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Chinese Gambling Superstitious Beliefs and Lottery Gambling Intensity: The Mediation of Counterfactual Thought

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Abstract

People in China spend a lot of time and money on lottery gambling. Lottery gamblers in Chaozhou, China, display Chinese superstitious beliefs about gambling and counterfactual thought. The researcher hypothesised that endorsement of Chinese gambling superstitious beliefs would predict lottery gambling intensity and that counterfactual thought would mediate the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity. One hundred and sixty-six participants completed an internet questionnaire on Chinese gambling superstitious beliefs, counterfactual thought and lottery gambling intensity. Chinese gambling superstitious beliefs were defined as beliefs that two independent events were associated, counterfactual thought was defined as the thought of the alternative reality and lottery gambling intensity was defined in terms of the amount of money and length of time spent on lottery gambling. The results showed that Chinese gambling superstitious beliefs predicted lottery gambling intensity, but counterfactual thought did not mediate this relationship. A competing model was then tested; the results showed that Chinese gambling superstitious beliefs mediated the relationship between counterfactual thought and lottery gambling intensity. Chinese people seemed to be attracted to lottery gambling by the prospect of winning large sums of money and they use superstitious beliefs to attempt to identify winning numbers. Services for lottery addicts could use the results of this study to educate them out of their gambling superstitious beliefs and belief in a counterfactual reality.

Keywords: Chinese gambling superstitious beliefs, counterfactual thought, lottery gambling intensity, mediation effect, psychology of gambling

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Contents

Chapter 1

Introduction

Background of the Study

In November 2015, the researcher went back to her hometown of Chaozhou, a city located in the southeast part of China. She found that there were many newly decorated lottery parlors on the streets. Lottery gambling seemed to have become a popular activity in the city. When she went to visit relatives or friends, it was very common for the relatives, friends or even neighbors to ask of her age and use the number of her age to buy lottery tickets for the coming draw. During traditional festivals in Chaozhou, people would worship their ancestors with a generous spread of food, fruits and sweets. In the past, they used to pray to their ancestors asking to be blessed with a secure life or a bountiful harvest for the year. These days, they pray to their ancestors asking for help to win the lottery; some of them even draw lots for lottery numbers after praying. It is not uncommon to hear people thanking their ancestors for helping them to win the lottery. When people who gamble in the lottery hear that someone has passed away, they buy the number of the deceased person's age, regardless of their relationship with the deceased person. On 18 August, 2017, Chaozhou Sports Lottery gave a lottery parlor in Chaozhou the "First Prize Birthplace" award as this parlor was believed to bring good luck to lottery players (Lai, 2017). A lottery player won ¥720,000 in Big Lotto; he claimed he watched the trend of winning numbers on the internet and chose his winning number by intuition (Lu, 2017). Neither the trend of winning numbers on the internet nor the player's intuition had anything to do with the lottery's winning number. Believing in these factors is a superstitious belief. People in this city link random events with lottery draws; they seem to believe that an independent or random

event could predict the results of lottery draws. The beliefs that two independent events are related are defined as superstitious beliefs (Joukhador, Blaszczynski, & Maccallum, 2004). The researcher believes that Chinese gambling superstitious beliefs would predict lottery gambling intensity, defined as the amount of money and the length of time of lottery gambling.

The lottery has become a hot topic among people in Chaozhou. When the researcher was interviewing lottery gamblers there, she was told that they would buy lottery tickets when they felt the time was propitious. They would mention what they were going to do if they won a lottery. They might be able to afford their family a better life and to send their children to better schools. They might buy a bigger house, an expensive car or a great vocation abroad. They might use the money to retire early. When they talked about what they would do with the money they might win, they were spending money they had not actually received. In China, for two Yuan lottery gamblers could dream of winning a national lotto prize of more than 5 million Yuan. With that large sum of money, people could realize their dreams. Such thinking is called counterfactual thought (Roese, 1997).The researcher believes that counterfactual thought would mediate the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity.

Importance of the Study

Lottery gambling is considered a form of small-stake betting and is encouraged by the Chinese government (Wu & Lau, 2015). But small stakes could add up into very large amounts. In 2015, sale of lottery tickets in China amounted to 367.88 billion Yuan (Ministry of Civil Affairs of the People's Republic of China, 2016). It is therefore important to find the pattern of lottery gambling among Chinese people and the reasons

why they buy lottery tickets. The chance of winning the lottery is low and the payback is small; the lottery in China returns 58.20% to the players (National Bureau of Statistics of the People's Republic of China, 2015) and the chance of winning a lotto was one in 21,425,712. This study is important since it would throw light on why Chinese people spend their hard-earned money, their time and energy on lottery gambling for a very small chance to earn small amount of payback.

When people play the lottery, they tend to believe in skill, chance, luck and optimism and they believe that the results of lottery could be predicted (Rogers & Webley, 2001). This study is important since it would provide support for the cognitive theory of lottery gambling (Rogers, 1998). According to Roger's (1998) cognitive theory of lottery gambling, lottery gamblers have patterns of irrational thinking, including superstitious beliefs and these patterns of irrational thinking support a long term gambling habit and the disregard for the mounting losses of money, time and energy. Superstitious thinking and behaviors are involved in both lottery gambling and other games of chance. Superstitious thinking and behaviors lead gamblers to focus on winning and not to pay attention to their losses. Roger (1998) mentioned that in general people had false perception of their chances of winning, and they had unrealistic optimism about lottery gambling. Lottery marketing takes advantage of people's counterfactual thought to encourage people to purchase lottery (Landman & Petty, 2000). Counterfactual thought is the imagining of an event that does not occur in the reality; for lottery gamblers, counterfactual thought is the thought of receiving a huge sum of money to solve financial problems. A study on Chinese gambling superstitious beliefs and counterfactual thought is important since it could provide support for the role of counterfactual thought in lottery gambling.

Objectives of the Study

The objective of this study is to identify the cognitive factors, gambling superstitious beliefs and counterfactual thought that influence lottery gambling in China. In 2015, sale of lottery tickets in Guangdong province amounted to 35.75 billion Yuan putting it first among 31 provinces in China (Integrated Division of Ministry of Finance of China, 2016). This study would examine the factors to explain why people in Chaozhou spend a lot of money, time and energy on lottery gambling.

Lottery gambling is considered small-stake gambling and it is easy for players to ignore the mounting loss of money, time and energy involved. Researchers have found negative aspects of sports lotteries; players might suffer from problematic lottery gambling, lie about their finance and commit crime (Li et al., 2012). Lottery gambling is a pure chance gambling (Rogers, 1998), no matter how the gamblers try, there is no way for them to predict or change the result. Lottery gambling may be socially accepted yet there are lottery addiction problems in China (Wu & Lau, 2015). The second objective of this study is to try to prevent Chinese people from having lottery gambling problems. Government offices or public organizations that help people to recover from gambling addiction may use the results of this study to educate lottery gamblers on the futility of their gambling superstitious beliefs and counterfactual thought.

Scope of the Study

The investigator conducted a study among lottery gamblers in Chaozhou, Guangdong province, China. Guangdong province ranks first in China in terms of population and fifteenth in land area with a population of 108.49 million (National Bureau of Statistics of the People's Republic of China, 2015). Chaozhou is one of 278 prefectural-level cities (Dreyer, 2015, pp. 31-34) near Fujian province. As one of the three cities in the Chaoshan area, it is important in terms of geographical location and

culture. Studying gambling superstitious beliefs, counterfactual thought and lottery gambling in Chaozhou could help increase understanding of lottery gambling in other cities in China. It is hoped that this study would help other researchers to become interested in the cognitive factors on lottery gambling among Chinese people and that it would contribute to the literature on lottery gambling in general and lottery gambling in China in particular.

Definitions of Terms

Superstitious beliefs. The beliefs that two independent events are related are defined as superstitious beliefs (Joukhador et al., 2004).

Counterfactual thought. Counterfactual thought is defined as the thought of things contrary to reality and is alternative to the past, the present or the future (Roese, 1997).

Lottery gambling intensity. Lottery gambling intensity was defined as amount of money (RMB) spent on the lottery every week and the length of lottery gambling in years.

Chapter 2

Literature Review

Lottery in China

The lottery was first adopted in China in the 1980s and had been fast developing in the past two decades of the twenty-first century (Ye, Gao, Wang, & Luo, 2012). There are two legal organizations authorized by the State Council to issue lotteries: China Welfare Lottery Issuing Center and China Sports Lottery Administration Center. The Ministry of Finance is in charge of supervision and regulation of the lottery industry by accepting reports from the Ministry of Civil Affairs and the General Administration of Sports of China that respectively establish the two lottery issuing organizations and are responsible for the issuance and sales of lottery tickets (AGTech, 2015).

There are five types of lotteries issued by these two organizations:

1. Sport Lottery. Gamblers typically bet on matches. Within the sport lottery, there are two main categories: single match betting and traditional football betting. Within single match betting, there are two sub-categories: pool betting on one single match and fixed odds betting on more than one match by multiples or accumulators. Single match betting and traditional football betting differ in two ways: traditional football betting allows gamblers to predict the result of every coming match within a specified period, while single match betting allows gamblers to bet on only one match. Single match betting is not limited to football matches; it also allows gamblers to bet on the United States NBA basketball tournaments. The winning probabilities of sport betting varies; the probability of the first prizes of all types ranged from one in 15,504 to one in 10,000,000 (Service and tool of China sports lottery, 2016). The market share of sport betting among all gambling in China was 16.1% in 2014. (AGTech, 2015; Official

website of China sports lottery, 2016)

2. Video Lottery Terminals. This so-called welfare lottery allows rapid plays of online lottery games. Video gambling terminals refer to lotteries issued through computer network and video technology. Gamblers use betting cards to buy a lottery ticket, draw a lottery and claim rewards on a video lottery terminal in a lottery parlor. This kind of lottery is interactive and highly entertaining. Unlike slot machines, video lottery terminals in China contain more games to be controlled by the gamblers, such as virtual golf, matching gems with the same colors and shooting games to get points. It is difficult to calculate the winning probability of these games, because the gamblers have to accumulate their scores and to compete with all gamblers in the country who play the same kind of games. The market share of video gambling terminals was 10% in 2014 and showed a rapid increase of 30.4% comparing to sales in 2013. (AGTech, 2015; Ministry of Civil Affairs of the People's Republic of China, 2012)

3. Lotto. Lotto is a game that requires gamblers to choose several numbers from a given series of numbers as a lottery ticket. For example, bettors in Super Big Lotto choose six numbers (from 1 to 35) from the first section, and two numbers (from 1 to 12) from the second section. Numbers from the two sections are combined as one lottery ticket. On the draw date, the gamblers compare their numbers with the results announced by the issuing organization to find out whether they have won. The lotto involves random selection of winning numbers, giving an equal low probability of winning for every ticket, a large prize pool and a large amount of money for winners. Lotto has three draws a week and accounted for 65.1% of the total lottery sales in 2014. Lotto was the most popular kind of lotteries sold in China. The probability of winning the first prize was one in 21,425,712. (AGTech, 2015; Ministry of Civil Affairs of the People's Republic of China, 2012)

4. Paper-based and Paper-based plus Smart Phone Scratch Cards. Each scratch card costs 2 Yuan, 3 Yuan, 5 Yuan, 10 Yuan or 20 Yuan. There is a total of 266 kinds of scratch cards available in China. The gamblers simply scratch the cards to find whether a symbol matches the announced result. Other games required the gamblers to scratch and play games to find out the results (AGTech, 2015; Ministry of Civil Affairs of the People's Republic of China, 2012; China welfare lottery, 2016). Basically, symbols or numbers are printed on paper and covered with gummed material. Instructions and results are announced on the card. Gamblers need to scratch the cover and follow the instruction to play a game and to find out whether they have won. Players have to play games similar to board games to find out the result, which makes the game more interesting. The rules are printed on the card. The map printed on the scratch card contains several stops. Each stop specifies how much the gambler receives. When playing, the numbers scratched by the gambler represent the dice numbers in a traditional board game, such as 2, 3 or 5. Each number shows how many steps the gambler moves on the map and which stops he reaches. For example, the gambler starts and arrives at stop 2. Then he moves 3 steps counting from stop 2 and arrives at stop 5. Finally, he moves 5 steps counting from stop 5 and ends up at stop 10. The gambler adds up all the amounts of money at stop 2, 5 and 10 to find out how much he has won. He may find out that he has not won anything. This is one of the scratch card games in China. There are various other games similar to traditional board and card games (China welfare lottery, 2016).

A new game has been developed to meet the wide use of smart phones. A QR code is printed on the paper and covered with gummed material. Gamblers scratch to find out the code and scan it by the APP issued by China Welfare. After that, the gamblers access a game similar to traditional scratch card games. The highest prize is 1 million

Yuan. (China welfare lottery, 2016)

The official return rate of scratch cards was 65% Ministry of Civil Affairs of the People's Republic of China; China welfare lottery, 2016). On the website of Welfare China (China welfare lottery, 2016), there are simulation games of scratch cards offered for players to play for free and there are not real rewards offered. These simulation games indicated that the odds of winning were different from real scratch card games. The researcher played different simulation games almost 100 times just to find out that she lost every game.

5. Number Game. Called Welfare 3D, this lottery requires gamblers to choose a three-digit number from 000 to 999. The number game is an important type of lottery in China. There is a Welfare 3D draw every day and the first prize is about 1,000 Yuan. The winning probability is one in 1,000 (China welfare lottery, 2016). Compared to other types of lottery, the number game has the highest probability of winning; 53 percent of sales of Welfare 3D is used as prize (China welfare lottery, 2016).

According to the data published by the Ministry of Finance and lottery sales organizations (China welfare lottery, 2016; Official Website of China Sports Lottery," 2016), the total amount of lottery sales in the 18 provinces from 2012 to October 2014 was 668.78 billion Yuan, consisting of Welfare Lottery at 374.36 billion and Sport Lottery at 294.42 billion. Twenty-seven percent of all the sales of lottery, or 185.55 billion Yuan, was kept by central and local governments, of which 89.644 billion Yuan was used for the public welfare fund. Lottery issuance fee accounted for 14.06% or 94.04 billion Yuan; and lottery awards were 389.191 billion or 58.2%. (National Audit Office of the People's Republic of China, 2015).

People who had lower education tended to buy more lottery (Zhang & Gao, 2009b).

3-Digit gamblers were older than other lottery gamblers, because the rule of 3-Digit is simple for elder people to learn (Ye et al., 2012). Not only gamblers' age and education, but also their marriage and income influenced gamblers' addictive tendency (Zhang & Gao, 2009b). In a study of 2,126 lottery buyers, the researchers found that in lottery purchasing, there were more males than females and low education buyers tended to invest more in lottery than high education buyers (Wang & Gao, 2010). In conclusion, most lottery players who have addictive tendency are middle-aged, low education and low-income males (Zhang & Gao, 2009a).

Chinese lottery gamblers are irrational and are affected by the history of winning lottery even though the history was random (J. Yuan, 2015). In the meanwhile, Chinese gamblers prefer to buy lotteries with high return rates (J. Yuan, 2015). In China, the size of the lottery rollover drives lottery demand (Jia Yuan & Gao, 2015). External control, negative coping style and education level predict addictive tendency of Chinese lottery gamblers (Zhang & Gao, 2009b).

Chinese lottery industry becomes one of the largest lottery industry in the world and Chinese lottery gamblers spends hundreds of billions of Yuan in lottery gambling (J. Yuan, 2015). The nature of the lottery and socio-demographics cause lottery addiction (Ye et al., 2012). Chinese lottery gamblers have addictive tendency (Zhang & Gao, 2009a) by contributing too much time and money in lottery gambling which may cause problem for their lives.

Rationality of Lottery Gambling

Economic researchers have argued that gambling and lottery gambling is rational, giving various reasons. Gamblers in a horse race knew the winning probability of the horses which enabled them to correctly forecast the results; their horse race betting

could be called rational (Rosett, 1965). Marfels (2001) argued that playing casino games could provide gamblers with utility and that the promotional allowances and expenses combined to render their gambling rational. Roulette gambling would be rational if the payoff were doubled so that it provided a positive net present value, particularly for less well-off individuals (Edelman, 1997). The rationality of lottery gambling can be tested by observing the numbers gamblers choose, their response to jackpot rollover and changes in jackpot payout and where they choose to buy tickets (Grote & Matheson, 2011). People who were induced to perceive that their income was lower than some reference point were more likely to buy lottery tickets than others (Haisley, Mostafa, & Loewenstein, 2008). Lottery gambling can be considered economically rational on the grounds that if players won a large sum of money they would have access to a better life (Cohen, 2000). Utility of gambling implied a violation of rationality properties such as choices between gambles; that was why the utility of gambling was never formalised in the economics literature (Diecidue, Schmidt, & Wakker, 2004). Lastly, the observed discrepancies between human behaviour and what might be considered rational could be due to performance errors, computational limitations, use of the wrong norm and the way subjects perceive gambling tasks (Stanovich & West, 2000).

Cognitive Theory of Lottery Gambling

Roger (1998) reviewed and examined the cognitive theory on lottery gambling. There are six distinctive features of a lottery: (1) relatively cheap to play; (2) huge prizes offered; (3) very low probability of winning; (4) relatively infrequent; (5) a kind of socially acceptable gambling; and (6) a game of pure chance. These features together make a lottery an attractive activity and lead gamblers to ignore the increasing amount of money they have been spending on lottery gambling (Rogers, 1998).

The normative theory of gambling could explain lottery gambling habit. Gambling is defined as gamblers choosing between the certain loss and the uncertain outcomes and gamblers should not play unless the outcomes were positive in the long term (Rogers, 1998). However, gamblers always ignore this rational thinking and keep playing, possibly because of the low cost of lotteries and the gamblers' neglect (Rogers, 1998). Yet the fact is that small costs add up to a large amount, possibly because of the pleasure or challenge brought by lottery gambling. The core beliefs of regular gamblers are false to some extent, which is the presupposition of cognitive theories of gambling (Rogers, 1998).

For lottery gamblers, it is true that there is a possibility of winning money, even though the possibility is low. It is not true that it is possible to win in a long run because lottery is a game of pure chance. It is also not true that keeping playing for a long time would bring any reward. These two false beliefs are the root of misunderstanding of probabilities and chance. Gamblers have difficulty in understanding the probabilities of winning and losing and misunderstanding of probabilities is a reason why people keep playing lottery (Rogers, 1998). Also, many kinds of irrational thinking are found among gamblers. Lottery gamblers have the gambler's fallacy; they tend to think winning is dependent on other events. Entrapment is a kind of behavior that the lottery gamblers keep gambling without noticing the accumulating losses. Some lottery gamblers also believe in hot and cold numbers. Hot numbers are numbers that have occurred during the past draws (Rogers, 1998); cold numbers are numbers that have rarely been selected in the past draws (Becser & Zoltayné Paprika, 2016). The probability of every number appearing in a draw is exactly the same. Lottery gamblers have unrealistic optimism, again because of their misunderstanding of probability. Perceived luckiness is another factor that encourages people to keep on buying lottery (Rogers, 1998).

Although lottery is a game of pure chance, lottery gamblers believe that their superstitious thinking and behaviours lead to positive outcomes. Illusion of control, near misses, rollover effect and the framing of gambling outcomes are another three cognitive biases lottery gamblers have. Finally, social factors have an added effect on lottery gambling: lottery gambling is a common topic among people and social factors may encourage gambling and some kinds of gambling involved interaction of players (Rogers, 1998).

Chinese Gambling Superstitious Beliefs

Lottery gambling is not a rational activity and superstitious beliefs are one of the reasons why people keep playing lottery (Ariyabuddhiphongs, 2011). Lottery gambling is based on gamblers' personal superstitious belief (Clotfelter, Cook, Edell, & Moore, 1999), a strong irrational belief that there is a causal relationship between two independent events (Joukhador et al., 2004). Problem gamblers were found to have more superstitious beliefs than non-problem gamblers and superstitious beliefs were correlated with gambling intensity, debts and problem gambling (Joukhador et al., 2004).

Superstitious beliefs could be negative or positive (Dagnall, Parker, & Munley, 2009). Negative superstitious beliefs refer to events that bring bad luck and positive superstitious beliefs refer to events that bring good luck (Wiseman & Watt, 2004). Superstitious beliefs depend on religion and culture (Joukhador et al., 2004) and differ among cultures and contexts. In the West, people may believe that black cats and the number 13 bring bad luck. This belief is not relevant in Eastern culture and studies on Western superstitious beliefs may not be applicable to Chinese culture. Chinese people usually believe in fengshui (wind and water; the flow of an arrangement) and that the

number 8 is a lucky number and 4 an unlucky one (Huang & Teng, 2009). Various forms of superstitious beliefs are involved in different types of gambling (D'Agati, 2014). Thai lottery gamblers searched for numbers from newspaper stories to use in a lottery (Pravichai & Ariyabuddhiphongs, 2014). Chinese gamblers' superstitious beliefs led them to overestimate the chance of winning (Wu, Lai, Tong, & Tao, 2013). Gamblers applied two different strategies in their long-run gambling: win-stay and lose-shift, a form of superstitious responding (Boynton, 2003). In the United States, Chinese and American gamblers who had higher superstitious beliefs tended to have higher level of problem gambling and depression; they might use counterfactual thought to shift their concentration away from negative thoughts (Kim, Ahlgren, & Bernhard, 2014).

Chinese gamblers think that superstitious beliefs such as belief in supernatural powers and lucky charms will increase their chance of winning. Superstitious beliefs had a positive correlation with Chinese gamblers' involvement with gambling and also with non-gamblers' intention to gamble (Wu et al., 2013). Gamblers tended to believe that lottery could be controlled and the result of lottery was dependent on other events (Kallmen, Andersson, & Andren, 2008). Superstitious beliefs were also a reason why people persisted in mahjong gambling (Zheng, Walker, & Blaszczynski, 2010). Belief in luck predicted gambling frequency of football lottery, Chinese lottery and baccarat (Zhou et al., 2012). In experiments of dice gambling, gamblers refused to believe that the results of the game were random; previous ideas and situation information were two factors that influenced gamblers in dice games. As games proceeded, superstitious beliefs were expressed; gamblers tended to believe that previous results would predict the coming results and they were trapped in their irrational beliefs (Bersabe & Arias, 2000). Among casino gamblers, superstitious beliefs were correlated with gambling motivations (Kim, Ahlgren, Byun, & Malek, 2016).

It was hypothesized (Hypothesis 1) that Chinese gambling superstitious beliefs would predict lottery gambling intensity.

Counterfactual Thought

Counterfactual thought is to think of things contrary to reality and is alternative to the past, the present or the future (Roese, 1997). Counterfactual thought helps people to prepare for the future by affecting people's intentions and decisions; the imagined alternative and the presupposed reality are two possibilities to explain how counterfactual thought is created by a person (Byrne, 2016). Upward and downward are two directions of counterfactual thought: upward counterfactual thought involves how results could have been better and downward counterfactual thought concerns how results could have been worse than reality (Myers, McCrea, & Tyser, 2014; Roese & Olson, 1993). Upward counterfactual thought is effective in controlling intention that moves gamblers to keep on buying lottery tickets. Counterfactual thought is particularly applied in lottery marketing; people keep spending a lot of money on lottery tickets even though they lose as time goes on. The internal factor for this phenomenon is counterfactual thought (Landman & Petty, 2000). Counterfactual thought impacts behaviours in two ways: content-specific and content-neutral, both of which functionally affected behaviours and behavioral intention; counterfactual thought has a goal-directed nature and it often concentrates on personal goals, desires and even ambitions (Smallman & Roese, 2009). Counterfactual thought is a correction of specific behaviours and arrangement for success in the future; counterfactual thought is related to intention formation (Epstude & Roese, 2011). Additive counterfactual thought is addition of an aspect from the present situation and subtractive counterfactual thought is subtraction of an aspect from the present situation (Epstude & Roese, 2008). Counterfactual thought is a way people evaluate events in their lives; additive

counterfactual thought has a damage control function that a person may link additive counterfactuals to future success; additive counterfactual thought is caused by the past failure and is proportional to past failure and subtractive counterfactual thought is triggered by a positive outcome (Roese & Olson, 1993).

There are some links between counterfactual thought and superstitious beliefs; counterfactual thought could foster superstitious beliefs (Miller & Taylor, 1995). There is a possibility that counterfactual thought enhanced superstitious beliefs (Mandel, Hilton, & Catellani, 2007, pp. 122-123). It is possible that both positive and negative counterfactual thought could drive superstitious behaviours (Vaidyanathan & Aggarwal, 2008).

Number search and gambling intensity mediated the relationship between superstitious beliefs and problem lottery gambling (Pravichai & Ariyabuddhiphongs, 2014). Depression was a mediator between superstitious beliefs and problem gambling (Kim et al., 2014). Years of gambling, life stress and impulsivity were all correlated with pathological gambling; impulsivity mediated the relationship between life stress and pathological gambling (Wu & Tang, 2011). Counterfactual thought mediated the relationship between event detail and confidence in gambling; event detail was about an event described with detailed or sketchy information (Petrocelli & Sherman, 2010).

It was hypothesized (Hypothesis 2) that counterfactual thought would mediate the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity. Hypothesis 1 and 2 may be represented by a model in Figure 2.1.

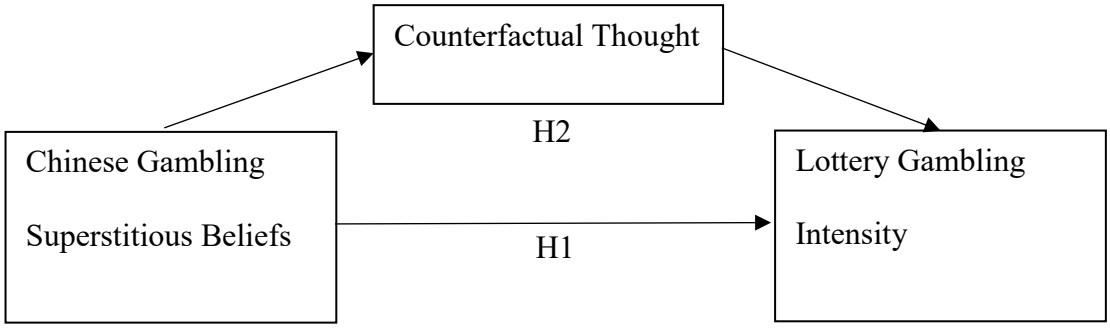

Figure 2.1 *Research model of the hypotheses. Hypothesis 1: Chinese gambling superstitious beliefs would predict lottery gambling intensity. Hypothesis 2: counterfactual thought would mediate the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity.*

Chapter 3

Method

Participants

The sample for this study (N = 166) was drawn from the population of lottery gamblers in Chaozhou, China. The average age of participants was 41.48 years old (SD = 9.523); four participants did not report their age. Ninety-one participants (54.8%) were women and 75 (45.2%) were men. More than half (61.4 %) were educated to college level or above. Slightly more than half (58.4 %) had a personal monthly income of more than 4000 Yuan. One third (33.7 %) were teachers. Table 3.1 provides detailed demographic information about the sample.

Table 3.1.

Demographic characteristics of the sample (N = 166)

Participant characteristics		Number	Percentage
Gender:	Male	75	45.2
	Female	91	54.8
Age in years: *M* = 41.48, *SD* = 9.52			
Marital status:	Married	148	89.2
	Single	13	7.8
	Divorced/widowed	5	3.0
Education:	Junior high school	28	16.9
	High school	36	21.7
	College and above	102	61.4
Monthly income in Yuan:	<1000	3	1.8
	1001 – 2000	17	10.2
	2001 – 3000	22	13.3
	3001 – 4000	27	16.3
	4001 – 5000	41	24.7
	≥ 5001	56	33.7
Occupation:	Company worker	39	23.5
	Farmer	9	5.4
	Student	2	1.2
	Teacher	56	33.7
	Civil servant	10	6.0
	Housewife	11	6.6
	Retired	6	3.6
	Other	33	19.9

Instruments

Chinese Gambling Superstitious Beliefs. Chinese gambling superstitious beliefs were assessed by a 15-item Chinese Gambling Superstitious Belief Scale (Ariyabuddhiphongs, Undated). The scale consists of statements that assess the participants' superstitious beliefs in gambling in general and in lottery gambling in particular. Samples of the statements on gambling superstitious beliefs are: 5. Do not allow anyone to hit or touch your shoulder while gambling and 8. Do not count the money while gambling, or you will lose. Samples of statements describing participants'

superstitious beliefs in lottery gambling are: 12. The winning lottery numbers are in the newspaper or Internet and 15. My ancestors will help me win the lottery. Participants were requested to indicate the extent of their agreement with the statements on a Likert scale from *(1) absolutely disagree, (2) disagree, (3) slightly disagree, (4) neither agree nor disagree, (5) slightly agree, (6) agree, (7) absolutely agree.* The scale may be found in the Appendix. Scores of 15 statements were added together to represent the participants' Chinese gambling superstitious beliefs, with high score indicating the participants' high level of Chinese gambling superstitious beliefs. An exploratory factor analysis was performed on the scale choosing 1.0 eigen value and rotating to varimax solution; the solution showed a one-factor structure that accounted for 52.45% of the variance. The Cronbach's alpha reliability index for this study was 0.99.

Counterfactual Thought. Counterfactual thought was assessed by a nine-item Counterfactual Thought Scale (Ariyabuddhiphongs, Undated). The scale consists of statements that ask the participants what they would do if they had a large amount of money won in a lottery. The statements on counterfactual thought are: *I would use the lottery money to* 1. Pay off debt, 2. Get a dream wedding, 3. Buy an expensive luxury car, 4. Buy a big house, 5. Go on a vacation abroad, 6. Buy stocks in the stock market, 7. Give some money to charity, 8. Give some money to my parents and 9. Pay for my child's university expenses. Participants were requested to indicate the extent of their agreement with the statements on a Likert scale from *(1) absolutely disagree, (2) disagree, (3) slightly disagree, (4) neither agree nor disagree, (5) slightly agree, (6) agree, (7) absolutely agree.* The scale may be found in the Appendix. Scores of nine statements were added together to represent the participants' level of counterfactual thought, with a high score indicating the participants' high level of counterfactual thought. An exploratory factor analysis was performed on the scale choosing 1.0 eigen

value and rotating to varimax solution; the solution showed a two-factor structure that accounted for 49.62% and 13.09% of the variance. The Cronbach's alpha reliability index for this study was 0.86.

Lottery gambling intensity was assessed in terms of amount of money (RMB) spent on the lottery every week and the length of lottery gambling in years. Two questions were used: *How much money (RMB) do you spend on the lottery in a week?* (responses given on a nine-point scale ranging from 1 (≤ 25) to 9 (>200)) and *How long have you been playing the lottery?* (responses given on a six-point scale ranging from 1 (≤ 1 year) to 6 (> 6 years)). Lottery gambling intensity was computed as 52 x weekly expenditure x number of years of lottery playing. An exploratory factor analysis was performed on the scale choosing 1.0 eigen value and rotating to varimax solution; the solution showed a one-factor structure that accounted for 68.73% of the variance. The Cronbach's alpha reliability index for this study was 0.83.

Procedure

The original version of the questionnaire used in this study was in English. As we did not have access to an English native speaker who could translate the questions from English to Chinese or from Chinese back to English we did not use translation and back-translation method to produce a Chinese version. The researcher translated the questionnaire into Chinese and asked a native speaker of Chinese who was teaching Chinese at Siam University to check the accuracy of the translation.

Calculation of sample size. The sample size was 164, as suggested by G*Power. G*Power is a computer program that is used to compute the statistical power of *t*-tests, *F*-tests, χ^2 tests, *z*-tests and exact tests in the social, behavioural, and biomedical sciences (Faul, Erdfelder, Lang, & Buchner, 2007). It offers several types of statistical

power analysis. We used G*Power v. 3, which has better effect size calculators than previous versions and offers graphic options (Faul et al., 2007). The parameters for the power analysis were as follows:

1. Test family: *t*-tests.
2. Statistical test: Linear multiple regression: fixed model, single regression coefficient.
3. Type of power analysis: A priori: Compute required sample size – given α power, and effect size.
4. Input parameters:
    - Tail(s): Two
    - Effect size f^2: 0.15
    - α error probability: 0.01
    - Power (1-β) error probability: 0.99
    - Number of predictors: 3 (Chinese gambling superstitious beliefs; counterfactual thoughts; a demographic variable).

According to G*Power the required sample size was 164.

Questionnaire distribution. The questionnaire was distributed through Tencent Questionnaire, a free online survey platform offered by Tencent company. Tencent Questionnaire provided the researcher with a link and a QR code of the questionnaire. The questionnaire was uploaded to the platform and sent to lottery sellers by Wechat. The lottery sellers then forwarded the link and QR code to their customers. The researcher set up the questionnaire so that participants could only respond when they had logged into their Wechat account and could respond only once from a given Wechat account. The questionnaire could be completed on a computer or a smartphone and could not be submitted unless responses had been given to all questions.

The questionnaire was sent to 704 lottery players. The response rate was 24% (170 respondents). Four of the respondents claimed that they did not buy lottery tickets or had bought tickets only once in their life; their responses were excluded from analysis, yielding a final sample of 166 respondents.

Statistical analysis. Responses to the questionnaire were imported into SPSS. Responses to the Chinese Superstitious Beliefs Scale and the Counterfactual Thought Scale were analysed to determine their factor structure. SPSS was used to calculate pairwise correlations between age, education, income, Chinese gambling superstitious beliefs, counterfactual thought and lottery gambling intensity in order to detect any multicollinearity. The PROCESS macro for SPSS was used to analyse potential mediation of the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity by counterfactual thought. PROCESS is an add-on for SPSS that allows analysis of mediation effects using an ordinary least squares or logistic regression-based path analytic framework (Hayes, 2013(Hayes, 2016) .

Chapter 4

Results

Correlations between variables.

Table 4.1.

Superstitious beliefs, counterfactual thought and lottery gambling intensity (money x time): means, standard deviations and correlations with respondents' age, education, and income (N = 166)

	Mean	*SD*	Age	Education	Income	Chinese Gambling Superstitious Beliefs	Counterfactual Thought
Age in years	41.48	9.52					
Education	2.45	0.77	.14				
Income	4.53	1.43	.24*	.56***			
Chinese gambling superstitious beliefs	2.77	1.27	-.15	-.15	-.04		
Counterfactual thought	4.69	1.28	-.09	.00	.10	.28***	
Gambling intensity	1.28	2.82	.19*	-.04	.12	.17*	.01

*Note. *p < 0.05, **p < 0.01, ***p<0.001*

Table 4.1 shows means, standard deviations and pairwise correlations between age, education, income, Chinese gambling superstitious beliefs, counterfactual thoughts and lottery gambling intensity. Age was positively correlated with income (r = .24, p < .05) and lottery gambling intensity (r = .19, p < .05). Education was positively correlated with income (r = .56, p < .001). Chinese gambling superstitious beliefs were positively correlated with counterfactual thought (r = .28, p < .001) and lottery

gambling intensity (r = .17, p < .05). Weekly lottery spend was positively correlated with duration of lottery gambling; in other words participants who spent more on the lottery each week tend to have been playing for longer.

Analysis of the Mediation Effect

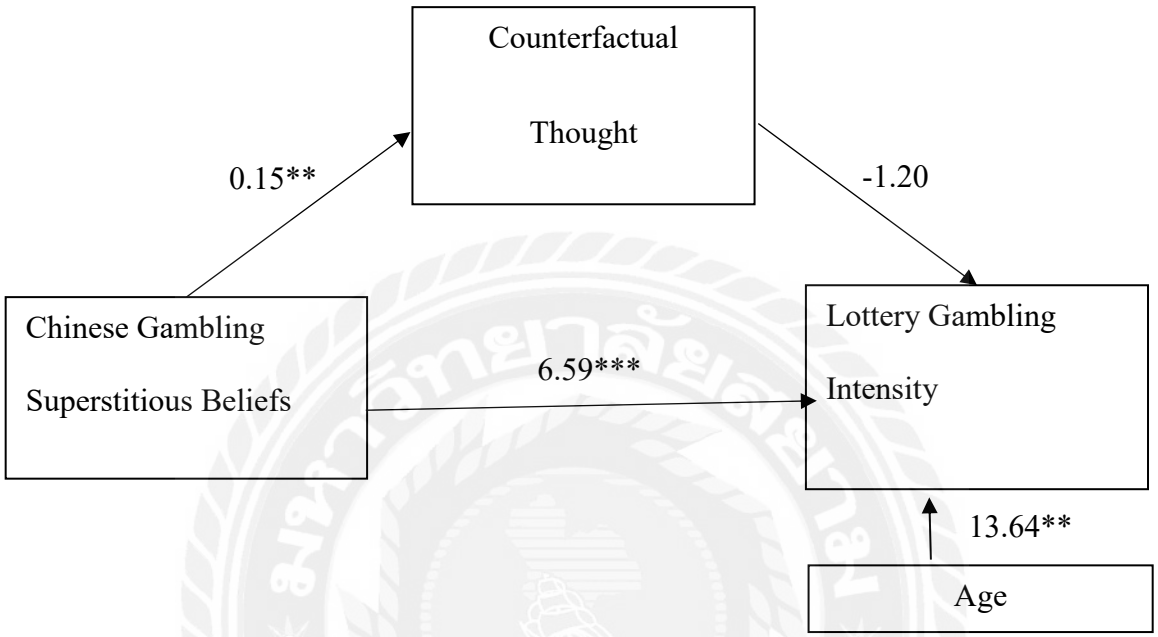

Figure 4.1 Research model of the mediation effect. 1: Chinese gambling superstitious beliefs predicted lottery gambling intensity (β = 6.59, p < 0.001). 2: counterfactual thought did not mediate the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity (β = -1.20). 3. Age predicted lottery gambling intensity (β = 13.64, p < 0.05).

*Note. *p < 0.05, **p < 0.01, ***p<0.001*

Table 4.2

Bootstrap results to test significance of mediation effect of Counterfactual Thought on the relationship between Chinese Gambling Superstitious Beliefs and Lottery Gambling Intensity

Path/Effect	Standardized		
	B	*SE*	*p*
Age → Lottery Gambling Intensity	13.64	4.88	< 0.01
a Chinese Gambling Superstitious Beliefs → Counterfactual Thought	0.15	0.05	<0.01
b Counterfactual Thought → Lottery Gambling Intensity	-1.20	4.22	ns
c Chinese Gambling Superstitious Beliefs → Lottery Gambling Intensity	6.59	2.52	< 0.001
Indirect effect ($a \times b$)	-0.18	0.56	0.7012

Note. Bias corrected ad accelerated confidence intervals = - 1.4651 to 0.8535, CI95, bootstrap resamples = 5,000. The 95% confidence interval for standadized result was produced with bias corrected option in the bootstrap dialogue box (Hayes, 2015)

Path *a* in Table 4.2 indicates that Chinese gambling superstitious beliefs predicted counterfactual thought ($\beta = 0.15$, $SE = 0.05$, $p < 0.01$). Path *b* indicates that counterfactual thought did not predict lottery gambling intensity. Path *c* indicates that Chinese gambling superstitious beliefs predicted lottery gambling intensity ($\beta = 6.59$, $SE = 2.52$, $p < 0.001$); hypothesis 1 was supported. The indirect effect ($a \times b$; $\beta = - 0.18$, $SE = 0.56$, $p < 0.70$) indicates that counterfactual thought did not mediate the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity; hypothesis 2 was not supported.

We also tested a competing model in which Chinese gambling superstitious beliefs was used as a mediator of the relationship between counterfactual thought and lottery gambling intensity.

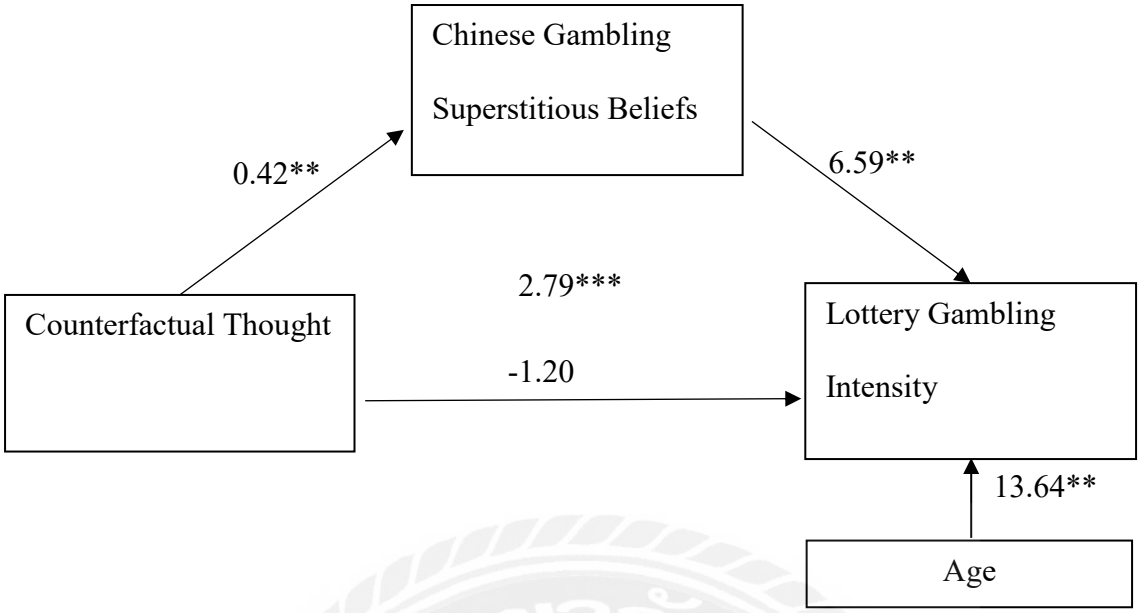

Figure 4.2 The competing model. Chinese gambling superstitious beliefs mediated the relationship between counterfactual thought and lottery gambling intensity ($\beta = 2.79$, $p<0.01$)

*Note. *p < 0.05, **p < 0.01, ***p<0.001*

Table 4.3

Bootstrap results to test significance of mediation effect of Chinese Gambling Superstitious Beliefs on the relationship between Counterfactual Thought and Lottery Gambling Intensity

Path/Effect	Standardized		
	B	SE	P
Age→ Lottery Gambling Intensity	13.64	4.88	< 0.01
a Counterfactual Thought→ Lottery Gambling Superstitious Beliefs	0.42	0.13	< 0.01
b Chinese Gambling Superstitious Beliefs→ Lottery Gambling Intensity	6.59	2.52	< 0.01
c Counterfactual Thought→ Lottery Gambling Intensity	-1.20	4.22	ns
Indirect effect (a × b)	2.79	1.26	< 0.001

Note. Bias corrected ad accelerated confidence intervals = 1.0362 to 6.6155, CI95, bootstrap resamples = 5,000. The 95% confidence interval for standadized result was produced with bias corrected option in the bootstrap dialogue box (Hayes, 2013).

Path *a* in Table 4.3 indicates that counterfactual thought predicted Chinese gambling superstitious beliefs (β = 0.42, *SE* = 0.13, $p < 0.01$). Path *b* indicates that Chinese gambling superstitious beliefs predicted lottery gambling intensity (β = 6.59, *SE* = 2.52, $p < 0.01$). The indirect effect (a × b; β = 2.79, *SE* = 1.26, $p < 0.001$) indicates that Chinese gambling superstitious beliefs mediated the relationship between counterfactual thought and lottery gambling intensity (β = 2.79, *SE* = 1.26, $p < 0.001$). Together these results provide support for the competing model in which Chinese gambling superstitious beliefs mediate the relationship between counterfactual though and lottery gambling intensity.

Chapter 5

Discussion

This study examined the phenomenon of Chinese lottery gamblers having gambling superstitious beliefs and counterfactual thought to engage in lottery gambling. It was hypothesised that endorsement of Chinese gambling superstitious beliefs would predict lottery gambling intensity and that counterfactual thought would mediate the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity. The study was conducted among 166 lottery gamblers in the city of Chaozhou in southern China. The results provided support for the first hypothesis, that endorsement of Chinese gambling superstitious beliefs directly predicts lottery gambling intensity. There was no support for the second hypothesis, that counterfactual thought mediates the relationship between Chinese gambling superstitious beliefs and lottery gambling intensity and so an alternative model, that counterfactual thought predicts lottery gambling intensity and Chinese gambling superstitious beliefs mediate the relationship between counterfactual thought and lottery gambling intensity, was tested. The results provided support for this alternative model.

Lottery gamblers in China are superstitious, believing that there are relationships between random events and gambling results. The sample of lottery gamblers in this study believed that the winning numbers could be found in the newspapers, on television or on the Internet. The organisation running the Chinese lottery has helped to promote superstitious beliefs by labelling lottery parlours where players have won large amounts of money ‘Lucky Parlours’ (Yu, 2017), thus implying that gamblers who bought lottery tickets from these parlours are more likely to win. Our study showed that Chinese gambling superstitious beliefs were the main reason Chinese people kept playing lottery.

Counterfactual thought has been defined as the thought of things contrary to reality as an alternative to the past, the present or the future (Roese, 1997). The researcher asked participants to imagine what they would do if they won a large amount of money on the lottery. Although there was no direct relationship between counterfactual thought and lottery gambling intensity in our sample, there was an indirect relationship mediated by Chinese gambling superstitious beliefs. This result may indicate that the lottery gamblers in our sample expected to win large sums of money from lottery gambling. Lottery gambling intensity was influenced by expectation of winning or counterfactual thought coupled with Chinese gambling superstitious beliefs.

A previous study of lottery gambling in China found lottery players tended to be male, middle-aged and have low incomes and little education (Wang & Gao, 2010). Our sample was made up mainly of women, people with relatively high incomes and a high level of education; a third belonged to the teaching profession. It is possible that the sample was biased because better educated gamblers were more likely to respond to the questionnaire than less well-educated gamblers. The results indicate that lottery gambling in China may not be confined to the less educated.

Limitations and Future Research

First, our sample was small. The response rate was low as it is still unusual for Chinese people to be asked to respond to research questionnaires and so they tend to be reluctant to do so. The sample included many highly educated, female teachers who did not spend much money on the lottery and this may have weakened the observed relationships between Chinese gambling superstitious beliefs, counterfactual thoughts and lottery gambling intensity.

Second, Chaozhou is a small city in China and the results may not apply to the

rest of China. Future research could address these limitations by recruiting a larger sample and surveying cities in other parts of China.

Third, lottery gambling may well be influenced by factors that were not measured in this study. The nature of the relationships between Chinese gambling superstitious beliefs, counterfactual thought and other factors that influence lottery gambling in China remains an open question.

Lastly, as there have been few studies of lottery gambling in China the reasons people choose to spend time and money on the lottery are not yet fully understood and further research is required. Cognitive theory is but one theory; other theories of lottery gambling may shed light on the issue.

Conclusion

Research on a sample of 166 Chinese lottery gamblers in Chaozhou, China provided support for the hypothesis that Chinese gambling superstitious beliefs predict lottery gambling intensity; gambling superstitious beliefs also appear to mediate the relationship between counterfactual thought and lottery gambling intensity. Chinese lottery gamblers seemed to be attracted to lottery gambling by the prospect of winning large amounts of money that would allow them to buy expensive items; their choice of numbers is influenced by superstitious beliefs. This study also supports the cognitive theory of lottery gambling and provides a reminder to the Chinese government and public organisations that it is important to teach gamblers that superstitious beliefs and counterfactual thought will not help them to win the lottery. This study was conducted in China and the results are not expected to generalise to other countries. Future research should address some of the limitations of this study by using a larger sample, testing other factors mentioned in the cognitive theory of gambling and testing other theories of lottery gambling.

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Appendix

July __, 2017

Dear participant,

Thank you for taking your time to respond to this questionnaire. I am doing research on the relationship between Chinese gambling superstitious beliefs, counterfactual thought and lottery gambling, and would very much appreciate your responses to the attached questionnaire. The first part of the questionnaire contains questions regarding your attitudes, characteristics, and intentions; there is no right or wrong response as each response reflects your current attitude, behaviour or thought. The second part of the questionnaire contains questions regarding your personal data. This part does not identify you by name; your data will not be revealed to anyone; and the research paper will report only aggregate data. You may be assured that your response will be kept confidential.

If you have any question concerning this research I can be reached at +86 13112532202.

Thank you very much for your cooperation.

Sincerely,

Lin Yueling, Investigator

Respondent's Consent Form:

I acknowledge that I have been informed by the investigator of the nature and purpose of this research, and I am freely choosing to participate without duress or coercion.

I understand that I may refuse to participate or withdraw my consent at any time I wish without having to state any reason, penalty or prejudice.

I have been assured by the investigator that any information I provide will be anonymous and kept confidential, and the research result will not disclose any personal data.

I am at least 18 years of age, and that I consent to participate in this study under the above conditions.

_____

Respondent

Part 1:

Section1. Chinese Gambling Superstitious beliefs

Please indicate the extent of your agreement with the following statements from 1. Absolutely disagree, 2. Disagree, 3. Slightly disagree, 4. Neither agree nor disagree, 5. Slightly agree, 6. Agree, 7. Absolutely agree

	Degree of agreement						
1. I believe in gods who are able to dominate human life and control all things on earth.	1	2	3	4	5	6	7
2. Wearing red underwear while gambling will bring good luck.	1	2	3	4	5	6	7
3. Avoid meeting monks or nuns before gambling.	1	2	3	4	5	6	7
4. Go and urinate if you have been losing money while gambling.	1	2	3	4	5	6	7
5. Do not allow anyone to hit or touch your shoulder while gambling.	1	2	3	4	5	6	7
6. Do not win early in the game, or you will lose a lot of money in the end.	1	2	3	4	5	6	7
7. Switch on all the lights at home before going out to gamble.	1	2	3	4	5	6	7

8. Do not count the money while gambling or you will lose.	1	2	3	4	5	6	7
9. Praying to the gods can help increase the chance of winning.	1	2	3	4	5	6	7
10. Do not have sex before gambling.	1	2	3	4	5	6	7
11. The right time, right position and right people affect the gambling result a lot.	1	2	3	4	5	6	7
12. The winning lottery numbers are in the newspaper or internet.	1	2	3	4	5	6	7
13. The age of a dead person gives you a winning lottery number.	1	2	3	4	5	6	7
14. Bad dreams will bring good luck.	1	2	3	4	5	6	7
15. My ancestors will help me win the lottery.	1	2	3	4	5	6	7

Section2. Counterfactual Thought

If you had won a lot of money from lottery jackpot, what would you do with the money? Please indicate the extent of your agreement with the following statements, from 1. Absolutely disagree, 2. Disagree, 3. Slightly disagree, 4. Neither agree nor disagree, 5. Slightly agree, 6. Agree, 7. Absolutely agree.

I will use the lottery money to:	Degree of agreement						
1. Pay off debt	1	2	3	4	5	6	7
2. Have a dream wedding	1	2	3	4	5	6	7
3. Buy an expensive luxury car	1	2	3	4	5	6	7
4. Buy a big house	1	2	3	4	5	6	7
5. Go on a vacation abroad	1	2	3	4	5	6	7
6. Buy shares in the stock market	1	2	3	4	5	6	7
7. Give some money to charity	1	2	3	4	5	6	7
8. Give some money to my parents	1	2	3	4	5	6	7
9. Pay for my child's university expenses	1	2	3	4	5	6	7

Section 3. Lottery purchase

1. How much money (RMB) do you spend on the lottery in a week?

1□ < =25 2□ 50 3□ 75

4□ 100 5□ 125 6□ 150

7□ 175 8□ 200 9□ >200

2. How long have you been playing the lottery?

1□ < =1 years 2□ 2 years 3□ 3 years

4□ 4 years 5□ 5 years 6 □ 6 years

8□ > 6 years

Part 2: Personal data

1. Gender: 1 □ Male 2 □ Female

2. Marital Status: 1 □ Married 2 □ Single 3 □ Divorced/widow(er)

3. Age: _____

4. Education: 1□ Junior high school 2□ High school 3□ College and above

5. Personal monthly income (RMB):

1□ 1,000 or less 2□ 1,001-2,000 3□ 2,001-3,000

4□ 3,001-4,000 5□ 4,001-5,000 6□ 5,001 or more

6. Your occupation:

1□ Company Employee 2□ Farmer 3□ Student

4□ Teacher 5□ Civil servant 6□ Housewife

7□ Retired 8□ Other_____

8. In addition to the lottery, what other types of gambling do you play?

2017 年　月　日

亲爱的参与者：

非常感谢你抽时间做这份问卷。我正在做一个关于中国迷信思想，反现实思维和彩票赌博之间的关系的研究，非常感谢你能完成问卷调查。第一部分包含的问题是关于你的态度、个性和意向；答案没有正确或者错误的区分，每个答案只是反映你现在的态度、行为和思想。第二部分包含的问题是关于你个人的数据。这部分是匿名的，你提供的数据不会被透露给任何人。该调查只会反映合计的数据。请放心，你的答案将会被保密。

如果你关于该研究的有任何问题请联系我：+86 13112532202

非常感谢你的合作。

研究人员 林粤玲

参与者同意书：

我确认该研究者已告知我该调研的性质和目的，我出于个人意愿选择参与而不是被强迫或胁迫。

我了解我可以在任何时候拒绝参加或收回我的承诺而无需说明任何理由、接受任何罚款或者偏见。

研究人员向我承诺我提供的任何信息都是匿名的并被保密的，研究结果也不会透露任何个人信息。

我年满 18 岁，我同意在以上条件下参与该研究。

参与者

1. 中国博彩迷信量表

以下题目请选择你赞成的程度的数字：1，完全反对；2，反对；3，有点反对；4，即不赞成也不反对；5，有点赞成；6，赞成；7，完全赞成

	赞成程度						
1，我相信世上有神能主宰人类的生活和控制世界上所有的事物。	1	2	3	4	5	6	7
2，博彩时穿红色内裤能给我带来好运。	1	2	3	4	5	6	7
3，博彩前不要见到和尚或者尼姑。	1	2	3	4	5	6	7
4，博彩时如果连续输钱的话就去小便。	1	2	3	4	5	6	7
5，博彩时不允许别人碰你的肩膀。	1	2	3	4	5	6	7
6，不要在一场赌博初期赢钱，不然你最后会输很多钱。	1	2	3	4	5	6	7
7，你出去赌博前把家里的灯打开。	1	2	3	4	5	6	7
8，赌博时不要数钱，不然会输。	1	2	3	4	5	6	7
9，向神祷告能增加赢的几率。	1	2	3	4	5	6	7
10，赌博前不要性爱。	1	2	3	4	5	6	7
11，正确的时间、地点和人会在很大程度上影响博彩结果。	1	2	3	4	5	6	7
12，中奖号码就在报纸上、电视上或网络上。	1	2	3	4	5	6	7
13, 一个去世的人的年龄能给你中奖号码。	1	2	3	4	5	6	7
14，噩梦会带来好运。	1	2	3	4	5	6	7
15，我的祖先能保佑我赢彩票。	1	2	3	4	5	6	7

2. 反事实思维量表

如果你赢了一个彩票大奖，你会用这些钱来做什么呢？以下题目请选择你赞成程度的数字：1，完全反对；2，反对；3，有点反对；4，即不赞成也不反对；5，有点赞成；6，赞成；7，完全赞成

我会把我赢彩票大奖的钱用在：	同意程度						
1，还清债务	1	2	3	4	5	6	7
2，举办一场梦幻婚礼	1	2	3	4	5	6	7
3，买一辆昂贵的豪华车	1	2	3	4	5	6	7
4，买一套大房子	1	2	3	4	5	6	7
5，去国外度假	1	2	3	4	5	6	7
6，炒股	1	2	3	4	5	6	7
7，做慈善	1	2	3	4	5	6	7
8，给父母一些钱	1	2	3	4	5	6	7
9，支付孩子的大学费用	1	2	3	4	5	6	7

3. 彩票购买

1. 你每周花多少元买彩票？

1□ < =25　2□ 50　3□ 75

4□ 100　5□ 125　6□ 150

7□ 175　8□ 200　9□ >200

2. 你买彩票多少年了？

1□ < 2 years　2□ 2 years　3□ 4 years

4□ 6 years　5□ 8 years　6 □ 10 years

8□ > 10 years

第二部分: 个人资料

1. 性别: （1）□ 男 （2）□ 女

2. 婚姻状态：(1) □ 已婚 (2) □ 单身 (3) □ 离异或丧偶

3. 年龄: _____

4. 教育程度: （1）□ 初中 （2）□ 高中 （3） 大学及以上

5. 个人月收入（元）:

（1）□ 1,000 及以下 （2）□ 1,001-2,000 （3）□ 2,001-3,000

（4）□ 3,001-4,000 （5）□ 4,001-5,000 （6）□ 5,001 及以上

7. 职业: （1）□ 公司职员 （2）□ 农民 （3）□ 学生
（4） □ 教师 （5）□ 公务员 （6） □ 家庭主妇
（7） □ 退休 （8） 其它_____

8. 除了买彩票，你还参与其它何种赌博活动?

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