Gambling and Completed Suicide in Hong Kong: A Review of Coroner Court Files

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Background: Previous studies have established a positive relationship between gambling and suicidal ideation and suicide attempts. Limited studies have investigated the role of gambling in completed suicide. This study aimed to determine the prevalence of gambling behavior among suicides and to compare the correlates of nongambling and gambling with and without related debt suicides.

Method: The death records from the coroner's court files of suicides (N = 1,201) in Hong Kong in 2003 were reviewed. Logistic regression models were used to investigate relevant correlates in suicides with gambling behavior and debt due to gambling compared to suicides with gambling behavior but no debt and nongamblers.

Results: Of the suicide victims, 233 (19.4%) showed evidence of gambling behavior prior to death; 110 of the 233 gambling suicides (47.2%) involved individuals who were indebted due to gambling. In comparison with the other 2 groups, the gambling with debt suicide victims were more likely to be male, aged 30–49 years old, married, and employed and to have died by charcoal burning (carbon monoxide poisoning). These individuals also had fewer recorded medical and psychiatric problems in the past year and lifetime. When comparing suicides with gambling behavior with and without gambling-related debt, the indebted victims were more likely to also have had debt problems not attributed to gambling (OR = 149.66, $P < .001$) and to have been disturbed by loan sharks prior to death (OR = 28.14, $P < .001$) but were less likely to have recorded psychiatric disorders during their lifetime (OR = 0.41, $P < .05$) and at the time of death (OR = 0.26, $P < .05$).

Conclusions: Gambling and indebted suicides have a distinct profile and may be difficult to predict using standard risk factors as references. This finding suggests the need for improved detection and suicide prevention efforts related to gambling in individuals with gambling-related debt.

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Recent rapid expansion of government and privately owned legalized gambling has been observed internationally.[1] Legalized gambling brings adverse consequences to the public's health.[2] The prevalence rate of adult excessive gambling behaviors (problem and pathological) across Western countries is about 3.0% and is set to rise if legalized gambling continues to expand at the present pace.[3] The prevalence estimates of problem and pathological gambling in Hong Kong are 4.0% and 1.8%, respectively.[4] Empirical studies have found that problem gambling, a progressive behavior characterized by continuous or periodic loss of control over gambling, preoccupation with gambling and money with which to gamble, and continuation of the active gambling despite adverse consequences,[5] is associated with issues such as disruption of work and family life, bankruptcy, child neglect, domestic violence, multiple addictions, criminal involvement, and juvenile delinquency.[2]

Previous studies have also established positive relationships between gambling and suicidal ideation and suicide attempts.[6] Limited studies, however, have investigated the role of gambling in completed suicide. Two coroner's court record–based descriptive studies on suicides with gambling behavior from Victoria, Australia,[7] and Quebec, Canada,[8] suggested that gambling is a crucial risk factor for suicide and the characteristics of suicides with gambling problems differ from nongambling suicides. They suggested that specific suicide prevention strategies are needed because general suicide prevention initiatives may not be helpful to suicidal individuals with gambling problems.[7,8] However, the methodological limitations of the 2 studies, ie, the small sample sizes and lack of comparison groups (ie, suicides without gambling problems), limited the generalizability of their findings. Therefore, reviews of this issue determined that no clear conclusions about the role of gambling in completed suicide can be drawn,[6] and the link between gambling and completed suicide has remained poorly understood. Thus, there has been no guidance with regard to clinical and policy decision making concerning management of this emerging issue, especially in Asia, due to the recent rapid development of the gambling industry in Macao Special Administrative Region, China, Singapore, and Taiwan.

Hodgins et al[6] suggested a common-factor conceptualized model to explain the gambling-suicide link among pathological gamblers. They suggested that

Clinical Points

- Gambling and indebted suicides may be difficult to predict using standard risk factors as references.
- Individuals with problem gambling and related debt are unlikely to seek psychiatric help.
- Primary care clinicians should attempt to assess the presence of problem gambling and related debt as part of the suicide risk assessment.

pathological gambling commonly co-occurs with mood and substance use disorders, and the financial losses associated with gambling problems may act as crucial precipitants to suicidal behavior of individuals with pathological gambling and other psychiatric vulnerabilities. Wong et al[9] provided support for the common-factor model in a psychological autopsy study on suicides with pathological gambling, finding that all of the individuals who committed suicide had unmanageable debt attributed to gambling and more than half had mood disorders prior to death. They suggested that the financial consequences of pathological gambling may lead to or exacerbate depression and hopelessness (especially for repaying debts), both of which are major causal risk factors for suicide.[9]

While many individuals gamble from time to time, not all people who gamble become problem or pathological gamblers or have debt attributed to gambling. Thus, it is logical to view that there are 3 groups among the suicides with regard to gambling behavior: (1) individuals with excessive gambling behavior that leads to financial losses, whose suicidal acts were precipitated by unmanageable debt and correlates of such debt (eg, depression, hopelessness); (2) individuals with gambling behavior whose suicidal acts may have been precipitated by the presence of other risk factors commonly observed in suicide (eg, relationship and work problems) and/or to personality traits that confer risk for both gambling and suicide (eg, impulsivity); in other words, gambling and indebtedness per se are not causally linked to their suicide risk; and (3) individuals without gambling behavior (eg, presence of mood, psychotic, and other psychiatric disorders).

Overall, these ideas suggest that, when gambling leads to indebtedness, it represents a causal risk factor for suicide, and total or partial indebtedness mediates the negative effect of gambling on suicide. However, when gambling does not lead to indebtedness, it is more likely to represent a proxy risk factor, and its negative effect will be aggregated or disaggregated when another risk factor for suicide presents. Kraemer and colleagues[10,11] defined a variable risk factor that can be manipulable and when manipulated can change the risk of the outcome as a causal risk factor.

In the present study, we examined a sample of suicides in Hong Kong in 2003 using the coroner's court records. The major aim was to investigate whether suicides with gambling behavior differ from other suicides. We hypothesized the following: (1) gambling behavior would be found to be more frequent in the overall suicide population than in the general population, (2) the characteristics of suicides with and without gambling behavior would be different, and (3) specifically, the characteristics of those gambling with and without debt would also be different.

METHOD

The data described in this report were extracted from the coroner's court files of suicides that were recorded between January 1 and December 31, 2003. Hong Kong utilizes the British coronial system under which every suspected suicide death, prior to being assigned a verdict of suicide by the coroner, is investigated by forensic pathologists and police officers. Regarding an investigation of a suspected suicide death, the role of the coroner is to determine the cause of death, and the role of the police is to investigate the possibility of the presence of any criminal activity surrounding the death. It is noteworthy that the death investigation may fall short of eliciting premorbid psychopathological or psychosocial factors relating to suicide; however, financial-related information, ie, presence of insurance, debt, and gambling behavior, is in general thoroughly investigated by the police because it is recognized as one of the significant indicators for the suspicion of illegal activity, manslaughter, or homicide and due to its implications for insurance reimbursement to the next of kin. The police generally collect bank and other legal debtor statements and insurance policies from the families of the deceased if the death is suspected to be unnatural (ie, accidental, suicide, and homicide).

The coroner's court files of suicides generally include sociodemographic information, circumstances of the death (such as witness reports), acute and chronic life situations, autopsy and toxicology reports, police investigation records, medical and psychiatric reports, suicide notes, and insurance policies. Information from the files was extracted by trained research assistants using a template developed by the Hong Kong Jockey Club Centre for Suicide Research and Prevention, Pokfulam, Hong Kong. The κ statistic of interrater reliability was 0.61.

Table 1. Sociodemographic, Medical, and Psychiatric Profiles of Coroner's Court Records: Suicides With Gambling Behavior and Gambling-Related Debt Versus Suicides With Gambling Behavior Without Gambling-Related Debt Versus Suicides Without Gambling Behavior[a]

Variable	Gambling-Related Suicides With Related Debt (n = 110)	Gambling-Related Suicides Without Related Debt (n = 123)	Non–Gambling-Related Suicides (n = 968)	χ^{2b}	*df*	*P*
Male	81.8	80.5	62.1	30.3	2	< .001
Age, y				26.6	4	< .001
≤ 29	12.7	10.6	18.3			
30–49	59.1	40.7	35.8			
≥ 50	28.2	48.8	45.9			
Marital status				12.1	4	< .05
Single	29.4	26.5	34.4			
Married/cohabited	60.6	58.1	47.2			
Divorced/widowed	10.1	15.4	18.4			
Employment and living status				46.1	4	< .001
Employed	52.3	37.7	28.4			
Unemployed	38.5	32.0	32.5			
Economically inactive	9.2	30.3	39.1			
Lived alone	24.5	27.0	22.2	1.6	2	NS
Suicide method				48.1	6	< .001
Carbon monoxide poisoning	49.1	36.6	21.7			
Jumping	30.0	37.4	48.3			
Hanging	15.5	17.1	19.5			
Other	5.5	8.9	10.4			
Recorded psychiatric and medical problems						
Diagnosed psychiatric problems in lifetime	10.9	21.1	33.1	28.1	2	< .001
Received psychiatric treatment in lifetime	12.7	21.1	34.0	26.9	2	< .001
Received psychiatric treatment at time of death	5.5	17.1	25.1	24.2	2	< .001
Medical problems	24.7	38.3	51.2	29.1	2	< .001
Psychosocial life events						
Family problems in the past year	48.2	45.5	45.5	0.3	2	NS
Relationship issues in the past year	10.9	10.6	10.4	0.0	2	NS
Past suicide attempts	26.4	29.3	28.1	0.3	2	NS
Bereavement	1.8	6.5	10.1	9.4	2	< .05
Criminal records	6.4	8.9	8.3	0.6	2	NS
History of drug use	13.2	29.7	33.1	6.4	2	< .05
History of alcohol abuse	16.9	5.2	6.5	9.0	2	< .01
Financial issues related to gambling						
Evidence of debt (including non–gambling related)	99.1	48.5	22.2	252.0	2	< .001
Types of gambling (multiple items)						
Casino in Macau	30.9	3.3	NA	32.5	1	< .001
Horse racing	43.6	48.8	NA	0.6	1	NS
Soccer gambling	18.2	5.7	NA	8.8	1	< .01
Mahjong	38.2	35.8	NA	0.2	1	NS
Involved with a loan shark	18.9	0.8	0.1	186.1	1	< .001
Involved with a legal financial institution	21.6	4.2	1.0	111.4	1	< .001

[a]All values are presented as percentages unless otherwise indicated.
[b]Pearson χ^2 tests for categorical variables.
Abbreviation: NS = nonsignificant at $P > .05$.

Data analysis proceeded in several steps. First, the sample was divided into (1) suicides without gambling behavior, (2) suicides with gambling behavior but no gambling-related debt, and (3) suicides with gambling and gambling-related debt. Second, the 3 groups were compared on all of the covariates listed in Table 1 using χ^2 tests, and the statistical significance was set at $P < .05$. Third, 2 separate logistic regression models were used to generate the adjusted odds ratios (ORs) of covariates leading to suicide with gambling behavior and suicide with gambling behavior with gambling-related debt, using suicides without gambling behavior and suicides with gambling behavior without gambling-related debt as comparison groups.

RESULTS

The total number of death cases that received a verdict of suicide in 2003 was 1,264 (18.6 per 100,000); however, only 1,201 (95.0%) were reviewed by the coroner, and, hence, the remaining cases (n = 63) were excluded from the analysis. Among the 1,201 cases, 233 (19.4%) showed evidence of gambling behavior prior to death. Of the 233 gambling-related cases, 110 (47.2%) were indebted due to gambling; 968 suicides were not gambling related (76.7%).

Table 1 shows the profiles of suicides with gambling behavior with and without gambling-related debt and the other suicides. In comparison with the other 2 groups, the suicide victims with gambling and

Table 2. Logistic Regression Models Comparing Gambling-Related Suicides With Non–Gambling-Related Suicides and Gambling-Related Suicide With and Without Gambling-Related Debt

	Gambling-Related Suicides (n = 233) vs Non–Gambling-Related Suicides (n = 968)		Gambling-Related Suicides With Debt (n = 110) vs Without Debt (n = 123)	
Variable	OR (95% CI)	*P*	OR (95% CI)	*P*
Male	2.64 (1.86–3.77)	.021	0.93 (0.47–1.83)	.830
Age	0.99 (0.98–1.00)	< .001	0.97 (0.95–0.99)	.001
Marital status				
Single	1		1	
Married/cohabited	2.32 (1.57–3.43)	< .001	1.56 (0.76–3.18)	.224
Divorced/widowed	1.51 (0.83–2.75)	.175	0.56 (0.17–1.83)	.337
Employment and living status				
Employed	1		1	
Unemployed	0.67 (0.48–0.94)	.021	0.88 (0.49–1.59)	.679
Economically inactive	0.33 (0.20–0.56)	< .001	0.29 (0.11–0.77)	.013
Lived alone	0.93 (0.66–1.31)	.678	1.04 (0.56–1.93)	.911
Suicide method				
Jumping	1		1	
Carbon monoxide poisoning	2.55 (1.80–3.60)	< .001	1.43 (0.77–2.65)	.257
Hanging	1.18 (0.76–1.83)	.465	1.37 (0.59–3.16)	.460
Other	1.08 (0.60–1.94)	.795	0.97 (0.31–3.05)	.965
Recorded psychiatric and medical problems				
Diagnosed psychiatric problems in lifetime	0.40 (0.27–0.59)	< .001	0.41 (0.19–0.88)	.023
Received psychiatric treatment in lifetime	0.41 (0.23–0.73)	.002	0.33 (0.11–0.99)	.047
Received psychiatric treatment at the time of death	0.61 (0.33–1.13)	.114	0.26 (0.07–0.97)	.049
Medical problems	0.48 (0.34–0.69)	< .001	0.84 (0.42–1.65)	.607
Psychosocial life events				
Family problems in the past year	1.19 (0.89–1.60)	.242	1.15 (0.67–1.98)	.602
Relationship issues in the past year	0.91 (0.56–1.49)	.706	0.74 (0.31–1.77)	.504
Past suicide attempts	1.01 (0.73–1.41)	.939	0.79 (0.43–1.44)	.439
Bereavement	0.50 (0.25–0.99)	.047	0.23 (0.04–1.18)	.077
Criminal records	0.66 (0.38–1.14)	.140	0.45 (0.16–1.26)	.128
History of drug use	0.40 (0.23–0.70)	.001	0.38 (0.12–1.18)	.095
History of alcohol abuse	0.59 (0.82–3.06)	.169	2.89 (0.84–9.89)	.092
Financial issues related to gambling				
Evidence of debt (including non–gambling related)	12.26 (8.13–18.47)	< .001	149.66 (18.66–1200.49)	< .001
Types of gambling (multiple items)				
Casino in Macau	NA		11.55 (3.9–34.19)	
Horse racing	NA		0.82 (0.46–1.46)	
Soccer gambling	NA		2.74 (1.07–7.06)	
Mahjong	NA		1.42 (0.77–2.62)	
Involved with a loan shark	97.49 (13.05–727.78)	< .001	28.14 (3.70–213.58)	< .001
Involved with a legal financial institution	12.15 (5.32–27.72)	< .001	5.64 (1.76–18.05)	.004

Abbreviations: NA = not applicable, OR = odds ratio.

gambling-related debt were more likely to be male, aged 30–49 years old, married, and employed and to have died by charcoal burning (carbon monoxide poisoning). These individuals had fewer records of medical and psychiatric problems in the past year and lifetime, and a lower proportion had a history of drug abuse, but more had a history of alcohol abuse. They were also more likely to have been involved with loan sharks and/or legal financial institutions prior to death than the other suicide groups.

When comparing suicides with gambling behavior with and without debt, the major difference between these 2 groups was their preferred gambling activities, with a significantly larger percentage (30.9% vs 3.3%) of indebted suicide victims having gambled at casinos in Macau, one of the highest-volume gambling centers in the world, and engaged in soccer betting.

Table 2 presents the results of the logistic regression models examining (1) suicides with and without gambling behavior and (2) suicides with gambling behavior and with and without gambling-related debt. After age and gender were adjusted for, suicide victims with gambling behavior were more likely to be married (OR = 2.32, $P < .001$), less likely to be economically inactive (OR = 0.33, $P < .001$), less likely to have a record of psychiatric disorders over their lifetime (OR = 0.40, $P < .001$), and much more likely to have been involved with loan sharks or legal financial institutions prior to death (OR = 97.49 and OR = 12.15, respectively, both $P < .001$) than the other suicide groups.

When comparing suicides with gambling behavior with and without gambling-related debt, we found that the indebted individuals were much more likely to also have debt problems not attributed to gambling (OR = 149.66, $P < .001$) and to have been involved with a loan shark prior to death (OR = 28.14, $P < .001$) but were less likely to have a record of suffering from

psychiatric disorders during their lifetime (OR = 0.41, $P < .05$) and at the time of death (OR = 0.26, $P < .05$).

DISCUSSION

Efforts to formulate policy regarding prevention of gambling-related suicides have been hindered by the paucity of research in this area. In this study, we used data gathered from the coroner's court files to examine the prevalence of gambling behavior among all suicides in Hong Kong and compare the correlates of nongambling and gambling with and without debt. First, we found that gambling behavior was prevalent among the suicides in Hong Kong. Second, we found that gambling with gambling-related debt suicides differ from other suicides. Third, the causal covariance of the indebtedness may create risk in a group of individuals who otherwise do not have much in common with other suicide victims. Since indebtedness is a modifiable risk factor, if targeted evidence-based prevention strategies or interventions are provided for the suicidal individuals with gambling problems, their suicidal acts may be prevented.

We found that about 20% of all suicide victims had gambling behavior, and about 10% were indebted by gambling. To our knowledge, this is the first study that has examined the prevalence of gambling problems among all suicides in a territory-wide setting. In comparison with the lower prevalence of problem and pathological gambling within the general population in Hong Kong,[4] gambling behavior is much more prevalent among the completed suicide population. However, this finding must be interpreted with caution because the severity of the gambling behavior among the suicide victims was not assessed during the death investigation, and we had to rely on the subjective information provided by the informants of suicides during the police investigations. However, if we classify problem gamblers as those whose gambling behaviors have led to socioeconomic difficulties, problem gambling is more prevalent among suicide victims than among the general population. In other words, problem gambling may be considered a risk factor for completed suicide. However, future studies using living control comparison groups are needed to confirm this finding.

We found significant differences between gambling and indebted suicides and the other suicide groups. Demographically, 52.3% of the indebted gambling suicide victims were employed, and 60.6% were married. Strikingly, only a small percentage of them had recorded psychiatric or medical problems prior to death, and they were not likely to have family or relationship problems. Interestingly, a lower percentage had a history of drug use, but a higher percentage had a history of alcohol abuse. A relatively higher percentage was involved with loan sharks or legal financial institutions prior to death. Previous studies found that the general suicide victims in Hong Kong are likely to be older aged, unemployed, living alone, divorced or widowed, and suffering from psychiatric and medical illnesses.[12,13] Since the profiles of suicides with gambling behavior differ from suicides in general, it is believed that standard risk assessments and interventions may not be applicable to these individuals.

Moreover, the gambling and indebted suicides identified in the present study are similar to the profiles of suicides with pathological gambling from our other study.[9] We reported previously that pathological gambling suicide victims were also likely to be aged 30–49 years old and married, to have died by charcoal burning (carbon monoxide poisoning), and to have had fewer medical and psychiatric problems in the past year and lifetime. We also found that about two-thirds of pathological gambling suicides had either a single episode or recurrent major depressive disorder prior to death; however, none of these individuals had sought professional help, and, thus, their disorders were often undiagnosed and untreated.[9] Although we are uncertain how many of the indebted gamblers in the present study met the criteria for pathological gambling, the presence of indebtedness related to gambling suggests that a large proportion would meet the criteria. Hence, attempts should be made to assess the presence of pathological gambling and gambling accompanied by indebtedness as part of the suicide risk assessment.

As speculated, the characteristics of suicides with gambling behavior with and without gambling-related debt differed from each other, and we found that the gambling activities of these 2 groups were different. The gambling and indebted suicide victims seem to have suffered from less-known risk factors when compared with those without debt. As mentioned above, suicide victims with gambling behavior but without related debt might be recreational gamblers whose gambling behavior may not have increased their suicide risk. This finding, once again, supports the observation that gambling and indebted suicides are distinctive and that indebtedness may be a significant contributing factor that enhances the individual vulnerability to suicide over and above the vulnerability conferred by presence and severity of gambling behavior.

A much higher rate of the gambling with gambling-related debt suicide victims engaged in gambling at casinos, but the nonindebted individuals mostly engaged in horse racing and mahjong. This finding is similar to that of Petry,[14] who found that gamblers engaged in different forms of gambling activities vary with respect to demographic characteristics as well as severity of gambling and other psychosocial problems. Petry[14] also found that those engaged in games

involving more knowledge and skill than luck suffered from lower rates of psychiatric distress or substance abuse, consistent with the need to maintain judgment when playing skill-oriented gambling activities. This finding may be one of the explanations for the lower rates of psychiatric and drug use problems among the indebted gambling-related suicides, which, in turn, suggests that psychiatric distress plays a smaller role in the suicidal acts than the suicides in general.

Dannon and colleagues[15] found that the different profiling of the indebted and nonindebted suicides with gambling is in line with the theoretical subtypes of problem gamblers. Dannon et al[15] suggested that gamblers can be classified into the impulsive subtype (those with high levels of risk-taking behavior who lack the ability to plan ahead and tend to lose large sums of money at one sitting), the obsessive-compulsive subtype (those who develop pathological gambling behavior in response to a perceived psychological trauma and tend to prefer slot machines and the lottery), and the addictive subtype (the largest subgroup of pathological gamblers that is associated with a moderate severity of pathological gambling but tends to gamble small amounts of money at a time in a repetitive and compulsive fashion).

The indebted individuals in the present study have similar profiles. The addictive subtype had been engaging in gambling repetitively and was in debt for a long period of time, and the suicidal act was precipitated by the disturbance of loan sharks or financial institutions followed by the hopelessness of repaying the debt. Those with gambling behavior but no gambling-related debt, on the other hand, have a profile similar to the obsessive-compulsive subtype in that they used gambling as a coping mechanism for their stressors and thus appeared to be recreational gamblers, but their suicidal acts were precipitated by the presence of other risk factors commonly observed in suicide. Dannon et al[15] suggested that antidepressive agents such as selective serotonin reuptake inhibitors and serotonin-norepinephrine reuptake inhibitors as well as psychotherapy addressing stress resolution and coping mechanisms may be helpful in the obsessive-compulsive subtype of pathological gamblers, whereas opioid antagonists that target the frontal lobe reward system may be helpful to the addictive subtype of pathological gamblers.[15,16]

Strengths and Limitations

This study has strengths and limitations. This was one of the largest studies to date that directly examined the prevalence of gambling problems among all suicides in a territory-wide setting. However, these data are limited by the study's retrospective nature, and some of the potential risk factors for suicide may not have been ascertained due to the limitation of using existing coroner's court files. Specifically, the major role of the coroner is to determine the cause and method of death on the basis of information derived from police investigation, witness statements from family members, and reports from health and mental health professionals. It is not surprising that the coroner and the death investigation may have underestimated premorbid psychopathological or psychosocial factors related to the deaths, especially when the apparent factor, eg, the presence of a psychiatric diagnosis in suicide deaths, is identified. Although the history of indebtedness and gambling behavior, for example, are standard questions of inquiry in a suicide death investigation, it is likely that this information may not be thoroughly collected as soon as a psychiatric diagnosis of a deceased individual is identified. From a research perspective, it is important to acknowledge the limitations regarding the reliability and validity of the information contained in the coroner's court files.

Another limitation is that without conducting psychological autopsy interviews with informants of suicides, the severity of gambling behavior among the suicides could not be ascertained. A control group of nonsuicides is not available for comparison. To address these limitations and enhance understanding of gambling and suicidal behavior in general, we suggest that future research should include using large-scale retrospective case-controlled psychological autopsy of completed suicides with problem and pathological gambling and prospective longitudinal panel methodologies of people with gambling and suicidal behavior.

CONCLUSION

Although we reported suicides with gambling in Hong Kong, the findings of this study have wide international implications. Gambling is undoubtedly becoming more common around the world. Many casinos have opened recently or are expected to open in Western countries such as the United Kingdom,[1] United States,[17] and Switzerland.[18] In Asia, for example, casinos are open in Vietnam, Singapore, the Philippines, and Kazakhstan. Governments in Taiwan, Thailand, and Japan are also considering legalizing casinos. When gambling becomes more accessible, gambling-related problems may heighten the risk of suicide among those who are more prone to gambling-related problems.[1] Moreover, in times of economic crisis, it is likely that more people will engage in financial risk-taking behavior, especially gambling, and are at increased risk for intemperate gambling and its potential consequences.

Legalized gambling generates revenues to governments without invoking new or higher taxes; however, it can also generate adverse psychosocial effects

on the public's health. Therefore, it is recommended that governments that have legalized or are contemplating legalizing gambling should utilize parts of the gambling-generated revenue in the development and implementation of a multilevel integrated public health approach to prevention and intervention for the general public and individuals at risk of problem gambling. These strategies may include developing health promotion activities for balanced and informed attitudes, behavior, and policies toward responsible gambling; providing subsidized training for medical and allied health professionals about early identification and intervention of problem gamblers; setting up surveillance and reporting systems to monitor trends in gambling-related participation and the incidence and burden of gambling-related problems; and allocating resources to set up specialized clinics/centers to treat pathological gamblers.[19]

A comprehensive research agenda is also needed to address gambling and its adverse effect on health and mental health, as well as its social and economic consequences. In particular, more formative and summative evaluation research is needed to examine best practices to help heavily indebted and suicidal gamblers who are generally reluctant to seek professional help.

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