

REPORT

on

A Study of Hong Kong People's Participation in Gambling Activities

Social Sciences Research Centre
The University of Hong Kong

Commissioned by The Ping Wo Fund

December 2022

Executive Summary

Study commissioning

1. The Ping Wo Fund (“the Fund”) was set up in 2003 to help prevent and alleviate gambling-related problems, through publicity and education, and provision of counselling and treatment services to gamblers with gambling disorder. The Fund considered that it was an opportune time to commission another round of study in 2021 to monitor the latest development in gambling participation and the prevalence of problem or pathological gambling in Hong Kong, to provide the basis for the Fund to introduce corresponding alleviation measures. The Secretary for Home Affairs Incorporated, as the Trustee of the Fund, commissioned the Social Sciences Research Centre of The University of Hong Kong (“HKUSSRC”) to conduct the Study through an open bidding exercise.

Study methodology

2. In this Study, four distinct research methods were used to collect information from different targets with different emphases. They were:
 - a) a telephone survey of the general public aged 15 and above to collect the general public’s views on gambling in Hong Kong;
 - b) a school survey of secondary school students to collect the youth’s views on gambling in Hong Kong;
 - c) individual interviews with problem gamblers and significant others to understand the perception, motivation of gambling, pathways of developing gambling disorder (GD), etc.;
 - d) focus group interviews with gamblers, at-risk (gambling) youths, young people and the general public (aged 30-67) to understand the perception, motivation of gambling, pathways of developing GD, etc.

Measures

3. The following measurements were used in either the surveys or interviews or both.
4. **Gambling behaviours:** types of gambling activities participated and reasons for participating (including legal and illegal gambling), frequency of gambling, source and amount of betting money, channels and venues of gambling and situation of credit betting

Prevalence of GD Measures

5. **DSM-5:** salient features of DSM-5 are that compulsive gambling is characterized as GD as gambling is a behavioral addiction; the threshold for pathological diagnosis is based on 4 of the 9 items in DSM-5. The level of severity is mild (4-5 items), moderate (6-7 items) or severe (8-9 items).

6. South Oaks Gambling Screen (**SOGS-RA**): revised for adolescents. This is a well-established instrument to find gambling severity among adolescents and is widely used round the world by all researchers and the SOGS-RA cutoffs are: 0 = No problem with gambling; 1-4 = Some problems; 5 or more = Probable pathological gambler.
7. Gambling motivation is measured with the modified Chinese version of the Gambling Motivation Scale (**C-GMS**) which was developed from the Gambling Motivation Scale (GMS). A higher score (over 75) indicates higher attribution to the motivation to gamble.
8. Gambling belief in terms of cognitive distortion, is measured with the modified Chinese version of the Gambling Belief Scales (**GBQ-C**) which was developed from Gambling Belief Scales (GBQ). It has two closely related factors, namely Luck/Perseverance subscale (9 items) and Illusion of Control subscale (5 items). A higher score (over 85) indicates a higher gambling belief distortion. GD gamblers score higher than non-problem gamblers on GBQ-C and its factors (viz., Luck/Perseverance and Illusion of Control). Its scores are moderately correlated with the duration of gambling sessions among GD gamblers.

Other risk or protective factors associated with GD:

9. Depression Anxiety Stress Scales 21 (**DASS-21**) is used to measure the mental health status (well-being) of the person. It is a quantitative measure of distress along the 3 axes of depression, anxiety and distress, with 21 questions. The cutoff scores of severity of each subscale are as follows: (1) Depression: 21 or above, (2) Anxiety: 15 or above, (3) Stress: 26 or above.
10. Family functioning is measured with **APGAR** and has been widely used in western countries to measure family functioning. This Study adopts the Chinese version of APGAR.
11. The 20-item Internet Addiction Test (**IAT**) is used to measure the presence and severity of Internet dependency among adults and adolescents. Total scores that range from 0 to 30 points are considered to reflect a normal level of Internet usage; scores of 31 to 49 indicate the presence of a mild level of Internet addiction; 50 to 79 reflect the presence of a moderate level; and scores of 80 to 100 indicate a severe dependence upon the Internet. It is used to measure the at-risk youth and others if they are addicted to the Internet, that makes them easier to be tempted to surf in the Internet gambling sites.

Telephone Survey of the General Public

12. **Survey Objectives:** As the telephone survey provides information from a representative sample of the general population aged 15 and above, it is relevant for all the following study objectives that relate to the general population.
13. **Telephone Survey Methodology:** The telephone survey covering both domestic fixed lines and mobile lines was designed to include a representative sample of the population aged 15 and above and able to speak Cantonese, Putonghua or English, excluding foreign domestic helpers. The coverage of domestic fixed lines in Hong Kong is about 50%, while the coverage of mobile lines in Hong Kong is at least 95%. After using the dual frame of

mobile and fixed line telephones in Hong Kong, HKUSSRC believes that the coverage exceeds 99% (see Appendix D). The sample was weighted to account for the dual frame, as explained in Appendix D. It was then weighted to match the gender and age characteristics published by the Census and Statistics Department for the population aged 15 or above. All tables use this weighting in order to minimize non-response bias and maximize representativeness of the findings for the population aged 15 or above. All fieldwork was undertaken by trained interviewers, with supervision, and a random sample of 5% of interviews received callbacks to check. An unanswered telephone number had at least three contact attempts before classifying as non-contact case.

14. **Response Rates of the Telephone Survey:** Fieldwork of the telephone survey was undertaken on weekdays from 6pm to 10pm and Saturdays from noon to 6pm over the period from August 5th to September 15th, 2021. Overall, there were 2,006 completed interviews, of which the number of domestic and mobile telephone survey respondents were both 1,003. This yields an overall sampling error of at most 1.2% (i.e. a 95% confidence interval width of at most +/- 2.4%) using standard statistical formulae. Response rate is calculated by dividing the number of complete interviews by the total number of all cases with some form of contact (Complete, Partials, Refusals and respondent non-contact cases), yielding 31.6% for mobile and 25.4% for domestic. While this response rate is lower than planned, this is unavoidable, given that many individuals now block all telephone calls from numbers that they do not recognize.
15. **Demographics of Survey Respondents:** Among the 2,006 respondents, more females participated than males, representing 55.1% of the whole sample. The largest proportion of respondents are aged between 60-69, representing 19.2% of all the respondents, followed by those aged from 50 to 59 (18.0%) and from 40 to 49 (15.8%), while groups with age between 15 and 17, and 18 and 21 contribute the smallest proportions of 1.5% and 3.1% respectively. In terms of education level, 29.1% and 28.4% of respondents had completed the senior secondary school only and obtained a bachelor's degree or above respectively. 58.5% of respondents were married and 27.4% of them were single, while separated/ divorced persons and widows/ widowers accounted for a total of 10.6%. As for the housing types, 39.2% of the whole sample lived in private housing, followed by public rental housing (28.6%). For monthly household income, 23.4% of respondents reported a household income of at least \$50,000 per month, followed by 8.0% between \$20,000 and \$24,999. 39.2% of the respondents were employees, followed by retirees (28.1%), full-time carers (13.3%), self-employed (6.6%), students (5.7%), unemployed/ job seekers (3.2%) and employers (2.1%). Among the 995 working respondents, 18.2% of them reported working in public administration/ social and personal services. The other three industries reported by more respondents were finance (9.4%), construction (8.4%) and retail (7.9%). The highest proportion of working respondents were managers and administrators (27.0%). 24.4% of working respondents were clerical staff and 13.5% of them were service workers and salespersons. Among working respondents, the highest proportion reported a monthly income from \$20,000 to \$24,999 (15.0%), followed by \$50,000 and above (14.9%) and \$15,000 to \$19,999 (12.4%).
16. **Participation in gambling activities:** the overall gambling prevalence rate for the past year was 39.5%. This is significantly lower than the prevalence in the period 2001 to 2016 reported in chapter 2, which varied from a minimum of 61.5% in 2016 up to a maximum of 80.4% in 2005. However, at least some of this decrease is due to COVID-19 and it seems likely that the rate will increase when the epidemic situation is under control.

17. **Age when first gambled:** 30.4% of the respondents reported that they first gambled before the age of 18.
18. **Types of gambling activities participated in during the past year:** amongst gamblers, the Mark Six was the most common form of gambling during the past year reported by participants (73.0%), followed by social gambling (50.6%), betting on Hong Kong Jockey Club (“HKJC”) horse racing (29.5%) and HKJC football (16.3%). Less than 1% reported online gambling less than 0.5% reported participation in online casinos (4 counts), online football betting (1 count) and online games for money (1 count).
19. **Frequency of participation in gambling in the past year:** the form of gambling with the highest frequency is HKJC horse race betting, for which the median frequency is once or more per week; followed by HKJC football betting, for which the median frequency is once every two weeks; for Mark Six gamblers, the median frequency is once every three to four weeks; finally, for social gamblers, the median frequency is once every six to twelve months.
20. **Money bet gambling in the past year:** HKJC horse race betting and football betting have the highest median amounts bet of HK\$201-\$500 per month, followed by social gambling and Mark Six lottery with median amounts of HK\$51-\$100 per month.
21. **Summary of the prevalence by demographics for different forms of gambling:** 48% of males gambled in the past year, compared to only 31% of females, while among gamblers, social gambling is more common for females (60% of female gamblers), while gambling on HKJC horse racing and football are more common for males (42% and 29% of male gamblers). Gambling is most common amongst those aged 22-69 (40%-45%), while among gamblers, social gambling is more common among younger gamblers (100% of gamblers aged 15-17); Mark Six is more common among middle aged gamblers (81% of gamblers aged 40-49), gambling on HKJC horse racing is more common among older gamblers (49% of gamblers aged 80 and above); gambling on HKJC football is more common among gamblers aged 50-59 (26%). Gambling is most common among the married persons and the separated and divorced persons (42%-43%), while among gamblers, gambling on HKJC horse racing is more common amongst the separated and divorced gamblers (40%). When we examine housing type, people not living in single buildings are more likely to gamble (39%-45%), while among gamblers, those living in public housing or single buildings are most likely to bet on HKJC horse racing (39%-40%). As regards employment status, employers are the most likely to gamble (59%), while among gamblers, students are most likely to be social gamblers (83% of student gamblers), while gamblers who are employers or retired are most likely to bet on HKJC horse racing (42%-43%), while unemployed gamblers are most likely to bet on HKJC football (33%). People employed in the construction or finance industries are most likely to be gamblers (57%-59%), while among gamblers, those working in logistics or construction are most likely to bet on Mark Six (88%-90%) and those working in catering are most likely to bet on HKJC horse racing (59%). People employed in craft and related occupations are most likely to be gamblers (67%). Workers with personal income between \$20,000 and \$44,999 are most likely to be gamblers (58%-62%), while among gamblers, those with personal income between \$35,000 and \$39,999 were most likely to gamble on the Mark Six (85%).

Participation in illegal gambling activities

22. **Online gambling:** among the respondents who have gambled in the past year, only seven respondents (0.9%) reported that they have participated in online gambling. Four of those have gambled through online casinos. For the frequency of online gambling, three respondents reported that they have gambled at least once a week. For the amount involved in online gambling, three respondents stated that they had spent over \$1,000 per month in online gambling. This small number of respondents is not sufficient to draw reliable conclusions about the nature of online gambling activities in Hong Kong (as the 95% confidence interval width is about +/-40%) or the background of those who engage.
23. **Illegal gambling other than online gambling:** only four respondents who had gambled in the past year (0.5% of gamblers) reported that they had taken part in gambling activities other than those provided by the HKJC, online or playing mahjong with friends or relatives, so these numbers are not sufficient to provide reliable information about the nature of these other gambling activities or the background of those who engage.

Opinion on the current provision of legal gambling activities

24. **Mark Six Lottery:** before COVID-19, the drawing of the Mark Six Lottery occurred two to three times a week. Among the respondents who engaged in the Mark Six Lottery, 86.6% of them agreed that the current number of draws per week was sufficient, followed by 11.0% who did not know, while only 2.4% of the respondents wish to increase the frequency of Mark Six Lottery draws and/or the number of bet types.
25. **HKJC horse race betting:** before COVID-19, the HKJC normally held horse racing twice a week during the racing season. Amongst gamblers who participated in HKJC horse race betting, 89.5% thought the opportunities were sufficient, another 8.3% did not know, while only 2.2% wanted higher frequency or more variety.
26. **HKJC football betting:** among gamblers on HKJC football in the past year, 88.6% thought the opportunities were sufficient, while 8.1% wanted either more frequency or variety.
27. **HKJC betting overall:** among all gamblers, 76.2% thought that the overall gambling opportunities offered by the HKJC were sufficient, while 5% thought they were not sufficient, of whom the majority wanted a greater variety of sport events covered.
28. **Participation in credit betting:** amongst the respondents gambling in the past year, only 12 respondents (1.5%) reported that they had borrowed to gamble. Of those 12 respondents, only one admitted to borrowing more than once; five respondents used credit cards, four borrowed from family members or friends, two took out private loans and one borrowed from a licensed finance company. Borrowing to gamble was associated with betting on HKJC horse racing, HKJC football and online gambling using statistical significance of 1%.
29. **Reasons for Participation in Gambling Activities:** the most popular reasons given by respondents were entertainment (28.6%), luck (22.8%), socialisation (16.3%) and wanting to win (12.2%).

30. **Gambling Disorder (GD) as measured by the DSM-5 scale:** of the 767 gambling respondents who completed the DSM-5 assessment, 9 respondents scored 4 or above (with one scoring 9), i.e. 1.17% of gambling respondents and 0.45% of the whole sample of 2,006 respondents. This means that the prevalence of GD for Hong Kong residents aged 15 and above is 0.45%. This is a major drop from the 1.4% prevalence in the 2016 sample, using the same measure. Evidence from many other jurisdictions suggests that this drop may be largely a temporary consequence of COVID-19 and it is not safe to conclude that the drop is either permanent or reflects educational or enforcement success. Betting on HKJC football and online gambling are the two forms of gambling associated with GD prevalence using statistical significance of 1%. Respondents were also asked whether the problems highlighted in the DSM-5 scale were associated with specific forms/contexts of gambling and the most common contexts reported for their gambling problems were HKJC racing (7.0% of gamblers), gambling with relatives or friends (6.0% of gamblers) and HKJC football (5.2%). Of all the demographic variables in the survey, the only one which shows a statistically significant relationship with DSM-5 score at $p < 5\%$ when using an appropriate nonparametric statistical test is Gender. DSM-5 scores are much lower for females, with no female gamblers scoring 4 and above, compared to 1.7% of male gamblers scoring 4 and above (i.e. only males were assessed as having GD).

Support Services for Gambling Problems in the Community

31. **Gambling Counselling Hotline (183 4633):** a majority of respondents (72.9%) were aware of the gambling counselling hotline. However, of the respondents aware of the hotline, only four respondents (0.3%) had called it, of whom three agreed that the hotline service was useful, while the other respondent expressed strongly disagreement. The only statistically significant predictors of awareness of the hotline were gambling in the past year (85.0% for gamblers, 62.2% for non-gamblers) and age, which is lowest for those aged 80 and above (27%), 14-17 (33%), 22-39 (40%) and 70-79 (41%)
32. **Counselling and treatment services for gamblers and their significant others:** of all respondents, 50.1% were aware of the counselling and treatment services provided for gamblers and their family members and friends while only four of them (0.4%) used these services. The views on the counselling and treatment services are divided with 2 respondents strongly agreed and agreed that the services were useful while the remaining two respondents shared the opposite view. Among the four respondents who had used the counselling and treatment services for gamblers and their significant others, only one respondent was aware of and had used the virtual counsellor under the Project i-Change and strongly disagreed that it was useful. There are no statistically significant predictors of who used the services. Of all respondents who answered this question, 56.8% thought the current legal age of 18 for gambling was appropriate, 30.3% suggested that the legal gambling age should be raised whereas 2.3% of the respondents suggested that it should be lowered. Amongst the other responses, there were another 26 respondents (1.3%) who expressed the view that gambling should be banned at all ages in Hong Kong.

General Public Overall Findings

33. The overall gambling prevalence rate for the past year was 39.5%, significantly lower than the previous minimum of 61.5% in 2016, however, at least some of this decrease is due to COVID-19 and it seems likely that the rate will increase when the epidemic situation is under control. 30.4% of the respondents reported that they first gambled before the age of

18. Mark Six was the most common form of gambling during the past year reported by participants, followed by social gambling, betting on HKJC horse racing and HKJC football. Less than 1% reported online gambling or other forms of illegal gambling. The form of gambling with the highest frequency and money bet is HKJC horse race betting, followed by HKJC football betting. The overwhelming majority of gamblers were happy with all the provisions offered for legal gambling. The prevalence of GD for Hong Kong residents aged 15 and above is 0.45%, a major drop from the 1.4% prevalence in the 2016 sample, using the same measure, although evidence from many other jurisdictions suggests that this drop may be largely a temporary consequence of COVID-19 and it is not safe to conclude that the drop is either permanent or reflects educational or enforcement success. Betting on HKJC football and online gambling are the two forms of gambling associated with GD prevalence. DSM-5 scores are much lower for females, with only males in the sample assessed as having GD. Awareness of counselling and treatment services for gamblers was high (over 50%) and almost no respondents supported lowering the gambling age of Hong Kong.

Secondary School Gambling Survey

34. **Survey Objectives:** As the secondary school survey provides a representative sample of youth aged 12-19, nearly all of whom are underage for gambling, it is relevant for the objectives relating to youth.
35. **School Survey Methodology:** The school survey aims at collecting information on the gambling behaviour of young people (secondary school students) and their perception towards gambling activities as well as the prevalence of gambling disorder. Despite HKUSSRC efforts in following up with all secondary school principals and persuading them to participate in the survey, only 20 secondary schools agreed in principle to participate. The number of participating schools is low as all schools were very concerned about lagging teaching progress due to COVID-19 restrictions and hence less willing to participate in any school survey. Nevertheless, these 20 secondary schools cover various types of schools in Hong Kong such as government schools, aided schools, direct subsidy scheme schools and private schools and are representing the student population of Hong Kong. As such, the gambling situation among the youth population, including the underage, could be investigated, i.e. the objectives of the Study concerning the youth population could be met. As the outbreak of COVID-19 in Hong Kong affected all schools, there is no reason to believe that this low response will have introduced bias. In each school, the school was asked to select one class at each level from Form 1 to Form 5 to participate in the self-administered paper questionnaire survey. Of the 20 schools who agreed in principle to participate, 16 schools (i.e. a 80% response rate) invited their students to complete a questionnaire which was designed to meet the objectives stated in Chapter 1. A total of 1,564 questionnaires were collected by the schools for HKUSSRC's analysis. The received questionnaires were scanned and verified using a computer system that automatically recognizes the completed bubbles on the form. Note that students can decide which questions (not) to answer, so the total number of responses will vary across questions. We exclude responses which are not appropriate, e.g. questions about gambling for those not gambling. If we assume that the sample of 1,564 is broadly representative of secondary school students in Form 1 to Form 5 in Hong Kong, the sampling error is at most 1.26%, so that the 95% confidence interval width for any proportion is at most +/- 2.5%. The number of questionnaires collected by each participating secondary school

varied from 59 to 168, with the exception of 1 school which only returned total of 20 questionnaires.

36. **Background of respondents:** gender was in general evenly distributed with 54.8% of the responses from male students and 45.2% of the responses from female students. The majority of respondents were children aged between 13 and 14 and adolescents aged between 15 and 16. The respondents' education level is representative of the form levels sampled, with at least 19.5% of students from each of the five form levels sampled. 30.1% of the 1,327 respondents reported that their monthly disposable income was \$1,001 and above. The majority of the respondents (88.4%) reported that their monthly disposable income mainly came from family members, followed by 12.4% of the respondents said that their disposable income came from themselves such as savings or part-time/ full-time job. Most of the respondents did not provide information on their household monthly income. 24.4% of students reported that they were religious. 36.1% of the 1280 students who answered the question on housing reported living in private owned housing, followed by 29.0% for public rental.
37. **Participation in Gambling Activities and Gambling Behaviour:** 15.9% of the secondary school students reported that they had gambled in the past year. The comparison with previous studies with the similar target group (students from Form 4 and Form 5) shows that the prevalence rate of the underage dropped from 33.5% in 2012 and 21.8% in 2016 to 15.9% in 2021. Nevertheless, the pandemic situation has decreased gambling prevalence globally, so this decrease may not last. Gambling prevalence did not show a statistically significant relationship at $p < 5\%$ with any of the demographic variables. Amongst the 220 secondary school students who reported that they had participated in gambling activities in the past year, less than 5% of students (i.e. less than 10 students) reported that they had gambled on Hong Kong Jockey Club (HKJC) football, HKJC local horse race, HKJC non-local horse race or other non-HKJC betting. However, 93.1% of gamblers reported gambling on poker/mahjong or similar in the past year and 23.8% of gamblers reported gambling on the Mark Six Lottery in the past year.
38. **Age started to gamble:** amongst the 186 students who gambled in the past year and reported the age at which they started gambling, 40 secondary school students (21.5%) reported they had the onset of gambling before the age of 10. Another 143 students (76.9%) reported that they started gambling between the age of 10 and 17.
39. **Channels for gambling:** among the 220 students who reported gambling in the past year, the only channels reported by more than 5 gamblers were family (22.3%), relatives (8.6%), the HKJC app (4.1%) and friends (2.7%).
40. **Locations of gambling:** the most common locations of placing bets as reported by the students who gambled were friend's residence (51.4%), followed by own residence (40.5%) and relative's home (33.3%).
41. **Gambling Problems as Measured by DSM-5:** of the 198 secondary students who gambled in the past year and completed the DSM-5 assessment, 97.5% of them were categorised as no risk gamblers and 2.5% of them (i.e. five students) was diagnosed as GD gamblers. Among these five GD gamblers, three attained mild level, two attained moderate level and none attained severe level. Among the whole sample of 1,383, the prevalence rate of GD is 0.4%, which is a large drop from the rate of 0.7% reported in the 2016 study.

However, this may be due to the COVID-19 restrictions. Comparisons with estimates of GD prevalence in studies earlier than 2016 are not meaningful due to the change in assessment tool from DSM-IV to DSM-5. GD status did not show a statistically significant relationship at $p < 5\%$ with any of the demographic variables, so comparing the demographics of gambling and non-gambling students is of no value.

42. **Sources of Betting Money:** regarding the sources of betting money, the most common source among gamblers was from themselves (49.6%), followed by borrowing from family or relatives or friends or classmates (5.0%). Only seven gambling students reported that they had borrowed money for placing bets. In particular, three of them reported that they had borrowed for gambling more than 50 times in the past year. Five of them reported that they had borrowed more than \$100 for placing bets and two students stated that they had borrowed more than \$100 on an occasion. Only one student still had an unpaid loan.
43. **Football Betting:** among the eight students who reported participating in HKJC football betting in the past year, the most common reasons were to support favourite teams/players and boost excitement when watching matches (both 50%). Of the six students who reported betting on HKJC football in the past year and who reported how much they spent on football gambling per month, three reported \$500 or more.
44. **Channels and locations of placing football bets:** among the eight students who reported betting on HKJC football in the past year, the most common channels of football gambling were placing bets through HKJC apps, family members and friends (all 38%), while the most common locations of placing football bets as reported by the students who gambled last year were one's home or relative's home (both 38%). When students gambled on HKJC football, many of them were accompanied by family members, relatives or friends (all 38%).
45. **Online Gambling:** only four students reported engaging in online gambling in the past year and of those, only one student answered the detailed questions on online gambling.
46. **Gambling Motivation Scale (C-GMS):** a total of 156 gambling students completed all the items on C-GMS. The C-GMS overall score has a positive Spearman's rank correlation with the DSM-5 score for gamblers. GD gamblers scored on average 63 higher than non-GD gambling students on the C-GMS scale.
47. **Gambling Beliefs Scale (GBQ-C):** the GBQ-C overall score has a median of 1.9 and a mean of 2.3; the Luck/ Perseverance subscale has a median of 1.7 and a mean of 2.2; the Illusion of Control subscale has a median of 1.9 and a mean of 2.3. The GBQ-C overall score and subscales all have a positive rank correlation with DSM-5 score which is statistically significant at 5%. GD gamblers score about 2.2 units higher than non-GD gamblers on all scales.
48. **Family Functioning:** the family functioning was measured by APGAR. The higher scores indicate higher satisfaction with family function, where 1 421 students completed all 5 items. The score is 0 for rarely, 1 for sometimes and 2 for always, with the overall scale calculated as the sum over the 5 items. The Family APGAR score had a median of 5.0 and mean of 6.0, with no statistically significant relationship with whether students gambled in the past year or with DSM-5 score.

49. **Perception on Legal Age for Gambling in Hong Kong:** 45.7% of respondents agreed with the current legal age for gambling, and 23.4% expressed the view that the legal gambling age should be changed. Amongst the respondents who did not support the current age limit for gambling (excluding those who chose the current legal age), 52.4% supported an age of 21 or older, 21.3% supported an age of 19 or 20, for a total of 73.7% supporting an increased legal age; while 26.3% supported a reduction in legal age to under 18.
50. **Youth summary findings:** 15.9% of the secondary school students reported that they had gambled in the past year, a substantial drop from 21.8% in 2016. Among the whole sample, the prevalence rate of GD is 0.4%, which is a large drop from the rate of 0.7% reported in 2016. However, the drop in both gambling and GD prevalence may both be due to the COVID-19 restrictions, so this decrease may not last. Less than 5% of gambling students (5%) reported that they had gambled on Hong Kong Jockey Club (HKJC) football, HKJC local horse race, HKJC non-local horse race or other non-HKJC betting, while more than 90% of gamblers reported gambling on poker/mahjong or similar in the past year and more than 20% of gamblers reported gambling on the Mark Six Lottery in the past year. About 20% of gamblers reported they had started gambling before the age of 10 and the only channels reported by more than 5% of gamblers were family (22%) and relatives (9%), while the most common locations of placing bets as reported by the students who gambled were friend's residence (51%), followed by own residence (41%) and relative's home (33%). The most common source of funds among gamblers was from themselves (50%), followed by borrowing from family or relatives or friends or classmates (5%), with less than 5% of gamblers reporting that they had borrowed money for placing bets. Less than a quarter of respondents expressed the view that the legal gambling age should be changed, of whom nearly three quarters supported an increased age limit. GD gamblers scored on average 63 higher than non-GD gambling students on the C-GMS scale and about 2.2 units higher on average than non-GD gambling students on all GBQ-C scales with all these scales showing a strong nonparametric correlation with DSM-5 score. The Family APGAR score showed no statistically significant relationship with whether students gambled in the past year or with DSM-5 score.

Qualitative Interviews

51. Interviews were conducted to supplement the quantitative findings.
52. **Interview Conclusions:** There are a number of prominent predictors to gambling disorder: (i) early age onset of gambling is a good predictor, evidenced by interviewing the people with gambling disorder, the majority have started their gambling as early as 6-11 years old; (ii) gambling motivation, personal needs (coping with low moods) are important, with their own given reasons for gambling like boredom, curiosity, for monetary gains, social interaction and feeling of accomplishment; (iii) many have reported the erroneous illusion of control and perception of luck/perseverance on the outcomes of their bets; (iv) perception of family functioning and support; (v) parental influences on gambling and lack of monitoring also can played an important role in the early developmental phases of heavy gambling; (vi) accessibility of venues, or via internet/mobile access to gambling; and (vii) availability helps towards the development of GD.

53. With the availability of easy loans from banks, financial companies, the amount of debts accumulated by GD gamblers, as disclosed in the interviews were alarming, from \$150,000 to \$30M. Many gamblers borrowed from family members, and significant others of the gamblers re-mortgage or sold their flat (e.g. \$5M in one case) to bail out the gamblers.
54. The interviews have shown the GD gamblers followed a pattern from the initial winning phase of fun and pleasure play, progressing to a losing phase, where they were greedy, hoping for more money by increasing the wagering as well as their tolerance level was increased, by betting more (like a bigger dosage) in order to maintain the pleasure or excitement. As a result, a desperate phase having a bigger debt, with the urgency to gamble more heavily in order to recoup the debts. These 3 phases of gambling can be heard from their interviews, these phases have been coined by Robert Custer in the early eighties.
55. For many GD gamblers, football betting and horse race were among the most popular type of gambling, next came Baccarat, in Macao casinos. Throughout the interviews, there were mention of illegal gambling (football betting, Pai Gow and basketball betting) via the internet or illegal venues. Some youths using internet sites to access free games, and some games with payment.
56. Consequences of gambling have led to many break-ups in the family, arguments, poor communication, poor family functioning and support as the family members were often shocked, disappointed and worried about repayment of debts. The gamblers interviewed agreed with the family's attitudes towards them as they have caused many of the problems and breakdown in marriages and in family relationships. The effects on the family and partners were often disastrous, leading to some psychological pains, stress, depression and anxiety symptoms.
57. Many participants in the individual interviews have accessed counselling from our local counselling centres and have found them helpful and supportive, even for the significant others who have found them useful.
58. None of the gamblers nor the significant others wanted HKJC to make changes to increase number of races or the betting choices and varieties on the races and football betting; nor did they advocate any change of legal gambling age.
59. In conclusion, out of ten gamblers recruited from the local three counselling centres financed by the Fund, 4 out of 10 met the severity criteria on the DSM-5, having GD, and 1 out of 10 met the criteria for moderate GD, with 2 others met the criteria for having mild GD. Therefore 4 out of 10 (40%) are diagnosed with severe level of GD.

Focus Groups Interviews

60. Focus groups interviews were also conducted to supplement the quantitative findings.
61. **Focus Groups Conclusions:** Evidence from this qualitative data showed that gamblers, adolescents and at-risk youths began gambling as a pleasurable activity. Various risk factors emerging from this study: (i) early age start, before 11 to be introduced to gambling by family members or friends; (ii) their reasons for gambling: boredom, past times, for

money, peer group social support; interests and good knowledge in sports; (iii) perception of family functions and monitoring; (iv) with availability of funds; and (v) accessibility of free internet gambling casino sites/ games with gambling elements, offering with free access may progress to having GD later; (vi) has high gambling motivation; and (vii) erroneous gambling beliefs of an illusion of control of the outcome of the bets/belief in luck and perseverance. These risk factors may turn a pleasurable activity into a disorder: from initial phase of fun, manageable finance, to intermediate stage of borrowing; with accumulated debts in the desperate stage of non-stop gambling to chase losses. Thus, causing family distress, poor academic results and breakdown of relationships.

62. Specifically, 6 out of 27 (22% of the participants interviewed) of the younger focus group participants scored mild (FG-Y6, FG-Y7, FG-Y8) to moderate (FG-Y4, FG-Y5) level of GD in the DSM-5 criteria. These six gamblers are at risk of developing more serious levels of gambling disorder.
63. Also, one adolescent (FG-C6) scored in the severe range of the SOGS-RA, suggesting he is a probable problem gambler. Three of the adolescents (FG-C7, FG-C9, FG-C10) showed mild problems in gambling as measured by SOGS-RA.
64. All of the five adolescents (FG-C6, FG-C7, FG-C8, FG-C9, FG-C10) and two children (FG-C2, FG-C3) scored mild in the Internet Addiction Test (IAT). One college student (FG-CS3) scored in the severe level in the IAT test.
65. Many of the participants in the focus groups (gamblers, at-risk youths) have received help and support from the counselling centres. The centres used groups and cognitive behavioral therapy to educate, help and support the gamblers and at-risk youths as well as family members (FG-G7, FG-Y4, FG-6, FG-7, FG-8).
66. A couple of the significant others in the group suggested that more manpower and resources should be directed to educate the community about the negative effects of gambling. However, only two members from the public (FG-P2, FG-P4) of the 65 participants hoped that the Jockey Club would increase the variety of gambling channels. Many (FG-G1, FG-Y7, FG-P3, FG-P5) thought the existing varieties of gambling activities are enough, no need to change, nor the legal age to gamble. Some never replied or has no views on this question.
67. **Qualitative studies combined:** Overall, in the qualitative part of the study, with a total sample of 65 adults and youths in the interviews individually or in focus groups, those who scored (6-7) moderate to (8-9) high on DSM-5 scores amounted to 9 out of 18 gamblers (50% of the focus group interviewed) who would be diagnosed as having a moderate to severe gambling disorder. For the youth groups 6 out of 27 youngsters (22% of the young focus group interviewed) have mild and moderate level of gambling disorder) and may be at risk of moving towards a GD path in the future. We need to be aware and help the young people before they get more addicted.

Recommendations

68. Public education

- (a) Support more public education on the harms and dangers of GD and prevention of problem gambling to the community, particularly to parents, children, adolescents and youth, including greater publicity through public transport and digital marketing/advertising on mobile devices including YouTube, TikTok and Instagram.
- (b) Support workshops on
 - i) Public health promotion of safer gambling which means you are using low risk strategies, sticking to a budget when you play.
 - ii) Psychological techniques to control urges and prevention.
 - iii) Responsible gambling morals - a set of social responsibility initiatives by the gambling industry, including governments and gaming control boards, operators and vendors to ensure integrity and fairness of the operations and to promote awareness of harms associated with gambling disorders.
 - iv) Train teachers to look out for the addictive behavior of internet gambling and illegal gambling after school in the park, playgrounds as the overseas findings show that the youth gambling is an issue of increasing concern internationally.
 - v) Train parents/ family members to look out and monitor the addictive behaviors of their children/spouses and its dangers and how they should not introduce their children to gambling, as the study showed the early age of gambling started with family members showing them the gambling activity.
 - vi) Teach 5-steps approach to help supporting family members affected by addiction problems. The five steps to support family members affected by addiction problems are (a) Listen, reassure and explore concerns; (b) Provide relevant, specific and targeted information; (c) Explore coping responses; (d) Discuss social support; and (e) Discuss and explore further needs.

69. Counselling Centres

- (c) Support follow-up on the drop-out clients as well as for the unmotivated GD.
- (d) Support more training workshops on psychological approaches to help the young and GD gamblers develop self-esteem, moral obligations/education, and responsible gambling.
- (e) Support more psychological treatment programmes for youth gambling, counselling for the needs of young adolescents, for preventing the development of GD.
- (f) Support the families (children, parents, partners) of GD gamblers, by organizing more family support groups, coping workshops for parents of GD, children support and activities.

- (g) Support more manpower/staff to assist clients and family members in other needs (sudden relapses and follow-ups). More 24/7 hotlines, using WhatsApp, easier access (24/7 by one person) with chatbox, video chats, emails to encourage the younger at-risk gamblers to access help or ask for advice and support throughout Hong Kong. Once the link is established the client is willing to come to face-to face counselling. Make sure the numbers are advertised widely in Hong Kong, on public transport adverts (on trams, MTR, Buses, taxis) that everyone can see.
- (h) Advertise powerful reminders of safer gambling and help seeking venues and numbers (WhatsApp, chatbox) throughout sports centres, on toilet doors, on HKJC sites when they place their bets.

70. HKJC as the licensed betting operator

- (i) Advertise and support projects aiming at the younger group (aged between 11 and 17) and at-risk youths in schools on preventing internet gaming and gambling. Support videos about dangers of sports and football gambling that appeal to these groups.
- (j) Take action on more responsible gambling policies on internet gambling for the younger groups. Though data in this survey did not show women gamblers were worse than male gamblers, it is suggested that the needs of female gamblers should not be neglected. Education and promotion to help female gamblers might be considered, as there is evidence from the UK, where recent data from the National Gambling Treatment Service has shown that the number of women receiving treatment for gambling in the UK has doubled in the past five years.

71. Other Government regulation and enforcement

- (k) Support tighter controls and review of checks on registration of online gambling sites that lure the young by giving away free chips or points to play (rewards).
- (l) Support tracing and fast action on all illegal gambling advertising, venues and sites together with the police. Look into how best to take action to shut illegal gambling sites.
- (m) As surveys show strong support of the existing legal age and minimal support for reducing the legal age, continue to monitor the situation of gambling in Hong Kong and assess the appropriateness of the current legal gambling age.
- (n) Investigate with the financial sector how best to limit the availability of easy loans to GD gamblers.