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Understanding responsible gambling: Insights from Chinese visitors in Macao casinos

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Abstract: Awareness of responsible gambling (RG) has a positive effect on the development of RG practices. Although recent studies have investigated the RG awareness of public and casino frontline employees, limited research has explored the RG awareness of the primary customer market (mainland Chinese visitors) for Macao casinos. To address this gap, this study investigated mainland visitors' access to and understanding of the Macao government's RG promotional efforts. Based on 41 in-depth interviews with Chinese visitors, a thematic analysis revealed that participants experienced limited accessibility to RG promotion and demonstrated differing understandings of RG concepts and the attribution of responsibility. The understanding of RG varied from a type of gaming activity, a restriction on gambling eligibility, a way to increase gambling revenue, a warning against gambling, to the regulation of legal gambling. Participants also held unilateral, bilateral, or multilateral perspectives towards those responsible for the latent gambling harm and tended to perceive RG promotion as relatively ineffective. These findings offer policy and practical implications for future promotion of RG initiatives.

Keywords: Responsible Gambling, Gambling Addiction, Gambling Behaviors, BCW model, Awareness.

Introduction

With the expansion of commercial gambling worldwide (Abbott et al., 2018; Markham & Young, 2015), gambling-related harm has attracted ongoing attention from society and public health (Bijker et al., 2022; Langham et al., 2015). This harm is not restricted to individuals with gambling disorders; most of the harm is attributable to gamblers who do not meet the diagnostic criteria for a gambling disorder (Abbott, 2020; Langham et al., 2015). The promotion of responsible gambling (RG), as a practical approach to reduce gambling harm, targets all gamblers (Hing, et al., 2017; Wood & Griffiths, 2015). Mainland Chinese visitors constitute the primary clientele of Macao's casinos, accounting for 70% of casino customers and contributing 80% of the city's total gambling revenue (Singtao News, 2022; Takeshi, 2018); however, the effects of RG initiatives do not appear to be reflected in their gambling behavior. Empirical evidence indicates several risk indicators among mainland Chinese gamblers, including a high participation rate (47.2%) in casino gambling (Zeng et al., 2014), a high prevalence of gambling disorder (32% of mainland Chinese patrons in Macao casinos were classified as problem gamblers and pathological gamblers) (Prentice & Woodside, 2013), and a high risk of involvement in criminal activities (In 2024, preliminary data from *Macao Daily News* reported an average of at least three monthly criminal cases involving mainland Chinese individuals linked to problem gambling, compared to only three cases involving local residents and one involving a foreign national over the entire year). Furthermore, after experiencing gambling-related harm, problem gamblers from mainland China are significantly less likely to seek help than local gamblers. Although individuals from mainland China account for about 70% of casino clientele, they account for approximately two-fifths of help-seekers, with an annual average of only 36 individuals seeking assistance from a gambling helpline, compared with 81 cases involving local residents (Manian et al., 2024). RG information helps promote gamblers' cognitive and behavioral RG-related strategies (Hing, 2017). The aforementioned situation suggests that mainland Chinese customers demonstrate limited use of these two strategies in practice, such as recognizing the odds of winning and losing, refraining from chasing losses, and actively seeking help. This may indicate a limitation in Macao's 15 years of RG efforts, which appear to have overlooked its primary customer base. Currently, the impact of RG promotion on this group remains unclear. Previous studies have supported that enhancing the awareness of RG can elicit RG behaviors, which helps in countering potential gambling-related problems (Louderback et al., 2023; Tong et al., 2019). Identifying the gap between Macao's RG promotion and its primary clientele's understanding of RG is essential for optimizing RG strategy and ensuring the protection of this key customer base. Therefore, this study aims to investigate the extent to which mainland Chinese

customers are exposed to Macao RG promotions, their RG awareness, and understanding of RG.

The behavior change wheel (BCW) model offers a comprehensive framework for understanding the relationships among the behavior system (COM-B), intervention functions, and policy categories. Specifically, the core of the BCW model is the COM-B system, which consists of three essential components: capability, opportunity, and motivation. This system serves as the foundation for identifying the sources of behavior change. These sources emerge from the interaction between the intervention functions located in the second layer and the policy categories situated in the outer layer of the wheel. For instance, the communication/marketing component within policy categories interacts with the education function within interventions (which aims to increase knowledge or understanding) to influence the behavior system (Michie et al., 2011, 2016). In addition to its application in the development and evaluation of intervention measures, the BCW model can also be used to assess the effectiveness of internal structures (Michie et al., 2016; Richardson et al., 2019). The effectiveness of the outer- and mid-layers can also be captured through the core COM-B system (Michie et al., 2016). Based on this model, this study seeks to examine the effectiveness of outer-layer policy categories (i.e., RG promotion) and mid-layer educational interventions (i.e., RG understanding) through the COM-B system.

Due to China's prohibition of gambling, it is not possible to promote RG domestically. Even within academia, there is a noticeable lack of discussion on the topic (e.g., a search conducted in the Scopus database using the keywords 'responsible gambling' and 'mainland' or 'mainland Chinese' yielded no relevant results). This absence may result in a general lack of understanding of casino-related information among mainland Chinese visitors, including how commercial gambling operates, gambling safeguards, risk factors, and the availability of support services. The lack of access to such information prevents them from making informed decisions, which are crucial for practicing RG (Blaszczynski et al., 2008). Moreover, with the expansion of the Individual Travel Scheme, more mainland Chinese visitors have the opportunity to travel to Macao for gambling activities, especially casino gambling (Manian et al., 2024). The exposure theory posits that environmental toxins (such as casinos) increase the likelihood of associated harm, including gambling-related disorders (Shaffer et al., 2004). An increase in gambling opportunities leads to a rise in gambling problems, particularly with continuous forms like casino games (Abbott, 2006; Hing et al., 2023). A lack of knowledge about casinos, changes in the gambling environment, and increased gambling opportunities may collectively increase the risk of problem gambling among this population. Since mainland Chinese visitors can access RG information only while visiting gambling jurisdictions, the effective delivery of RG messages within these jurisdictions is particularly crucial. Within BCW's policy categories, 'communication/marketing' refers to

activities conducted through print, electronic, or broadcast media (Michie et al., 2016). RG promotions in Macao include themed posters, electronic displays, promotional videos, RG stations, RG information kiosks, and an RG mobile application. RG messages are also disseminated through television, radio, billboards, websites, public transportation, and magazine advertisements. However, it remains unclear whether these promotions have effectively reached visiting individuals. This study examines the physical opportunities available to mainland Chinese visitors to access RG-related information, including resources, locations, and other facilitating or enabling environments. Therefore, the first research question of this study is to use the ‘opportunity’ component of the COM-B system to capture the gap between the RG promotion efforts in Macao and the extent to which mainland Chinese visitors are exposed to them.

Previous studies have demonstrated that different populations exhibit varying levels of awareness regarding RG. Among the general public, a majority of Canadians are not aware of any RG initiatives (Turner et al., 2005). In Macao, the RG awareness rate among residents is 64.9% (Social Welfare Bureau, 2024), and casino employees generally understand what RG entails (Manian et al., 2022). Additionally, electronic gaming machine (EGM) players and individuals in high-risk gambling groups tend to possess a relatively high knowledge of RG strategies (Christensen et al., 2024; Hing et al., 2016). It is worth noting that a gap exists between awareness of and understanding of RG as gained through public RG promotion (Tong et al., 2019). In this context, awareness refers to having heard of RG, whereas understanding involves possessing the knowledge of RG. Therefore, individuals may be aware of RG without necessarily understanding its content. For instance, while the awareness rate of RG among Macao residents is 64.4%, only 17.4% demonstrate an actual understanding of RG initiatives (Social Welfare Bureau, 2024). Experts suggest that RG-related information has not been adequately publicized or understood, and there is limited meaningful assistance available to consumers (Hing et al., 2017). To date, no research has specifically examined the RG understanding among visitor groups. A deeper understanding of mainland Chinese visitors’ perceptions of RG may contribute to enhancing the effectiveness of RG promotional efforts. Official RG reports in Macao generally regard an understanding of the RG concept as central to comprehending its content (Social Welfare Bureau, 2024). This study investigates this issue based on the definition provided by the Macao government:

Responsible Gambling occurs in a properly regulated environment where one’s involvement in gambling activities brings no harm to the gamblers, family members, friends, other gamblers, or casino staff; nor would it lead to negative consequences for the local community and residents.

To achieve this goal, responsible gambling requires: Government/Gamblers, Family and Friends/Gambling Operators/Problem Gambling Prevention and Treatment Center/Educational and other community organizations need to collectively bear the responsibility. (Social Welfare Bureau, n.d.).

This study investigates mainland Chinese visitors' understanding of RG in accordance with two key aspects of this definition: 'What is responsible gambling?' and 'Who should be responsible?'. Increased knowledge and understanding of RG may encourage customers' compliance with RG guidelines (Louderback et al., 2023) and help prevent gambling-related harm. Although responsibility attribution for RG is considered a shared responsibility, gamblers and those affected by gambling tend to attribute gambling harm to individual choices, viewing its prevention or control as a matter of personal responsibility (Marko et al., 2023). These individual perceptions align with personal responsibility framings commonly found in both industry and government messaging (Marko et al., 2022). This perception may pose obstacles to individuals seeking assistance. Therefore, the second research question of this study is to examine the effectiveness of RG promotion in educational interventions (increasing knowledge or understanding) through the 'capability' component (i.e., correct understanding) of the COM-B system.

Additionally, the exploration of mainland Chinese visitors' perceptions of RG holds universal significance. China has been a major source market for both Macao and international casinos; any changes in Chinese visitors' gambling behaviors can have a substantial impact on the global gambling industry (Zeng et al., 2022). Current quantitative research on RG awareness often employs measurements related to specific RG measures, such as restrictions on casino hours of operation, maximum betting limits, and pre-commitment (Christensen, 2024; Tong, 2019). This can serve as a useful indicator for understanding the responsibility attribution of RG. The focus of this study is not on assessing specific RG measures, but rather on exploring casino visitors' subjective perceptions of RG in order to identify potential gaps in RG promotion. Given the significant variation in individual interpretations, the research objectives cannot be adequately addressed through questionnaire-based surveys. Therefore, it is more appropriate to adopt a qualitative research approach that emphasizes the interpretation of subjective meanings and contextual understandings (Fossey et al., 2002).

Methods

Interview guide

Interviews feature open and broad inquiries designed to gather a thorough understanding of the participants' viewpoints (Roberts, 2020). Based on the research objectives, three main interview questions with

several follow-up or prompt questions were developed. The main questions were closely aligned with the research aim, and the follow-up or prompt questions were designed to encourage interviewees to ‘dig deeper’ for more detailed and complete responses (Roberts, 2020). The three main questions for the interview are detailed as follows:

- (1) To what extent is RG promotion accessible to Chinese visitors of Macao casinos? This question scrutinizes whether visitors have an awareness of RG, their information source, and the locales of information access.
- (2) How do these visitors understand RG? This question explores Chinese visitors’ specific understanding of RG. If the response was ‘I do not understand’ or ‘I do not know’, we adopted the follow-up question: ‘If taken literally, can you understand what RG means?’ Or ‘Can you imagine what it might mean?’
- (3) Who should be responsible for RG? This question probes Chinese visitors’ understanding of which party or parties should be responsible for RG and what their specific responsibilities are.

Furthermore, additional prompt questions were posed based on the conversation, which required the interviewee to provide explanations or clarifications at certain points. For instance, following an interviewee’s mention of RG’s restraints on gamblers, the interviewer asked for further details regarding the specific restraints induced by RG.

Interviews

This study received formal ethics approval from the researchers’ institutional affiliation. Data were collected through in-depth interviews, and interviewees were selected using a convenience sampling approach with purposive elements based on specific population characteristics; the sampling process relied primarily on ease of access (Mumtaz et al., 2025). Two selection criteria were used to identify specific participant groups: 1) they were tourists from mainland China; and 2) they had visited Macao casinos. Before the start of each interview, participants were screened using these two criteria and were asked to provide informed consent. The interview locations included the Border Gate (*Portas do Cerco*, the primary and highest-volume checkpoint for land border crossings between Macao and mainland China), Macau International Airport (departure hall), and areas immediately adjacent to casino premises. The first two sites serve as key entry and exit points on the Macao border. Research assistants, who had received prior training in qualitative interview techniques, rotated across the three designated locations, proactively inviting tourists to participate in the study. Each interview lasted approximately 20 to 30 minutes. Data saturation was reached after 41 interviews, indicating that no new themes or insights were emerging from the interviewees’ responses. Among the 41 interviewees, 18 were recruited at the airport, 14 near the casinos, and nine

at the Border Gate. This distribution may be attributed to the fact that, compared to the other two locations, tourists at the Border Gate were generally more time-constrained and situated in more crowded environments, which may have limited their availability for participation.

Data analysis

The interview transcripts were analyzed using ATLAS.ti version 24.0, a computer-assisted qualitative data analysis program. In this study, a thematic analysis approach was applied to examine the textual data obtained from in-depth interviews. Thematic analysis is a widely used method for identifying, analyzing, and reporting patterns (themes) within qualitative data (Braun & Clarke, 2006). The analytic process adhered to the six phases outlined by Braun and Clarke (2006): 1) familiarizing the data; 2) generating initial codes; 3) searching for themes; 4) reviewing themes; 5) defining and naming themes; and 6) producing the report (Braun & Clarke, 2006). To ensure the reliability of the analysis and minimize subjective bias, the researchers immersed themselves in the data, independently conducted initial coding, and subsequently compared and discussed their interpretations until a consensus was reached within the research team. This collaborative strategy contributed to the trustworthiness and consistency of the thematic interpretation. Two examples of the coding are as follows:

Shifting gambling to entertainment, not full monetization' (#05)
Responsible gambling involves having a certain awareness of your own gaming behavior. You should not exceed your limits and must play within your ability—it's just a game (#59).

The above two quotes were considered to reflect an understanding of RG and were coded as 'rational gambling', because the speakers mentioned 'entertainment' and 'limit'.

Participants

A total of 41 mainland Chinese visitors were interviewed (see Table 1), with approximately equal gender distribution. The majority of the interviewees were between 21 and 30 years old (51.2%), represented various provinces and municipal cities in mainland China, and were employed in diverse occupations. Moreover, 65.9% of the interviewees held a junior college or university degree, and 58.5% were single. Income levels among the interviewees were polarized, with one group reporting low income and the other reporting relatively high income. 65.9% of visitors participated in gambling, while 34.1% did not gamble during the visit. However, all interviewees visited casinos, and even those who did not gamble on this occasion could still represent potential casino customers and could have been exposed to RG information within the casino environment. In line with the public health model, which advocates prevention-over-treatment, upstream prevention at the population level is necessary (Price et

al., 2021). From this perspective, the responses of potential gamblers and non-gamblers provide relevant insights into the effectiveness of upstream prevention. Therefore, the responses of all visitors entering the casino are meaningful for evaluating RG promotion.

Table 1. The profile of interviewees ($N = 41$).

Factor	Category	Frequency	Percentage
Gender	Male	19	46.3
	Female	22	54.7
Age	21–30	21	51.2
	31–40	13	31.7
	41–50	3	7.3
	51–60	4	9.8
	61–70	1	2.4
Education level	Under junior high school	1	2.4
	Junior high school	2	4.9
	High school or equivalent	3	7.3
	Junior college or university	27	65.9
	Postgraduate qualifications	8	19.5
Place of residence	Shanghai	8	19.5
	Beijing	1	2.4
	Tianjin	1	2.4
	Guangdong	5	12.2
	Guangxi	8	19.5
	Xinjiang	1	2.4
	Jiangsu	4	9.8
	Jiangxi	2	4.9
	Hebei	1	2.4
	Henan	1	2.4
	Zhejiang	4	9.8
	Hunan	2	4.9
	Guizhou	1	2.4
	Liaoning	2	4.9
	Single	24	58.5
	Married	15	36.6
	Other	2	4.9
Occupation	Civil servant or employee of state-owned enterprises	5	12.2
	General employee in private sectors	6	14.6
	Professional	10	24.4
	Retiree	2	4.9
	Student	6	14.6
	Economically inactive individual (e.g., homemaker)	2	4.9
	Other or undisclosed	10	24.4
Annual income (CNY*)	Less than 10,000	8	19.5
	10,001–20,000	1	2.4
	20,001–50,000	0	0.0
	More than 50,000	32	78.0
Gambling participation	Yes	27	65.9
	No	14	34.1

*USD 1 = CNY 7.33 (15 January 2025).

Findings

The findings of this study provide insights into mainland Chinese visitors' perceptions and experiences related to RG promotion. The thematic analysis revealed four main themes: accessibility of RG promotion, understanding of RG, responsibility holders, and effectiveness of RG promotion.

Accessibility of RG promotion ('opportunity' of COM-B)

This subsection presents findings on the coverage of RG promotion from three aspects: 1) the extent of interviewees' access to RG promotion; 2) the locations where they have access to RG promotion; and 3) the distinction between access and understanding.

- ***RG promotion does not appear to reach most casino visitors.*** Among the 41 interviewees, only ten reported having been exposed to RG promotion, including six first-time visitors and four repeat visitors. Gambling involvement also differentiated awareness of RG promotion. Visitors who gambled at casinos were more likely to report exposure to RG promotion (8 casino gamblers compared to 2 non-gamblers). In summary, regardless of prior experience (first-time or repeat) in visiting Macao or casino gambling, the majority of interviewees were unaware of RG promotion. This lack of awareness is illustrated by the following two quotations from the interviewees:

Never heard of it. I only know sic bo, baccarat, but not this. (#11)

Not paying attention, I haven't paid attention yet. This is not a problem I need to worry about. (# 27)

- ***Locations of RG promotions that are accessible to visitors.*** The interviewees who reported exposure to RG promotion identified several information channels through which such messages were conveyed. These included LED screens located both outside and inside casino premises (e.g., promotional slogans, leaflets at the cashier counters, and designated smoking rooms), retail establishments within integrated casino resorts, public/casino shuttle buses, and signage at the Macao border area after crossing the Hong Kong-Zhuhai-Macao Bridge.
- ***Accessibility to RG promotions does not imply understanding RG.*** The findings indicate that visitors' accessibility does not represent an understanding of the RG concept. Ten interviewees reported exposure to RG promotion but demonstrated incorrect comprehension of the term. Only five interviewees accurately

understood that RG refers to rational gambling behavior, whereas the remaining interviewees either admitted to not knowing the specific content or demonstrated misunderstandings. They believed that RG was a ‘gambling item’ (#27) or a ‘means to maximize the casino’s revenue’ (#17). One interviewee recalled noticing the RG promotion but was unable to articulate its meaning, stating that the only impression it left was simply ‘gambling’.

I don’t really remember the colorful stuff by the roadside. I wasn’t paying much attention... I just know it was promoting something, but ... I can’t remember clearly. ...I know it was somewhere, maybe on a bus or something on the roadside. [Interviewer: Was the phrase ‘responsible gambling’ written?] No, I only remember the word ‘gambling’. (#22)

The results indicate that, in terms of opportunities, the resources, locations, and facilitation methods of RG that visitors can access are limited. On RG resources, only a very few mainland Chinese visitors received RG promotional information. The locations where RG information was available were primarily concentrated within or around casino premises, while at major entry and exit points for mainland Chinese tourists, such as the Border Gate and the airport, there was almost no such information available. Furthermore, interviewees did not mention the presence of any identifiable RG initiatives. Among those who reported some level of exposure to RG promotion, the majority did not fully comprehend its meaning. This suggests that in environments where RG promotion is present, there is a lack of facilitative tools to support individuals in developing a clear understanding. Therefore, physical opportunities, which include resources, locations, and facilitation methods, remain limited. The current RG promotional efforts lack adequate coverage and reach, particularly for non-local casino visitors.

Understanding of RG (‘capability’ of COM-B)

The results regarding the interviewees’ understanding of RG and responsibility holders are illustrated in Figure 1. Among the 41 interviewees, only six interviewees understood RG as rational gambling behavior, as evidenced by the following two quotations: ‘I feel like it advocates rational gambling, which means playing as little as possible and having entertainment within your means (#10); ‘shifting gambling to entertainment, not full monetization’ (#05). Four interviewees demonstrated an understanding that closely aligned with the core concept of RG; they perceived RG as a form of warning similar to health advisories such as ‘smoking is harmful to health’:

My first reaction, along with my friends, was that it's a bit strange to say 'responsible gambling' in front of a casino. It's especially like saying 'don't smoke excessively' on a cigarette box. (#5)

Just like smoking, everyone knows that smoking is harmful to health. But if you look at the cigarette boxes, especially in foreign countries, they will show what the lungs of smokers look like and what normal lungs look like. It has a warning effect. (#19)

Furthermore, five interviewees did not understand RG and were unable to articulate what it might entail; they perceived the term as too abstract to be understood. Finally, the remaining more than half of the interviewees had misconceptions about RG.

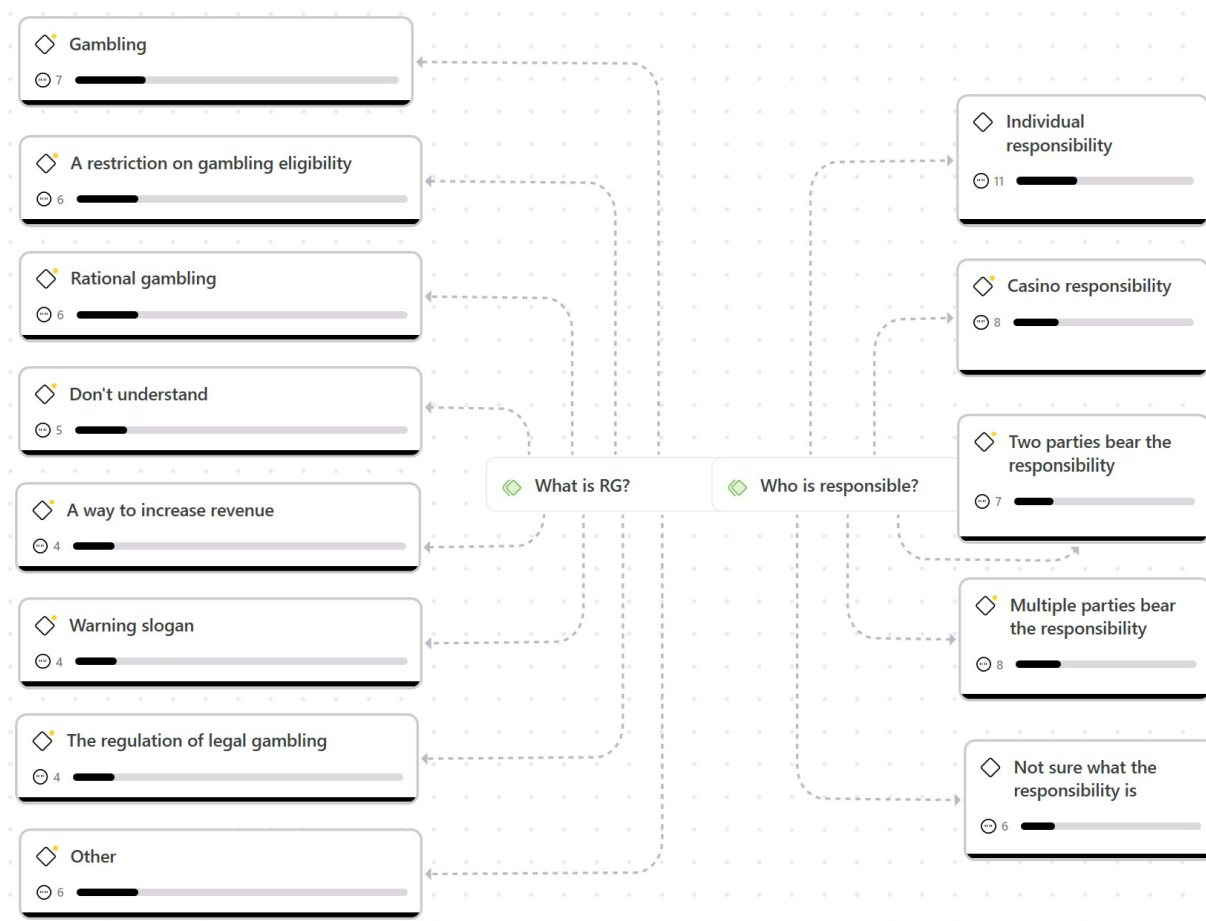


Figure 1. Casino visitors' understanding of Responsible Gambling (numbers below each response indicate frequency).

- ***RG is gambling.*** The highest proportion of interviewees regarded

RG as one formality of gambling. In this view, RG was perceived as a form of gambling itself, as reflected in the following three quotations:

The term sounds like some positive things, similar to the welfare lottery... I think it is definitely a gambling item. (#22)

Gambling relies on luck. It [RG] is gambling... it's like making a move in playing chess without regrets, where you can't withdraw the move... If you lose the bet, it's probably gone; you can't regret it or anything like that. (#9)

RG is a concept that I find quite complex. At first glance, I don't think much about it, as this type of gambling seems overly complicated. I see it as something like the lottery. Something I wouldn't delve into what the concept means. I just wouldn't think about it much. (#27)

- ***RG is a restriction on gambling eligibility.*** Six interviewees perceived RG as a restriction on gambling. In addition to age restrictions, they explained that gamblers' qualifications were restricted based on their asset status, such as entry qualifications, the amount of casino chips exchanged, betting limits, and the duration of permitted gambling activity. The following quotations indicate this understanding:

If you want to go to a casino to gamble, first of all, apart from the age restriction, there will be an asset requirement. You need to provide some proof showing the amount of your assets—for example, only those with assets of more than \$10 million or \$50 million are eligible to enter and gamble. Those with assets below \$5 million are prohibited from entering. ... My own understanding [about RG] is that you can only gamble after verifying your assets. (#26)

My own understanding of RG is that it may involve an evaluation system for everyone who enters the casino, just like the personal credit checking system [in mainland China]. ... For example, there would be an assessment of a person's creditworthiness, based on their economic capacity or family conditions, to determine how many casino chips they are allowed to exchange. They would not be permitted to receive more than this amount. (#7)

- ***RG is a way to increase revenue.*** Four interviewees regarded RG as a means of increasing revenue; they believed that RG contributed to both casinos and the government. This economic perspective is

exemplified by the following two quotations:

I think RG is using technology and then maximizing the casino's revenue. (#17)

RG is paying taxes. ... Paying taxes for gambling is the same as that for cigarette smoking. (#11)

- ***RG is the regulation of legal gambling.*** RG was understood by four interviewees as a form of regulation governing legal gambling; they viewed RG as comparable to the rules and regulations required for operating compliant casinos.

[RG] may ensure that it does not violate the laws of China, and then uphold the fairness of the games, that is, legal compliance. So, fairness is ensured for all involved, whether customers, employers, or employees. (#14)

In my opinion, this should be a legal and compliant form of gambling. It is government-protected gambling, not the illegal underground casinos that operate in the dark (#47).

Other misunderstandings. In addition, other interviewees offered unique insights into RG that reflected misunderstandings of the concept. Some perceived RG as a system that provides loans to gamblers, as a form of security responsible for maintaining order in casinos, or as an approach to controlling gamblers' behaviors, among other misunderstandings.

I thought it was a loan or something. ...For example, someone lost all their money in gambling and then took out a loan to continue playing. I thought it was doing this. ...I thought it was a small loan company or something like that. (#8)

From my literal understanding, it [RG] means that the casino should be responsible for the personal safety inside casinos. Because there are often people losing money in casinos who may lose their temper, which may bring disaster to the people around them, so maintaining order in the casino is an essential responsibility (#40).

I guess [RG] is about being responsible for one's own actions. For example, if I win or lose money at the casino, will those emotions affect how I perform there, lead to arguments or other issues? I have seen people who lost money at the casino get into physical altercations with others, so [RG] should be about controlling one's own behavior (#42).

Attribution of responsibility

Regarding the entities responsible for RG, the interviewees demonstrated varying levels of understanding. Among the 41 interviewees, six were unaware of who should bear responsibility, while 19 perceived responsibility as unilateral, i.e., assigned either to individuals or to casinos. A bilateral perspective was expressed by seven interviewees who identified any two of the three parties (individuals, casinos, and the government) as responsibility holders. Additionally, a multilateral perspective emerged from eight interviewees who stated that multiple parties were collectively responsible for RG. This broader attribution of responsibility included individuals, the government, casinos, casino employees, banks, lending agencies, and related organizations.

Notably, the responsibilities understood by the interviewees were not limited to reducing gambling-related harm; rather, they encompassed a range of other interpretations. For example, when describing unilateral responsibility, the interviewees' understanding was as follows:

It is similar to the idea of irrevocable decisions, meaning that you cannot go back on your word. If you gamble and lose, it may be gone, and you cannot retract your actions; you must take responsibility for all your decisions. (#9)

For me, responsibility is just the process of exploring and experiencing [gambling]; yes, it's just a process of experiencing. ... Because if you don't set foot in the field, you'll be curious ... It is like exploring an unfamiliar shopping mall, similar to the experience of various travels. In any case, it is purely about exploring a field that one is not familiar with and experiencing this process. (#25)

The casino itself must be responsible for RG. This means that in terms of funds, it should identify and not allow the amount to exceed a certain percentage of one's assets, such as 20% or 50%. If [this threshold] is exceeded, measures should be taken to prevent the individual from continuing to play... and to control them. (#16)

Moreover, interviewees described the responsibilities of multilateral parties as follows:

Individual responsibility requires self-control...The government controls the size of the bets, but casinos have operating expenses, so a cap of \$2000 per bet is not feasible. (#6)

First, one must be responsible for oneself, followed by the government, and finally the casinos. Individuals must first manage their own finances and take care of their own wallets. The government's responsibility is to safeguard the interests of both

tourists and local residents. Casinos must also operate in compliance with regulations, refrain from any manipulations or tampering with machines, and strive to be compliant and lawful. (#5)

The findings indicate that a substantial proportion of interviewees demonstrate deficiencies in capabilities. They not only hold misunderstandings about the RG concept but also are unable to determine the responsible attribution. In the BCW model, policy (RG promotion) aims to enhance behavioral capabilities through its educational function, which involves increasing knowledge and understanding. The fact that mainland Chinese visitors exhibited severely limited knowledge and understanding of RG, and in some cases held misunderstandings, suggests that the educational intervention function in RG promotion has not been effective in achieving its intended outcomes.

Casino visitors' perception of RG effects ('motivation' of COM-B)

Ten of the interviewees discussed the effects of RG, expressed concerns about the effectiveness of RG, and concluded that RG had little impact. In particular, some interviewees with extensive gambling involvement had developed a negative viewpoint towards the role of RG promotion in reducing gambling-related harm based on their personal experiences, as illustrated by the following two quotations:

I think it [RG] is just a formality. I don't think it will have much effect. I think it is self-contradictory. It is contradictory to Macao's policies. They are developing the gaming industry on the one hand, and the gaming industry itself. I don't think it will have any effect on me. ...I am an experienced player; that is, I have gambled many times and have become deeply involved. (#10)

It's a slogan, but there's no actual action. I haven't seen any. ... It doesn't have much effect. You see, my friend lost CNY 120,000 in just four days despite placing small bets. Although his family runs a restaurant and the economic conditions are not bad, losing CNY 120,000 in a few days—who can accept that? (#13)

The interviewees also explained why they believed that RG promotion was not effective. First, they questioned whether gamblers were capable of gambling rationally; second, they believed that RG represented a conflict of interest with the beneficiaries of gambling revenue; third, they highlighted the perceived benefits associated with gambling participation.

If a gambler sits down at the gambling table, they may lose their sense of rationality. I actually feel that this kind of thing [RG] doesn't have much effect. (#18)

There should be a limit on how much one can lose, but the casino operates 24 hours a day. ... I don't think they will implement such rules anytime soon, because the casino needs to make a profit, their own profit. (#23)

Everyone knows that smoking is harmful to health, but many people still smoke to relax. Similarly, I also know that gambling is not good, but it helps me relax. Especially for office workers like us, sometimes the work stress can be high, and [we] need a way to release it. (#19)

Notably, some interviewees requested information about RG initiatives in Macao at the conclusion of the interviews. Upon obtaining the relevant information, they proceeded to share their additional opinions on RG. A representative quotation is provided below:

[RG] information should be made known to the public. If the information cannot reach them, even if 'responsible gaming' messages are displayed everywhere, it will be useless. (#7)

Reflective motivation in the COM-B system refers to individuals' beliefs about the consequences of their actions. The findings suggest that visitors were skeptical of the RG's effects in changing gambling behavior. They provided strong evidence explaining the reasons for a diminished level of confidence in the effectiveness of RG. This evidence was based on several reported factors, including doubts about rational gambling, concerns over conflicts of interest, the perceived benefits of gambling, inadequate promotional efforts, as well as the accounts of three interviewees who self-reported experiencing problem gambling.

Discussion and conclusion

This study investigated the perceptions of mainland Chinese visitors towards RG promotion in Macao. The results indicate that existing RG promotion is insufficient for mainland visitors. Although the three components of COM-B in the BCW model (i.e., opportunity, capability, and motivation) fail to capture the effects of outer-layer policy categories and mid-layer educational intervention functions, the COM-B framework can provide guidance and insights for the government to optimize the RG's intervention design and promotional practices.

With respect to the 'opportunity' component, the opportunity to access RG promotion for visitors can be examined from resources, location, and facilitation methods. In locations, mainland Chinese visitors are typically exposed to RG promotion located in or around casino premises; therefore, it is necessary to strengthen promotional efforts specifically within this pathway. In terms of accessing RG resources, although various promotional strategies have been implemented, the forms of RG promotion

accessible to casino visitors from mainland China remain very limited, and some convenient and key promotional initiatives do not reach this population. For instance, although a convenient mobile application promoting RG has been available since 2014, none of the interviewees reported having access to it. Hence, it is recommended that the government strengthen the application of this tool. Moreover, RG information kiosks represent a key initiative in promoting RG. These kiosks have been installed inside the gaming areas of Macao casinos to provide visitors with accessible information and support related to responsible gambling practices (Responsible Gambling Promotions Organising Committee, 2023). However, regarding information sources on RG promotion, none of the interviewees reported noticing or mentioning the kiosks inside the casinos. This might be attributed either to the design of the RG kiosks that does not clearly convey their intended function or to the kiosks' inconspicuous placement within the casino environment. We recommend that the government improve the design of the RG kiosks to better highlight their function and supervise their placement within casinos to increase visibility and attract the attention of visitors. In terms of facilitation methods, even if the kiosks cover all casinos, no interviewees mentioned them, indicating that there are no facilitation measures within the venues, such as personnel explanations. It is recommended to increase facilitation measures while optimizing kiosk design and placement.

In terms of the 'capability' component, gamblers are more knowledgeable about RG than non-gamblers, which is consistent with previous research (Hing et al., 2017; Social Welfare Bureau, 2024). Nevertheless, most interviewees did not report an increase in RG knowledge through educational interventions; they either lacked a clear understanding of RG or held significant misconceptions, with some mistaking it for a gambling activity. This implies that interventions combining publicity with education are essential; for example, the target population's RG knowledge can be enhanced through activities such as roadshows and booth games. Additionally, the Chinese translation of RG makes it difficult to understand. 'Responsible gambling' is a term used in academic discussions and may not be suitable as a promotional slogan. 'Responsible consumption of gambling (RCG)' might be a more appropriate advocacy slogan. The expression of RCG in Chinese focuses on consumption rather than gambling, suggesting a focus on expenditure rather than on financial gain. Moreover, this proposed definition offers greater flexibility in application as it can be 'unpacked' into its constituent components to provide further elaboration, for example, by appending specific RCG principles after the slogan. These principles include 'Make sure your gambling is affordable'; 'Make sure your gambling does not harm yourself or others'; and 'Balance gambling with other responsibilities in life' (Hing et al., 2018). In line with these straightforward interpretations, government authorities in jurisdictions where gambling is legalized should adopt clearer and more specific expressions when promoting RG.

Regarding attribution of responsibility, the interviewees in this study primarily assigned responsibility to the individual, often overlooking other relevant stakeholders who may also bear responsibility. The results indicate that the government has inadequately promoted the RG responsibility framework, necessitating emphasis on disseminating the responsibilities of multiple stakeholders and implementing multi-party interventions. As previous studies have revealed, when society places blame on the gamblers for the negative consequences of gambling, individuals affected by problem gambling are more likely to encounter public stigma, which results in salient self-stigma (Hing et al., 2016a, 2016b). Self-stigma of problem gamblers generates a series of negative consequences, including delayed help-seeking, anxiety about treatment, worries about counselor attitudes, and fear of relapse, all of which hinder recovery from gambling issues (Hing et al., 2014; Hing et al., 2016b). Gamblers from mainland China may be more susceptible to experiencing self-stigma because gambling is illegal there. The later onset of casino gambling opportunities makes them susceptible to the exposure effect, which accelerates the development of gambling-related problems more quickly, such as high debt and suicide ideation (Manian et al., 2024). Gamblers from a jurisdiction that has legally banned gambling have not yet developed the same level of awareness, coping skills, or resistance to the potential negative effects of gambling as their counterparts in regions with a longer history of legalized gambling (Black et al., 2012; LaPlante & Shaffer, 2007). These aspects may contribute to the higher prevalence rate of gambling among Macao casino patrons (To & Huang, 2022). Furthermore, when mainland Chinese visitors encounter problem gambling, they are often unable to receive help or treatment locally. Therefore, on-site identification and intervention efforts for problem gambling within casino venues are important initiatives. The government should develop behavioral indicators to identify problem gambling, and casinos or third parties should be responsible for implementing the guidelines. In addition, distance support is important for clients who lack access to local support organizations. We thus recommend the government and related institutions strengthen the gambling helpline and optimize its online services to ensure that individuals who encounter problem gambling can promptly receive appropriate assistance or treatment.

In terms of the ‘motivation’ component, the findings indicate that visitors from mainland Chinese generally did not possess relevant knowledge of RG. As a result, they had difficulty evaluating specific RG measures and were less likely to develop motivation to engage with RG initiatives, often relying instead on retrospective reflection on the consequences of gambling to judge the effectiveness of RG. This form of reflective motivation suggests a lack of confidence in the effectiveness of RG, as visitors base their views on their perceptions of individual gambling behaviors and the intensity of policy promotions. This observation is consistent with previous research (Hing, 2005). Although promotional efforts and educational interventions have the potential to change and shape

gambling-related knowledge, attitudes, skills, and behaviors (Williams et al., 2012), prior studies suggest that these measures may not be more effective than other RG initiatives (Ladouceur et al., 2017). Thus, in addition to promotion, it is also necessary to employ more effective and engaging RG measures tailored to the needs of diverse visitor groups.

In summary, this study applied the BCW model to explore how policy categories and educational functions review RG practices through the COM-B components of capability, opportunity, and motivation. This approach extends the application of the BCW model in the RG context and provides practical recommendations for improving the design and implementation of RG initiatives.

STATEMENT OF COMPETING INTERESTS

No potential conflict of interest was reported by the author(s).

ETHICS APPROVAL

The Research Committee of Macao Polytechnic University approved the project, “Comparison of Perceptions and Behavioral Intentions of Responsible Gambling between Mainland Chinese Tourists and Macao Residents,” on January 18, 2024. (Approval code: RP/CJT/-01/2023/E01).

RELATIVE CONTRIBUTIONS

Wongkun Manian: Conceptualization; Data curation; Formal analysis; Investigation; Methodology; Writing – original draft; Writing – review & editing.

Libo Yan: Investigation; Methodology; Writing – review & editing.

Zhonglu Zeng: Conceptualization; Data curation; Supervision; Writing – review & editing.

Hong-Wai Ho: Investigation; Methodology; Writing – review & editing.

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RESEARCH PROMOTION

This study examined the understanding of responsible gambling (RG) awareness among mainland Chinese visitors. Interviews with 41 visitors found that participants had limited access to RG promotion and held diverse understandings of RG.

References

- Abbott, M. (2006). Do EGMs and problem gambling go together like a horse and carriage? *Gambling Research: Journal of the National Association for Gambling Studies (Australia)*, 18(1), 7–38.
- Abbott, M., Romild, U., & Volberg, R. (2018). The prevalence, incidence, and gender and age-specific incidence of problem gambling: Results of the Swedish longitudinal gambling study (Swelogs). *Addiction*, 113(4), 699–707. <https://doi.org/10.1111/add.14083>
- Abbott, M. W. (2020). The changing epidemiology of gambling disorder and gambling-related harm: public health implications. *Public Health*, 184, 41–45.
- Bijker, R., Booth, N., Merkouris, S. S., Dowling, N. A., & Rodda, S. N. (2022). Global prevalence of helpseeking for problem gambling: A systematic review and meta-analysis. *Addiction*, 117(12), 2972–2985. <https://doi.org/10.1111/add.15952>
- Black, D. W., McCormick, B., Losch, M. E., Shaw, M., Lutz, G., & Allen, J. (2012). Prevalence of problem gambling in Iowa: Revisiting Shaffer's adaptation hypothesis. *Annals of Clinical Psychiatry*, 24(4), 279–284.
- Blaszczynski, A., Ladouceur, R., Nower, L., & Shaffer, H. (2008). Informed choice and gambling: Principles for consumer protection. *The Journal of Gambling Business and Economics*, 2(1), 103–118.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Christensen, D. R., Roberts, A., Williams, R. J., Allami, Y., Belanger, Y., Shaw, C., ... & Stevens, R. M. (2024). Awareness and impact of casino responsible gambling/harm minimization measures among Canadian electronic gaming machine players. *International Gambling Studies*, 24(3), 458–478.
- Fossey, E., Harvey, C., McDermott, F., & Davidson, L. (2002). Understanding and evaluating qualitative research. *Australian & New Zealand Journal of Psychiatry*, 36(6), 717–732. [doi:10.1046/j.1440-1614.2002.01100.x](https://doi.org/10.1046/j.1440-1614.2002.01100.x)
- Hing, N. (2005). Giving the gamblers a voice: The perceived efficacy of responsible gambling practices in NSW Clubs. *Gambling Research: Journal of the National Association for Gambling Studies (Australia)*, 17(1), 53–69.
- Hing, N., Holdsworth, L., Tiyce, M., & Breen, H. (2014). Stigma and problem gambling: Current knowledge and future research directions. *International Gambling Studies*, 14(1), 64–81. <https://doi.org/10.1080/14459795.2013.841722>
- Hing, N., Nuske, E., Gainsbury, S. M., & Russell, A. M. T. (2016a). Perceived stigma and self-stigma of problem gambling: Perspectives of people with gambling problems. *International Gambling Studies*, 16(1), 31–48. <https://doi.org/10.1080/14459795.2015.1092566>
- Hing, N., Nuske, E., Gainsbury, S. M., Russell, A. M. T., & Breen, H. (2016b). How does the stigma of problem gambling influence help-seeking, treatment and recovery? A view from the counselling sector. *International Gambling Studies*, 16(2), 263–280. <https://doi.org/10.1080/14459795.2016.1171888>
- Hing, N., Rockloff, M., & Browne, M. (2023). Adoption, adaptation or exposure? Novel digital gambling activities and links with gambling problems. *Current Addiction Reports*, 10(2), 254–261.
- Hing, N., Russell, A. M. T., & Hronis, A. (2017). What behaviours and cognitions support responsible consumption of gambling? Results from an expert survey. *International*

- Journal of Mental Health and Addiction*, 15(6), 1320–1341. <https://doi.org/10.1007/s11469-017-9793-4>
- Hing, N., Russell, A. M., & Hronis, A. (2018). A definition and set of principles for responsible consumption of gambling. *International Gambling Studies*, 18(3), 359–382. <https://doi.org/10.1080/14459795.2017.1390591>
- Hing, N., Sproston, K., Tran, K., & Russell, A. M. T. (2017). Gambling responsibly: Who does it and to what end? *Journal of Gambling Studies*, 33(1), 149–165. <https://doi.org/10.1007/s10899-016-9615-9>
- Ladouceur, R., Shaffer, P., Blaszczynski, A., & Shaffer, H. J. (2017). Responsible gambling: A synthesis of the empirical evidence. *Addiction Research & Theory*, 25(3), 225–235. <https://doi.org/10.1080/16066359.2016.1245294>
- Langham, E., Thorne, H., Browne, M., Donaldson, P., Rose, J., & Rockloff, M. (2015). Understanding gambling related harm: A proposed definition, conceptual framework, and taxonomy of harms. *BMC Public Health*, 16, 1–23.
- LaPlante, D. A., & Shaffer, H. J. (2007). Understanding the influence of gambling opportunities: Expanding exposure models to include adaptation. *American Journal of Orthopsychiatry*, 77(4), 616–623. <https://doi.org/10.1037/0002-9432.77.4.616>
- Louderback, E. R., LaPlante, D. A., Abarbanel, B., Kraus, S. W., Bernhard, B. J., & Gray, H. M. (2023). Examining responsible gambling program awareness and engagement trends and relationships with gambling beliefs and behaviors: A three-wave study of customers from a major gambling operator. *Journal of Gambling Studies*, 39(1), 401–429.
- Manian, W., Li, X., & Zeng, Z. (2022). Employee perceptions of responsible gambling in Macao: Concepts, indicators, and intervention barriers. *Journal of Gambling Studies*, 39(1), 431–446. <https://doi.org/10.1007/s10899-022-10114-w>
- Manian, W., Li, X., Zeng, Z., & Wang, X. (2024). Characteristics of gambling helpline callers in Macao: A regional comparison. *Journal of Gambling Studies*, 40(3), 1607–1622. <https://doi.org/10.1007/s10899-024-10300-y>
- Markham, F., & Young, M. (2015). “Big gambling”: The rise of the global industry-state gambling complex. *Addiction Research & Theory*, 23(1), 1–4. <https://doi.org/10.3109/16066359.2014.929118>
- Marko, S., Thomas, S. L., Pitt, H., & Daube, M. (2023). The impact of responsible gambling framing on people with lived experience of gambling harm. *Frontiers in Sociology*, 8, 1074773. <https://doi.org/10.3389/fsoc.2023.1074773>
- Marko, S., Thomas, S. L., Robinson, K., & Daube, M. (2022). Gamblers’ perceptions of responsibility for gambling harm: A critical qualitative inquiry. *BMC Public Health*, 22(1), 725. <https://doi.org/10.1186/s12889-022-13109-9>
- Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1), 42. <https://doi.org/10.1186/1748-5908-6-42>
- Michie, S., Atkins, L., & Gainforth, H. L. (2016). Changing behaviour to improve clinical practice and policy. In P. C. Dias, A. Gonçalves, Â. Azevedo, & F. Lobo (Eds.), *Novos Desafios, Novas Competências: Contributos Atuais da Psicologia* (pp. 41–60). Axioma - Publicações da Faculdade de Filosofia. https://doi.org/10.17990/Axi/2016_9789726972679_041
- Mumtaz, A. M., Ramayah, T., Hiram, T., & Jun-Hwa, C., (2025). Convenience sampling: A review and guidelines for quantitative research. *Journal of Applied Structural Equation Modeling*, 9(2): 1–15. DOI:10.47263/JASEM.9(2)01

- Prentice, C., & Woodside, A. G. (2013). Problem gamblers' harsh gaze on casino services. *Psychology & Marketing*, 30(12), 1108–1123. <https://doi.org/10.1002/mar.20670>
- Price, A., Hilbrecht, M., & Billi, R. Charting a path towards a public health approach for gambling harm prevention. *J Public Health (Berl.)* 29, 37–53 (2021). <https://doi.org/10.1007/s10389-020-01437-2>
- Responsible Gambling Promotions Organising Committee. (2023). *Report on Responsible Gambling Promotions 2020-2022*. <https://iasweb.ias.gov.mo/cvf/annualReport/RG2022-chi.pdf>
- Richardson, M., Khouja, C. L., Sutcliffe, K., & Thomas, J. (2019). Using the theoretical domains framework and the behavioural change wheel in an overarching synthesis of systematic reviews. *BMJ Open*, 9(6), e024950.
- Roberts, R. (2020). Qualitative interview questions: Guidance for novice researchers. *The Qualitative Report*, 25(9), 3185–3203. <https://doi.org/10.46743/2160-3715/2020.4640>
- Shaffer, H. J., LaBrie, R. A., & LaPlante, D. (2004). Laying the foundation for quantifying regional exposure to social phenomena: Considering the case of legalized gambling as a public health toxin. *Psychology of Addictive Behaviors*, 18(1), 40–48. <https://doi.org/10.1037/0893-164X.18.1.40>
- Singtao news. (2022, October 18). Macau's two measures to save tourism industry: major banks expect limited stimulus from gambling. https://www.singtao.ca/googleamp/amp.php?region=vancouver_hk&cat=144&post_id=6057985
- Social Welfare Bureau. (n.d.). *What is responsible gambling?* Problem Gambling Prevention and Treatment Division - The Resilience Centre, Government of the MSAR. <https://iasweb.ias.gov.mo/cvf/en/responsibility.jsp>
- Social Welfare Bureau. (2024). *Report on 'A Survey of Responsible Gambling Knowledge 2020'*, Institute for the Study of Commercial Gaming, University of Macau. <https://iasweb.ias.gov.mo/cvf/en/annualReport/07/10/2026en.pdf>
- Takeshi Kihara. (2018, Aug 16). Mainland tourists are back! Macau casinos see huge profit increase. *NIKKEI - Japanese Economic News Chinese Edition*. <https://zh.cn.nikkei.com/industry/tradingretail/31838-2018-08-16-15-50-55.html>
- Tong, K. K., Chen, J. H., & Wu, A. M. (2019). Application of health belief model to practice of responsible gambling. *Journal of Gambling Studies*, 35(3), 1047–1062.
- To, W. M., & Huang, G.-H. (2022). Profiling of gamblers and problem gamblers among casino patrons in Macao SAR. *Journal of Gambling Studies*, 39(3), 1111–1128. <https://doi.org/10.1007/s10899-022-10152-4>
- Turner, N. E., Wiebe, J., Falkowski-Ham, A., Kelly, J., & Skinner, W. (2005). Public awareness of responsible gambling and gambling behaviours in Ontario. *International Gambling Studies*, 5(1), 95–112. <https://doi.org/10.1080/14459790500098044>
- Williams, R.J., West, B.L., & Simpson, R.I. (2012). Prevention of Problem Gambling: A Comprehensive Review of the Evidence, and Identified Best Practices. Report prepared for the Ontario Problem Gambling Research Centre and the Ontario Ministry of Health and Long Term Care. October 1, 2012. <http://hdl.handle.net/10133/3121>
- Wood, R. T. A., & Griffiths, M. D. (2015). Understanding positive play: An exploration of playing experiences and responsible gambling practices. *Journal of Gambling Studies*, 31(4), 1715–1734. <https://doi.org/10.1007/s10899-014-9489-7>

- Zeng, Z., Prentice, C., & King, B. E. (2014). To gamble or not? Perceptions of Macau among Mainland Chinese and Hong Kong visitors. *International Journal of Tourism Research*, 16(2), 105–112.
- Zeng, Z., Wang, X., & Wong, I. A. (2022). A study of adaptive gambling behaviors of visitors from Mainland China to Macau. *Asian Education and Development Studies*, 11(3), 547–558. <https://doi.org/10.1108/AEDS-02-2020-0028>

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