

***Cognitive Dissonance among Chinese Gamblers:
Cultural Beliefs versus Gambling Behavior***

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Abstract

The main objective of this research was to ascertain whether there is cognitive dissonance among Chinese gamblers as a consequence of gambling while holding negative attitudes toward gambling, which are inherent in their cultural values. Using the behavioral variable of actual gambling and an attitudinal variable of negative beliefs about gambling, a third, practical measure of cognitive dissonance was obtained. By means of questionnaires completed by 200 adult Chinese respondents, these measures were examined in relation to three independent variables used in the gambling literature. Cognitive dissonance was expected to have significant negative correlations with traditional Chinese values and family emotional support, and a significant positive correlation with neuroticism. Cognitive dissonance was also examined for its relation to two personal outcome measures, namely, self-actualization and life satisfaction. The results revealed that the family support, traditional values, and neuroticism variables were correlated with gambling as expected, confirming the validity of the new measures; and that cognitive dissonance does indeed exist among Chinese gamblers, with increased gambling strongly associated with more cognitive dissonance. The research revealed that Chinese gamblers, even though they do gamble, also hold negative attitudes toward gambling. This provides a new perspective on studying Chinese gambling, and offers a possible strategy to help Chinese pathological gamblers, that is, by advising them that their negative beliefs about gambling reflect the positive moral values of their traditional society, an approach that may reduce their desire to gamble.

Although there has been a great deal of research on gambling among Chinese people, including that they gamble to a greater extent than other populations (Oei, Lin, & Raylu, 2008), and that they have higher rates of gambling addiction (Chen et al., 1993), there has been almost no mention of the fact that the traditional mores of Chinese society condemn gambling as immoral (Cheng, 2009). Additional evidence for the idea that gambling is deemed immoral in Chinese society is research showing Chinese gamblers under-reporting their gambling (Blaszczynski, et al., 1998) because they see it as an admission of “personal failure,” and do not report it in order to “save face” (Loo, et al., 2008, p. 1154). Yet, many authors see gambling as an acceptable behavior for the Chinese (e.g., Fong & Wong, 2009). But if gambling is accepted by Chinese society, why would the Chinese see their gambling as an admission of personal failure? And why would they have to avoid admitting that they gamble in order to save face? Clearly, based on the historical condemnation of gambling and on the fact that Chinese people see their gambling as a personal failure, it can only be concluded that gambling is indeed regarded as immoral by traditional Chinese culture.

In other words, there is a contradiction between the traditional Chinese view of gambling and the act of gambling, which means that Chinese people who live according to traditional Chinese beliefs would be less likely to gamble. Taormina (2009) empirically tested this idea and found a strong *negative* correlation (at $p < .001$) between these variables.

That poses no problem for people who do not gamble; but the fact that many Chinese people do gamble and that the condemnation of gambling is part of traditional Chinese culture should create a feeling of cognitive dissonance for those people. Cognitive dissonance is an uncomfortable mental state that occurs when two inconsistent (or contradictory) perceptions exist together for a person (Festinger, 1957). Thus, cognitive theory would predict that Chinese people who gamble and who are also mindful of their traditional beliefs would experience cognitive dissonance. This study was designed to test this idea.

Research Design

The main variable of Cognitive Dissonance is examined as a function of its two component variables, i.e., Gambling Behavior and the Negative Beliefs about Gambling in traditional Chinese culture. These three variables are the dependent variables because they are the focus of this study, and they are examined in relation to three antecedent and two outcome variables.

Gambling Behavior. For clarity, gambling is defined as “the betting or wagering of valuables on events of uncertain outcome” (Devereux, 1979, as cited in Scull & Woolcock, 2005, p. 30). As the literature on the detrimental effects of gambling on people’s lives is so extensive, and because of the limited space allowed for this article, only one study is cited here, i.e., Bergh and Kühlhorn (1994) studied more than 100 pathological gamblers and found that over 50% had serious financial problems, difficulties in relationships with family and friends, as well as psychological problems. This provides the rationale for studying how gambler’s think.

Negative Beliefs about Gambling. As noted above, Chinese society has long considered gambling to be improper and/or immoral because it can have detrimental effects on families, friends, the community, and the society (for further discussion of this, see Taormina, 2009). Chinese people therefore have a long history of negative beliefs about gambling, so these beliefs will be another component of the present research.

Cognitive Dissonance. This variable has never been used before in gambling research. Leon Festinger (1957) described cognitive dissonance by saying “if a person holds two cognitions

that are psychologically inconsistent, he or she would experience dissonance” (as quoted in Aronson, 1992, p. 304). A “cognition” is a thought, idea, or perception; and the inconsistency refers to a situation where two perceptions do not fit together in a logical way. An example is when we learn that someone we thought was a friend has been insulting us when speaking to other people. According to dissonance theory, when such inconsistencies happen, they create a feeling of discomfort because the incongruous perceptions are disconcerting.

With regard to Chinese gambling, the two perceptions are: (a) one gambles; and (b) traditional Chinese mores, which are deeply ingrained in society, view gambling as immoral. Evidence of the traditional beliefs can be found in various places. Historically, Cheng (2009) reported that views against gambling date back to Confucius, that there are anti-gambling stone monoliths in China that are over a thousand years old, and that the Qin Dynasty (221-206 BC) outlawed gambling. Cheng also reported severe punishments against gambling, which included torture and even death. Furthermore, in Mainland China, where gambling is still illegal, Papineau (2005) reported that there have been campaigns that denounce and attempt to eradicate gambling. Yet, there are Chinese people who gamble. Consequently, even though the idea of cognitive dissonance has not been previously researched in the gambling literature, cognitive dissonance must exist among Chinese gamblers!

H(1a) The more people Gamble, the more Cognitive Dissonance they will experience.

H(1b) The more Negative Beliefs about Gambling people have, the more Cognitive Dissonance they will experience.

Antecedent Variables

In addition to the three main variables identified above, which were used as the dependent variables in this research, two other variables that are often found in the gambling literature are used as potential antecedents, namely, Neuroticism and Family Emotional Support. One additional antecedent variable employed was traditional Chinese Values. The rationale for each of these variables is explained in their descriptive paragraphs, below.

Neuroticism. This variable was included for two reasons. One was to test the convergent validity of the gambling measure, that is, previous literature has found Neuroticism to be positively related to gambling. For example, Dube, Freeston, and Ladouceur (1996) assessed several variables to distinguish between potential and probable pathological gamblers, and reported that “worry” (a critical component of Neuroticism) was positively and significantly associated with pathological gambling. Steel and Blaszczynski (1996) used three personality measures, namely, Psychoticism, Extraversion, and Neuroticism, and found that Neuroticism was one of the predictors of gambling behavior. Therefore, Neuroticism was used to confirm the validity of the gambling behavior scale used in this study. The other reason for using this variable was to assess its relationship with the new variable of Cognitive Dissonance.

H(2) The more Neuroticism people have, the more they will (a) Gamble, and (b) feel Cognitive Dissonance.

Family Emotional Support. Attachment theory forms a basis for understanding how family support could relate to gambling. Ainsworth (1989) argued that supportive emotional attachment leads to more social competence and emotional adjustment. Slutske, Caspi, Moffitt, and Poulton (2005) claimed that gamblers tend to have negative emotionality, which could develop as a result of low family support and attachment; and Pietrzak and Petry (2005) found that gambling was associated with poor social adjustment. Also, Hardoon, Gupta, and Derevensky (2004) found gambling to be related to poor family support. Furthermore, Taormina (2009) tested these ideas and found a significant negative relationship between

family emotional support and gambling behavior. The same relationship is expected here. H(3) The more Family Emotional Support people have, the less they will (a) Gamble, and (b) experience Cognitive Dissonance.

Chinese Values. A study conducted in China (Chinese Culture Connection, 1987) identified four factors of traditional Chinese values, one of which was “Confucian dynamism,” with the other three also related to Confucian philosophy, i.e., moral discipline, human heartedness, and integration (of social mores). Many of the elements of these factors can be understood to be oriented toward social harmony, such as non-competitiveness, reciprocation, saving face, patience, and kindness towards others. These foster peaceful coexistence, but gambling puts people in a contentious position; so it is not surprising that Confucius has been quoted as saying that gambling is immoral (Lau, 1983). Furthermore, in a modern study of attitudes toward gambling, Vong (2004) found that Chinese people are morally opposed to gambling, with 57% of respondents agreeing with the statement “I am morally against gambling.” Thus, both tradition and research suggest that Chinese values are negatively related to gambling. H(4) The more that people live according to traditional Chinese Values, the less they will (a) Gamble, and (b) experience Cognitive Dissonance.

Outcome Variables

The final two variables used in this study are related to one’s feelings of personal achievement and are used as outcome variables, namely, Life Satisfaction and Self-Actualization.

Life Satisfaction. Diener’s (1984) theory of life satisfaction states that happiness with standard of living, job, and family, can lead to feelings of life satisfaction. Thus, gamblers should have low life satisfaction because gambling leads to loss (not gain). This would decrease the standard of living, jeopardize one’s job, and disrupt family relationships (Wong & So, 2003). Grant and Kim (2005) found pathological gamblers had lower life satisfaction. H(5): The more people Gamble, the less Life Satisfaction they will have.

Regarding cognitive dissonance and life satisfaction, Festinger’s (1957) theory states that whenever two inconsistent perceptions co-occur, psychological distress results. Shaffer and Hendrick (1974) tested this idea using opposite constructs (dogmatism and tolerance of ambiguity) to create cognitive inconsistency and found that participants experienced mental discomfort in the cognitive dissonance condition. As traditional values are lifetime beliefs, and if gambling is done over some time period, the dissonance that is engendered could result in long-term psychological discomfort, and, thus, life dissatisfaction.

H(6): The more Cognitive Dissonance gamblers have, the less Life Satisfaction they will have.

Self-Actualization.

In his theory of motivational needs, Maslow (1943) explained that Self-Actualization is the highest level of satisfaction a person can achieve in life, which is characterized as the ability to fully use one’s personal potential and to experience life fully. To reach this level, according to the theory, a person must first satisfy the other four needs, i.e., physiological, safety, belongingness, and esteem (in that order). For gamblers, however, there is a factor that makes it difficult to satisfy even the lower level needs. That is, that the odds are invariably against the gambler, meaning that they will have financial losses (Walker, 1992), which often place gamblers in debt. As noted by Taormina (2009), the historic censure against gambling was based on the fact that debt disrupts people’s lives because cannot satisfy their basic needs if they do not have money, and they will have family arguments, lose friends, and lose esteem from others. Thus, if they cannot satisfy the lower level needs, which is necessary to satisfy the highest level need, gamblers will have difficulty self-actualizing. The logic is the same for

Cognitive Dissonance, which makes it difficult to fully use one's potential.

H(7): The more people Gamble, the less Self-Actualization they will have.

H(8): The more Cognitive Dissonance people have, the less Self-Actualization they will have.

Method

Respondents

The respondents were 200 adult Macau residents (91 female, 107 male) aged 18 to 67 years ($M=32.74$, $SD=10.77$). On marital status, 124 were single, 74 married, and 2 were "other." For education, 32 completed primary, 100 secondary school, 6 a 2-year college diploma, 56 a bachelor degree, and 6 a master degree or above. For monthly income (in the local currency), 53 earned below 5,000; 46 earned 5,000-9,999; 63 earned 10,000-14,999; 28 earned 15,000-19,999; 7 earned 20,000-24,999; and 3 earned 25,000 or more. On gambling behavior, the mean score was 1.69 ($SD = 0.65$) on a 5-point frequency measure.

Measures

Measuring Cognitive Dissonance

To measure cognitive dissonance among Chinese gamblers, two variables were needed to compute these values. One is gambling behavior, and the other is a measure that assesses traditional Chinese beliefs that reflect gambling as an improper behavior. The two component variables are explained first, followed by a discussion of the Cognitive Dissonance variable, which includes a description of how it was computed.

Gambling Behavior. Actual gambling behavior was the essential element of this research, and was measured by the Gambling Behavior Scale (Taormina, 2009). The scale has 10 items, and asks how often the person had bet money on different types of gambling. The items (games) were "Social gambling with family," "Social gambling with friends," "Mark six lottery betting," "Football betting," "Basketball betting," "Macau casino table games," "Casino slot machines," "Other slot machine venues," "Horse racing," and "Dog racing." The question was "In the past 12 months, how often have you bet money on the following games?" Answers were on a 5-point scale ranging from 1 (never) to 5 (very often), and the responses were averaged.

Negative Beliefs about Gambling. Several sources of Chinese writings (e.g., Confucius, 2007; Qiu, 1984; So, 2002) were consulted to locate long-standing sayings and proverbs that reflect negative beliefs about gambling. A total of five statements were selected for use as items for this scale. These were: "Greediness will result in poverty," "Gambling ten times will result in nine losses," "You will win a candy but lose a factory," "Not gambling is winning," and "Losing is all because of an early win." The responses were on a 5-point Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree), and the responses were averaged.

Cognitive Dissonance. Measuring cognitive dissonance can be difficult because it is a mental state that cannot be directly assessed. That is, two conditions must occur simultaneously, which means cognitive dissonance must be measured with two variables; and the variables must be examined in such a way that it would reveal the disparity. These two variables were: (a) the degree to which the person agreed with traditional cultural views against gambling, and (b) how much that person actually engaged in gambling. If dissonance exists, it would be among individuals who have high scores on both their gambling behavior as well as how much they see gambling as an undesirable behavior.

Thus, cognitive dissonance was operationalized for each person by *multiplying* the person's gambling behavior score times that person's score on a measure indicating agreement with statements reflecting *negative* beliefs about gambling. A low score indicates little difference, while a high score would indicate that they gamble a lot while also having strong negative beliefs about gambling; thus, the higher the value, the greater the dissonance. Whereas the Gambling Behavior scale ranged from 1 to 5 and the Negative Beliefs about Gambling scale also ranged from 1 to 5, the Cognitive Dissonance scale could range from 1 (no dissonance) to 25 (extremely high dissonance).

Chinese Values. This was measured by Taormina's (2009) 12-item Chinese Values scale. Sample items were "Having a sense of shame," "Personal steadiness," and "Moderation." Respondents were asked to what extent they live their lives by these values, and responses were on a scale from 1 (never) to 5 (always). The Cronbach alpha scale reliability was .87.

Family Emotional Support. This was from Family Emotional Support Scale (Procidano & Heller, 1983); only 10 items relating to receiving rather than giving support were used. A sample item was "My family gives me the moral support I need," and respondents were asked how much they agreed or disagreed with the statements using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The reliability of this scale was .89.

Neuroticism. This was a 5-item scale using items that focused on the "worry" aspect of neuroticism. Two items were from Costa and McCrae's (1992) NEO Neuroticism Domain, e.g., "I am filled with doubts about things," and three items from Peterson and Seligman's (2004) Neuroticism measure, e.g., "I am not confident that things will work out for the best." Respondents were asked how much they agreed or disagreed that these statements described them, using the 5-point disagree-agree Likert scale. The scale reliability was .74.

Life Satisfaction. This was measured by Sirgy et al.'s (1998) the 10-item Life Satisfaction Scale. This scale asks respondents to compare their life achievements with various situations by asking how satisfied they are with their life compared to the statements in the items. Sample items were "The life goals you set for yourself" and "The accomplishments of your friends." Responses were on a 5-point Likert scale ranging from 1 (extremely unsatisfied) to 5 (extremely satisfied). The scale reliability was .88.

Self-Actualization. This was a 10-item scale that used three items from Jones and Crandall (1986) and seven newly developed items for this study. The new items were added to better represent the self-actualization concept. Sample items were "I am very happy being the person I am now" and "I am being the person I always wanted to be." Respondents were asked how much they agreed or disagreed that these statements described them, using the 5-point disagree-agree Likert scale. The scale reliability was .77.

Procedure and Ethics

Data were gathered in Macau from 100 people from the general population and 100 gamblers. For the general population, people passing at busy street corners in densely populated areas were randomly selected. For gamblers, data were gathered from people exiting sports betting shops. All potential respondents were told the nature of the research and asked if they would answer the questionnaire. Those who agreed were handed a questionnaire, which was collected on site when finished. APA ethical guidelines were followed with all respondents.

Results

Demographic Differences

Though no hypotheses were made for demographics, they were tested (t-tests and ANOVAs) for differences on Gambling Behavior, Negative Beliefs about Gambling, and Cognitive Dissonance. For gender, females gambled less than males ($p < .001$), had more negative beliefs about gambling than males ($p < .05$), and had less cognitive dissonance than males ($p < .001$). No significant differences were found for any of the other demographics.

Correlations

Correlations were run to test all the hypotheses. For Cognitive Dissonance, both Gambling Behavior and Negative Gambling Beliefs were positively and significantly correlated with Cognitive Dissonance (both $ps < .001$), which supported H(1a) and H(1b), respectively. Neuroticism was positively correlated with Gambling ($p < .01$) and with Cognitive Dissonance ($p < .05$), supporting H(2a) and H(2b), respectively.

Family Emotional Support was negatively correlated with Gambling ($p < .001$) and also with Cognitive Dissonance ($p < .005$), supporting H(3a) and H(3b), respectively. Likewise, Chinese Values was negatively correlated with Gambling ($p < .001$) and with Cognitive Dissonance ($p < .10$), supporting H(4a) and H(4b), respectively.

For the Outcome Variables, Gambling was negatively related with Life Satisfaction ($p < .005$), supporting H(5). And Cognitive Dissonance was negatively correlated with Life Satisfaction ($p < .05$), supporting H(6). Likewise, Gambling was negatively correlated with Self-Actualization ($p < .005$), supporting H(7). And Cognitive Dissonance was negatively correlated with Life Satisfaction ($p < .05$), supporting H(8). All correlations are shown in Table 1.

Table 1.

Means, SDs, and correlations between Cognitive Dissonance, Gambling, Negative Gambling Beliefs, and the theoretical test variables (N=200).

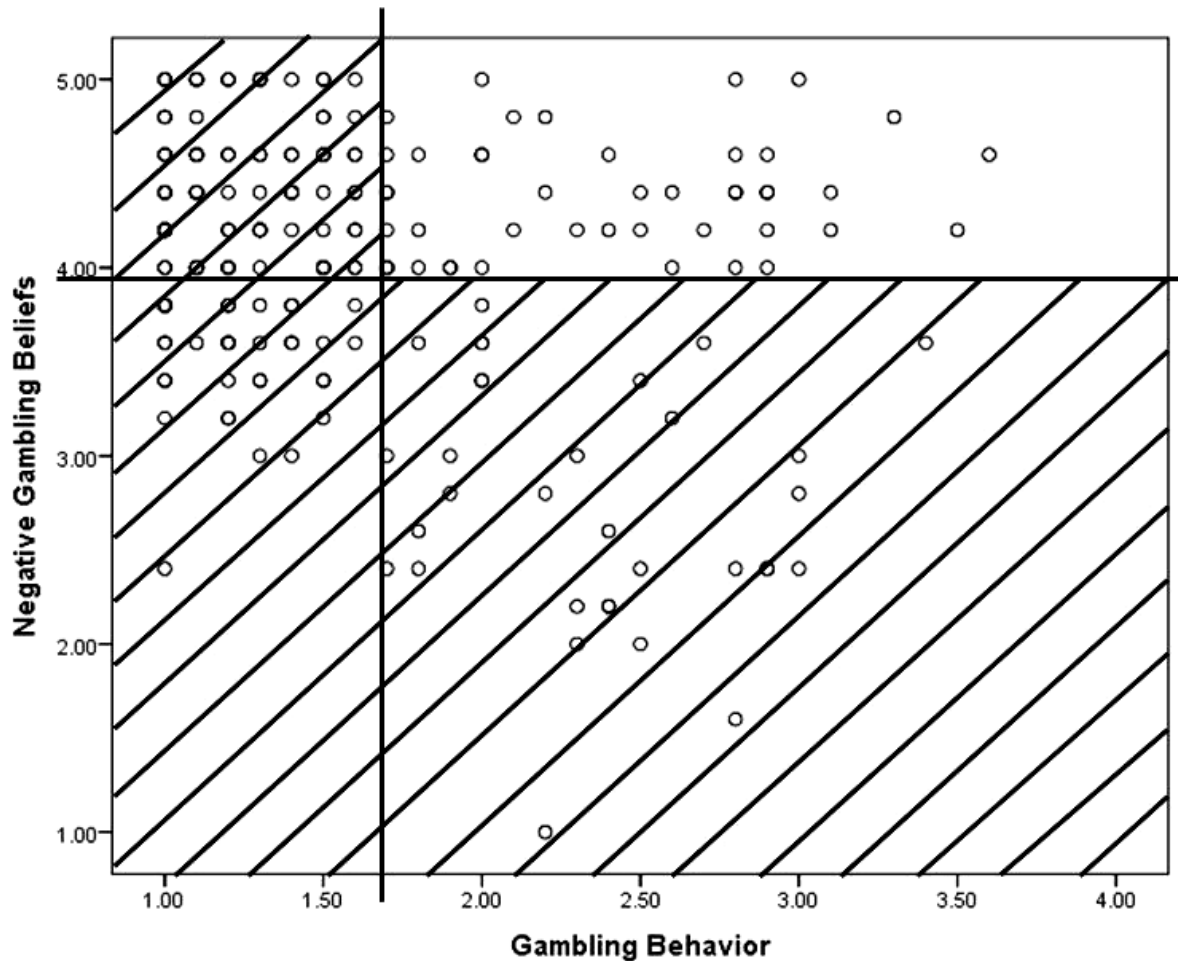
Variables	Mean	SD	Cognitive Dissonance	Gambling Behavior	Negative Gambling Beliefs
Cognitive Dissonance	6.62	2.73	---		
Gambling Behavior	1.69	0.65	.82****	---	
Negative Gambling Beliefs	3.99	0.76	.32****	-.25****	---
Chinese Values	3.66	0.49	-.09†	-.24****	.33****
Family Emotional Support	3.35	0.58	-.19***	-.26****	.14*
Neuroticism	3.07	0.63	.15*	.17**	-.05
Self-Actualization	3.26	0.49	-.12*	-.14*	.07
Life Satisfaction	3.32	0.56	-.16*	-.20***	.06

† $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .005$; **** $p < .001$.

To further assess Cognitive Dissonance, the scores for Negative Beliefs about Gambling were plotted as a function of Gambling Behavior to find respondents who were high on both variables, which would indicate high Cognitive Dissonance. For the cutoff values, the high Gambling scores were set at ≥ 1.70 , and the high Negative Beliefs scores were set at ≥ 4.00 . The high dissonance group (N=45) is shown in the upper-right quadrant of Figure 1.

Figure 1.

Scatterplot of all respondents (N=200) on Gambling and Negative Beliefs about Gambling. Cutoffs show high gambling (score ≥ 1.70) and high negative gambling beliefs (score ≥ 4.00). Those scoring high on both variables are in the upper-right quadrant.

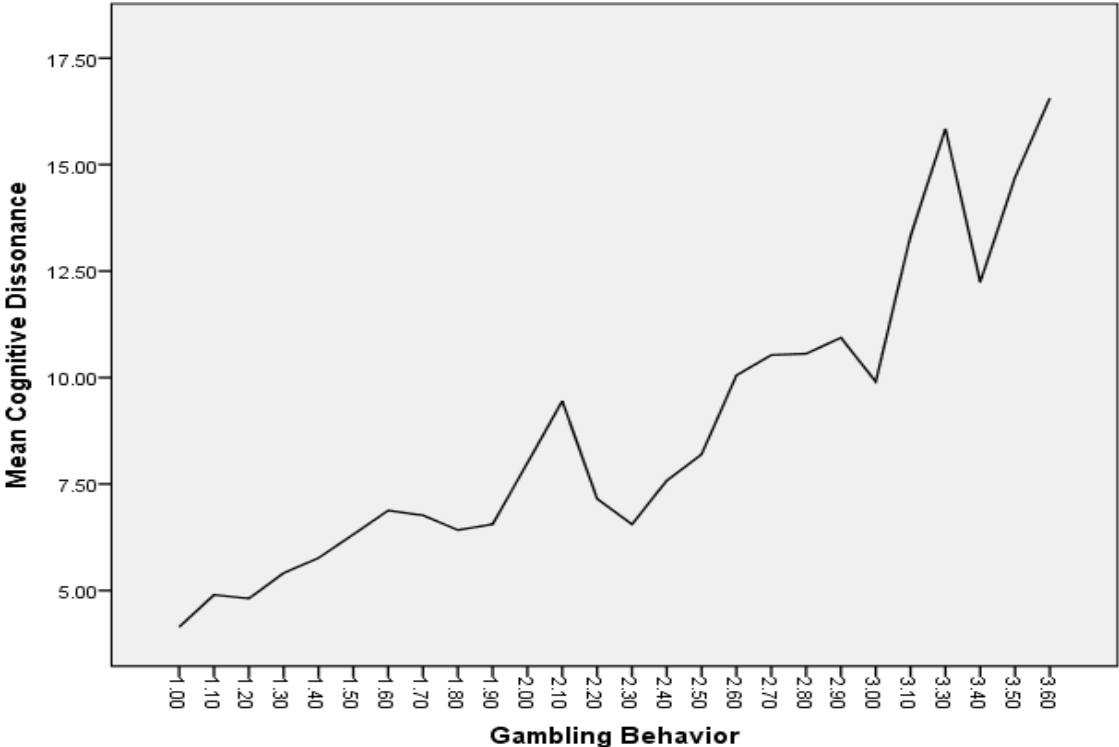


To assess the overall relationship between Gambling and Cognitive Dissonance, a line chart was graphed to depict the relationship between these two variables. First, the line was drawn for all 200 respondents (N=200), shown in Figure 2(a).

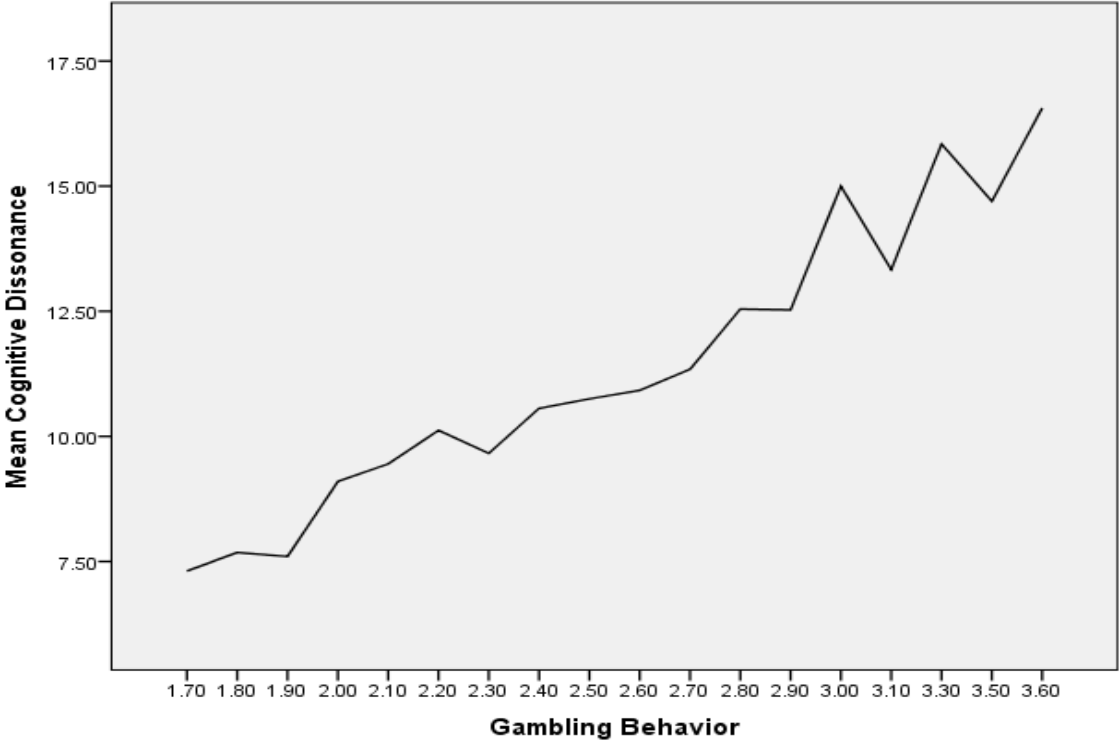
For comparison, another line was graphed for only the people in the high gambling and high negative beliefs group (N=45), which is shown in Figure 2(b). Both charts show strong increasing functions, with the overall (N=200) correlation, $r = .82$, $p < .001$, and the gamblers showing an even stronger correlation, of $r = .96$, $p < .001$ (with less variation).

Figure 2.

(a) Cognitive Dissonance as a function of Gambling Behavior for all respondents (N=200).



(b) Cognitive Dissonance as a function of Gambling Behavior, for respondents high on both Gambling and Negative Gambling Beliefs; see upper-right quadrant in Figure 1 (N=45).



Discussion

The results offered strong evidence that cognitive dissonance exists among Chinese gamblers. That is, Chinese gamblers had cognitive dissonance because they gambled while holding negative beliefs about gambling at the same time. This was the critical concern in this study because the idea of cognitive dissonance among Chinese gamblers had been absent from the literature, although anticipated (Taormina, 2009), and until now there was no research on it.

The results are also strengthened by Cheng's (2009) claim that, according to Confucian thought, which is the traditional view of Chinese culture, gambling is an immoral behavior. These results also reflect the views of Mencius (372-289 BC), another Chinese philosopher, who considered gambling to be one of the "five unfilial acts," i.e., behaviors *not* acceptable in the society. The results for Family Emotional Support strengthened this idea as it was strongly and negatively correlated with gambling behavior and cognitive dissonance. As gambling is viewed negatively in society, families may be giving the gamblers less emotional support as a signal that gambling is unacceptable, thus increasing the gamblers' cognitive dissonance.

Apparently, the picture of gambling in the mind of Chinese gamblers seems quite ambiguous. On one hand, they desire to gamble for the obvious reason of hoping to gain a big win at one of the games (e.g., roulette, where the payout to the gambler could be as much as 35:1, i.e., the gambler could gain \$35 dollars for each \$1 bet). On the other hand, however, the "odds" of winning always favor the casino and are always against the gambler (e.g., in roulette, the odds are 35:1 *against* the gambler), and gamblers know this. This fact is the logical basis for not gambling; but the emotional problem is that the loss of money is detrimental not only to the gamblers but also to their families, because the losses result in debt and an accompanying weakening of the integrity of their families. This is the reason gambling was regarded so negatively by traditional society, i.e., gambling has the potential to undermine the very fabric of society because the family is the most important and fundamental unit in Chinese society.

Thus, the gambler must feel the discomfort of the two competing perceptions, i.e., the desire to gamble in hope of making a big win versus the knowledge that gambling is considered to be immoral by one's family (reflected in this study by the lower Family Emotional Support) and by society (assessed by the Chinese Values measure). This disparity between gambling behavior and the negative attitudes about gambling thus resulted in cognitive dissonance.

Neuroticism was another variable assessed for its relationship to both gambling and cognitive dissonance, and was used to test the validity of the new measures. First, Neuroticism had a significant positive relationship with Gambling, which coincides with findings by Blanco et al. (2001), who suggested neurotic people might have less self-control and thus gamble more. Neuroticism also had a significant positive correlation with Cognitive Dissonance, which implies that people who are more neurotic have more difficulty dealing with the dissonant cognitions. Thus, neuroticism also supported the (construct) validity of the new measures.

Additionally, the two outcome variables of Self-Actualization and Life Satisfaction were included to assess whether gambling and cognitive dissonance might influence these feelings. Gambling had a highly significant negative relationship with Life Satisfaction, suggesting that gambling interferes with one's ability to achieve certain accomplishments in life. Likewise, gambling had a significant negative relationship with Self-Actualization, which indicates that gambling limits one's ability to live a full life, e.g., as gambling leads to debt, which limits what one can have in life, one cannot live one's life to the fullest.

Regarding Cognitive Dissonance, similar results were obtained. That is, it had a significant negative relationship with Life Satisfaction, suggesting that the incongruent cognitions about one's gambling and social values is distracting enough to reduce one's ability to reach high levels of accomplishment in life. Likewise, Cognitive Dissonance also had a significant negative relationship with Self-Actualization, which indicates that the dissonant perceptions are also sufficiently disturbing to reduce one's feelings that one is living a full life.

The finding, that Chinese gamblers hold negative attitudes about gambling even though they do gamble adds a new perspective on studying Chinese gamblers, i.e., by examining their cognitive dissonance. A practical implication of this research offers a possible strategy for helping Chinese pathological gamblers, namely, advising them that their negative beliefs about gambling reflect the positive moral values of their traditional society, an approach that may help them to reduce, and possibly even stop, their gambling.

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