for novice drivers in China that will be effective in reducing their over-involvement in road traffic crashes. The current paper reports on development of the education and training program and the process evaluation findings from a first implementation of the program in a pilot study conducted in Beijing during 2010. The aims of the process evaluation were to determine if the program was delivered as intended and to assess participants' perceptions of the program.

Methods

Program development

It was intended to determine the details of the current China novice driver and training system and risk factors for crash via public records in the Chinese literature; however, published information was scarce. Therefore a series of stakeholder interviews was undertaken with government ministers, driving school managers, insurance company managers and post-licence driving instructor companies, as well as a review of licensing materials and observations of training at driving schools during 2008 and 2009. Based on the information gathered and given the strict regulation of the learner driver period by Central Government and the lack of real-world driving experience, an education and training program was designed for new licence graduates; it focused on driving lessons in central Beijing and supported education not covered in current learner driver curricula.

Driving lesson protocols and feedback forms to participants were adapted from materials provided by the Australia Driver Trainers Association NSW. As post-licence driving lessons are typically two hours or longer in Beijing (to allow for congestion), three two-hour driving lessons were the maximum number possible within project resources. The lessons were designed to increase in complexity based on the skill level of the novice.

Given the extensive manoeuvring experience gained in driving school courses, the initial focus was on vehicle handling skills in traffic, commencing in lower traffic volumes at off-peak times when possible, to more complex traffic situations based on the skill level of the novice. Lessons progressed to increasing attention to the higher-order skills of situation awareness and hazard perception, promoting maintenance of a 'safety cushion' around the vehicle and constant wide and far visual searches to monitor potential hazards [19]. The final lesson was held during dark evening hours.

At the end of each lesson, the instructor provided individual feedback to the participant on their performance and the aspects that required practice prior to the following lesson. Supporting educational content was also developed to draw attention to the high crash risk of new drivers, high-risk scenarios (e.g., driving at night), and safety behaviours and strategies (e.g., seatbelt use in all seats and how to choose a safe car). Feedback could also include attention to educational content.

The protocol was adapted to Chinese appropriate phrases, images and formats by the Beijing Chinese-German Safe-Driving Technology Development Company, a company that specialises in developing driver education materials and training professional driving instructors. A succinct education manual was developed in print form accompanied by a DVD with repeated key messages and selected additional content and scenarios the company had previously developed.

The company also developed a manual for the driving instructors and trained local instructors with 10 to 30 years experience in providing post-licence driver training; all were members of a local, highly regarded organisation, the Luantai Club. One of the China-based researchers (Dr Yu) also attended a training program provided by the Luantai Club and inspected their training vehicles to ensure standard teaching and vehicles were commensurate with the high safety standards required for the project.

Participants and procedure

Participants were recruited in and around driving schools via posters and prominent stands with advertising brochures in driving school waiting rooms and large outdoor billboards in parking areas where participants arrived at the schools via bus shuttle services. One large driving school also included business–card size advertisements in the paperwork provided on successful licence completion. Inclusion criteria were having obtained a driver licence within the past four weeks, with access to a vehicle and intention to drive during the following months.

Applicants were invited to contact the George Institute China office to schedule a visit for an in-person interview. Informed written consent was first obtained, followed by a baseline interview, after which a block randomisation technique (blocks of five) was used to randomly assign participants to the intervention or to the control group. In lieu of the three free driving lessons provided to intervention participants, control participants were provided with a six-month roadside assistance membership with the China Automobile Association. Comprehensive driving insurance was also purchased for the intervention participants for six months to cover their involvement in the study.

In total, 127 participants were recruited during March to December 2010. Of these, 64 were randomised to the intervention. Intervention participants were provided with the educational package at this time. Research team staff scheduled all lessons with the participant, predominantly via phone, and relayed them to Luantai Club on a weekly basis or more often if needed, to ensure that the lessons occurred, at minimum, one week apart to allow practice time and that the final lesson was completed in the evening.

Spot checks were also conducted for a random selection of training lessons to ensure the protocol was followed, including ensuring that no additional passengers were in the training vehicle (a typical occurrence in Beijing) and that the participant was collected and returned to their designated location on routes identified as appropriate during the instructor training (a typical lesson in Beijing involves driving to the next participants' collection location rather than returning to the original location).

Following completion of the training program, intervention participants completed a brief interview over the phone to determine whether:

- the driving lessons increased in complexity over time
- the driving instructor completed the individual feedback form at the end of each lesson

- they drove between lessons to practice tasks recommended by the driving instructor
- they believed the education and training program was of benefit to them
- the lessons were sufficient for their needs
- they had any other feedback on positives and negatives of the program.

Responses were collated into a Microsoft Office Excel 2007 spreadsheet and total responses calculated. The study protocol was approved by the University of Sydney Human Research Ethics Committee and the Peking University Institutional Review Board.

Results

The total study sample of 127 participants comprised 69 females (54.3%) and 58 males (45.7%). Of the 64 trained participants, 36 (56.3%) were female and 28 (43.8%) male, showing a similar distribution to the overall sample. The age distribution is presented in Table 1. The average age overall and for the intervention group was 30 years, while the average age for the control group was 31 years. Both groups included a participant aged 51 years, with the youngest participant in the intervention group aged 21 and in the control group aged 20.

Table 1. Age of participants

Sample	n	Mean	Standard deviation	Minimum	Maximum
Control	63	31.1	6.6	19.6	51.4
Intervention	64	30.2	5.2	21.2	51.0
Total	127	30.6	5.9	19.6	51.4

Table 2 summarises responses to yes/no questions included in the post-training interviews. In process terms, 80% of the lessons increased in complexity over time and instructor feedback was provided to the participant in 95% of cases, as intended. Over 80% also undertook practice between lessons, which could include revising educational components as well as driving. It is unknown whether increasing complexity did not occur due to participant skills level or inattention of the instructor. While practice in between lessons was not mandatory, individual feedback should have been provided in all lessons for all participants. In terms of overall impressions, Table 2 shows that when directly asked, all participants believed they had benefited from undertaking the program and over three-quarters wished there were more lessons.

Qualitative feedback provided more varied responses. Fifty-one participants (79.7%) described the program as "good", "helpful" or referred to improved skills, knowledge of safe driving or progress in driving ability (the most common response theme). Seven participants particularly commented that they now were prepared to drive independently, while one specifically stated that they had now overcome their fear of driving.

The second most common comment was a wish for more lessons (n=19, 29.7%), with two additional participants suggesting there was not enough training and that more was needed. Three participants specifically requested more attention to parallel parking, while one commented there should be less time on parking (notably not a focus on the program due to its extensive coverage in the driving school).

The third most common response was description of the instructor as "nice" and/or "patient" (n=9, 16.1%), although early in the program delivery period, one participant experienced instructor conflict with the collection location and one reported that the manual was not strictly followed. In practical terms, three respondents commented that they would have preferred a better selection of vehicles and one experienced difficulty finding a training time on weekends. In terms of the education component, three expressed wishes for additional enriched content and an additional participant suggested a theory test on this content would be beneficial. Two respondents suggested the program was "not that different" or "could be more advanced" compared to their experience in the driving schools.

Departures from the protocol identified by the participant comments or through spot checks occurred predominantly early in the program delivery period and were followed up with the manager of the Luantai Club. Issues identified during spot checks were smoking by the driving instructor during the driving lesson and requests to carry additional passengers. Once issues were identified and addressed by the Luantai Club manager, they were largely overcome for the remainder of the study.

Discussion

The results of the process evaluation suggest that a novice driver education and training program based on best practice in high-income countries was successfully developed for the China context, in that it was able to be implemented as intended, was appropriately targeted to the intended users, and was acceptable

Table 2. Perceptions of the education and training program for 64 intervention participants

Question	Yes n	Yes %
Did the lessons involve increasingly more difficult driving skills over time?	51	79.7
Did the instructor give you feedback at the end of each lesson?	61	95.3
Did you practice what the instructor taught you in between lessons?	52	81.3
Do you think the lessons benefited you?	64	100.0
Do you wish you still had more lessons?	49	76.6

and relevant. Participant reports and spot checks indicated that the protocol was followed closely and any deviations were able to be rectified in a timely manner. All participants reported benefiting from the program and the majority undertook optional supplementary driving practice or theory review as recommended by driving instructors, with more than three-quarters wishing they could have additional training. While further outcome evaluation (in progress) is required to determine if the program is also successful in improving road safety for China novice drivers, this is a positive example of transferring a promising program to a different cultural context.

Previous research has demonstrated varying levels of success when implementing road safety initiatives found to be successful in high-income countries to low- to middle-income countries. For example, introduction of laws mandating motorcycle helmet use in Thailand in 1993 increased wearing rates fivefold, but from an initial low rate of 4.5% to 22.6% [20]. In contrast, introduction of a mandatory motorcycle helmet law in Vietnam in December 2007, with strong government and non-government organisation support and extensive policing, was associated with near 100% compliance [21].

In China, the 1993 introduction of laws requiring mandatory fitting of front seatbelts and wearing by drivers and front-seat passengers resulted in an observed wearing rate below 10% and a self-reported wearing rate of 22% [22, 23]. However, a later more targeted intervention in one Chinese province that focused on enhanced police training and enforcement coupled with a publicity campaign effected an absolute increase in observed wearing rates of 20% [24].

These differences indicate that cultural differences can impact on the effectiveness of interventions transferred from one setting to another, which may be due to a variety of factors including how they are implemented. This study suggests the implementation of the present initiative was well received and valued, and was therefore culturally appropriate. Whether the program also results in increased safety is particularly of interest generally and due to the older average age of the China novice drivers compared to the age of typical novice driver populations in high-income countries, which typically peaks close to the minimum licensing age.

Limitations of the study include inability within the project resources to deliver more than six hours of individualised driving lessons. While the optimal amount of accompanied driving is currently unclear, the novice driver literature suggests a much greater number of hours is likely to be required. Such an increase could ensure that a range of conditions, including more complex conditions, is encountered, in order to have a significant impact on crash risk once licensed to drive independently [25, 26, 15].

Nonetheless, as China novices currently have a very low baseline level of experience, if any, of driving in typical Beijing traffic, it was anticipated that even six hours of lessons in such conditions, building on the driving school lessons and supplemented by the education program, would help alert new drivers to their uniquely high crash risk and the higher-order skills required for safer driving, and therefore promote safe driving practices.

In addition, participants were not able to be randomly selected and therefore the generalisability to the wider novice driver population in China is unknown. Many new licensees were reticent to discuss the project as they were suspicious there may be 'a catch', such as the need to agree to pay for additional lessons or insurance. Therefore, the experience of the participants may differ to those who were exposed to recruitment but chose not to participate. Nonetheless, so little information is available on novice drivers in China and on the potential applicability of initiatives developed in high-income countries that the results provide an important example to demonstrate such interventions can be successfully adapted and adopted.

Conclusions

Little is known about novice drivers in China and how best to enhance their learn-to-drive experience to improve their safety on the road. This study has demonstrated that an education and training program adapted from best practice in high-income countries was able to be developed for the China context, and that it was successfully implemented by trainers and instructors and followed by participants. This presents a promising approach to help reduce the current over-representation of novice drivers in road trauma in China. Further research is required to determine if that ultimate aim can be achieved.

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References

1. Hu G, Wen M, Baker TD, Baker SP. Road-traffic deaths in China, 1985–2005: Threat and opportunity. Inj Prev 2008; 14:149-53.
2. Liu Z. Urban transport challenge and its implications to the automobile manufacturing industry. Paper presented at Automotive News China Conference; 15-18 November 2006; Beijing, China.

3. Wang Y, Zhang W, Salvendy G. Effects of a simulation-based training intervention on novice drivers' hazard handling performance. Traffic Injury Prevention 2010; 11:16-24.
4. World Health Organization. Global status report on road safety: Time for action. Geneva: World Health Organization, 2009.
5. World Bank China and Mongolia Sustainable Development Unit (EASCS), East Asia and Pacific Region. China, road traffic safety: The achievements, the challenges, and the way ahead. World Bank Working Paper. Washington DC: World Bank, 2008.
6. Hu G, Baker T, Baker S. Comparing road traffic mortality rates from police-reported and death registration data in China. Bull World Health Organ 2011; 89:41-45.
7. Kopits E, Cropper M. Traffic fatalities and economic growth. Accid Anal Prev 2005; 37:169-78.
8. Wang SY, Li YH, Chi GB, Xiao SY, Ozanne-Smith J. Injury-related fatalities in China: An under-recognised public-health problem, Health System Reform in China 4. Lancet 2008; 372(9651):1765-73.
9. China Automobile Association. Manager. Personal communication, July 2008.
10. Williams AF. Teenage drivers: Patterns of risk. J Safety Res 2003; 34(1):5-15.
11. Twisk DAM, Stacey C. Trends in young driver risk and countermeasures in European countries. J Safety Res 2007; 38(2):245-57.
12. Ministry of Communication. Regulations for administration of automobile drivers. 2006. Last accessed 21 January 2011. http://www.moc.gov.cn/zizhan/siju/daoluyunshusi/zhengceguiding/200908/ t20090824_613067.html.
13. Ministry of Public Security. Regulations on the application for and use of motorized vehicle driving licenses. 2006. Last accessed 24 January 2011. http://www.mps.gov.cn/n16/n1282/n3493/n3823/n442207/453922.html.
14. Senserrick T. Australian graduated driver licensing systems. J Australasian College of Road Safety 2009; 20(1):20-26.
15. Groeger JA, Brady S. Differential effects of formal and informal driver training. Road Safety Research Report No. 42. London: Department of Transport, 2004.
16. Williams AF. Contribution of the components of graduated licensing to crash reductions. J Safety Res 2007; 38(2):177-84.
17. McKnight AJ, Peck RC, Foss R. Graduated driver licensing: What works? Inj Prev 2002; 8(Suppl II):32-38.
18. McCartt A, Teoh E, Fields M, Braitman K, Hellinga L. Graduated licensing laws and fatal crashes of teenage drivers: A national study. Arlington, VA: Insurance Institute for Highway Safety, 2009.
19. Horswill MS, McKenna FP. Drivers' hazard perception ability: Situation awareness on the road. In Banbury S, Tremblay S (eds). A cognitive approach to situation awareness: Theory and application. Aldershot, Hampshire: Ashgate Publishing, 2004. pp. 155-75.
20. Ichikawa M, Chadbunchachai W, Marui E. Effect of the helmet act for motorcyclists in Thailand. Acc Anal & Prev 2003; 35:183-89.
21. Global Road Safety Partnership. Motorcycle helmets in Vietnam - A success story. Last accessed 24 September 2009. http://www.grsproadsafety.org/archive-motorcycle_helmets_in_vietnam_a_success_story-143.html.
22. Lui N, Yang GH, Ma JM, Chen AP. Injury associated health risk factors in Chinese people in 2002. Chin J Epidemiol 2005; 26:746-50.
23. Passmore J, Ozanne-Smith J. Seatbelt use amongst taxi drivers in Beijing, People's Republic of China. Int J Inj Contr Saf Promot 2006; 13:187-89.
24. Stevenson M, Yu J, Hendrie D, Li L, Ivers R, Zhou Y, Su S, Norton R. Reducing the burden of road traffic injury: Translating high-income country interventions to middle- and low-income countries. Inj Prev 2008; 14:284-89.
25. Gregersen NP. Evaluation of 16-years age limit for driver training: First report. VTI Report 418A. Linköping, Sweden: Swedish National Road and Transport Research Institute, 1997.
26. Gregersen N-P, Berg H-Y, Engstrom I, Nolen S, Nyberg A, Rimmo PA. Sixteen years age limit for learner drivers in Sweden – An evaluation of safety effects. Accident Analysis and Prevention 2000; 32:25-35.

Fatalism and road safety in developing countries, with a focus on Pakistan

by A Kayani, MJ King and JJ Fleiter, Centre for Accident Research and Road Safety – Queensland (CARRS-Q), Queensland University of Technology

Abstract

Road crashes are a significant problem in developing countries such as Pakistan. Attitudes are among the human factors that influence risky road use and receptiveness to interventions. Fatalism is a set of attitudes known to be important in Pakistan and other developing countries; however, it is rarely addressed in the road safety literature. Two broad types of fatalism are theological fatalism and empirical fatalism, both of which are found in developed countries as well as in developing countries. Where research has been conducted into the issue, fatalism is considered to interfere with messages aimed at improving road safety.

Pakistan has a serious road crash problem, and there is sufficient information to suggest that fatalism is an important contributing factor to the problem, but a better understanding of how fatalism operates in Pakistan is needed if effective prevention strategies are to be developed. A proposed study using an anthropological approach is described, which will be exploratory in nature and which is aimed at investigating fatalism and related concepts among Pakistani road users and those who develop and implement road safety policy.

Keywords

Fatalism, Superstition, Developing countries, Pakistan, Prevention, Road safety

Introduction

Road traffic crashes have emerged as a major health problem around the world. Road crash fatalities and injuries have been reduced significantly in developed countries, but they are still an issue in low- and middle-income countries (often termed