



Validation of the Chinese-language Brief Sensation Seeking Scale: Implications for risky riding behaviors of parental motorcyclists and their child passengers



Hsiu-Ping Fan^{a,b,c,d}, Mau-Roung Lin^c, Chyi-Huey Bai^e, Ping-Wen Huang^a,
Yung-Hsiao Chiang^{f,g}, Wen-Ta Chiu^{c,h,*}

^a Department of Emergency Medicine, Show Chwan Memorial Hospital, 542, Sec. 1, Chung-shan Rd., Changhua 500, Taiwan, ROC

^b Department of Emergency Medicine, Chu Shang Show Chwan Hospital, 75, Sec. 2, Jishan Rd., Zhushan Township, Nantou 557, Taiwan, ROC

^c Institute of Injury Prevention and Control, College of Public Health and Nutrition, Taipei Medical University, 250 Wu-Hsing Street, Taipei 110, Taiwan, ROC

^d School of Public Health, Taipei Medical University, Taiwan, ROC

^e Department of Public Health, College of Public Health and Nutrition, School of Medicine, College of Medicine, Taipei Medical University, Taiwan, ROC

^f Department of Surgery, School of Medicine, College of Medicine, Taipei Medical University, Taiwan, ROC

^g Division of Neurosurgery, Department of Surgery, Taipei Medical University Hospital, 252 Wu-Hsing Street, Taipei 110, Taiwan, ROC

^h Ministry of Health and Welfare, 488, Sec. 6, Zhongxiao E. Rd., Taipei City 115, Taiwan, ROC

ARTICLE INFO

Article history:

Received 20 December 2013

Received in revised form 5 September 2014

Accepted 11 September 2014

Available online xxx

Keywords:

Sensation seeking

Chinese

Parent

Child

Motorcycle

Risky behavior

ABSTRACT

Motorcycles are the leading cause of road traffic deaths in the Western Pacific and Southeast Asia, where Mandarin Chinese is the most commonly used language. Sensation seeking (SS) is reported to correlate with many risky motor vehicle behaviors, and therefore a culture-adapted Chinese instrument is needed to assess this personality trait in Chinese-speaking motorcycling populations. The standard front and blinded-backward process was carried out to formulate the Chinese-language Brief Sensation Seeking Scale (C-BSSS). 193 parental motorcyclists who rode with their young children were interviewed concerning their SS levels, demographics, riding behaviors, and the driving/riding experiences. A random sample of 30 subjects was re-interviewed 1–2 weeks later to examine the test-retest reliability. Psychometric analyses revealed satisfactory item characteristics, internal consistency, intraobserver reliability, and interobserver reliability. Additionally, parental motorcyclists who had the following characteristics were more likely to be the high sensation seekers (SSers), including male, younger age, presenting risky motor vehicle behaviors of themselves (e.g., higher riding speeds, operating after drinking, using a mobile phone while operating, and receiving a traffic ticket), and carrying child passengers who demonstrated dangerous motorcycling behaviors (e.g., a younger age, non-helmeted, and overloaded). We conclude that the C-BSSS is a useful and reliable measure of SS for ethnic Chinese populations. This instrument may be helpful to develop the future prevention strategy of motorcycle injuries in Chinese parental motorcyclists and their young child passengers.

© 2014 Elsevier Ltd. All rights reserved.

1. Introduction

Nearly 1.3 million people die each year on the world's roads, and 60% of them were aged 15–44 years (WHO, 2013). Among all modes of road travel, motorcycling has been demonstrated to be the most dangerous (Beck et al., 2007; Hinds et al., 2007; Monk et al., 2009). In the US, motorcycle deaths and injuries have recently been rising and have become an important public health

problem (Coben et al., 2007; Weiss et al., 2010a,b). In many Southeast Asian and Western Pacific countries, motorcycles are one of the major means of transportation and are also the leading cause of deaths in road travel (Lin et al., 2003a,b; Yu et al., 2011; WHO, 2013). In China, for example, 23,000 people died from motorcycling in 2010, accounting for 35% of all road traffic deaths (WHO, 2013). This problem may be more serious in Taiwan. On this 36,000-km² island, motorcycles accounted for two-thirds of registered motor vehicles in 2013, while they resulted in nearly half of all road traffic deaths (MTC, 2013).

Pediatric motorcycle injuries may be an important cause of children's deaths in Asia. As infectious diseases continue to decrease, injury is now a leading cause of death, permanent

* Corresponding author. Tel.: +886 2 27361661x6579; fax: +886 2 27390387.

E-mail addresses: d508099001@tmu.edu.tw, wchiu.tmu@gmail.com (W.-T. Chiu).

disability, and serious morbidity in children after infancy in many Asian countries (Linnan et al., 2007). Among all types of child injuries, motor vehicle crash is a major cause of fatalities (Linnan et al., 2007). In Taiwan, it is the first killer of children aged 1–19 years (MHW, 2011). Despite risky motorcycling behaviors by adolescents as reported in other countries (Pileggi et al., 2006), another possible explanation is connected to a phenomenon that parents in Taiwan commonly motorcycle with their young children.

Drivers' behaviors contribute to more than 90% of motor vehicle crashes (Evans, 1993). When it comes to young motorcyclists, risky behaviors appear to be dominant human factors rather than riding inexperience (Pileggi et al., 2006). There is a growing number of studies supporting a significant association of drivers' personality with their risky driving behaviors (Jonah, 1997; Jonah et al., 2001; Dahlen et al., 2005; Patil et al., 2006; Zakletskaia et al., 2009; Wong et al., 2010; Constantinou et al., 2011).

Among many personality traits, sensation seeking has received considerable attention. Zuckerman (2006) defined SS as “the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience”, while his Sensation Seeking Scale consists of 40 forced-choice items (Zuckerman et al., 1978). The Sensation Seeking Scale measure has been criticized for its length, colloquialisms and forced-choice response format (Hoyle et al., 2002; Stephenson et al., 2003, 2007). As a result, the Brief Sensation Seeking Scale (BSSS) was further developed as an alternative (Hoyle et al., 2002). The BSSS was shown to have satisfactory item characteristics and internal consistency across age, gender, and ethnic categories, and also had predictable associations with perceptions or experiences of smoking, drinking, and using illicit drugs (Hoyle et al., 2002; Stephenson et al., 2003, 2007).

As mentioned above, motorcycling is very popular in Southeast Asia and Western Pacific countries. Cross-cultural adaption of the BSSS is needed to assess this personality trait in Chinese-speaking motorcycling populations. Furthermore, not only adults but also children are suffering from motorcycle injuries in these ethnic Chinese populations. Since parents usually decide the riding style of their young child passengers, measuring the SS level of parental motorcyclists may be essential to identify high-risk groups for pediatric motorcycle injuries. Therefore, based on the theory of

known-group validity (Cronbach and Meehl, 1955), 4 hypotheses were proposed when we developed and validated the C-BSSS:

1. Men are more likely to be high SSers than women;
2. Younger adults are more likely to be high SSers than older ones;
3. Parental motorcyclists with risky driving/riding behaviors are more likely to be high SSers than those without; and
4. Parental motorcyclists carrying child passengers with risky riding behaviors are more likely to be high SSers than those carrying child passengers without such behaviors.

2. Method

2.1. Participants

During the 5 Saturdays in June 2012, parents who rode motorcycles with their children were recruited in the motorcycle parking lot of the only one shopping mall in Changhua City, the capital of Changhua County and the second largest city in west-central Taiwan. Changhua City covers an area of 65.69 square kilometers with a population of about 236,000. There are approximately 38,600 (16.4%) children aged 14 years or below (DOHR, 2012). A parent was included if his/her age was 18 years or above and he/she rode a motorcycle with his/her own child who was aged 14 years or below at the time of the interview. Parents who rode motorcycles with more than 2 wheels (i.e., motor-tricycles or motorcycles with training wheels) or powered by other than gasoline (i.e., electric scooters) were excluded because of the different vehicle types.

2.2. Instrument

The BSSS retains the original conceptualization with four components of thrill and adventure seeking, experience seeking, disinhibition, and boredom susceptibility. The BSSS consists of 8 items (2 for each component), and each item uses a Likert scale of 1–5, with a larger score indicating higher SS. Following the convention in other studies of SS (Stephenson et al., 1999; D'silva et al., 2001; Jonah et al., 2001; Henderson et al., 2005; Evans et al., 2006; Zakletskaia et al., 2009), subjects with a BSSS score greater

Table 1
Demographics and the prevalence of risky behaviors of the study subjects.

Characteristic	Parental motorcyclist (N = 193)		Child passenger (N = 193)	
	No.	%	No.	%
Demographic				
Gender (Male) ^c	63	32.6	99	53.5
Age (years) ^c				
Mean ± SD	36.5 ± 5.7		6.6 ± 2.9	
Range	19.0–57.0		1.0–12.5	
Educational attainment				
Junior high school or below	14	7.3		
Senior high school	81	42		
College or above	98	50.8		
Risky driving/motorcycling				
Speeding (>70 km/h of local speed limit) ^a	5	2.6		
Crash experience ^b	46	23.8		
Operating within 1 h after drinking ^b	13	6.7		
Mobile phone use while operating ^b	41	21.2		
Received at least one traffic ticket ^b	54	28.0		
Non-helmeted ^{a,c}			77	40.1
Overloaded (≥ 3 persons on a motorcycle) ^{a,c}			91	47.4
Taking the position before the motorcyclist ^{a,c}			109	56.8

^a The behavior occurred during the motorcycling journey just before our interview.

^b Driving/motorcycling experience of all types of motor vehicles in the past 3 years.

^c Several variables have few missing data, including 8 (4.1%) for child gender, 1 (0.5%) for parent age, and 1 (0.5%) for each risky riding behaviors of child passenger.

Download English Version:

<https://daneshyari.com/en/article/6965905>

Download Persian Version:

<https://daneshyari.com/article/6965905>

[Daneshyari.com](https://daneshyari.com)