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Gambling Behaviors among VIP Hosts in Macao

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GAMBLING BEHAVIORS AMONG VIP HOSTS IN MACAO

By

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ABSTRACT

Gambling Behaviors among VIP Hosts in Macao

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Many studies have shown that casino employees are at-risk gamblers, but limited research on this topic has been conducted in Asia. Given the unique gambling setting of Macao, it would be meaningful to investigate the gambling behaviors among VIP Hosts, who play an important role in the gaming market. Specifically, the present study examined the relationship between problem gambling, cognitive distortions, and potential risk and protective factors. The author used a snowball technique to recruit participants and an online survey to collect data. A total of 41 responses were included in the data analysis. The results showed that VIP Hosts tended to have high problem gambling scores compared to the general population. Although a series of factors associated with problem gambling and cognitive distortions were introduced in the hypotheses, none of them were found statistically significant in affecting VIP Hosts' gambling behaviors or cognitions. The findings of the current study did not support the view that cognitive distortions could predict problem gambling. Hence, both gaming operators and regulators should realize that the prevalence of problem

gambling among VIP Hosts is relatively high. Also, the findings suggested that a nuanced approach to Responsible Gaming (RG) training might be more effective than a one-size-fits-all approach. Nonetheless, future research is needed to validate these conclusions due to the limitations associated with the current study.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

In Macao, casinos are operated with a mass gaming system and a VIP gaming system. The operations on the mass gaming floor are similar to those in ordinary Nevada-style casinos (Wang & Eadington, 2008). Separating from the mass floor, VIP gaming has its own designated rooms that are mostly filled with Baccarat tables (Ho, 2018). VIP gaming dominates the market, contributing over 60% of the total gaming revenue in the last decade (Gaming Inspection and Coordination Bureau, 2020). Most VIP rooms are operated by junkets, while casino operators have their own VIP rooms, as known as the "Company Rooms". In VIP rooms, players usually have higher betting limits, ranging from US$125 to US$300,000 per hand (Lam & Eadington, 2009). To cater to this group of high rollers and create customer loyalty, VIP Hosts are recruited by junkets or casino operators. They help players with scheduling arrangements, accompany players during their time at the casino, and handle players' requests. In addition, because of the uniqueness of Baccarat in Chinese culture, VIP Hosts are often encouraged to chant for a strong hand when players squeeze the cards. They also give advice to players on how to bet by looking for game patterns. Therefore, VIP Hosts are a group of frontline employees who are regularly exposed to gambling.

On December 18, 2018, Macao Legislative Assembly approved a bill to issue a ban on casino employees, including VIP Hosts, from entering casinos when off duty

(Law No.17/2018). This bill aimed to prevent casino employees from developing gambling disorders. Would merely having this universal ban address the problem gambling issue among Macao casino employees, including VIP Hosts? This question needs to be further examined.

Dangerfield (2004) suggested that the restriction could, in turn, lead to an increase in participation in substitute forms of casino gambling such as lotteries. On the other hand, casino employees from different departments are not equally likely to develop gambling problems as Guttentag et al. (2012) concluded that Canadian casino employees from Table Games exhibited a higher rate of problem gambling than those from other departments. Similarly, a study conducted in the U.S. showed casino employees in Food, Beverage, & Retail are more likely to have game misconceptions compared to those in Back of House (Abarbanel et al., 2019). Currently, there is limited research on VIP Hosts and their gambling behaviors in Macao, so this study will provide insight by seeking to identify factors possibly affecting this group of casino employees.

Purpose of Study

The objective of this study is to investigate the gambling behaviors among Macao VIP Hosts and identify factors associated with their gambling behaviors. The goal of the research is to help Macao gaming operators and regulators get a holistic understanding of VIP Hosts and realize that a nuanced approach to responsible gambling (RG) training has the potential to be more effective compared to a one-size-

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fits-all approach. Furthermore, RG training programs for VIP Hosts could be refined

by considering the factors related to their gambling behaviors.

The following research questions will be addressed:

RQ1. How do VIP Hosts' risk and protective factors correlate with problem

gambling?

RQ2. How do VIP Hosts' risk and protective factors correlate with cognitive

distortions?

RQ3. How do VIP Hosts' cognitive distortions correlate with problem gambling?

Conceptual Framework

Hing and Breen (2008b) identified several risk and protective factors associated

with gambling behaviors and problem gambling, such as exposure to heavy gamblers

and knowledge of responsible gambling. Also, several risk and protective factors have

been proven to be linked with cognitive distortions. For example, the finding of

Moore and Ohtsuka (1999) suggested younger people had more faith in their ability to

win the game. It is consistent with a recent study that demonstrated that younger and

newer casino employees were more likely to develop gambling-related distortions

(Hing & Breen, 2008b). Moreover, research has shown that cognitive distortions

played a pivotal role in the maintenance of problem gambling behaviors (Addicott et

al., 2015; Leonard & Williams, 2016; Myrseth et al., 2010; Toneatto & Millar, 2004;

Xian et al., 2008). As such, to provide a comprehensive review of gambling behaviors

among VIP Hosts, the author proposed an investigative framework consisting of risk

and protective factors, problem gambling, and cognitive distortions (Figure 1).

Figure 1

Proposed investigative framework: risk and protective factors-cognitive distortions-problem gambling.
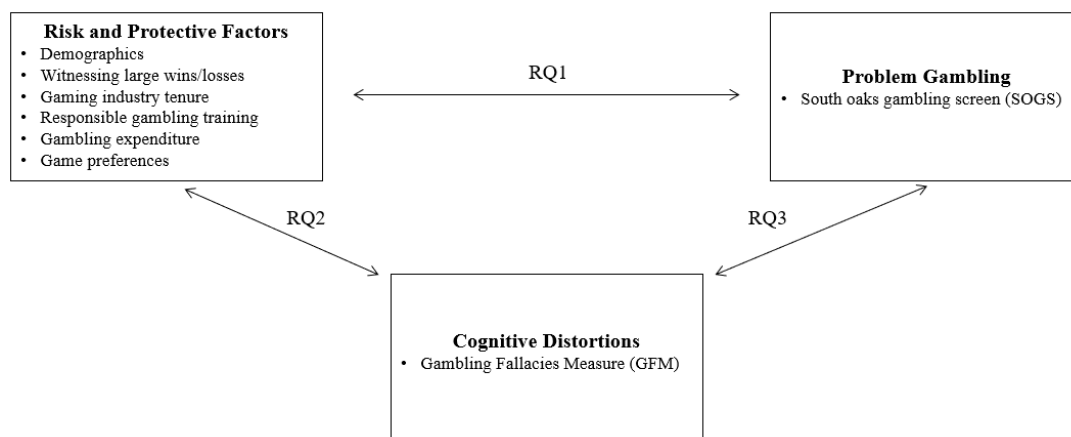
Statement of Problem

Most problem gambling studies with regard to casino employees, which considered the working environment, are western-based (Abarbanel et al., 2019; Guttentag et al., 2012; Hing & Breen, 2008a, 2008b; Nerilee Hing & Gainsbury, 2013; H. J. Shaffer et al., 1999). That is, limited research has investigated the casino employees in Asian countries. Furthermore, there is little consensus among researchers on whether Asian casino employees are at-risk gamblers. Lee et al. (2008) found casino employees did not have a higher rate of pathological gambling than the general population in Korea, whereas past studies suggested casino employees were more vulnerable to problem gambling in Macao (Wong & Lam, 2013; Wu & Wong, 2008). Moreover, among those studies, only Table Games employees (e.g., dealers)

were included or the job positions of the subjects were not identified. As such, little is known about VIP Hosts, an important group of Macao casino employees. Given the uniqueness of the Macao gaming market, it is vital to explore VIP Hosts' gambling behaviors, since their working environment places them at risk for high exposure to heavy betting, a behavior sometimes associated with problem gambling. Furthermore, the relationship between casino employees' risk and protective factors, problem gambling, and cognitive distortions is not widely examined, and little is known of this relationship as it exists in the unique gambling setting of Macao.

Limitations

Several limitations are associated with this study. First, the sample might not be representative because the snowball technique has been used to recruit participants. Second, the results might be biased due to the small sample size. Third, data collected from the self-report questionnaire could be biased. For example, gamblers with higher losses are less likely to estimate their gambling expenditure accurately (Auer & Griffiths, 2017). Fourth, the gambling behaviors of VIP Hosts could be significantly changed due to the COVID-19 pandemic. For instance, as the Macao government imposed restrictions such as shutting down casinos during the outbreak of the virus, some respondents would probably reduce the frequency of gambling and gambling expenditure.

Definition of Key Terms

Baccarat: A popular casino game in Asia. Gamblers can bet on either the Banker's

hand or the Player's hand. The hand totals nine or is closest to nine wins.

Junkets: Licensed individuals or companies who are allowed to conduct gaming

promotion activity in Macao casinos (Ho, 2018).

Junket operations: Through a contract (i.e., the rolling model or the net-win model)

with casino operators, junket operators could provide exclusive gaming tables for

VIP players who are recruited by junk agents. Junket agents often cover all the

transportation and accommodation expenses to attract VIP players. In VIP rooms,

players often bet with dead chips that cannot be redeemed for cash or cash chips,

while their winning bets are paid with cash chips. Following this, VIP players

could exchange cash chips for dead chips and make bets again. The total amount

of dead chips wagered and lost is the rolling volume. Through the rolling model,

junket operators will be remunerated with commissions (e.g., 1% of the rolling

volume). While through the net-win model, junket operators will receive (bear) a

certain percentage of the net win (loss) generated by gamblers (Ho, 2018).

Mass gaming floor: Portion of the casino premises where slot machines and a variety

of table games, such as Blackjack and Roulette, are open to all customers.

Problem gambling: "Problem gambling is gambling behavior that creates negative

consequences for the gambler, others in his or her social network, or for the

community" (Ferris & Wynne, 2001).

Responsible gambling: Policies and practices designed to prevent and reduce

gambling-related harms (Blaszczynski et al., 2004).

Higher roller: Players who usually bet between US$125 and US$300,000 per hand

(Lam & Eadington, 2009).

Mahjong: A traditional Chinese gambling game that involves skills (Hannum &

Cabot, 2012).

CHAPTER 2

LITERATURE REVIEW

Gambling in Macao

Macao, a special administrative region of China, is the only place where land-based gambling (e.g., casinos) is legal in China. Macao represents the largest gambling region in the world, in terms of gaming revenue. As of September 2020, there were 41 casinos that generated US$36.5 billion in gross gaming revenue with a total of 6,739 gaming tables and 17,009 slot machines in 2019 (Gaming Inspection and Coordination Bureau, 2020). Comparatively, Nevada's gross gaming revenue was US$12 billion (Nevada Gaming Control Board, 2020), and Singapore brought in US$3.4 billion in 2019 (Genting Singapore Limited, 2020; Las Vegas Sands Corp., 2020).

Located on the southern coast of China, Macao was colonized by the Portuguese in 1557, but was returned to China in 1999 (Loughlin & Pannell, 2010). The gambling industry in Macao was first legalized in 1849 (Godinho, 2014). However, given the competition among many small-sized operators, the introduction of gambling did not generate much tax revenue for the government (Fong & Ozorio, 2005). To increase revenue, the Macao government monopolized the gaming market in 1930 (Godinho, 2014). Hou Hing Company won the first monopoly by promising to pay MOP 0.8 million (approximately US$100,000) per year to the government (Fong & Ozorio, 2005). Tai Hing Company was granted the second monopoly seven years later

because it agreed to increase the tax payment to MOP 0.224 million (Fong & Ozorio, 2005). In 1961, Sociedade de Turismo e Diversões de Macau (STDM) was awarded the third monopoly casino concession (Godinho, 2014), and it also agreed not only to pay a higher tax per year, but to help build infrastructure to promote tourism with Macao. It maintained the exclusive right to conduct the gaming business for 40 years. In 2002, with the gaming liberalization, STDM's monopoly was ended. The objectives of this move were to bring competition and modern practices to the gaming industry, and to drive the development of other industries (Fong & Ozorio, 2005; Loughlin & Pannell, 2010). As a result of this decision, six gaming concessions/sub-concessions were granted to Galaxy Entertainment, SJM, Wynn Resorts, Las Vegas Sands, MGM, and Melco Crown (Godinho, 2014).

Macao casinos offer a variety of games such as Roulette, Blackjack, Baccarat, VIP Baccarat, and slot machines. Among them, Baccarat and VIP Baccarat generated over 80% of gross gaming revenue in the past years (Gaming Inspection and Coordination Bureau, 2020). Apart from casino gaming, there are other available gambling products including Mahjong (a traditional Chinese game), greyhound racing, horse racing, lottery, and sports betting (Gaming Inspection and Coordination Bureau, 2020). Given the dominance of the gaming industry in Macao, the number of casino employees reached 58,225 in 2019, accounting for nearly 10% of Macao's population (Statistics and Census Service, 2020). Gambling behavior among Macao residents is also popular; a recent report showed 40.9% of Macao residents

participated in at least one gambling activity in the past 12 months. The median

monthly gambling expenditure was estimated at HK$80 (US$10) (University of

Macau, 2019).

VIP Gaming in Macao

VIP gaming is a unique part of the gaming market in Macao. The introduction of

VIP gaming can be traced back to the 1930s, and it fully matured by the mid-1980s

(Wai Ho, 2017). In 1984, the then-casino monopoly, STDM, informally granted

permission to junket operators to manage private gaming rooms within the casino

(Lam, 2013; Lam & Eadington, 2009). As many high rollers who were recruited from

Hong Kong and Taiwan by junket agents, preferred to play Baccarat without drawing

any attention from the public, those VIP gaming rooms became popular in the Macao

casino industry (Lam, 2013). This business model helped STDM recruit many high

rollers. Figure 2 describes the relationships among the five participants in the VIP

gaming system. As shown in Figure 2, the junket operator signs a contract with the

casino to operate a VIP room (Relationship A). Then the junket agents recruit VIP

players (Relationship D) and introduce them to the junket operator in exchange for

commissions (Relationship B). On the other hand, the junket operator hires VIP Hosts

(Relationship C), who in turn, provide individualized customer service to VIP players

(Relationship E).

Figure 2

Relationships between participants in the VIP gaming system in Macao.
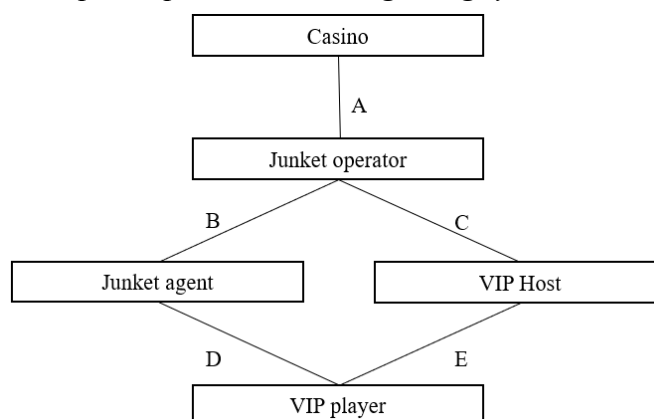
Since the gaming liberalization in 2002, VIP gaming has been legally recognized

and regulated under Administrative Regulation No. 6/2002 (Godinho, 2014). VIP

gaming continues to be an important revenue source of the Macao gambling market.

For example, its revenue hit a record high of US$29 billion in 2013, accounting for

66% of annual gross gaming revenue (Gaming Inspection and Coordination Bureau,

2020). As of January 2018, Ho (2018) reported there were 109 junket operators and

5,698 registered junket agents, with over 200 gaming areas were designated

specifically for VIP play across Macao casinos (Ho, 2018).

Characteristics of Chinese Gamblers

Gambling has a long history in China and has been a popular activity among

Chinese communities for centuries (Binde, 2005). Many Chinese people gamble to

seek both excitement and an opportunity to make money (Tao et al., 2011; Vong,

2007; Zeng & Forrest, 2012). In addition, Ozorio and Fong (2004) found Chinese

gamblers intend to take high risks while gambling, and these players believe that

gaming is a shortcut for them to make money. High-risk players also prefer table

games to slot machines because they perceive that the former offers larger and quicker

winnings than the latter (Lam, 2005). Further, Chinese people hold a strong belief in

Feng Shui, the idea of creating harmony in one's surrounding environment (Kim et

al., 2016). As one example, MGM Resorts rebuilt its lion statue to cater to Chinese

gamblers because entering the mouth of the lion was considered bad Feng Shui by

Chinese patrons (Kim et al., 2016). In addition, Chinese gamblers have a higher

illusion of control (Oei et al., 2008); for example, Chinese baccarat players believe

shouting and peeling cards could help them obtain a favorable hand (Lam, 2012).

Interestingly, this belief might be influenced by gambling-theme Chinese movies,

which showcased skills were involved in gambling, game results were not random,

and supernatural power could be used to beat casinos (Un & Lam, 2016). Also, among

Chinese gamblers, superstitious beliefs are associated with their gambling behaviors.

For instance, gamblers will not read books before gambling as the word "book"

sounds like the word "losing" in Chinese (Huang & Teng, 2009). Moreover,

numerology plays an important role in Chinese culture. The number eight is a lucky

number, because the pronunciation of the word sounds like the word "prosperity" in

Chinese. This could explain why the opening ceremony of the 2008 Summer Olympic

Games in Beijing began at 8 pm on August 8th, 2008 (Pontes & Williams, 2020). On

the other hand, the number four is avoided as it shares the similar pronunciation of the

word "death" in Chinese (Huang & Teng, 2009). Therefore, most casino resorts in

Macao often skip the fourth floor to cater to customers' numerological superstition. Even in Las Vegas, Encore resort has no floors numbered from 40 to 49 (Kim et al., 2016). Furthermore, Pontes & Williams (2020) found Chinese gamblers tended to gamble more often and make larger bets when exposed to the color red, as they perceive this color as a signal of good luck. Perhaps, this could be the reason why Wynn Las Vegas uses the color red for its interior theme (Kim et al., 2016).

Gambling Behaviors among Casino Employees

There has been considerable research conducted studying the gambling behaviors of casino employees. However, VIP Hosts, as an important group of Macao casino employees, have not received much attention among researchers. In general, casino employees exhibit higher rates of participation in gambling than the general population, and are more likely to develop gambling-related problems (Guttentag et al., 2012; Hing et al., 2008; Hing & Gainsbury, 2011; Shaffer et al., 1999; Shaffer & Hall, 2002). In the hope of reducing problem gambling among casino employees, restrictions have been applied in many jurisdictions, including Macao. For instance, Macao casino employees are not allowed to enter casinos when off duty (Law No.17/2018). However, it is unclear if these restrictions effectively reduce problem gambling among casino employees, and some have suggested that they could, in turn, lead to an increase in participation in substitute forms of casino gambling such as lotteries (Dangerfield, 2004).

Further, workplace factors play a crucial role in affecting casino employees'

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behaviors. Hing and Gainsbury (2013) identified five types of risk factors associated with gambling problems among them: (1) workplace triggers to gamble; (2) encouraging influence of work colleagues to gamble; (3) limited social opportunities; (4) familiarity and interest in gambling; and (5) workplace motivators to gamble.

Specifically, workplace triggers include large jackpots, players' big wins, and exposure to gambling at work (Hing & Gainsbury, 2013). Employees who are more exposed to these triggers tend to be more likely to develop gambling problems (Hing & Gainsbury, 2013). Second, encouraging influence of work colleagues to gamble includes working with colleagues who are regular gamblers, talking about the positive aspects, and sharing tips. The greater the influence, the more likely they are to become problem gamblers (Hing & Gainsbury, 2013). Third, as casino employees often work on shift, they have limited opportunities to socialize. This leads to a higher tendency to develop gambling problems (Hing & Gainsbury, 2013). Fourth, gaming employees are more likely to become problem gamblers because of their increased familiarity and greater interest in gambling (Hing & Gainsbury, 2013). Fifth, making friends, relaxing after work and winning money are several examples of workplace motivators to gamble. When employees felt motivated by these factors, they had a higher likelihood of problem gambling (Hing & Gainsbury, 2013).

Casino employees are also influenced by employment factors (e.g., department of employment, length of employment) (Abarbanel et al., 2019; Duquette, 1999; H. J. Shaffer et al., 1999). For instance, employees in the Food, Beverage, & Retail

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departments are more likely to have gambling misconceptions than employees in

Back of House operations (Abarbanel et al., 2019). Also, Duquette (1999) found that

employees who have high contact with gamblers, such as dealers and slot attendants,

exhibit higher problem gambling rates than those who had low exposure to gambling.

In terms of length of employment, casino employees with a longer history of

employment in the gaming industry are more likely to experience gambling-related

harms (Shaffer et al., 1999). Therefore, the current study posits that witnessing large

wins and length of employment will positively affect gambling severity among VIP

Hosts.

    H1. Participants' reports of witnessing large wins are positively associated with

            gambling severity among VIP Hosts.

    H2. Length of employment in the gaming industry is positively associated with

            gambling severity among VIP Hosts.

On the other hand, a previous study identified two protective factors of casino

employment toward the development of gambling problems. These factors include 1)

discouragement from colleagues and 2) exposure to gambling losses and problems,

such as seeing gamblers become upset about gambling and hearing about their losses

(Hing & Gainsbury, 2013)**.** Hence, the researcher proposes that witnessing large losses

will negatively affect gambling severity.

    H3. Participants' reports of witnessing large losses will be negatively associated

            with gambling severity among VIP Hosts.

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With the emergence of responsible gambling (RG), many casino operators now conduct training programs for their employees to minimize the harmful effects of gambling. However, there is little consensus on the impact of RG programs among casino employees. Previous research indicated that RG training sessions help casino employees increase their gambling knowledge and obtain a better understanding of how chance and randomness affect one's chances of winning (Giroux et al., 2008; LaPlante et al., 2012). Whereas Hing and Breen (2008a) argue that RG training does not protect casino employees from developing gambling problems. Further, Guttentag et al. (2012) found the RG training cannot discourage casino employees from gambling. Nonetheless, the Macao government launched an RG program in 2009, and as a result, the public awareness of RG has increased from 23.7% in 2009 to 60.5% in 2013 (Tong et al., 2018). Among Macao casino employees, Wong and Poon (2011) observed significant positive changes in gaming knowledge and symptoms of excessive gambling and they could be maintained after 12 months. Therefore, this study posits that responsible gambling training will be negatively associated with gambling severity among VIP Hosts.

H4. Responsible gambling training will be negatively associated with gambling severity among VIP Hosts.

Cognitive Distortions and Gambling Behaviors

Past studies have shown that cognitive distortions played a significant role in the development and maintenance of problem gambling behaviors (Addicott et al., 2015;

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Cunningham et al., 2014; Leonard & Williams, 2016; Moore & Ohtsuka, 1999; Myrseth et al., 2010; Toneatto & Millar, 2004; Xian et al., 2008). Ladouceur (2004b) suggests gambling cognitive distortions could be classified into three categories: misperceptions about randomness, the illusion of control, and superstitions.

The *gambler's fallacy* (i.e., people tend to believe a particular outcome of random events is less likely to occur when it occurs more frequently during the past) and the *hot hand fallacy* (i.e., people tend to believe a particular outcome of random events is more likely to occur when it occurs more frequently during the past) are two common examples of the misperceptions about randomness (Ayton & Fischer, 2004). Consistent with the hot hand and gambler's fallacies, Suetens et al. (2016) found gamblers bet more on numbers that become "hotter" in the recent past, and bet less on numbers that have been drawn in the preceding week as long as the numbers are not hot.

The *illusion of control* in gambling is an erroneous belief that gamblers overestimate their ability in changing the outcomes of random events (Lopez-Gonzalez et al., 2018). This illusion is significantly associated with pathological gambling (Orgaz et al., 2013). Gamblers with a high illusion of control use the peak win to evaluate gambling experience when they lose, while those with a low illusion of control use the final outcome as the determinant of their evaluation (Cowley et al., 2015). In addition, Myrseth et al. (2010) indicate that gamblers with a stronger illusion of control prefer skill games (e.g., cards games, horse betting, and sports

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betting) to chance games (e.g., slot machines, bingo, and lotteries). But they find there are no differences in the illusion of control between pathological and non-pathological gamblers among those skill-game players.

The superstitions refer to the misperceptions of cause-effect association between two independent events (Joukhador et al., 2004). Touching wood, saying prayers, and wearing lucky charms are several examples of superstitious behaviors in Western culture (Rogers, 1998). Problem gamblers reported higher rates of superstitious beliefs compared to non-problem gamblers, and there was a strong correlation between superstitious beliefs and gambling intensity (e.g., the number of gambling sessions per week, weekly loss) (Joukhador et al., 2004).

To comprehensively assess cognitive distortions, the Gambling Fallacies Measure (GFM) (Leonard et al., 2015; Leonard & Williams, 2016) has been developed and used in recent studies covering over 17,000 individuals (Leonard & Williams, 2016). The assessments of misperceptions about randomness, the illusion of control, and superstitions are all included in this instrument, and higher scores on the GFM reflect greater resistance to cognitive distortions.

In addition, Miller and Currie (2008) suggest cognitive distortions are correlated with an individual's gambling expenditure. For instance, gamblers engaging in risk practices such as borrowing money to gamble bet less money if they have fewer distortions. Similarly, Delfabbro and Winefield (2000) reported that gamblers with cognitive distortions were apt to spend more money in a gambling session than those

without such cognitions. Therefore, the current study posits that GFM scores will be correlated with gambling severity, game preferences, and gambling expenditure among VIP Hosts.

> H5. GFM scores will be negatively associated with gambling severity among VIP Hosts.

> H6. Among VIP Hosts, skill-based game players will have higher GFM scores than non-skill-based game players.

> H7. GFM scores will be negatively associated with gambling expenditure among VIP Hosts.

Risk and Protective Factors Associated with Cognitive Distortions

The research regarding the factors that contribute to cognitive distortions in gambling remains undeveloped (Leonard & Williams, 2019). Gender might be one of the factors associated with cognitive distortions, despite inconsistent findings (Leonard & Williams, 2019; Moore & Ohtsuka, 1999; Tao et al., 2011). Both Moore and Ohtsuka (1999) and Tao et al. (2011) observed males have a stronger illusion of control. In addition, although Leonard and Williams (2019) demonstrate there is no significant correlation between age and cognitive distortions, Moore and Ohtsuka (1999) indicate younger people are apt to hold erroneous beliefs about gambling, which is consistent with the finding that younger casino employees are more likely to develop gambling-related distortions (Hing & Breen, 2008b). Further, Hing and Breen (2008b) reported newer employees had a higher tendency towards erroneous beliefs.

Abbott (2006) supported this finding by suggesting that lack of gambling exposure would increase the likelihood of having cognitive distortions. Hence, this study posits that age, gender, and length of employment in the gaming industry will affect GFM scores among VIP Hosts.

H8. Age will be negatively associated with GFM scores among VIP Hosts.

H9. Among VIP Hosts, men will have higher GFM scores than women.

H10. Length of employment in the gaming industry will be negatively associated with GFM scores among VIP Hosts.

Notably, cultural factors might play an important role in reinforcing cognitive distortions. As mentioned earlier, given the unique characteristics of Chinese culture, Chinese people tend to believe in Feng Shui, hold strong beliefs in numerology, and prefer the color red. As such, VIP Hosts might display greater cognitive distortions compared to Western casino employees who perform a similar job.

Summary

Based on the literature review, to comprehensively investigate the gambling behaviors among Macao VIP Hosts and identify factors associated with their gambling behaviors, the researcher proposes an investigative framework consisting of risk and protective factors, problem gambling severity, and cognitive distortions (see Figure 1).

The researcher intends to answer the following research questions through this model and suggests the following hypotheses.

Research Questions and Hypotheses

1. How do VIP Hosts' risk and protective factors correlate with problem gambling?

H1. Participants' reports of witnessing large wins will be positively associated with gambling severity among VIP Hosts.

H2. Length of employment in the gaming industry will be positively associated with gambling severity among VIP Hosts.

H3. Participants' reports of witnessing large losses will be negatively associated with gambling severity among VIP Hosts.

H4. Responsible gambling training will be negatively associated with gambling severity among VIP Hosts.

2. How do VIP Hosts' risk and protective factors correlate with cognitive distortions?

H6. Among VIP Hosts, skill-based game players will have higher GFM scores than non-skill-based game players.

H7. GFM scores will be negatively associated with gambling expenditure among VIP Hosts.

H8. Age will be negatively associated with GFM scores among VIP Hosts.

H9. Among VIP Hosts, men have higher GFM scores than women.

H10. Length of employment in the gaming industry will be negatively associated with GFM scores among VIP Hosts.

3. How do VIP Hosts' cognitive distortions correlate with problem gambling?

H5. GFM scores will be negatively associated with gambling severity among

VIP Hosts.

CHAPTER 3

METHODS

This chapter introduces the method that was used to investigate the gambling

behaviors among Macao VIP Hosts based on the investigative framework proposed in

Chapter 1. The sampling, data collection, participant recruitment, survey instrument,

data analysis, and ethical concerns will be discussed in detail.

Sampling

Samples were drawn from the gaming employees who had worked as VIP Hosts

in the past six months in Macao. Both current and former employees were eligible to

participate in the study. All participants must be over 18 years old. Although there was

no nationality limitation, they must be able to read Chinese or English.

Data Collection and Participant Recruitment

An online survey (see Appendix A) was used to collect the data. It was developed

in Qualtrics, a web-based tool for survey creation and distribution. The survey was

first made available for respondents on April 21, 2020 and closed on May 4, 2020.

During the first round of data collection, only 16 valid responses were received. To

increase the response rate, the researcher decided to offer incentives in the second

round, which began on June 10, 2020 and ended on July 12, 2020. The second-round

survey remained the same except for the incentive section. Participants who

completed the survey in the first round were also eligible to receive the incentive upon

verification. All responses were automatically recorded in Qualtrics. The researcher then de-identified the collected data and saved it in an electronic file with a password.

The researcher employed a snowball technique to recruit participants for the study. The snowball technique has been previously used to recruit sensitive groups for research purposes (Sadler et al., 2010). Firstly, the researcher sent recruitment messages (see Appendix B) via WeChat (a Chinese messaging app) to several VIP Hosts as he used to work in Macao and knew a group of people who worked as VIP Hosts in Macao. Also, participants were encouraged to share this survey with other VIP Hosts.

As an incentive, participants who completed the survey were eligible to receive a $5 Amazon gift card or to choose a $5 donation to COVID-19 Fund for the World Health Organization. Participants who chose the gift card were required to provide their email address by going to a new link. It was separate from the main survey so that the researcher could assure the anonymity of their responses. The digital gift cards were distributed through the Amazon website after all surveys were collected.

Description of Survey Instrument

Participants first arrived at a consent page where they were presented with the informed consent document (see Appendix C). Upon reading the consent document, they could click a button indicating that they consent ("Agree, I have read the above information and agree to participate in this study") or click a button indicating that they do not consent (Disagree, I do not wish to participate in the study). Participants

who chose not to consent were directed to a page thanking them for considering participating. Participants who chose to consent were re-directed to the survey.

The survey began with a screening question to verify whether respondents had worked as VIP Hosts in the past six months in Macao. If respondents answered "no", they were directed to a page thanking for their time. If respondents answered "yes", they were directed to a grouping question that asked whether respondents were "currently working as a VIP host in Macao". If respondents answered "yes", the remaining survey questions would be customized for current employees; If respondents answered "no", the remaining questions would be customized for former employees. Then respondents were asked a series of demographic questions, including gender, age, country of origin, education level, marital status, and monthly income. Questions that followed were about their gambling behaviors. Following this, respondents were directed to the next two sections that assessed their cognitive distortions and gambling severity, respectively.

Gambling Fallacies Measure (GFM)

The GFM (Leonard et al., 2015; Leonard & Williams, 2016) includes10 multiple-choice questions, each with only one correct answer. GFM Scores are the summation of the correct responses and range from 0 to 10. Higher scores reflect greater resistance to cognitive distortions. The GFM assesses all of main gambling fallacies: hot hand fallacy (Questions 2, 4, 10); Monte-Carlo fallacy (Questions 1, 2, 4, 10); belief that luck is dispositional (Questions 3, 4); illusion of control (Questions 5, 8, 9);

insensitivity to sample size (Question 6); and base rate neglect (Question 7) (Leonard & Williams, 2016). By conducting factor analysis, a two-factor solution was found to be most consistent: a failure to understand the randomness and chance of most gambling games (Questions 1, 2, 3, 4, 5, 8, 9, and 10) and lack of statistical knowledge (Questions 6 and 7) (Leonard & Williams, 2016). The hierarchical coefficient omega for this measure is 0.61, which indicates adequate internal consistency. Besides, the one-month test-retest reliability is good (r=.70) (Leonard et al., 2015). Over 17,000 people from different countries have been successfully assessed by using this measure. These samples were between 13 to 89 years old and included over 1000 problem gamblers (Leonard & Williams, 2016). Because GFM is the only available measure that has strong content validity, adequate convergent, discriminant validity, and external validity (Leonard et al., 2015; Leonard & Williams, 2019), it was selected for the survey instrument in this study. As the Chinese version of the GFM was not available, the researcher translated the original version into Chinese and sent it to an independent researcher who was proficient in both English and Chinese for verification. Minor changes were also made to adapt to the Chinese culture after consulting with two casino employees in Macao.

The Chinese Version of South Oaks Gambling Screen (C-SOGS)

The original SOGS is a 20-item questionnaire, derived from clinical criteria of pathological gambling in DSM-III (Lesieur & Blume, 1987). This instrument was developed in 1987 to screen for pathological gambling and has been largely used in

problem gambling research for several decades. The C-SOGS was first available in 2007 when the SOGS was translated from English into Chinese by local clinicians in Macao and then back-translated into English by independent researchers (Tang et al., 2007). The results of Tang et al. (2010) show that the C-SOGS is a reliable and valid instrument to screen for problem and pathological gambling. Each question in C-SOGS is scored with 0 or 1. The total score is ranging from 0 to 20. Further, Tang et al. (2010) suggest a cut score of 8 could be used to classify individuals as pathological gamblers in Chinese societies.

Next, an open-ended question was presented so that respondents could share their additional thoughts on responsible gaming and problem gambling with the researcher. Upon completion of the survey, respondents entered the incentive section. They were asked whether they wanted an incentive. If yes, they were directed to a separate webpage where they could select their prize and provide their email address. If not, they were directed to the end of the survey.

Data Analysis

The data file was downloaded from Qualtrics and imported into SPSS 25 for analysis. Prior to formal data analysis, descriptive statistics were used to summarize VIP Hosts' demographic information (gender, age, nationality, income, etc.) and their gambling behaviors (gambling frequency, betting amount, motives, etc.). As suggested by Osborne and Overbay (2004), the $z=3$ rule was followed to detect univariate outliers.

Next, Shapiro-Wilk tests were conducted to check the normality of C-SOGS scores and GFM scores. As C-SOGS scores were not normally distributed, the hypotheses regarding RQ1 (H1, H2, H3, and H4) were tested via Kruskal-Wallis tests. On the other hand, because GFM scores followed a normal distribution, H7 and H10 were tested via one-way ANOVA. In addition, an independent samples t-test and a Pearson product-movement correlation were conducted to examine H8 and H9, respectively. Notably, since the survey did not include questions on game preference (i.e., skill-based game or chance game), the author failed to test H6. The measurement of each variable is as follows:

1. Age: it ranges from 16 to 60.

2. Gender: male = 1; female = 2; prefer not to say = 3.

3. Length of employment in the gaming industry: below 1 year = 1; 1 - 3 years = 2; 3 - 5 years = 3; 5 - 7 years = 4; above 7 years = 5.

4. Witnessing large wins (HK$): below 1,000,000 = 1; 1,000,000 - 5,000,000 = 2; 5,000,000 - 10,000,000 = 3; 10,000,000 - 20,000,000 = 4; above 20,000,000 =5.

5. Witnessing large losses (HK$): below 1,000,000 = 1; 1,000,000 - 5,000,000 = 2; 5,000,000 - 10,000,000 = 3; 10,000,000 - 20,000,000 = 4; above 20,000,000 =5.

6. Frequency of RG training: never = 1; once a year = 2; twice a year =3; more than twice a year = 4.

7. Monthly gambling expenditure (HK$): below 1,000 = 1; 1,000 - 5,000 = 2; 5,000 - 10,000 = 3; above 10,000 = 4.

8. C-SOGS score: it is the total score of the 20-item questionnaire and ranges from 0 to 20.

9. GFM score: it is the summation of the correct responses in the GFM and ranges from 0 to 10.

Moving further, based on the results of hypotheses testing, all significant variables would be included in Multiple Linear Regression (MLR) models that predict C-SOGS scores and GFM scores. By doing this, the author would further understand the relationships among problem gambling, cognitive distortions, and other factors. Meanwhile, several underlying assumptions would be tested to conduct the MLR analysis,. First, the normality of the residuals would be examined via Shapiro-Wilk tests. Second, variation inflation factors (VIFs) would be used to detect multicollinearity. A VIF value of 5 or higher indicates the existence of multicollinearity. Third, a scatterplot of residuals versus predicted values would be observed to examine homoscedasticity. Moreover, in order to compare the differences between past-year gamblers and non-gamblers, the author conducted a subgroup analysis.

Ethical Concerns

The online survey had limited anticipated risks. One possible concern could be that participants who had been suffering from gambling problems might feel upset or

embarrassed when they tried to answer some of the questions. A list of local resources regarding problem gambling treatment was provided at the end of the survey (see Appendix A). If they chose to exit the survey, they would have a prompt that shared these gambling treatment resources with them.

To assure the anonymity of participants' responses, several steps were taken. The researcher blocked the storage of IP addresses from participants to assure their responses could not be linked back. Further, participants who were willing to take the incentive were required to enter a new link and provide an email address. The link was separate from the main survey. Hence, their personal information collected in the main survey could not be associated with their email address.

CHAPTER 4

RESULTS

Overview of the Sample

A total of 71 individuals opened the survey link; 56 participants completed the survey, resulting in a completion rate of 78.9%. Of the 56 surveys submitted, 13 were excluded as respondents did not identify themselves as VIP Hosts, and 1 was excluded as the respondent reported he had completed the survey twice. After examining Z scores, one additional outlier was removed. Thus, a total of 41 responses were included for the final analyses.

Demographics

Table 1 summarized the demographic characteristics of 41 respondents. Their average age was 30.2 years old (SD=3.6), with a maximum age of 40 and a minimum age of 24. It could be observed that more than half of the sample was male (53.7%), the majority of the respondents were from Macao (48.8%) or Taiwan (41.5%), over 70% of the sample obtained a bachelor's degree, nearly two-thirds of the respondents were single (68.3%).

Table 1
Demographic Characteristics of the Study Sample

	N	Percent
Age		
Mean age ± SD	30.2 ± 3.6	
Gender		
Male	22	53.7

	N	Percent
Female	18	43.9
Prefer not to respond	1	2.4
Country/region of residence		
Macao	20	48.8
Taiwan	17	41.5
Malaysia	3	7.3
Hong Kong	1	2.4
Highest level of education		
High school or equivalent	11	26.8
Bachelor's degree	29	70.7
Master's degree or above	1	2.4
Marital status		
Single	28	68.3
Married	13	31.7

Occupational Characteristics

The occupational characteristics of the study sample were presented in Table 2. Although junket operators predominated in the VIP gaming industry, over half of the respondents were hired by casino operators (58.5%). Most of the respondents earned between HK$15,000 and HK$35,000 per month (75.6%). Nearly one-third of the respondents worked in the VIP gaming industry for 3-5 years (31.7%). Most of the respondents received RG training at least once a year (85.4%), whereas 6 employees did not receive it in the past 12 months (14.6%).

Table 2
Occupational Characteristics of the Study Sample

	N	Percent
Employer		
Casino operator	24	58.5
Junket operator	17	41.5
Monthly income (HK$)		
15,000-25,000	15	36.6

	N	Percent
25,000-35,000	16	39.0
35,000-45,000	5	12.2
45,000-55,000	3	7.3
Over 55,000	2	4.9
Years in the VIP gaming industry		
Below 1 year	2	4.9
1-3 years	10	24.4
3-5 years	13	31.7
5-7 years	9	22.0
Above 7 years	7	17.1
Frequency of RG training		
Never	6	14.6
Once a year	19	46.3
Twice a year	9	22.0
More than twice a year	7	17.1

Witnessing Largest Wins/Losses

Table 3 displayed the largest win/loss for a client's single trip that was witnessed by the respondents. Thirty-nine percent of respondents had witnessed a win and loss over HK$20 million (39.0%), followed by HK$5-10 million (win: 29.3%, loss: 31.7%). Less than 10% of the respondents reported their witnessing largest wins or losses were below HK$1 million.

Table 3

Witnessing Largest Win/Loss

	N	Percent
Win (HK$)		
Below 1,000,000	3	7.3
1,000,000 - 5,000,000	4	9.8
5,000,000 - 10,000,000	12	29.3
10,000,000 - 20,000,000	6	14.6
Above 20,000,000	16	39.0
Loss (HK$)		
Below 1,000,000	1	2.4

		N	Percent
1,000,000 - 5,000,000		6	14.6
5,000,000 - 10,000,000		13	31.7
10,000,000 - 20,000,000		5	12.2
Above 20,000,000		16	39.0

Gambling Behaviors among VIP Hosts

The gambling behaviors of the respondents were reported in Table 4.

Approximately 37% of the respondents gambled in the past 12 months (N=15). On

average, respondents spent HK$4,200 per month on gambling. Out of the 15

gamblers, 13 gambled less than once a month (86.7%). When asked which forms of

gambling activities they participated in, the respondents could select multiple

response options. Sixty percent of the gamblers bet at Macao casinos (N=9), 33.3%

purchased Mark Six lottery tickets (N=5), 20.0% played Mahjong or cards at home

(N=3), 13.3% gambled at slot venues (N=2), and 6.7% wagered on soccer or

basketball (N=1).

Table 4
Gambling Behaviors of the Study Sample

	N	Percent
Gambled in the past 12 months		
Yes	26	63.4
No	15	36.6
Gambling frequency		
Less than once a month	13	86.7
Once a month	1	6.7
More than once a month	1	6.7
Monthly gambling expenditure ($HK)		
Below 1,000	6	42.9
1,000 - 5,000	3	21.4
5,000 - 10,000	2	14.3

Above 10,000	3	14.3
Forms of gambling activities (multiple responses)		
Betting at Macao Casinos	9	60.0
Mark Six	5	33.3
Playing Mahjong or Cards at Home	3	20.0
Betting at Slot Venues	2	13.3
Soccer/Basketball Betting	1	6.7

Gambling Motives

Table 5 illustrated the gambling motives of the respondents who gambled in the past 12 months (N=15). They agreed most strongly that gamble was "to win money" (*M*=6.07, *SD*=1.64), followed by "to have fun" (*M*=5.33, *SD*=1.59) and "to experience my achievement" (*M*=4.36, *SD*=1.74). Also, respondents agreed least strongly that gamble was "to escape from routine life" (*M*=2.36, *SD*=1.60).

Table 5
Gambling Motives of the Study Sample

	Mean	SD
To win money	6.07	1.64
To have fun	5.33	1.59
To experience my achievement	4.36	1.74
To be with friends	3.86	2.14
To take risks	3.86	2.14
To learn casino games	2.93	1.59
To release tensions	2.93	1.77
To meet new people	2.57	1.56
To escape from routine life	2.36	1.60

Note. Strongly agree=7, Agree=6, Somewhat agree=5, Neither agree nor disagree=4, Somewhat disagree=3, Disagree=2, Strongly disagree=1.

Gambling Fallacies Measure (GFM) Scores

The GFM score ranges from 0 to 10. As shown in Table 6, the average GFM

score was 6.41 (*SD*=1.95), with the highest score of 10 and the lowest score of 2.

Over 80% of the respondents scored between 4 and 8. The respondents scored the

lowest scores on Questions 6 and 7, which were used to evaluate the knowledge of

statistical probabilities (Leonard & Williams, 2016).

For Question 6, the correct answer is "4 times", while more than half of the

respondents chose "it is just as likely that he has gone either 4 or 100 times" or "100

times" (56.1%). For Question 7, approximately one-third of the respondents selected

the correct answer (34.1%), "betting all your money on a single bet".

Table 6

Gambling Fallacies Measure Scores of the Study Sample

GFM Scores	N	Percent
2	1	2.4
3	1	2.4
4	6	14.6
5	5	12.2
6	9	22.0
7	5	12.2
8	8	19.5
9	4	9.8
10	2	4.9

C-SOGS Results

Table 7 summarized the C-SOGS scores and categorization of the study sample.

The average score was 2.27, with a standard deviation of 2.54. As suggested by Tang

et al. (2010), participants who scored 8 or higher on the C-SOGS were classified as

pathological gamblers, while participants who scored between 0 and 4 were non-

problem gamblers. Meanwhile, the researcher classified the respondents as at-risk

gamblers when their C-SOGS scores were between 5 and 7. Thus, most of the

respondents would be classified as non-problem gamblers (82.9%), whereas

pathological gamblers accounted for 7.3% of the respondents and 9.8% were at-risk

gamblers.

Table 7
C-SOGS Results of the Study Sample

	N	Percent
Scores		
0	13	31.7
1	8	19.5
2	7	17.1
3	2	4.9
4	4	9.8
5	1	2.4
6	1	2.4
7	2	4.9
8	3	7.3
Category		
Non-problem gambler	34	82.9
At-risk gambler	4	9.8
Pathological gambler	3	7.3

Note. Non-problem gamblers (scores: 0-4), At-risk gamblers (scores: 5-7),
Pathological gamblers (scores: 8-20).

Hypotheses Testing: Risk and Protective Factors & Problem Gambling (RQ1)

A Shapiro-Wilk test showed that C-SOGS scores were not normally distributed, W

(41)=.82, *p*<.05. Thus, Kruskal-Wallis tests were used to examine H1, H2, H3, and

H4. According to the p-values in Table 8, there were no significant differences in

mean C-SOGS scores for the respondents who reported varying results on (1)

witnessed largest wins, $H(4)=4.35$, $p=.79$; (2) witnessed largest losses, $H(4)=4.78$,

$p=.31$; (3) tenure in the VIP gaming industry, $H(4)=6.84$, $p=.15$; and (4) frequency of

RG training, $H(3)=1.55$, $p=.67$. All hypotheses (H1, H2, H3, and H4) for RQ1 were

rejected.

H1. Participants' reports of witnessing large wins are positively associated with

gambling severity among VIP Hosts.

H2. Length of employment in the gaming industry is positively associated with

gambling severity among VIP Hosts.

H3. Participants' reports of witnessing large losses will be negatively associated

with gambling severity among VIP Hosts.

H4. The frequency of RG training will be negatively associated with gambling

severity among VIP Hosts.

Table 8
Summary of Kruskal-Wallis Tests for C-SOGS

	C-SOGS		
	M (SD)	H	η^2
Witnessing large wins (HK$)			
Below 1,000,000	4.67 (3.21)	4.35 (*p*=.79)	.12
1,000,000-5,000,000	.75 (.96)		
5,000,000-10,000,000	2.17 (2.33)		
10,000,000-20,000,000	2.83 (2.71)		
Above 20,000,000	2.06(2.69)		

Witnessing large losses (HK$)			
Below 1,000,000	7.00 (n/a)	4.78 (*p*=.31)	.12
1,000,000-5,000,000	1.50 (2.35)		
5,000,000-10,000,000	2.54 (2.26)		
10,000,000-20,000,000	2.80 (2.78)		
Above 20,000,000	1.87 (2.68)		
Years in VIP industry			
Below 1	3.50 (4.95)	6.84 (*p*=.15)	.17
1-3	.90 (1.37)		
3-5	2.23 (2.17)		
5-7	2.22 (2.82)		
Above 7	4.00 (3.00)		
Frequency of RG training			
Never	3.67 (4.03)	1.55 (*p*=.67)	.004
Once a year	1.79 (2.04)		
Twice a year	2.78 (2.54)		
More than twice a year	1.71 (2.21)		

Hypotheses Testing: Risk and Protective Factors & Cognitive Distortions (RQ2)

A Shapiro-Wilk test indicated GFM scores were normally distributed, W (41)=.96, *p*=.22. Thus, H7 and H10 were tested by using one-way ANOVA. In addition, a Pearson Product-movement correlation test was conducted to test H8, while an independent samples *t*-test was conducted to test H9. As shown in Table 9, no significant difference in mean GFM scores was found for respondents who reported varying results on (1) monthly gambling expenditure, $F(3, 10)=1.20$, $p=.36$, $\eta^2_P = .26$, and (2) tenure in the VIP gaming industry, $F(4, 36)=.11$, $p=.98$, $\eta^2_P =.01$.

Table 11 illustrated male respondents (*M*=6.77, *SD*=2.15) outperformed female respondents (*M*=5.89, *SD*=1.60) in terms of average GFM scores. However, the mean difference was not significant, $t(38)=-1.44$, $p>.05$. Further, the Pearson correlation test

showed that age and GFM scores were not significantly related, $r=.15$, $p=.35$ (see

Table 10). All hypotheses (H7, H8, H9, and H10) for RQ2 were rejected.

H7. GFM scores will be negatively associated with gambling expenditure among

VIP Hosts.

H8. Age will be negatively associated with GFM scores among VIP Hosts.

H9. Among VIP Hosts, men will have higher GFM scores than women.

H10. Length of employment in the gaming industry will be negatively associated

with GFM scores among VIP Hosts.

Table 9

Summary of One-way ANOVA Test for GFM

	GFM Scores		
	M (SD)	F	Partial η^2
Monthly gambling expenditure (HK$)			
Below 1,000	7.33 (2.16)	1.20 (p=.36)	.26
1,000-5,000	5.00 (.00)		
5,000-10,000	6.00 (2.83)		
Above 10,000	6.67 (.58)		
Years in VIP industry			
Below 1	6.50 (3.54)	.11 (p=.98)	.01
1-3	6.10 (1.91)		
3-5	6.54 (1.98)		
5-7	6.67 (2.35)		
Above 7	6.29 (1.50)		

Table 10

Summary of Pearson Correlations between GFM and Age

	M (SD)	GFM Scores	Age
GFM Scores	6.41 (1.59)	1	
Age	2.27 (2.54)	.15 (p=.35)	1

Table 11

Summary of Independent Samples t-tests for Male vs. Female

	M (SD)	t	p
Male	6.77 (2.15)	-1.44	.16
Female	5.89 (1.60)		

Hypotheses Testing: Cognitive Distortions & Problem Gambling (RQ3)

To test H5, a Pearson correlation test was performed. As shown in Table 12, no significant correlation between GFM scores and C-SOGS scores was found, r=-.13, p=.40. Thus, H5 for RQ3 was rejected.

H5. GFM scores will be negatively associated with gambling severity among VIP Hosts.

Table 12

Summary of Pearson Correlations between GFM and C-SOGS

	M (SD)	GFM	C-SOGS
GFM	6.41 (1.59)	1	
C-SOGS	2.27 (2.54)	-.13 (*p*=.40)	1

Modeling

As shown in Table 13, all hypotheses were rejected through the data analyses. Therefore, there existed no significant correlations among C-SOGS scores, GFM scores, and risk and protective factors. Moreover, the MLR model that predicts C-SOGS scores could not be conducted, given all independent variables were not significant. Nonetheless, a subgroup analysis was used to further investigate the

patterns between past-year gamblers and non-gamblers among the study sample.

Table 13

Summary of Hypotheses Testing

No.	Hypotheses	Results
H1	Participants' reports of witnessing large wins are positively associated with gambling severity among VIP Hosts.	Rejected
H2	Length of employment in the gaming industry is positively associated with gambling severity among VIP Hosts.	Rejected
H3	Participants' reports of witnessing large losses will be negatively associated with gambling severity among VIP Hosts.	Rejected
H4	Responsible gambling training will be negatively associated with gambling severity among VIP Hosts	Rejected
H5	GFM scores will be negatively associated with gambling severity among VIP Hosts.	Rejected
H7	GFM scores will be negatively associated with gambling expenditure among VIP Hosts.	Rejected
H8	Age will be negatively associated with GFM scores among VIP Hosts.	Rejected
H9	Among VIP Hosts, men will have higher GFM scores than women.	Rejected
H10	Length of employment in the gaming industry will be negatively associated with GFM scores among VIP Hosts.	Rejected

Subgroup Analysis: Gamblers vs. Non-gamblers

In the survey, participants were asked whether they gambled in the past 12 months. If yes, they were identified as past-year gamblers (N=15). The remaining respondents were past-year non-gamblers (N=26). Because of the limited sample size, Fisher's exact tests were performed to assess the associations between gambling and other factors. Prior to running Fisher's exact tests, all variables were re-categorized into two groups. Table 14 indicated no significant differences between past-year

gamblers and non-gamblers, regarding their gender (p=.75), residence (p=1.00), highest level of education (p=1.00), marital status (p=.31), employer (p =.52), monthly income (p=.28), tenure in the VIP industry (p=1.00), frequency of RG training (p=.65), witnessing largest wins (p=.75), and witnessing largest losses (p=.11).

Table 14

Fisher's Exact Test for Past-year Gamblers and Non-gamblers

	Gambler	Non-gambler	
	N (%)	N (%)	p (2-sided)
Gender			
Male	9 (60.0)	13 (52.0)	.75
Female	6 (40.0)	12 (48.0)	
Residence			
Local (Macao)	7 (46.7)	13 (50.0)	1.00
Non-local (Hong Kong, Taiwan, Malaysia)	8 (53.3)	13 (50.0)	
Highest level of education			
High school or equivalent	4 (26.7)	7 (26.9)	1.00
Bachelor's degree and above	11 (73.3)	19 (73.1)	
Marital status			
Single	12 (80.0)	16 (61.5)	.31
Married	3 (20.0)	10 (38.5)	
Employer			
Casino operator	10 (66.7)	14 (53.8)	.52
Junket operator	5 (33.3)	12 (46.2)	
Monthly income (HK$)			
Below 35,000	13 (86.7)	18 (69.2)	.28
Above 35,000	2 (13.3)	8 (30.8)	
Years in VIP industry			
Below 3	4 (26.7)	8 (30.8)	1.00
Above 3	11 (73.3)	18 (69.2)	
Frequency of RG training			
Never	3(20.0)	3(11.5)	.65
At least once a year	12(80.0)	23 (88.5)	
Witnessing largest wins (HK$)			

Below 10,000,000	6 (40.0)	13 (50.0)	.75
Above 10,000,000	9 (60.0)	13 (50.0)	
Witnessing largest losses (HK$)			
Below 10,000,000	10 (66.7)	10 (38.5)	.11
Above 10,000,000	5 (33.3)	16 (61.5)	

According to the results of Shapiro-Wilk tests, both age (W(40)=.96, *p*=.23) and GFM scores (W(41)=.96, *p*=.22) were normally distributed. Thus, independent samples t-tests were conducted to compare the mean age and GFM scores for past-year gamblers and non-gamblers. As shown in Table 15, there were no significant differences between the two groups regarding age and GFM scores (*p*>.05).

Table 15
t-tests for Past-year Gamblers and Non-gamblers

	Gambler	Non-gambler		
	M (SD)	M (SD)	*t*	*p*
Age	31.53 (3.40)	31.20 (3.15)	-.32	.76
GFM	6.53 (1.77)	6.34 (2.08)	-.29	.78

As C-SOGS scores (W(41)=.82, *p*<.05) were not normally distributed, a Mann-Whitney test was used to compare the difference between the two groups of VIP Hosts. Table 16 showed that C-SOGS scores of past-year gamblers (*Mdn*=3.00) were higher than those of past-year non-gamblers (*Mdn*=1.00), and the difference was significant, U($N_{gamblers}$=15, $N_{no\text{-}gamblers}$=26)=105.50, *z*=-2.48, *p*=.01.

Table 16

Mann-Whitney Test for Past-year Gamblers and Non-gamblers

	Gambler	Non-gambler			
	Median	Median	U	z	*p*
C-SOGS	3.00	1.00	105.50	-2.48	.01

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CHAPTER 5

DISCUSSION

Gambling Participation

Overall, nearly one-third of participants gambled in the past 12 months. Among them, more than 80% gambled less than once a month and betting at Macao casinos was the most popular gambling activity.

Inconsistent with previous literature (Guttentag et al., 2012; Hing et al., 2008; Hing & Gainsbury, 2011; Shaffer et al., 1999), Macao VIP Hosts did not exhibit a high rate of gambling participation. Specifically, only 36.6% of VIP Hosts were identified as past-year gamblers. This number is much lower than reported by Hing and Gainsbury (2011) (94.5%) and Guttentag et al. (2012) (97.0%) among casino employees in the Western countries. While in Asia, this finding supports a recent study that found no significant difference in the gambling involvement between Macao casino employees and the general population (Zeng et al., 2020). The author notes two significant external factors may result in a low level of gambling participation for VIP Hosts. First, a new law that prohibited Macao casino employees from entering casinos when off-duty took effect on December 27, 2019 (Law No.17/2018). Gambling at casinos or slot venues was no longer an option for Macao casino employees, including VIP Hosts. Second, the data were collected during the COVID-19 pandemic. The outbreak of coronavirus negatively impacted the Macao gambling industry, resulting in nearly 60% of casino employees have been forced to

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take unpaid leave since the pandemic (Macau Daily Times, 2020). Thus, with lower income, some VIP hosts may have been less likely to gamble.

Problem Gambling

Although the rate of gambling participation was low, Macao VIP Hosts exhibited a high rate of problem gambling as compared to the general public (Zeng et al., 2020). Nearly one in ten (9.8%) VIP Hosts were classified as at-risk gamblers (C-SOGS: 5-7) and 7.3% were pathological gamblers (C-SOGS: 8 and above), whereas 82.9% of VIP Hosts reported no gambling problems (C-SOGS: 0-4). However, the results may not be generalizable due to the limitations of snowball sampling. Nevertheless, this finding is in line with previous research that found a higher problem gambling rate among casino employees compared to the general population (Guttentag et al., 2012; Hing & Gainsbury, 2011; Shaffer et al., 1999). Moreover, the present study showed a significant difference in program gambling scores between past-year gamblers and non-gamblers, which is understandable considering that non-gamblers are less likely to develop gambling problems than gamblers.

Gambling Motives

In terms of gambling motives, winning money was the most endorsed reason for gambling among the respondents. This finding is consistent with past research that indicated Chinese gamblers often perceive gambling as a way of making money (Ozorio & Fong, 2004; Tao et al., 2011; Vong, 2007; Zeng & Forrest, 2012). On the other hand, although past research has shown that escape served as the core reason to

gamble (Wood & Griffiths, 2007), the least strongly endorsed gambling motive in this study was to escape from routine life. This finding could be explained by the nature of VIP Hosts' work. For instance, unlike casino dealers, VIP Hosts are not required to perform repetitive tasks at work, such as dealing cards. Instead, they often have flexible work arrangements and are encouraged to socialize with gamblers. Because of this, VIP Hosts may not easily get bored with the routine life, not to mention they want to escape from it by gambling.

Risk and Protective Factors & Problem Gambling

This study fails to support the previous finding that witnessing big wins was a risk factor of problem gambling (Hing & Gainsbury, 2013). Meanwhile, no significant difference in C-SOGS scores was observed between the respondents with varying witnessing largest losses. This result is inconsistent with the finding of Hing and Gainsbury (2013) that witnessing big losses was negatively correlated with problem gambling. This inconsistency may be due to the high volatility of Baccarat. Since Baccarat is the most popular game in the VIP gaming market, VIP Hosts are frequently exposed to huge wins or losses. As such, they are more likely to understand the randomness and chance of the game and less likely to establish irrational beliefs about gambling by witnessing the players' wins or losses.

Regarding the relationship between Responsible Gambling (RG) training and problem gambling, although the respondents who received RG training at least once a year had a lower mean problem gambling score than those who didn't receive it, the

difference was not statistically significant. Inconsistent with research that has shown casino employees could decrease the likelihood of developing gambling problems after completing RG training (LaPlante et al., 2012), this study supports a previous study demonstrating that RG training may be ineffective at minimizing problem gambling among casino employees (Hing & Breen, 2008a). However, it is noteworthy that the present study only investigated the frequency of RG training, which may not serve as a significant protective factor against problem gambling. As the content of RG training problems varies from casino to casino (Beckett et al., 2020), further studies should include the measurement of the training effectiveness of RG programs to comprehensively examine the relationship between RG training and problem gambling among VIP Hosts.

Risk and Protective Factors & Cognitive Distortions

To investigate the risk and protective factors related to cognitive distortions, four variables were examined in the present study, including gender, age, gambling expenditure, and tenure in the VIP gaming industry. First, no significant correlation between gender and the Gambling Fallacies Measure (GFM) scores was observed, although men reported higher mean scores than women. This finding is in line with the previous literature demonstrating the impact of gender difference on the cognitive distortions remained controversial (Leonard & Williams, 2019; Moore & Ohtsuka, 1999; Tao et al., 2011). Second, although past research has shown that younger people tended to have stronger illusions of control over winning (Moore & Ohtsuka, 1999),

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the available evidence suggested that age is not a significant factor associated with cognitive distortions, which is consistent with the findings of Leonard and Williams (2019). Third, this study fails to support past research that showed cognitive distortions were correlated with gambling expenditure (Delfabbro & Winefield, 2000; Miller & Currie, 2008). Fourth, contrary to the findings that newer staff were more likely to hold false beliefs about winning due to new exposure to gambling (Hing & Breen, 2008b), tenure in the gaming industry is not a crucial predictor of cognitive distortions. Again, the small sample size may lead to biased outcomes. Replicated studies with larger sample sizes are needed to confirm these initial findings.

Cognitive Distortions & Problem Gambling

The majority of respondents reported relatively low scores in GFM, suggesting gambling fallacies are prevalent among VIP Hosts. This finding is in accordance with recent studies that indicated gambling fallacies could be commonly found in the general population (Leonard et al., 2021; Leonard & Williams, 2016).

As higher GFM scores reflect greater resistance to cognitive distortions, a higher GFM score should result in a lower likelihood of problem gambling (Addicott et al., 2015; Cunningham et al., 2014; Leonard & Williams, 2016; Moore & Ohtsuka, 1999; Myrseth et al., 2010; Toneatto et al., 1997; Xian et al., 2008). This study, however, found no significant correlation between GFM scores and problem gambling scores. Moreover, no significant difference in GFM scores was detected for past-year gamblers and non-gamblers. Even considering the potential bias of the small sample

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size, the data collected seem to suggest cognitive distortions are not a crucial

predictive factor of problem gambling, which is in line with the findings of Leonard et

al. (2021).

Study Implications

Despite the small sample size, the present study provided preliminary evidence

to support several implications in the gaming field. First, the study reported a high

rate of problem gambling among Macao VIP Hosts, who serve as the closest point of

contact for VIP players on the casino floor. There is a possibility that a VIP Host who

holds gambling misconceptions provides a guest with an unpleasant experience, as the

VIP Host's false beliefs in gambling may trigger the player's problematic gambling

behaviors, such as chasing losses. To prevent this from happening, both casino

operators and junkets should proactively identify at-risk gamblers among their VIP

Hosts and provide them with adequate support in a timely manner. For example, the

Human Resources (HR) department could conduct routine problem gambling

screening in the VIP department. Each VIP Host will be encouraged to participate in

this program by monetary incentives provided by the HR department. Once a VIP

Host meets the screening criteria for problem gambling, the HR staff will refer

him/her to a professional counselor.

Regarding the treatment of problem gambling, this study found that cognitive

distortions are not strongly related to problem gambling severity among VIP Hosts.

Hence, problem gambling counselors should realize that although fixing cognitive

distortions is often included in the treatment and RG training (Yakovenko et al., 2016), it may not be effective to help VIP Hosts. In addition, RG program providers could consider developing tailor-made training for casino employees in different departments, rather than adopting a one-size-fits-all approach. For instance, as the present study showed VIP Hosts lack statistical knowledge, it would be beneficial to include more information related to statistics and probability in the VIP Hosts' training sessions

For Macao gaming regulators, the high prevalence of problem gambling among VIP Hosts should raise red flags on current gaming policies. To reduce the problem gambling rate, they could consider issuing work permits for all VIP Hosts. People will be eligible to work as VIP Hosts only if they complete a series of RG training and pass a qualifying exam administered by the Macao government. This mandatory measure may reinforce their RG knowledge and decrease the likelihood of developing gambling problems.

Limitations

There are several limitations in the current study. First, snowball sampling is not a random selection process. The recruitment of participants relies on referrals, so people who have a large number of social connections are more likely to get invited (Cohen & Arieli, 2011). In addition, only current employees or former employees who had worked in the past six months were eligible to participate in the survey. As such, the results cannot be generalized to all VIP Hosts in Macao. Second, the present study

included a total of 41 responses, meaning the sample size was relatively small. As suggested by (Hackshaw, 2008), it is difficult to tell whether the results generated from studies with a small sample size are real effects or random variation. Third, using self-report questionnaires to collect data from Chinese employees may result in bias. Previous research found that participants who came from Eastern cultures tended more to engage in impression management than Westerners (Riemer & Shavitt, 2011), and that impression management was negatively related to the self-report data on the South Oaks Gambling Screen (SOGS) scores (Kuentzel et al., 2008). That is, VIP Hosts are more likely to underreport their SOGS scores as they attempt to make favorable first impressions. Fourth, the results may be biased as the survey data were collected during the COVID-19 pandemic. The respondents might gamble less frequently at Macao casinos during the lockdown because of the government-imposed restrictions on casinos, including a complete shutdown in February 2020. Meanwhile, the Macao gaming industry has experienced a downturn since the outbreak of COVID-19. It was reported that many casino employees were forced to take unpaid leave (Macau Daily Times, 2020). Perhaps, some VIP Hosts would reduce their gambling expenditure due to a pay cut. This trend is in line with a recent study examining the impact of COVID-19 on Swedish gamblers (Håkansson, 2020).

Recommendations for Future Research

Given the limitations of this study, the author proposes several directions for future research. First, as the snowball technique is a non-probability sampling method,

future research could reduce the sample selection bias by using respondent-driven sampling to recruit VIP Hosts (Heckathorn, 1997). Second, researchers should increase the sample size to avoid a small sample bias. This could be achieved by providing participants with higher incentives or collaborating with casino operators and junkets. Third, future research is needed to reduce social desirability bias. As suggested by Dolnicar (2018), future studies could include a social desirability scale in the survey to minimize that bias. Fourth, considering the impact of COVID-19, it would be beneficial to conduct the research after the pandemic ends. This allows the researchers to further understand whether there are changes in gambling behaviors among VIP Hosts during the COVID-19 pandemic. Fifth, the author has examined a limited number of factors associated with problem gambling and cognitive distortions. For instance, the present study did not include the game preference (i.e., skill-based or chance games) in the survey, which is a factor sometimes associated with the illusion of control. Thus, it is desirable for future work to explore the role of other factors played in affecting gambling behaviors and cognitions. Sixth, since the present study only focuses on VIP Hosts, future studies could investigate the gaming behaviors among Macao casino employees in other departments, such as Table Games and Surveillance. This will help researchers understand how casino employees' gambling behaviors differ by department. Moreover, once VIP Hosts receive a new version of RG training, a follow-up study with the same participants could be conducted to measure the effectiveness of these programs. It will provide insight into how to

customize RG programs for casino employees in different departments in order to minimize gambling harm.

Conclusion

This study investigated the relationship between problem gambling severity, cognitive distortions, and potential risk and protective factors among Macao VIP Hosts. It provided a holistic profile of this hard-to-reach group of casino employees, detailing their gambling behaviors and cognitions. The results revealed that VIP Hosts had a lower rate of gambling participation, while they were more likely to develop gambling disorders. Both gaming operators and regulators should be aware of these trends and undertake a sophisticated approach to reduce gambling-related harm for Macao VIP Hosts.

SURVEY

Section A: Verification of Participants

1) Have you worked as a VIP host in the past 6 months in Macao?
   a. Yes
   b. No (Survey ends)
2) Are you currently working as a VIP host in Macao?
   a. Yes
   b. No

Section B: Verification of Previous Participants

1) Have you ever done this survey before?
   a. Yes
   b. No (Section B ends)
2) What is your age?

   _____

3) What is your country (region) of origin? (Eligible respondents jump to Section G)
   a. Mainland China
   b. Macao
   c. Hong Kong
   d. Taiwan
   e. Malaysia
   f. Other (Please specify) ____

Section C: Demographic Survey and Gambling Behaviors

1) What is your gender?
   a. Male
   b. Female
   c. Prefer not to respond
2) What is your age?

   _____

3) What is your country (region) of origin?
   g. Mainland China
   h. Macao
   i. Hong Kong
   j. Taiwan
   k. Malaysia
   l. Other (Please specify) ____
4) What is the highest degree or school you have completed?
   a. Less than High School
   b. High School or equivalent

c. Bachelor's degree

d. Master's degree or above

5) What is your marital status?

    a. Single

    b. Married

    c. Separated/Divorced

    d. Widowed

    e. Other (Please specify) _____

6) Current VIP host: What is your monthly income? (HKD)

Former VIP host: What was your monthly income when you worked as a VIP host? (HKD)

    a. Below 15,000

    b. 15,000 - 25,000

    c. 25,000 - 35,000

    d. 35,000 - 45,000

    e. 45,000 - 55,000

    f. 55,000 - 65,000

    g. 65,000 - 75,000

    h. 75,000 - 85,000

    i. 85,000 - 95,000

    j. Over 95,000

7) How many years have you been working in the VIP gaming industry?

    a. Below 1 year

    b. 1 - 3 years

    c. 3 - 5 years

    d. 5 - 7 years

    e. Above 7 years

8) Current VIP host: Are you currently working for a junket operator or a casino operator?

Former VIP host: Were you working for a junket operator or a casino operator?

    a. Junket operator

    b. Casino operator

    c. Other (Please specify) _____

9) Current VIP host: Have you received any responsible gaming training from your current employer in the past 12 months?

Former VIP host: Have you received any responsible gaming training from your former employer within one year?

    a. Never

    b. Once a year

    c. Twice a year

    d. More than twice a year

10) Among your clients, what is the largest amount of *win* for a single trip you have

witnessed in the past 12 months? (HKD)
a. Below 1,000,000
b. 1,000,000 - 5,000,000
c. 5,000,000 - 10,000,000
d. 10,000,000 - 20,000,000
e. Above 20,000,000

11) Among your clients, what is the largest amount of *loss* for a single trip you have witnessed in the past 12 months? (HKD)
a. Below 1,000,000
b. 1,000,000 - 5,000,000
c. 5,000,000 - 10,000,000
d. 10,000,000 - 20,000,000
e. Above 20,000,000

12) Have you gambled in the past 12 months?
a. Yes (Please go to No.13)
b. No (Section B ends)

13) How often did you gamble in the past 12 months?
a. Less than once a month
b. Once a month
c. Twice a month
d. Three times a month
e. Four times a month
f. More than four times a month

14) Which forms of gambling activities did you participate in the past 12 months? (Select all that apply)
a. Mark Six
b. Macao/Hong Kong Horse Racing
c. Soccer/Basketball Betting
d. Buying Pacapio Tickets
e. Playing Mahjong at Mahjong Venues
f. Betting at Macao Casinos
g. Betting at Slot Venues
h. Betting at Casino Ships
i. Betting at Internet Casinos
j. Playing Mahjong or Cards at Home
k. Other (Please specify) _____

15) What is the average amount spent per month on your gambling activities in the past 12 months? (HKD)
____

16) Why do you gamble? *7 Point Likert Scale: Strongly agree, Agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Disagree, Strongly disagree
a. To win money

b. To take risks
c. To experience my achievement
d. To have fun
e. To meet new people
f. To be with friends
g. To learn casino games
h. To escape from routine life
i. To release tensions
j. Others____

Section D: Gambling Fallacies Measure

1) "Which of the following set of lottery numbers has the greatest probability of being selected as the winning combination?"
   a. 1, 2, 3, 4, 5, 6
   b. 8, 18, 3, 55, 32, 28
   c. Each of the above have an equal probability of being selected

2) "Which gives you the best chance of winning the jackpot on a slot machine?"
   a. Playing a slot machine that has not had a jackpot in over a month.
   b. Playing a slot machine that had a jackpot an hour ago.
   c. Your chances of winning the jackpot are the same on both machines.

3) "How lucky are you? If 10 people's names were put into a hat and one name drawn for a prize, how likely is it that your name would be chosen?"
   a. About the same likelihood as everyone else
   b. Less likely than other people
   c. More likely than other people

4) "If you were to buy a lottery ticket, which would be the best place to buy it from?"
   a. A place that has sold many previous winning tickets
   b. A place that has sold few previous winning tickets
   c. One place is as good as another

5) "A positive attitude or doing good deeds increases your likelihood of winning money when gambling."
   a. Disagree
   b. Agree

6) "A gambler goes to the casino and wins 75% of the time. How many times has he or she likely gone to the casino?"
   a. 4 times
   b. 100 times
   c. It is just as likely that he has gone either 4 or 100 times

7) "You go to a casino with $100 hoping to double your money. Which strategy gives you the best chance of doing this?"
   a. Betting all your money on a single bet
   b. Betting small amounts of money on several different bets

  c. Either strategy gives you an equal chance of doubling your money.

8) "Which game can you consistently win money at if you use the right strategy?"
  a. Slot machines
  b. Roulette
  c. Baccarat
  d. None of the above

9) "Your chances of winning a lottery are better if you are able to choose your own numbers."
  a. Disagree
  b. Agree

10) "You have flipped a coin and correctly guessed 'heads' 5 times in a row. What are the odds that heads will come up on the next flip? Would you say"
  a. 50%
  b. More than 50%
  c. Less than 50%

Section E: South Oaks Gambling Screen (SOGS)

1) "When you gamble, how often do you go back another day to win back money you lost?"
  a. Never
  b. Less than ½ the time I lost
  c. Most of the time I lost
  d. Every time I lost

2) "Have you ever claimed to be winning money gambling but weren't really? In fact, you lost?"
  a. Never
  b. Less than ½ the time I lost
  c. Most of the time I lost
  d. Every time I lost

3) "Do you feel you have ever had a problem with betting money or gambling?"
  a. No
  b. Yes, in the past, but not now
  c. Yes

4) "Did you ever gamble more than you intend to?" (Y/N)

5) "Have people criticized your gambling?" (Y/N)

6) "Have you ever felt guilty about the way you gamble or what happens when you gamble?" (Y/N)

7) "Have you ever felt like you would like to stop betting money or gambling but didn't think you could?" (Y/N)

8) "Have you ever hidden any gambling activities from your spouse/partner, children or other important people in your life?" (Y/N)

9) "Have you ever argued with people you live with over how you handle money?" (Y/N)

10) "Have you ever borrowed from someone and not paid them back as a result of your gambling?" (Y/N)
11) "Have you ever lost time from work (or school) due to money or gambling?" (Y/N)

"If you borrowed money to gamble or to pay gambling debts, who or where did you borrow from. (Y/N)

12) From household money
13) From your spouse or partner
14) From other relatives or in-laws
15) From banks, loan companies, or credit unions
16) From credit cards
17) From loan sharks
18) Shares
19) You sold personal or family property
20) You have withdrawn money from your account and did not have the sufficient amount in the account"

Section F: Comments

1) Do you have any additional thoughts on responsible gaming and problem gambling, that you would like to share with the researchers?

_____

_____

Closing Statement

Thank you for completing the online questionnaire.

If you have any questions about the study, please feel free to contact Shane Kraus, PhD at +1(702) 895-0214 or shane.kraus@unlv.edu.

If for some reason after taking this questionnaire you feel that you might want to talk to someone about treatment opportunities to address some kind of problem you may be experiencing, we encourage you to contact the local problem gambling treatment centers.

Problem Gambling Prevention and Treatment Division - The Resilience Centre, Rua Francisco H. Fernandes, n.º 11, Edf. Walorly, 2º andar-AK1. +853 28230101.

Yat On Responsible Gambling Counselling Center, n.º 9-11, R/C, Loja K, R. do Cmte. Mata e Oliveira. +853 28210033

APPENDIX B

RECRUITMENT MESSAGE

Send three text messages in the following order:

Text message 1:
Hello, we are requesting your assistance with a research study conducted by University of Nevada, Las Vegas (UNLV) on the gambling behaviors among VIP hosts in Macao. After completing the survey, you will be eligible to get a US$5 (HK$39) Amazon gift card or choose a promised donation to WHO.

Text message 2:
You may click the following link to go to the survey page. In addition, I am asking that you help us distribute this survey to other VIP hosts in Macao. Thank you very much.

Text message 3:
https://unlv.co1.qualtrics.com/jfe/preview/SV_2iAj9qUbtmf0Yx7?Q_SurveyVersionID=current&Q_CHL=preview

EXEMPT RESEARCH STUDY

INFORMATION SHEET

UNLV

William F. Harrah College of Hospitality

TITLE OF STUDY: Gambling Behaviors among VIP Hosts in Macao

INVESTIGATOR(S) AND EMAIL: <u>Dr. Shane Kraus at shane.kraus@unlv.edu</u>

"The purpose of this study is to explore the gambling behaviors among VIP hosts in Macao (China). You are being asked to participate in the study because you are/were a VIP host in Macao and you are at least 18 years of age.

If you volunteer to participate in this study, you will be asked to complete an online questionnaire about your gambling behaviors and cognitions.

This study includes only minimal risks. The study will take about 15 minutes of your time. After you complete and submit your survey, you will be eligible to get a US$5 (HK$39) digital Amazon gift card or choose a promised donation to COVID-19 Fund for WHO. You can provide your email address for receiving the reward by going to a new link. It is separate from your survey so that the researcher can assure the anonymity of your responses. The gift cards will be sent after all surveys have been completed. Following this, the data file containing your email address will be destroyed.

For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office of Research Integrity – Human Subjects at 702-895-2794, toll free at 877-581-2794, or via email at IRB@unlv.edu.

Your participation in this study is voluntary. You may withdraw at any time. You are encouraged to ask questions about this study at the beginning or any time during the research study.

Any identifying information will be kept confidential by the researchers. We have also blocked IP addresses to make sure your responses cannot be linked back to you. Information collected in this study will be used for research purposes."

<u>Participant Consent:</u>

"Agree, I have read the above information and agree to participate in this study. I am at least 18 years of age."
"Disagree, I do not wish to participate in the study."

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