

Report 5

A Study on Financial Debt and Suicide in Hong Kong

### Abstract

The presence of indebtedness is known as a risk factor that can trigger a stressed person to contemplate suicidal behaviour. The proportion of debt related to suicide deaths has also increased drastically since 1997. It is estimated that about 48% of total suicide deaths are related to indebtedness. The suicide rate in Hong Kong has increased more than 50% over the past few years, from 12.1 in 1997 to 18.6 (per 100,000) in 2003. In this paper we will compare the profiles of suicides with and without debt problems based on the Coroner's Court death files in 2002. We discovered that middle-aged males accounted for the majority of debt-related suicides with nearly half using carbon monoxide to asphyxiate themselves. The middle-age group of men aged 25-39 has also seen a 70% increase in the rate since 1997 and the number of men using carbon monoxide poisoning had increased in tandem from 1% to about 26% of total deaths in 2002. Suicide associated with debt problems seems to involve fewer mental and physical difficulties, not receiving public assistance, and a formal job responsibility. Gambling is a major contributing factor to unmanageable indebtedness. Some suicide prevention strategies targeting high-risk groups are discussed as well.

## Introduction

Hong Kong's suicide rate has increased drastically from 12.1 in 1997 to 18.6 (per 100,000) in 2003. The figure is at a historic high and the increasing trend is worrying with middle-aged suicides experiencing the most dramatic increase with the proportion of indebtedness amongst this group increasing from 15% to nearly 50% over the decade. Hong Kong, of course, was severely hit by the Asian financial crisis since the sovereignty handover in 1997. The unemployment rate also reached a historic high of 7.6% and there were 25,620 documented orders for compulsory winding-up and bankruptcy in 2002. According to the Official Receiver's Office, Hong Kong SAR, the figure was about 22.4 times higher than in 1997. This unfavorable economic environment has had a tremendous impact on the lives of people in the community while financial-related problems are more prevalent than ever before. Simultaneously, Japan also suffered from the regional financial turmoil, struggling with enormous economic difficulties over the past decade. In 2003, there were more than 32,000 suicide deaths recorded in Japan, a rate of 25 per 100,000.

Numerous studies have investigated the association between suicidal behaviour and financial difficulties. Haider and Haider (2002) studied the association between the seriousness of suicidal behaviour and the depth of financial problems in Pakistan. Amongst 160 patients studied via hospital accident and emergency admission, about a third was in debt and yielded a higher suicidal intent score than their counterparts. Unemployment was much more prevalent amongst debtors in the study. Dyer (1996) suggested that during the worsening farm crisis in the United States in the 1980s, suicide was a leading cause of death among farmers, mainly because of economic stress. Hintikka et al. (1998) investigated indebted people with suicidal behaviour among the Finnish general population and concluded that difficulties in repaying debts were an independent factor associated with suicidal ideation. Evidence from Graham and Burvill (1992); Blaszczyński and Farrell (1998) also showed that debt burden is one of the contributing factors in suicides. In fact, financial problems also contribute a great deal to a host of other social issues like crime, divorce, domestic violence and suicides (Blaszczyński & Farrell, 1998; Chuang & Huang, 1997; Graham & Burvill, 1992; Yip et al., 2003). More (1992) suggests that suicide statistics can be employed as an indicator of a malfunctioning

society. Economic development has also been recognized as one of the main determinants of altering mortality, disease and injury patterns (Berger & Mohan, 1996).

The aim of the study is to examine the impact of financial debt on suicide deaths and its association to other social or mental risk factors. The study is important in identifying the alarming risk factors of debt suicidality. Our aim is to facilitate early intervention and prevention programmes for this high-risk group.

#### Methods and Materials

A well-structured questionnaire was designed to collect relevant information from the deceased's documents made available from the Coroner's Court as in Chan, Yip, Au and Lee (2005). In Hong Kong, as in the most Western countries, coroners are required by law to investigate suicide death. They have to be satisfied beyond a reasonable doubt that the death was self-inflicted and that the person had the intention to die (Coroner Court, 2003). In 2002, about 1,088 (362 females and 726 males) suicide cases were studied. Demographic profiles such as gender, age group, marital status, ethnicity and place of birth were included in the analysis. Also collected was information on economic background, educational level, employment status, whether or not the person was on public assistance, and other variables like psychiatric problems, medical illness, drughabit, gambling, record of previous suicide attempts and the presence of a suicide note.. Both univariate and multivariate logistic regressions using backward elimination selection procedure were employed with a five percent level of significance considered. The odds ratio of corresponding parameters was also estimated with 95 prediction intervals. The robustness of the model fitting was evaluated by the Hosmer-Lemeshow test statistics (Cook & Weisberg, 1982; SAS manuals, 1990).

#### Results

Based on the Coroner's Court suicide data, Hong Kong's suicide rate stood at 16.0 (per 100,000), that is nearly a 30% increase since 1997 and 10% above the world average (14.5 per 100,000, WHO, 2002). Among the completed suicide deaths about 24.5% had debt problems, and the deaths were more prevalent amongst males. Of

those with mounting debts about half committed suicide by carbon monoxide poisoning; three quarters of suicide deaths by charcoal poisoning were by males. The use of charcoal burning amongst the deceased with debt was 4.3 times higher than that of other suicides. The middle-aged group 40-49 and older adults (60 and above) were over-represented in the suicide population compared with the population distribution in Hong Kong ( $p\text{-value}<0.01$ ). The majority of the deceased with debt comprised the middle-aged group of those 40 to 49. This phenomenon was consistent for both genders (Figures 1.1 and 1.2). And, about 56% of the suicide deaths were by unemployed persons, which is substantially higher than that of the general population (7.6%) in 2002.

Table 1 shows the main sources of indebtedness among all suicides and their severity level of debt in 2002. Gambling activities such as Macau casinos, horse betting or mahjong (a popular Chinese betting game played with four people), were the major causes of debt accumulation, comprising about 34% of the total. Business difficulties/failures (11%) and over-consumption of products and services (8%) were the other two key factors. Economic difficulties contributed just a small portion of the source of their debts even though more than half of the suicides were related to unemployment. About 60% of the deceased accumulated their debts within a year, and 12% of the total ran into debt lasting more than five years. Of those with evidence of mounting debts, around 44% had debts totaling from HK\$100,000 (approx. US\$13,000) to HK\$500,000 (approx US\$64,000). In addition, more than half of the debtors over-extended themselves to an unmanageable level. Legal credit card loan debt ranked first (22%) and illegal loan shark debts (illegal loan agencies), surprisingly, constituted an insignificant proportion (4%) in our study. Also, the majority of debt sources were from legal financial institutions and the banking sector, together constituting about 30% of the total.

Table 2 gives the results after applying a logistical regression to study the profiles of the suicide deaths of those with and without financial debt. It seems that males had a higher risk of debt engagement than their female counterparts. The risk of indebt suicide increased with age up to 60 years old and peaked at the age group of 40-49. On the other hand, older adults aged 60 and above had significantly less risk of financial debt problems than that of younger groups. The widowed deceased had a

lesser risk of financial debt than married, divorced or single persons, while those with higher education levels were found to have fewer financial problems ( $p$ -value=0.049). Those born in Hong Kong as well were more likely to suffer from debt problems than those from the Mainland among suicide deaths. Other significant predictors of indebtedness included: employment status, whether or not the deceased was receiving public assistance, and suffering from a psychiatric or medical illness. It seems that those who were employed, not receiving public or welfare assistance, and not suffering from psychiatric or medical illnesses, saw financial debt problems playing a key role. Gambling and suicide notes were also correlated with those at risk of indebtedness whereas other variables like ethnicity, drug usage or previous failed suicide attempts were not significant to help differentiate the indebted deceased from other suicides.

A backward selection procedure was introduced to identify the significant risk factors in the study in order to differentiate the indebted deceased from the pool by simultaneously taking other variables into consideration. Four noteworthy risk factors were identified, including place of birth, employment status, whether the person suffered from psychiatric problems, or was involved in gambling activities (see Table 3). About 50% of suicides happened to those who were unemployed. However, a lower prevalence of debt problem was reported amongst the unemployed group than those with regular jobs.. Among those unemployed persons, about 28.3% had debts, which is significantly lower than that recorded from the employed deceased (44%) ( $p$ -value<0.01). Those suffering from psychiatric disorders or those who did not gamble were found to have less common traits among the deceased in which indebtedness was an aggravating factor.

### Discussions and Conclusions

The main source of indebtedness of the deceased was found to be linked to an individual's overspending habits, and gambling involvement rather than any direct impact brought about from adverse personal economic situations like unemployment. However, it is true that unemployment was prevalent among suicides in 2002. Aggregate-level studies have shown a significant association between employment status and suicidal behaviour where unemployment somehow intensifies the

vulnerability to suicidal behaviour (Johansson and Sundquist, 1997; Platt, 1984; Platt & Hawton, 2000). And, the phenomenon among suicide attempters and deaths were far more common than in the general population (Hawton & Rose, 1986; Platt & Kreitman, 1990). However, our analysis suggests that suicide among the unemployed cannot be simply explained by financial difficulties alone. Also, those who suffered from high-risk indebtedness were part of the group that were formally employed and who did not receive public assistance. These people showed relatively better mental and physical health status. Gambling activities seemed to be an important indicator in risk intensification of financial debt problems and this subsequently led to a correlative increase in the threat of committing suicide. A high score of suicidal ideation among the clinical population of pathological gamblers was also reported (Lesieur & Blume, 1990; Blaszczynski & McConaghy, 1986; Linden, Pope, & Jonas, 1996). Blaszczynski and Farrell (1998) highlighted a strong association between gambling and suicide as well indicating that early intervention for pathological gambling behaviour was necessary.

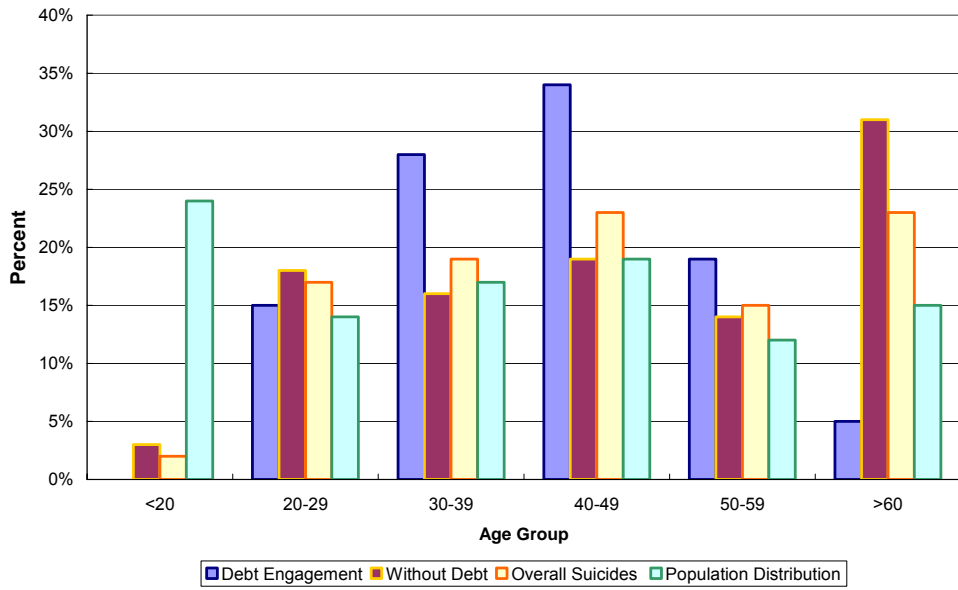
Since 2003, two non-governmental organizations the Tung Wah Group of Hospitals (TWGHs) and the Hong Kong Society of Accountants (HKSA) have been running a “Healthy Budgeting” course and delivering service for those suffering from financial difficulties within the community. It was discovered that among 783 individuals who sought counseling and professional accounting advisory services from July to November 2003, the prevalence of suicidal ideation and/or suicide attempts was not higher than that of the general population (CSR, 2004). Those found to be suffering from indebtedness in our study were able to resolve their difficulties, if they were willing to seek proper financial restructuring help. Apparently, encouraging the seeking of help with financial debt problems is a vital component in suicide prevention for indebted people. In a cultural context, Asians with gambling debts or those who have overspent may be ashamed to seek help from others and will most often try to conceal their problems. For this reason, early intervention should be initiated for pathological gamblers and gamblers in general before their debts become unmanageable and they subsequently become suicidal risks.. Public education on personal financial management is also needed and should be promoted throughout all sectors in the community. Awareness campaigns for

families and friends on how to assist their loved ones who are overburdened by unmanageable debt should also be formulated and implemented throughout the community. More stringent credit card and bank loan issuing controls would also help reduce the incidence of financial-related suicide tragedies in Hong Kong (CSRP, 2004). The banking sector in Hong Kong is very aggressive in their market share expansion, but charges some of the highest bankcard interest rates in the world (up to 30% per annum). That is why vulnerable groups of overspenders have a great tendency to get trapped by readily available bankcards with their relatively high spending limits (Chan et al., 2005).

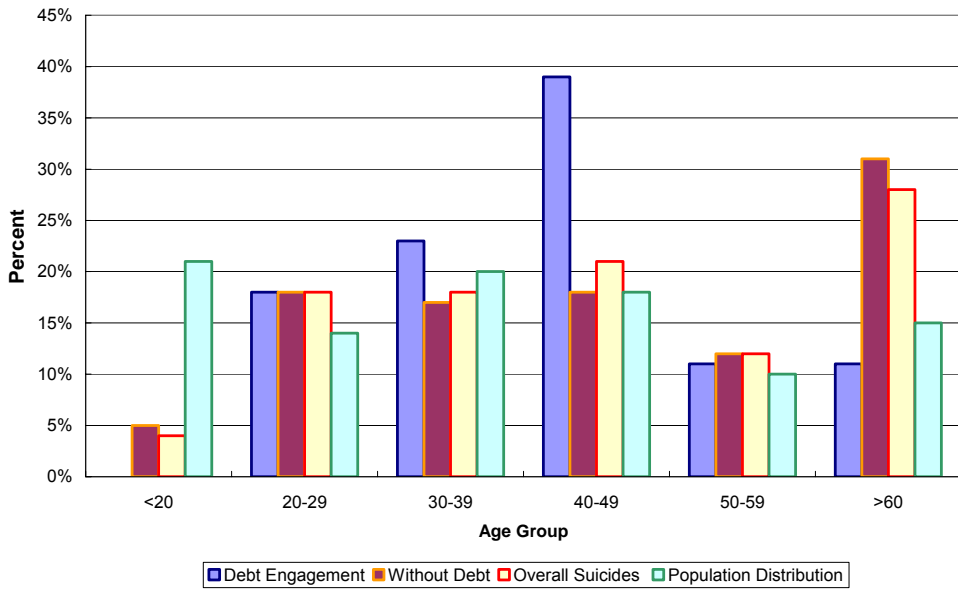
In 2002, the Japanese government undertook a series of prevention measures to change their citizens' attitudes toward suicide (Bremner, 2002). These initiatives included sponsoring a prominently displayed article in one of Tokyo's major newspapers about middle-age suicide, plus sponsoring academic seminars on 'suicide and the workplace', and publishing the first formal guidelines to help corporate counselors identify suicidal tendencies. The effectiveness of these preventive policies has yet to be evaluated but the authorities have indeed at least aroused public awareness and concern about the issue of suicide and public health care in the community.

Suffering from financial and economic difficulties is not new especially under adverse economic conditions. Financial and economic problems are also common in developing countries especially for those adapting to a rapid economic transition. People easily fall into debt trap problems when they fail to manage their finances and expenditures properly. Offering counseling services to high-risk groups, and tightening the issuance of bankcards and loans to vulnerable groups should be major considerations in helping to prevent debt-related suicides. Within the community, counseling and support services should also be adopted to strengthen the coping skills of those who face financial difficulties. Figure 1.1 and figure 1.2 illustrate a comparison of suicides with debts, without debts, as well as the overall completed suicides and general population by gender and age group

**Figure 1.1 - Male Distribution Comparison in Various Groups**



**Figure 1.2 - Female Distribution Comparison in Various Groups**




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Table 1

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<i>The main sources of debt associated with suicides (Multiple coding)</i>			
1.a - Cause of debts (multiple coding)		Percent (n)	
Gambling			
Macau casino	31%		
Horse racing	28%		
Mahjong	23%		
Illegal soccer/horse/casino	9%		
Casino outside HK/Macau	3%		
Others	6%	33.8% (97)	
Business difficulties/Failed business		11.4% (33)	
Over consumption of goods and services		7.6% (22)	
Residential rents		7.2% (21)	
Investment losses		5.5% (16)	
Overcommitted mortgage		4.1% (12)	
Buying illegal drugs		2.4% (7)	
Unable to meet basic living expenses		2.1% (6)	
Unemployment		1.4% (4)	
Compensation to others		1.4% (4)	
Recent loss of job		0.7% (2)	
Bankruptcy		0.7% (2)	
Legal costs		0.7% (2)	
Drug abuse		0.3% (1)	
Medical costs		0.3% (1)	
Business rentals		0.3% (1)	
1.b – Severity of Debts		Percent (n)	
Severely unmanageable debt		26.5% (27)	
Unmanageable debt		55.9% (57)	
Manageable debt		17.6% (18)	
1.c - Sources of Debts		Percent (n)	
Credit card		22.0% (115)	
Family		18.8% (98)	
Legal financial institution		16.3% (85)	
Bank		13.6% (71)	
Friends/colleagues		13.0% (68)	
Loan shark		4.0% (21)	
Others		13.0% (68)	

Table 2  
Adjusted odds ratio estimated from univariate logistic regression model, risk factors with debt engagement

Factor		Odd Ratio	95% CI		P-value
Gender	Male	2.18	1.57	3.01	0.00
	Female	1.00	-	-	-
Age Group	Less than 20	0.00	0.00	0.00	0.00
	20-29	4.55	2.47	8.38	0.00

	30-39	8.51	4.75	15.22	0.00
	40-49	9.62	5.45	16.95	0.00
	50-59	6.59	3.57	12.17	0.00
	60 and above	1.00	-	-	-
Marital Status	Married	0.98	0.70	1.36	0.87
	Divorced	1.31	0.79	2.19	0.30
	Widowed	0.10	0.02	0.43	0.00
	Single	1.00	-	-	-
Ethnicity	Non-Chinese	0.40	0.12	1.33	0.13
	Chinese	1.00	-	-	-
Place of Birth	Others	0.55	0.23	1.28	0.17
	Mainland	0.34	0.24	0.48	0.00
	Hong Kong	1.00	-	-	-
Education Status	Tertiary or above	0.44	0.09	2.10	0.31
	High School	1.46	0.66	3.23	0.35
	Junior Level	2.21	1.00	4.88	0.05
	Low Education	1.00	-	-	-
Employment Status	Others	0.09	0.06	0.16	0.00
	Unemployed	0.50	0.36	0.71	0.00
	Employed	1.00	-	-	-
Public Assistance	Yes	0.52	0.33	0.80	0.00
	No	1.00	-	-	-
Psychiatric Problem	Yes	0.25	0.17	0.37	0.00
	No	1.00	-	-	-
Medical Illness	Yes	0.31	0.23	0.43	0.00
	No	1.00	-	-	-
Drug Consumption	Yes	0.93	0.61	1.43	0.76
	No	1.00	-	-	-
Gambling	Yes	11.11	6.67	20.22	0.00
	No	1.00	-	-	-
Suicide Note	Yes	2.56	1.92	3.45	0.00
	No	1.00	-	-	-
Previous Attempt	Yes	0.95	0.68	1.35	0.80
	No	1.00	-	-	-

Table 3

*Adjusted odds ratio estimated from multivariate logistic regression model, risk factors with debt engagement*

Factor		Odd Ratio	95% CI		P-value
Place of Birth	Others	0.31	0.11	0.02	0.05
	Mainland	0.26	0.14	0.47	0.00
	Hong Kong	1.00	-	-	-
Employment Status	Others	0.20	0.09	0.43	0.00
	Unemployed	0.49	0.27	0.87	0.01
	Employed	1.00	-	-	-
Psychiatric Problem	Yes	0.25	0.13	0.47	0.00
	No	1.00	-	-	-
Gambling	Yes	9.17	4.76	17.86	0.00
	No	1.00	-	-	-