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REPORT
on
A Study of Macao People's Participation
in Gambling Activities 2022

Commissioned by
Social Welfare Bureau
Macao Special Administrative Region

Institute for the Study of Commercial Gaming
Faculty of Business Administration
University of Macau

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Executive Summary

Commissioned by the Social Welfare Bureau, the Institute for the Study of Commercial Gaming of the University of Macao surveyed Macao people's participation in gambling activities, assessed the prevalence rates of gambling disorder in Macao, and compared the results with those of the previous studies. The purpose of this study is to provide recommendations with regard to the gambling disorder prevention and treatment services and policies to the Social Welfare Bureau.

With the computerized-random-digit-dialing method adopted, this research successfully interviewed 2,033 Macao residents aged 18 or above. The findings are summarized below:

- After the significant drop in 2019 (40.9%), the gambling participation rate in the current study continued to experience a substantial drop of 10.8 percentage points to 30.1%. Once again, the gambling participation rate hit the lowest rate among similar surveys in Macao over the years.
- Among the 2,033 respondents, only 405 of them (19.9%) participated in “commercial gaming” in the past 12 months. The participation rate in “commercial gaming” in the 2019 study already dropped by about 8 percentage points to 36.2%. In the current study, the participation rate continued to drop by 16.3 percentage points, making it the lowest ever-recorded participation rate in “commercial gaming” in Macao.
- The relationship between gambling participation and the demographic characteristics of respondents found in the current research was in general consistent with those found in the previous studies. Respondents who were males, born in Macao, or migrated to Macao at younger ages, had secondary education or a master's degree or above, and had higher monthly personal income were more likely to participate in gambling activities in the past year. Different from the 2019 study, age, type of residential housing, employment status, occupation, and gaming employees or not were not significantly related to the gambling participation in the current study.
- With refusal cases excluded from the analysis, the median monthly gambling expenditure of 2,011 respondents was zero. This level had remained unchanged for three consecutive surveys. However, if only gamblers were taken into account, the median monthly expenditure on gambling was MOP100, which represented an increase of 20.1% from MOP83.3 in 2019. Furthermore, results of the current study also showed that gamblers' median monthly expenditure on “commercial gaming” increased from MOP50 in 2019 to MOP100. This level was the same as that of 2016.
- Compared with the 2019 study, the participation rates of “social gambling” (15.6%) and “horse racing” (1.0%) increased in the current survey. “Mobile phones/iPad (apps) games with monetary involvement” (0.1%) recorded participation for the first time in this type of

survey. The participation rates of both “mahjong house” (1.1%) and “online casino” (0.2%) remained unchanged in the current survey. Following the previous survey, “using computer to play money involved games” continued to have zero participation in the current study. Meanwhile, the participation rates of “mark six lottery” (13.0%), “soccer/basketball betting” (2.5%), “Macao casino” (5.6%), “slot machine parlor” (3.0%), “arcade games with monetary involvement” (e.g., “fishing arcade game”, “poker arcade game”, etc.) (0.3%), and “pacapio” (0.2%) decreased in the current survey. Among these activities, the decrease in the participation rate of “mark six lottery” was the most significant. It is worth noting that the participation of “Macao casino” and “slot machine parlor” had declined for five consecutive studies.

- Results showed that the five most popular gambling activities in descending order were “social gambling” (15.6%), “mark six lottery” (13.0%), “Macao casino” (5.6%), “slot machine parlor” (3.0%), and “soccer/basketball betting” (2.5%). “Social gambling” returned to the top most popular game in Macao years after the first survey conducted in 2003. As for “soccer/basketball betting”, its popularity ranked fifth although it rose to fourth place in the previous survey.
- In terms of the median monthly gambling expenditure, “soccer/basketball betting” recorded the highest expenditure (MOP500) among the five most popular gambling activities. This amount was 16.7 times higher than that of the “mark six lottery”, which had the lowest median monthly gambling expenditure (MOP30). The second highest median monthly gambling expenditure was “Macao casino” (MOP300). The median monthly gambling expenditure of “slot machine parlor” (MOP200) and “social gambling” (MOP100) ranked third and fourth, respectively. Taken together, the amounts spent on the five most popular gambling activities in the current survey were higher than the amounts spent in the previous survey. As among these activities, “soccer/basketball betting” marked the largest percentage increase in gambling expenditure. “Slot machine parlor” ranked second in terms of the percentage increase in expenditure. Overall speaking, the median monthly gambling expenditures of gamblers rebounded in the current survey after a fall in the previous survey.
- The results of the current survey showed that demographic characteristics were related to participation in individual gambling activities. For instance, those who participated in “social gambling” tended to age between 18 and 24 years, single, students or out-of-school teenagers, had a master’s degree or above, born in Macao or migrated to Macao at younger ages. As for those who participated in “mark six lottery”, they were mainly males, aged between 25 and 34, or between 55 and 64, born in Macao, or migrated to Macao at the age of 1 to 9, lived in government social housing, participated in the workforce, worked in the gaming industry, worked shifts, had a monthly personal income ranging between MOP15,001 and MOP50,000. Regarding participation in “Macao casino”, males and people working shifts tended to have higher participation than their counterparts. When it comes to “slot machine parlor”, older adults tended to participate in this activity. Similar to “Macao casino” in the current survey,

those who participated in “soccer/basketball betting” tended to be males and people working shifts.

- Consistent with the previous studies, “entertainment” and “social gathering” were the primary reasons to participate in “social gambling”, while “hoping to win money” continued to be the primary reason driving respondents to participate in “mark six lottery”. As for “Macao casino”, “hoping to win money” and “entertainment” continued to be the two major reasons for participation. Regarding “slot machine parlor”, “entertainment” continued to be the main reason for participation. When it comes to “soccer/basketball betting”, for the first time “hoping to win money” replaced “entertainment” as the first major reason for participation.
- Results showed that “soccer/basketball betting” participants, who typically placed bets either “during the game” or “both before and during the game”, their monthly participation days (2 days), as well as the number of bets per betting day (3 bets), were significantly higher than those of “soccer/basketball betting” participants who typically placed their bets only before the game (0.6 days; 2 bets). In addition, the survey also found that the age when “soccer/basketball betting” participants first participated in this activity had no statistically significant relationship with their spending, frequency of participation, and number of bets on this activity.
- Among the 2,033 respondents, less than 10% of them expressed that they had the intention to bet on matches during the “2022 FIFA World Cup” (7.5%). Further analysis found that respondents who were males (13.5%), aged between 25 and 44 (22.6%), born in Macao (9.5%), or moved to Macao between the ages of 1 and 9 (10.7%), with a higher monthly personal income, participated in the workforce (9.9%), and with a diploma (13.8%) or a master’s degree or above (10.7%) were significantly more likely to bet on the World Cup. As for the major reasons for them betting, “entertainment” and “event fervour/atmosphere” of the event were the two most mentioned reasons.
- Gambling disorder refers to persistent and recurrent problematic gambling behavior leading to clinically significant impairment or distress, as indicated by the individual exhibiting four (or more) of the 9 criteria in a 12-month period. According to this definition, 9 out of 2,033 respondents were classified as probable disordered gamblers, who accounted for 0.45% of the overall sample. Among these probable disordered gamblers, 6 (0.30%), 2 (0.11%), and 1 (0.04%) of them were classified as having mild, moderate, and severe gambling disorder, respectively. Compared with the prevalence rate in 2019, the prevalence rate of gambling disorder in this survey (0.45%) was 0.31 percentage point lower.
- Consistent with the findings of the previous studies, “Macao casino” (57.2%) continued to be the most popular form of gambling participated by probable disordered gamblers. It was also the most common form where probable disordered gamblers experienced gambling disorder.

- Due to the limited number of probable disordered gamblers, this study was unable to conduct cross-tabulation and chi-square analysis to determine the relationships between their demographic characteristics and gambling disorder. For the same reason, this study was unable to examine the likelihood of a person becoming a probable disordered gambler with Logistic Regression analysis.
- A comparison between gaming employees (36.6%) and non-gaming employees (including those who were unemployed, retirees, housewives, and students or out-of-school teenagers) (29.4%) found that gaming employees were significantly more likely to participate in gambling activities.
- The current survey explored the drinking practices of gamblers. Results showed that 70 respondents (11.5%) who gambled in the past year expressed that they consumed alcohol before or during their gambling participation. Among them, drinking practices happened most often in “social gambling”, which was then followed by “Macao casino” and “soccer/basketball betting”. Further analysis found that respondents who were males, single, aged between 25 and 44, with a monthly personal income above MOP15,000, participated in the workforce, students, or out-of-school teenagers were significantly more likely to consume alcohol before or during gambling.
- Among the 2,033 respondents, more than 70% of them (71.4%) claimed that they had heard of the local gambling disorder prevention and treatment centers. Compared with the past studies, this proportion was lower than 73.7% in 2019, 78.3% in 2016, and 83.0% in 2013. Furthermore, among these respondents, only 35.1% were able to name the centers. However, this proportion was higher than 30.9% in 2019, 32.3% in 2016 and significantly higher than 17.4% in 2013.
- Among the local gambling disorder prevention and treatment centers, respondents were most familiar with the Problem Gambling Prevention and Treatment Division - The Resilience Centre of the Social Welfare Bureau (11.3%). The awareness of which rebounded in the current survey after a slight decrease in the previous survey. The second center respondents were most familiar with was the 24-Hour Hotline and Online Gambling Counseling Services (9.7%). In fact, the increase in its awareness was the most significant in the current survey. As for the rest of the centers, their awareness also recorded varying degrees of increase in the current survey.
- Respondents were asked in what situations a gambler should seek help from a gambling disorder prevention and treatment center. Concerning this question, respondents put forward an average of 1.86 situations. Approaching 40% of the respondents (38.7%) believed that when those who participated in gambling were “out of control/unable to extricate themselves from gambling/chasing losses”, they should seek help from treatment centers. Other situations that should seek help from treatment centers included “having financial difficulties due to gambling/relying on others for financial assistance” (33.1%), “borrowing money for

gambling” (16.5%), “often preoccupied with gambling” (14.7%), “having deteriorated relationships with family and friends because of gambling” (12.8%), etc. In addition, as high as 15.8% of the respondents were not able to give at least one situation when a gambler should seek help from treatment centers.

- If the situations respondents mentioned happened to themselves, 62.4% were willing to seek help from treatment centers, and 25.3% would not seek help from treatment centers. 11.6% of the respondents expressed “Don’t know / Hard to say”, and 0.7% of the respondents refused to express their willingness. For those who refused to seek help from treatment centers, the major obstacle came from the belief that they had the ability to solve their gambling problems (27.0%). Besides that, “having help from family/friends” (13.0%), “treatment centers cannot solve my gambling problems” (9.8%), “no treatment is needed as once addicted, one could not be saved” (8.4%), and “do not want people seeing me going to these centers” (8.1%), etc. were the other reasons mentioned.

Conclusion

Commissioned by the Social Welfare Bureau, the Institute for the Study of Commercial Gaming of the University of Macau conducted “A Study of Macao People’s Participation in Gambling Activities 2022”. With the computerized-random-digit-dialing method adopted, this study successfully interviewed 2,033 Macao residents aged 18 or above.

In 2019, the gambling participation rate of Macao residents already dropped significantly to 40.9%. However, in the current survey, the gambling participation rate continued to experience another substantial drop to 30.1%. Compared with the participation rate (67.9%) recorded at the early stage of the liberalization of the gaming industry, the participation rate in the current study dropped a total of 37.8 percentage points. Once again, this participation rate hit the lowest rate ever recorded in Macao.

Similar to the previous studies, the top five gambling activities most commonly participated in Macao in the current survey in descending order were “social gambling” (15.6%), “mark six lottery” (13.0%), “Macao casino” (5.6%), “slot machine parlor” (3.0%), and “soccer/basketball betting” (2.5%). Apart from “social gambling” which had a slight increase in the participation rate (+3.0 percentage points), the participation rates of the remaining four activities experienced varying degrees of decrease (from -1.8 to -13.5 percentage points). “Social gambling” returned to the top most popular participated gambling activity in Macao years after the first survey conducted in 2003 (43.8%). Even so, compared with the first survey, the participation rate of “social gambling” in the current study decreased by 28.2 percentage points. In addition, compared with the study in 2019 (7.6%), the participation rate of “soccer/basketball betting” also decreased by 5.1 percentage points, and its popularity returned to fifth place after it rose to fourth place in the previous survey. Concerning the participation in online gambling activities, results showed that the participation rate of “online casino” (0.2%) remained the same as that of the 2019 survey, while that of “using computer to play money involved games” continued to have zero participation rate in the current study. However, “mobile phones/iPad (apps) games with monetary involvement” recorded participation (0.1%) for the first time in this type of survey. In short, the participation rates of these online gambling activities were all at the level of less than half a percentage point. Results indicated that residents’ participation in online gambling activities had not increased significantly. Overall speaking, residents' participation in "social gambling" was slightly more common than that in the previous survey, while the participation in other gambling activities tended to be the same or even lower than those in the previous survey.

A review of the survey results over the years found that “Macao casino” and “soccer/basketball betting” continued to be the activities more commonly participated by men. Meanwhile, “social gambling”, which used to be more commonly participated by men, was found to have no significant relationship with gender in the current survey. However, it is worth noting

that the current survey found that the age group (18-24 years old) most commonly involved in “social gambling” was younger than the age group (25 to 34 years old) found in the previous survey. Meanwhile, the employment status most commonly involved in “social gambling” had changed from those who were in the workforce in the previous survey to students or out-of-school teenagers in the current survey. Results showed that youths and students in Macao become more active in “social gambling” participation. As such, it is suggested that in their gambling disorder preventive efforts, in particular those related to community activities and promotions, both government and non-government centers strengthen their preventive efforts and “responsible gambling” promotions to youths and students so as to reduce the likelihood of them from having gambling problems due to their participation in “social gambling”.

According to the results of the current study, “soccer/basketball betting” participants who typically placed bets either during the game or both before and during the game, their monthly participation days, as well as the number of bets per betting day, were significantly higher than those of “soccer/basketball betting” participants who typically placed their bets only before the game. Results showed that participants who usually placed their bets during the game or both before and during the game were more enthusiastic about betting on soccer and basketball games than those who usually placed their bets only before the game. In addition, the survey also found that the age when “soccer/basketball betting” participants first participated in this activity had no statistically significant relationship with the amount spent, frequency of participation, and number of bets on this activity.

Furthermore, the current survey investigated residents’ intentions to bet in the upcoming “2022 FIFA World Cup”. Results showed that less than 10% of the respondents (7.5%) believed that they would participate in “soccer/basketball betting” during the “World Cup”. Further analysis found that respondents who were males, aged between 25 and 44, born in Macao or moved to Macao between the ages of 1 and 9, had a higher monthly personal income, participated in the workforce, and had a diploma or a master’s degree or above were significantly more likely to bet on the “World Cup” games. As for those who expressed interest in betting on the “World Cup” games, “entertainment” and “event fervour/atmosphere” were the two most reasons mentioned. As the precautionary measure against the negative impact of the “World Cup” on residents’ participation in “soccer/basketball betting”, it is suggested that on top of the regular gambling disorder preventive and control efforts, both government and non-government organizations organize “responsible gambling” promotion with a special focus on the “World Cup”.

According to DSM-5, 9 out of 2,033 respondents exhibited four or more criteria meaning that they might have been classified as disordered gamblers. They accounted for 0.45% of the total sample. Among these probable disordered gamblers, 6 (0.30%), 2 (0.11%), and 1 (0.04%) of them were classified as having mild, moderate, and severe gambling disorder, respectively. Compared with the prevalence studies in the past, the number of probable disorder gamblers reduced further. Meanwhile, consistent with the previous findings, “Macao casino” continued to be the most popular type of gambling participated by disordered gamblers. Nevertheless, due to

the limited number of probable disordered gamblers, this study was not able to examine the likelihood of a person becoming a probable disordered gambler with Logistic Regression analysis.

A comparison between gaming employees (36.6%) and non-gaming employees (including those who were unemployed, retirees, housewives, and students or out-of-school teenagers) (29.4%) found that gaming employees were significantly more likely to participate in gambling activities. In addition, the current survey explored the drinking practices of gamblers. Results showed that 70 respondents (11.5%) who gambled in the past year expressed that they consumed alcohol before or during their gambling participation. Among them, drinking practices happened most often in “social gambling”, which was then followed by “Macao casino” and “soccer/basketball betting”. Further analysis found that respondents who were males, single, aged between 25 and 44, with a monthly personal income above MOP15,000, participated in the workforce, students or out-of-school teenagers were significantly more likely to drink alcohol before or during gambling. With regard to the above results, it is suggested that both government and non-government gambling disorder prevention and treatment centers strongly promote the applications and practices of “responsible gambling”, in particular those related to the behavior “Don’t gamble when you are drunk”, so as to allow the residents to be aware of the possible dangers of gambling while they are drunk. It is hoped that when specific education on this “responsible gambling” behavior is provided, residents’ awareness on this behavior is strengthened and will practice “responsible gambling” whenever they gamble.

Regarding residents’ awareness of the local gambling disorder prevention and treatment centers and their demand for the services, the current study found that the proportion of residents who had heard of a local center was slightly lower than the proportions found in the previous studies. However, among those who had heard of a local center, the percentage of them who could name a center was higher than the percentages of the previous surveys. Among the local gambling disorder prevention and treatment centers, respondents were most familiar with the Problem Gambling Prevention and Treatment Division - The Resilience Centre of the Social Welfare Bureau. Its awareness rebounded in the current survey after the slight decrease in the previous survey. The second center respondents were most familiar with was the 24-Hour Hotline and Online Gambling Counseling Services. In fact, the increase in its awareness was the most significant in the current survey. As for the rest of the centers, their awareness also recorded varying degrees of increase in the current survey. The results showed that the number of residents who were aware of where to seek help was increasing. With regard to the demand for gambling disorder counseling services, the most often mentioned situation in which respondents believed a gambler should seek help was “out of control/unable to extricate themselves from gambling/chasing losses”. This was then followed by “having financial difficulties due to gambling/relying on others for financial assistance”, “borrowing money for gambling”, “often preoccupied with gambling”, “having deteriorated relationships with family and friends because of gambling”, etc. However, there were still as high as 15.8% of the respondents who were not able to give at least one situation when a gambler should seek help from treatment centers. As such,

strengthening the promotion of “responsible gambling” is strongly suggested. When asked if the situations they mentioned happened to themselves, 62.4% of the respondents were willing to seek help from treatment centers, and 25.3% would not seek help from treatment centers. 11.6% of the respondents expressed “Don’t know / Hard to say”, and 0.7% of the respondents refused to express their willingness. Results showed that the willingness to take the initiatives to seek help in Macao warrants improvement. For those who refused to seek help from treatment centers, the major obstacle came from the belief that they had the ability solve their gambling problems. Besides that, “having help from family/friends”, “treatment centers cannot solve my gambling problems”, “no treatment is needed as once addicted, one could not be saved”, and “do not want people seeing me going to these centers”, etc. were the other reasons mentioned. It seems that some of the residents underestimate the negative impacts of gambling problems. Besides, some may not understand or even misunderstand the services of treatment centers. In order to encourage those in need to seek professional counseling and assistance as soon as possible, it is suggested that both government and non-government counseling centers continue and intensify their efforts to promote the importance of seeking help from professional counseling centers. They should also strengthen the promotion of the substance of counseling services so that residents will have a clear understanding of gambling counseling services, thereby enhancing their confidence in the centers and their services.

Since the outbreak of COVID-19 more than two and a half years ago, a series of epidemic prevention measures and guidelines have led Macao residents into the regular mode of epidemic prevention and control in their daily lives. The data with regard to gambling participation and gambling disorder in this survey was collected under this condition. Results showed the fact that even under the regular mode, the gambling participation rate and the prevalence of gambling disorder continued the downward trends recorded in the past few studies before the outbreak of COVID-19. Meanwhile, the top five gambling activities most commonly participated by residents remained the same as those found before the epidemic. Amid the epidemic prevention and control around the world, online gambling activity has surged and has become a major growth driver in gross gambling revenue (Fletcher, 2021; UK Gambling Commission, 2021). Even so, participation in online gambling activities in Macau has not increased significantly. In summary, under the regular mode of epidemic prevention, the gambling participation of residents remains stable.

As early as 2009, the Social Welfare Bureau, the Gaming Inspection and Coordination Bureau, and the University of Macau have jointly promoted “responsible gambling”. So far, the promotion has run for 13 consecutive years during which different stakeholders promote “responsible gambling” without interruption. Over the years, the government has adopted measures such as legislation, publicity, and education to promote “responsible gambling” and reduce the negative impact caused by excessive gambling. As for the gaming operators, they have actively cooperated with the government in the implementation of applicable laws and regulations and operated their gaming business in a responsible way. Aside from providing professional counseling services, the gambling disorder prevention and treatment centers have actively carried out a variety of publicity

and educational activities in response to the promotional theme set by the government every year. Aimed at schools, families, and the community, educational institutions and community organizations have helped the public to establish the proper value of money, have a fundamental understanding of gambling, correct any erroneous ideas and avoid developing a gambling addiction. As for the gamblers, the results of the current survey showed that both the gambling participation rate and the gambling disorder prevalence rate dropped further. Besides, among regions using the same screen of gambling disorder, the prevalence rate of Macao was the lowest in recent years. As such, it can be seen that the continuous vigorous efforts to promote “responsible gambling policy” by various stakeholders, and the positive impacts of the related education should not be overlooked. Hence, continuing “responsible gambling” promotion is strongly suggested. Also, relevant organizations should strengthen public education in relation to gambling disorder. Meanwhile, they should increase efforts to promote the substance of professional counseling services so as to allow Macao residents to have a deep understanding of these services. It is hoped that after the promotions, in case of need, residents would seek help from gambling disorder prevention and treatment centers and have early interventions, thereby reducing further personal as well as social costs caused by gambling disorder.