

# Chinese Drivers' Risky Driving and Risk Taking in Other Life Situations

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*The first aim of this study was to investigate Chinese drivers' preferences to risk-taking behaviors encountered in daily life, including safety and health, finance, recreation, social areas, and ethics. The second aim was to evaluate the association between Chinese risky driving and other risk-taking behaviors. A questionnaire survey was conducted with the 324 Chinese drivers who responded. Through a principal component analysis an 8-factor structure was created to interpret different domains of risk-taking behaviors. They were risks in driving, ethics, recreation, gambling, abused health (voluntarily engaging in smoking and binge drinking), investment, ignored health (ignoring personal health, such as eating expired food), and monetary social areas. The result of multiple regression analysis showed that drivers who were likely to engage in driving risks were also likely to take risks in domains of ethics, abused health, gambling, investment, recreation, and ignored health.*

Chinese drivers   risky driving   risk taking

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## 1. INTRODUCTION

Traffic safety is a serious problem in China. With the rapid growth in economy more and more Chinese people are going to have their private cars. By the end of 2008, there were ~64 670 000 cars in China, which was an increase of 13.52% compared to 2007 [1]. Since the beginning of keeping statistics on traffic accidents in China in 1970, the number of traffic accidents reached a peak in 2002 with 773 137 accidents in that year. The number began to decrease in 2003, and the trend lasted until 2008. In 2008, there were 265 204 traffic accidents, in which 73 484 people died and 304 919 others were injured [2].

Many studies have investigated the relationship between road traffic crashes and risky driving behaviors [3, 4, 5, 6]. Behaviors considered as risky driving include speeding, tailgating, overtaking on the right, running red lights, chasing

other drivers out of anger, driving after drinking beyond the legal blood alcohol concentration limit, not using a seat belt, and driving without a license [7]. It was found that risky driving behaviors, however measured, were associated with an increased chance of an injury or death [8].

Chinese drivers exhibit various risky behaviors on the road. They drive aggressively to force other cars to yield, speed to show off their good cars, and drive while drunk [9]. In 2006, there were 378 781 traffic accidents in China. Speeding caused 36 586 accidents and accounted for 9.66% of the total, with 11 828 deaths and 39 951 injuries. Dangerous overtaking caused 11 326 accidents accounting for 2.99% of the total, which brought about 2588 deaths and 14 584 injuries. Drunk driving was also serious; it caused 9442 accidents accounting for 2.49% of the total and resulted in 3763 deaths and 10 325 injuries [10].

Different perspectives of cognitive, personality, and social psychology have attempted to explain risky driving and traffic accidents [11, 12, 13, 14, 15]. Cognitive research studies variables such as attention distribution and information processing. Personality research focuses on the predictive value of personality traits. Social psychological research attempts to explain differences in risk-taking behavior and accident involvement within the framework of social cognition models, where variables such as attitudes, perceived risk, social norms, and perceived behavioral control are central determinants of behaviors [14].

In the social psychology domain, there has been a lot of interests in studying risky driving in the individual life context. Tillman and Hobbs studied high- and low-accident drivers in a taxi firm over 60 years ago [16]. Through an interviewing process it was found that driving habits and high accident record were simply a manifestation of a way of living that had been demonstrated in drivers' personal lives. That is to say "a man drives as he lives". Simpson also emphasized the importance of lifestyle as a determinant of risky driving and traffic accidents, that many causes of road collisions should be considered as being related to lifestyle factors [17]. According to Hatakka, Keskinen, Gregersen, et al.'s hierarchical model [18], driving behavior is not an isolated behavior. It is connected to other aspects of life and is affected by the individual's value, attitudes, and motivation.

The associations between risky driving and life situations have been investigated in quite a few studies [19, 20, 21, 22]. Most of them used two approaches. One was the problem behavior approach, which showed that problem driving was highly related to problem behaviors such as smoking, drinking, antisocial behaviors, and involvement of non-organized activities with friends [19, 20]. The other was the lifestyle approach, which identified correlations between driving behavior and lifestyle aspects, including infrequent participation in sport activities, frequent intoxication, and low commitment to school and organized activities [23].

A literature review of road safety research in China showed there was only one study that explored Chinese drivers' risk taking on the road [24]. It analyzed the correlation between risky driving and drivers' personality, attitude, and driving experience [15]. However, Chinese lifestyle has changed a lot with the economic development in China since the early 1980s. It has engendered an improvement in material wealth as well as changes in aspects of people's daily life in a modernized society [25]. It includes changes in health beliefs and health practices, in an involvement in individual financial activities, and in social relationships and social behaviors. Then, these authors hypothesized whether Chinese people were willing to take risks not only in the traffic domain but also in other life situations, whether there were correlations between risky driving and other risk-taking behaviors. If so, deep understandings and thoughts of countermeasure were expected for Chinese risky driving. So, this current research was going to investigate Chinese risk-taking behaviors in the context of general life situations and to study the association between risky driving and other risk-taking behaviors, including safety and health risks, financial risks, recreational risks, ethics risks, and risks in social areas.

## 2. OBJECTIVES

The first aim of this study was to explore Chinese risk-taking behaviors in a broader life context. Although there were several comparative studies about Chinese risk taking, most of them were limited to financial risk options. However, this study was first going to investigate and provide a description of Chinese preference for risks encountered in daily life. It was to find out Chinese preference to risks in different situations and to analyze the latent structure of various risk-taking behaviors. Based on the assumption that different risk-taking behaviors usually take place together and can be considered as risky lifestyles, the second aim of this study was to evaluate the association between risky driving of the Chinese and their involvement in other risks,

and to investigate how risk activities can predict risky driving. It has also been found that not all life activities provide equally useful experiences for identity development. Each behavior can be viewed as a goal-directed action, functional to specific developmental tasks [26]. Thus, it was expected that different risk-taking behaviors would have different contribution to predicting risky driving behaviors.

### 3. METHOD

#### 3.1. Participants

Drivers in Beijing, China, who had a driving license for at least one year were recruited in this study. All of them were recruited through personal contacts: the authors asked friends to find drivers in their companies who fulfilled the requirement and ask them to fill in a questionnaire. Student drivers who fulfilled the requirement were also recruited to fill in this questionnaire. The questionnaire was completed individually when the participants were free. Each of them was given a bookmark or a keychain for their participation. The questionnaires were distributed and collected between September 25 and October 27, 2008.

Finally, 438 drivers responded to the survey. Among all the cases, 114 were found to be invalid because of incomplete and inconsistent responses. Then, 324 cases with 239 males (73.8%) and 85 females (26.2%) went into data analysis. This gender ratio was in accordance with the driver status in Beijing [27]. Most of the drivers (97.5%) were private car drivers. Respondents were aged between 22 and 58 ( $M = 31.2$ ,  $SD = 5.47$ ). Their mean driving experience was 4.5 years ( $SD = 3.88$ ).

#### 3.2. Instruments

This was an anonymous pen-and-paper survey. The questionnaire consisted of 50 items in five domains of risks, including safety and health (e.g., use of seat belts, smoking), finance (e.g., buying stock, betting in poker), recreation (e.g., camping in the wild), ethics (e.g., cheating on income tax), and social areas (e.g., lending

money to friends), in an attempt to cover everyday risk-taking situations. Most items were identified on the basis of literature on risk attitude [28] and risk-taking behaviors [26, 29]. Some risky driving behaviors were generated on the basis of Chinese road safety laws and regulations [30]. For example, one regulation about driving speed in special weather states “When driving in low visible weather, such as fog, rain and snow, drivers should drive less than 60 km/h and keep a gap with the front vehicle of more than 100 m”. On that basis, the authors generated a risk statement “Driving over 60 km/h in heavy fog on a highway”. Of 50 items, 20 were about safety and health risks, including 10 on traffic risks. There were 8 items in each risk domain of finance, recreation, and social areas and another 6 items covered ethics.

The validity of the questionnaire was ensured. During its development, the authors asked experts in human–computer interaction whether any statements were confusing; the authors revised the questionnaire on the basis of the feedback and then asked another expert to evaluate it again. In total, 10 experts helped to evaluate the questionnaire and it was revised eight times before being sent out. Moreover, to minimize socially desirable answers, the study was anonymous. The participants were instructed accordingly and assured that the results of the questionnaire would be confidential. They were asked for truthful answers.

Participants were asked to evaluate their likelihood of engaging in each risky behavior on a 7-point rating scale ranging from 1—*extremely unlikely* to 7—*extremely likely*. This scale was designed to measure risks in two ways. First, there was a descriptive label of the degree to which an individual appeared to avoid or seek out a risky behavior. Second, the questionnaire also considered the individual or situational difference in the way risks and benefits were perceived. The risks measured in this study were the same as people’s preference for risky options in the risk–return model. This model is a tradeoff between an option’s expected benefit and its riskiness, which can be illustrated with Equation 1 [31]. Items were randomly interspersed rather than sorted

by risk domains. Participants were also asked to record their gender, age, education, income, and years of possessing a driving license.

$$\text{preference}(x) = a(\text{expected benefit}(x)) + b(\text{perceived risk}(x)) + c, \quad (1)$$

where  $a$ —coefficient of expected benefit, which reflects attitude towards expected benefit;  $b$ —coefficient of perceived risk, which reflects attitude towards perceived risk;  $x$ —risk behavior.

## 4. RESULTS

### 4.1. Overview

Table 1 lists the mean and standard deviation of scores for each of the 50 items, arranged according to the score. Shoplifting had the lowest score, indicating that most respondents were extremely unlikely to take that risk. Lending a friend money had the highest score, implying that

most respondents were likely or extremely likely to engage in this risk.

A closer analysis shows that most health-related risks had low item scores. Most finance-related risks had high item scores. Items in the traffic domain had higher average scores. This indicated that those driving risks were perceived to be less risky and most respondents were likely to take them. Scores for not wearing a seatbelt when driving on the highway and drunk driving were relatively low, which indicated that respondents perceived those behaviors as high-risk ones and most respondents were unlikely to take them.

### 4.2. Factor Analysis

Exploratory factor analysis with the principal component extraction method was used to determine the components underlying Chinese drivers' risk-taking behaviors in different life

**TABLE 1. Descriptive Statistics of Chinese Drivers' Risk-Taking Behaviors ( $N = 324$ )**

Items	$M$ ( $SD$ )	Items	$M$ ( $SD$ )
Shoplifting	1.4 (0.77)	Disregarding a speed limit	3.5 (1.87)
Smoking a pack a day	2.2 (1.83)	Sharing an apartment	3.6 (1.78)
Taking medicine with side effects	2.2 (1.37)	Stealing a TV cable	3.8 (1.80)
Binge drinking	2.2 (1.61)	Asking for a raise	3.8 (1.68)
Moving to a newly decorated house	2.4 (1.50)	Driving down a hard shoulder	3.8 (1.78)
Not wearing a seatbelt on a highway	2.6 (1.70)	Spending money impulsively	3.8 (1.76)
Drunk driving	2.7 (1.73)	Betting in a poker game	3.9 (1.97)
Forging a signature	2.7 (1.67)	Ignoring physical pain	3.9 (1.68)
Swimming in natural water	2.8 (1.86)	Speeding for fun	4.0 (2.00)
Chasing a typhoon	2.8 (1.76)	Bungee jumping	4.0 (1.96)
Driving in a fog	2.9 (1.66)	Speeding to save 5 min	4.1 (1.95)
Riding a motorcycle without a helmet	2.9 (1.87)	Wearing provocative clothes	4.1 (1.61)
Engaging in a dangerous sport	2.9 (1.54)	Speaking on an unpopular issue	4.1 (1.54)
Being involved in illegal races	2.9 (1.60)	Co-signing for a friend	4.2 (1.50)
Buying prohibited medicine	3.0 (1.80)	Using office supplies	4.2 (1.56)
Crossing a junction at a red light	3.0 (1.68)	Speeding to save 15 min	4.2 (1.78)
Playing mah-jongg	3.1 (1.92)	Disagreeing with a boss	4.3 (1.56)
Going down a ski run	3.1 (1.64)	Camping in the wild	4.4 (1.74)
Lottery betting	3.1 (1.78)	Overtaking on the right	5.2 (1.56)
Cheating on an exam	3.2 (1.75)	Holding profitable stock	5.2 (1.40)
Going on vacation with no prior arrangements	3.3 (1.89)	Holding stock at a loss	5.2 (1.49)
Eating expired food	3.4 (1.73)	Not having a smoke alarm in the house	5.3 (1.53)
Cheating on income tax	3.4 (1.65)	Investing in a moderate fund	5.5 (1.37)
Consuming alcohol	3.5 (2.11)	Buying stock	5.6 (1.34)
Dating someone from the Internet	3.5 (1.84)	Lending money to a friend	5.7 (1.26)

TABLE 2. Factor Analysis of Chinese Drivers' Risk-Taking Behaviors (N = 324)

Item	Factors								Communality Estimate
	1	2	3	4	5	6	7	8	
Speeding to save 15 min	.718	.217	.038	.204	.047	-.045	.107	.104	.633
Speeding to save 5 min	.705	.181	.033	.210	.026	.010	-.005	.081	.582
Disregarding speed limit at night or in the morning	.683	.116	.107	.053	.120	.026	.174	.013	.540
Overtaking a slow driver on the right	.620	.128	-.109	.027	.139	-.003	-.075	.200	.479
Driving down a hard shoulder	.602	.016	.022	.133	.023	.108	.115	-.149	.429
Speeding for fun	.575	-.020	.164	.007	.184	.054	.010	.083	.402
Crossing a junction at a red light	.560	.201	.189	-.070	.004	.114	.206	-.114	.463
Using office supplies	.178	.683	.017	-.029	.102	-.072	-.008	.176	.547
Cheating in an exam	.013	.604	-.110	.150	.196	.167	.121	-.072	.486
Cheating on income tax	.277	.582	.087	.198	.032	-.114	-.110	.058	.492
Forging a signature	.173	.516	.168	.240	-.105	-.180	.123	-.137	.459
Stealing a TV cable	.317	.501	.148	.253	.171	-.120	-.057	.004	.484
Shoplifting	.026	.434	.115	.063	.113	.052	.186	-.332	.366
Engaging in dangerous sport	.047	.123	.759	.037	.051	-.002	-.032	.118	.613
Going on vacation with no prior arrangements	.160	-.052	.695	.170	.032	-.215	.001	.051	.590
Bungee jumping	-.119	.197	.613	-.105	-.024	.062	.022	.184	.478
Chasing a typhoon	.274	-.180	.511	.141	.148	.134	.104	-.241	.497
Being involved in illegal races	.316	.073	.429	.170	.139	.091	-.075	-.131	.368
Betting a day's income in poker	.191	.093	.120	.728	.141	.100	-.064	.118	.637
Playing mah-jongg	.109	.147	-.007	.711	.257	.040	.088	.091	.622
Betting a day's income on lottery	.020	.171	.119	.549	.033	.133	.195	.056	.405
Spending money impulsively	.201	.167	-.028	.454	-.106	-.310	.081	.110	.401
Binge drinking	.133	.141	.055	.072	.761	-.124	.086	.233	.703
Smoking a pack a day	.070	.016	-.095	.186	.721	.032	-.040	-.156	.596
Taking medicine with side effects	.099	.101	.118	.142	.570	-.318	.034	-.075	.487
Drinking alcohol	.217	.133	.219	-.093	.544	.295	.113	.076	.522
Drunk driving	.303	.302	.147	-.057	.421	.174	.265	.055	.488
Investing 10% of annual income in moderate fund	.060	.007	-.022	.065	-.090	.763	-.064	.070	.607
Investing 10% of annual income in stock	.171	-.108	.021	.128	.010	.751	-.082	.061	.632
Move into a newly decorated house	.039	-.036	-.014	.140	.094	-.183	.708	.069	.570
Ignoring physical pain	.142	-.006	-.039	.192	-.004	-.148	.606	.050	.450
Eating expired food	.165	.243	.056	-.147	.078	.224	.597	-.069	.528
Lending money to a friend	.139	.003	.110	.252	.017	.130	.022	.595	.467
Co-signing for friend	.097	.000	.289	.208	.031	.097	.198	.562	.502
Asking for a raise	.099	.032	.329	.303	-.072	.065	.072	-.430	.480

Notes. For names of factors, see Table 3. Gray denotes factor loading exceeding .4.

situations. When determining the number of factors, eigenvalues should be greater than 1 and they should have at least 3 items salient on the factor. An item is salient if its highest loading on the factor and the absolute value of the loading is over .4 [32, 33]. On the basis of those criteria,

35 items were retained and eight factors were extracted. The Kaiser-Meyer-Olkin (KMO) value was .813. These eight factors explained 51.448% of the total variance. Table 2 is the component matrix. Factor loading exceeding .4 is highlighted in gray.



**TABLE 3. Eigenvalues, Percentage of Variance Explained, Mean Score, and Number of Items in Each Factor (N = 324)**

Factor	Initial Eigenvalue	Variance Explained (%)	Cumulative Variance Explained (%)	M (SD)	No. of Items
1 Driving	6.447	18.421	18.421	4.0(1.22)	7
2 Ethics	2.102	6.007	24.427	3.3(0.99)	6
3 Recreation	1.957	5.591	30.019	3.2(1.14)	5
4 Gambling	1.724	4.924	34.943	3.5(1.32)	4
5 Abused health	1.643	4.695	39.638	2.5(1.16)	5
6 Investment	1.455	4.159	43.797	5.6 (1.17)	2
7 Ignored health	1.390	3.971	47.767	3.2 (1.15)	3
8 Monetary social	1.288	3.681	51.448	4.6 (0.97)	3

The eight factors clearly clustered similar risks together and divided some initially proposed risk domains into subdomains. Factor 1 was called driving and included all risk-taking behaviors in traffic. It had the highest contribution to the variance. Factor 2, ethics, included items of non-ethical practices. Factor 3, or recreation, was about taking risks of doing some sports or joining in some leisure activities. Factor 4 was called gambling. Factor 5 was called abused health, which involved voluntarily taking risks that affected health. Factor 6, investment, had two items only. As investment is an important risk in daily life, and all the proposed risk domains were expected to be covered in this scale, this factor was kept. Factor 7 was called ignored health, understood as ignoring risks that affected personal health. Factor 8, monetary social, involved interpersonal risks related with money. In total, those eight factors accounted for 51.448% of the variance. The number of items and variance of each factor are shown in Table 3.

Cronbach's  $\alpha$  was used to check the internal consistency. Nunnally recommended the co-efficient should be greater than .70 for the reliability to be considered satisfactory [34]. Overall Cronbach's  $\alpha$  for the 35 items was .858. Because  $\alpha$  is sensitive to the number of tested items, it is more likely to get a lower value with fewer items. In the results of the factor analysis, some factors consisted of two or three items, which increased the difficulty of obtaining a satisfactory  $\alpha$ . Therefore  $\alpha$  for the initially proposed five domains (safety and health, finance, recreation, ethics, and social areas)

was calculated on the basis of pairs of items that measured similar risk-taking behaviors in each domain. Finally, for four domains  $\alpha > .70$  ( $\alpha = .83$  for safety and health,  $\alpha = .72$  for finance,  $\alpha = .74$  for recreation, and  $\alpha = .70$  for ethics). For social domain  $\alpha = .65$ , which was above the threshold of .60 suggested for exploratory research. The low  $\alpha$  coefficient of social risks was also in accordance with Bina, Graziano, and Bonino that the social subscale was always the least reliable one in three continuous studies [26].

Analysis of variance (ANOVA) was conducted to assess the gender effect of risk-taking in different domains. Scores for each risk domain were obtained as the average item score belonging to the factor. A high score indicated a high likelihood of taking a risk. It was found that the scores for male respondents were higher than for female respondents in all domains, although the difference was not always significant. Especially, male respondents ( $M = 2.8$ ,  $SD = 1.14$ ) had a significantly higher tendency than female ones ( $M = 1.8$ ,  $SD = 0.86$ ) to engage in abused health risks ( $p = .001$ ). Male respondents ( $M = 4.1$ ,  $SD = 1.22$ ) seemed more likely to take driving risks than female ones ( $M = 3.7$ ,  $SD = 1.19$ ), although the difference was not significant ( $p = .384$ ).

### 4.3. Predictors of Risky Driving Behaviors

To evaluate the relationship between risky driving and other risk activities, the Pearson correlation coefficient was calculated for each pair of factors. As shown in Table 4, the highest

TABLE 4. Pearson Correlations Between Factors ( $N = 324$ )

Factor	Driving	Ethics	Recreation	Gambling	Abused Health	Investment	Ignored Health	Monetary Social
Driving	1							
Ethics	<b>.448**</b>	1						
Recreation	.310**	.237**	1					
Gambling	.366**	.394**	.248**	1				
Abused health	.408**	.375**	.263**	.282**	1			
Investment	.151**	-.040	.054	.074	.039	1		
Ignored health	.272**	.231**	.106	.191**	.236**	-.036	1	
Monetary social	.280**	.207**	.330**	.344**	.183**	<b>.116*</b>	.136*	1

Notes. \*\* $p = .01$ ; \* $p = .05$ ; bold highlights the highest and lowest significant correlation between risk domains.

TABLE 5. Prediction of Driving Risks (Stepwise Multiple Regression on Factors) ( $N = 324$ )

Factor	Variance Explained (%)	Increment (%)	Coefficient	$t$	$p$
Ethics	19.4	19.4	.262	4.890	.000
Abused health	25.5	6.1	.193	3.735	.000
Gambling	28.1	2.6	.134	2.591	.010
Investment	29.8	1.7	.144	3.077	.002
Recreation	31.4	1.6	.138	2.826	.005
Ignored health	32.9	1.5	.135	2.799	.005

significant correlation was observed between factors of driving and ethics ( $r = .448$ ), and the lowest significant correlation was between monetary social and investment ( $r = .116$ ). The average correlation was .222. Concerning the factor of driving, statistically significant correlations were found with all the other seven factors. Relatively high correlations were observed with ethics ( $r = .448$ ), abused health ( $r = .408$ ), gambling ( $r = .366$ ), and recreation ( $r = .310$ ).

Driving risks was the dependent variable, whereas the other seven factors as well as gender and driving experience were independent variables; stepwise multiple regression analysis was used to explore how risk-taking behaviors could predict risky driving. As shown in Table 5, six factors entered into the model of driving risk, and totally contributed to 32.9% of the variance ( $F = 26.640$ ,  $p = .000$ ). The factor of ethics accounted for 19.4% of the variance; abused health for 6.1%, and gambling for another 2.6%. Investment, recreation, and ignored health contributed to a small improvement in the variance, with 1.7, 1.6, and 1.5% respectively.

Gender and driving experience did not enter into the regression model. All  $\beta$  coefficients were positive.

## 5. DISCUSSION

This study investigated Chinese drivers' risky driving as well as their risk-taking behaviors in other situations encountered in daily life. The results showed the respondents' degree of risk-taking in different life situations of safety and health, finance, recreation, social, and ethics risks. In line with numerous other studies which measured drivers' aberrant behaviors [35, 36], most Chinese drivers are unlikely to take traffic risks such as driving while drunk and not wearing a seatbelt on the highway, while they are more likely to take the risks of speeding when under time pressure and overtaking because of impatience.

Concerning the latent structure of risk-taking behaviors in different life situations, some of the initially proposed risk domains were categorized into subdomains. Health-related risks were divided according to the intentional willingness

of engaging in the risk. Financial risks were divided as investment is a more manageable risk category while gambling is less controllable [37]. Social risks were mainly monetary, which was an interpersonal relationship related with money. The results of gender effect on risk-taking in different domains were consistent with previous studies according to which males were more likely than females to take risks in most life situations [38, 39, 40]. The significant association between risky driving and other risk activities suggested that ethics and recreational pleasure played significant roles in risky driving behaviors.

This study has its special contributions. It is the first to study Chinese risk-taking behaviors in all life situations and to provide an overview of the degree to which Chinese people appear to seek out risks in daily life. It was not limited to managerial or financial risks, but included risks of safety and health, finance, recreation, social, and ethics areas. It reflects that at present Chinese people are not likely to take health-related risks and are more likely to take risks in financial areas. They are very likely to take the risk of helping friends and relatives to provide monetary support. What is more, driving is perceived to be a lesser risk and most Chinese are very likely to take it. These findings provide a foundation for further studies of Chinese risk taking. What is more, the further division of initially proposed risk domains and correlations between different risk domains leads us to look at these risks according to their different attributes, such as common or dreaded, voluntary or involuntary, and controllable or uncontrollable [41]. Here, dreaded is defined at its high end by perceived lack of control, catastrophic potential, fatal consequences, and the uneven distribution of risks and benefits [42]. These beliefs and attributes will provide evidence for cross-situation studies of risk-taking behaviors, which is really important for understanding Chinese behaviors in such a rapidly growing environment.

Regarding the association between risky driving and risk taking in other life situations, remedial approaches should be proposed to emphasize the need for multi-domain and long-

term changes in road safety. The corrective approaches should be individual-based and should target drivers' attitude towards risks in the broader life contexts. For example, ethics played an important role in determining Chinese risky driving. Enhancing drivers' ethical values in their life will increase their compliance with traffic regulations and their consideration of other road users' safety. This has great importance for decreasing Chinese drivers' risk-taking in the current situation. The motivation of seeking recreational pleasure while driving should also be targeted. All these ideas provided foundations for changing Chinese risky driving in further studies.

This study identified factors associated with risky driving behaviors, but it was only to a limited extent able to explain how the relationships were established. In future research, we expect to investigate whether the relationship between risky driving and other risk activities is a result of specific activities or rather of the way of dealing with life events. It is also hoped that the underlying causal mechanisms of risky driving behaviors could be identified and changes of these risky driving behaviors would be initiated in future studies.

## 6. CONCLUSION

In summary, this study described Chinese drivers' risk taking in various life situations including safety and health, finance, recreation, ethics, and social areas. At present Chinese people are not likely to take health-related risks. They are very likely to take financial risks, including helping friends and relatives in this matter. Driving is less risky and most Chinese are very likely to take it. This study further demonstrated that driving risk-taking was significantly associated with risk taking in ethics, abused health, gambling, investment, recreation, and ignored health.



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