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Suicide and Attempted Suicide in Hong Kong - with a Note on Prevention

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Suicide

Suicide is under-reported everywhere. To what extent this under-reporting is depends on a number of factors such as the method used to certify the cause of death, how suicide is recorded and registered and the attitude of the public towards suicide. Since these factors are different in different countries international comparisons of suicide rates are of rather doubtful value. Generally speaking, highly industrialized countries tend to have high suicide rates as exemplified by countries in Europe. In countries subject to rapid industrialization suicide rates are expected to be on the increase in which females tend to be more affected than males.

The suicide rate in Hong Kong over the past 2-3 decades are shown in Figure 1. A few points are worth nothing: (i) The figures were obtained indirectly from the Registrar General's Department and they were different from those available in the Coroners' Office. However, since we are comparing annual statistics from the same source, this discrepancy does not matter very much. (ii) The graph shows marked fluctuations and it is difficult to identify social and other factors to explain them. (iii) The female rate was lower than the male rate throughout the years.

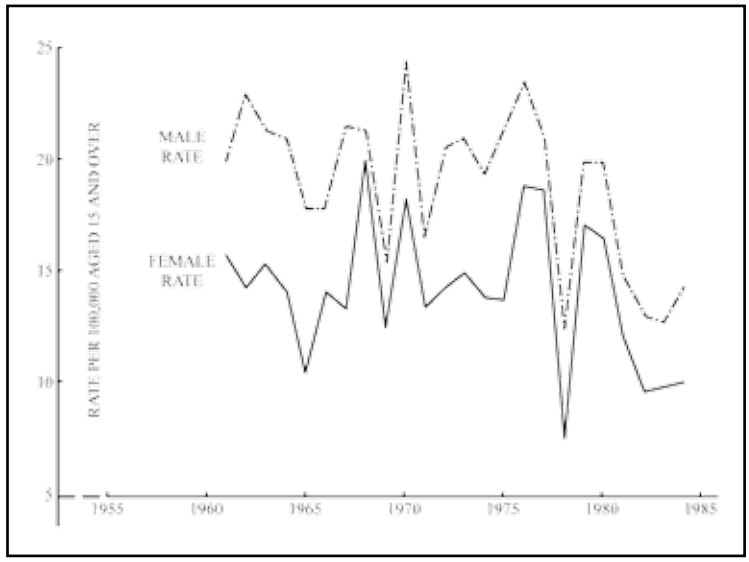

Figure 1: Suicide rate in Hong Kong (1961-1984)

Transcript of presentation at the 5th Professor Yap Pow Meng Memorial Lecture of The Mental Health Association of Hong Kong delivered on 27th September, 1985 at the Lady Trench Auditorium of the Duke of Windsor Social Service Building.

Source: Hong Kong Journal of Mental Health, 1985, 14(2), 64-72

Now let me share with you some reliable findings from our analysis of the 684 cases of suicide as inquired into by the coroners for the whole of our territory in 1981 which had a population of about 5 million. Additional information was obtained by studying the police files of the suicides on the Hong Kong Island in the same year. These 684 cases constituted 2.7% all deaths reported in that year.

Suicide rate

The crude suicide rate for Hong Kong in 1981 was 18.2 per 100,000 population aged 15 and over. It varied with the 4 regions (Table 1).

There is continuing debate on how far statistics derived from death inquest underestimate the true incidence of suicide in the community. One study in Dublin indicates that the suicide rate based on psychiatric evaluation of medical records was 4 times the coroners' statistics. Another study in Helsinki on the other hand puts the underestimate as below 9%.

The suicide rate increased steadily with age and rose sharply on reaching 65. 18% male and 30% female suicides were above 65. The male suicide rate was 20 and the female 15.9 and the ratio of male to female rates was 1.26 (Table 2). Death by suicide was most striking in the younger age groups (Table 3).

Table 1
Crude suicide rate

	Rate per 100,000 Population	Rate per 100,000 pop. aged 15 yrs. and over
Hong Kong Island	14.2	18.2
Kowloon	8.5	10.4
New Kowloon	17.3	21.7
New Territories	13.1	18.4
(Whole Territories)	13.9	18.2

Table 2
Sex and age specific rates of suicide

	Male		Female	
Age group	No. (%)	Rate	No. (%)	Rate
0 - 14	3(0.8)	0.5	4(1.4)	0.7
15 - 24	56(14.1)	9.3	42(14.6)	7.7
25 - 35	96(24.2)	20.1	56(19.4)	13.9
35 - 44	51(12.9)	18.7	23(8.0)	10.9
45 - 54	58(14.6)	20.9	40(13.9)	16.7
55 - 64	60(15.2)	30.0	37(12.9)	19.3
65 & over	72(18.2)	54.3	86(29.9)	44.3
	396(100%)		288(100%)	

Table 3
Death by suicide in different age groups

Age group	No. of suicide cases	No. of death from all causes	%
0-14	7	1,253	0.6
15-24	98	585	16.8
25-34	152	831	18.3
35-44	74	939	7.9
45-54	98	2,589	3.8
55-64	97	4,851	2.0
65 & over	158	13,930	1.1

Method of suicide

Jumping from a height was the most common method used in suicide. Hanging which was at the top of the list in Prof. Yap's study was now second except that in old age groups (55 and over) it remained to be the most popular method. Poisoning of various types were more frequent among female than male suicides (Table 4). In England and Wales about 65% of suicides died of self-poisoning.

Precipitating cause

The problem encountered shortly before suicide was taken as the precipitating cause. However, in many cases the precipitant was just an exacerbation of some problem which had been present for a long time. There was a difference in the type of precipitating causes among different age groups. Physical illness was predominant in the elderly whereas psychiatric illness was the most common in the younger age groups (Table 5).

Table 4
Methods of suicide

	Male (N = 396)	Female (N = 288)	Total (N = 684)
Jumping from a height	50.5%	42.7%	47.0%
Hanging	32.0%	29.1%	30.8%
* Poisoning of various kinds	*7.1%	*16%	10.8%
Drowning	7.1%	11.1%	8.8%
Burning	1.0%	0.7%	0.9%
Others	2.3%	0.4%	1.5%
	100%	100%	100%

* $P<0.001$

Table 5
Precipitating causes of suicide

Physical illness	35%	
Psychiatric illness	39.8%	Remarks:
Interpersonal problem	17.8%	There was a difference in the type of precipitating causes in different age groups.
Job/financial problem	17.3%	
Academic problem	3%	
Others	12%	

Previous attempts

20% of suicides had previous attempts and about one-third of these attempts occurred within 6 months of their death. Furthermore, more than one-third of those who made earlier attempts used the same method in their complete suicide.

Communication of Intention

About 40% of suicides had communicated their intention to their relatives, friends or doctors, but often the communication was not taken seriously or just ignored. About 20% had left a note or will.

Our study also confirmed that (i) The divorced and separated had the highest rate followed by the widowed. (ii) A positive correlation existed between unemployment and suicide. Thus when the employment status of male suicide subjects between 20-65 years was compared with the economically active male population it was found that 36.6% of the former but only 4.1% of the latter were unemployed. (iii) There was a positive correlation between social pathology and suicide. This has been reflected earlier in Table 1.

Attempted suicide

Attempted suicide may be defined as 'an act deliberately undertaken by a patient which mimics the act of suicide but which does not result in fatal outcome' although some would prefer to call it parasuicide. Reliable data on the frequency of attempted suicide in the general population are difficult to obtain. It is estimated to be around 8 times that of suicide. In most, if not all, parts of the world attempted suicide especially among late teenagers and young adults seen in the general hospital has been on the rise. In Hong Kong studies on attempted suicide are scarce but in this presentation the findings would be quoted from a local study done a few years ago on a sample of patients admitted to Queen Elizabeth Hospital after a suicidal attempt and referred to our visiting psychiatrists there. The sample which consisted of 150 patients would probably comprise cases, in which more severe psychopathology or physical complication was involved.

Age and sex distribution

There were 67 males and 83 females in the sample. The male to female sex ratio was 1:1.24. The age distribution in relation to sex is shown in Table 6. Attempted suicide was most commonly encountered in the age group of 15 to 24.

Marital status

When the marital status of suicide attempters aged 15 and over was compared with that of the general population, the significance of divorce and separation and of being single was confirmed (Table 7).

Table 6
Age and sex distributions of suicide attempters

Age group	Male (N = 67)	Female (N = 83)	Total (N = 150)	General pop. (N = 4,986,560)	p
0 - 14	0%	2.4%	1.3%	24.8%	< .001
15 - 24	41.8%	42.2%	42%	23%	< .001
25 - 34	23.9%	36.1%	30.6%	17.7%	< .001
35 - 44	7.5%	7.3%	7.3%	9.7%	NS
45 - 54	13.4%	4.8%	8.6%	10.4%	NS
55 - 64	7.5%	2.4%	4.6%	7.8%	NS
65 & over	5.9%	4.8%	5.3%	6.6%	NS

Table 7
Marital status of suicide attempters aged over 14

	Suicide attempters (N = 148)	General population (N = 3,713,053)	p
Single	47.3%	38.1%	< .05
Married	44.6%	55%	< .02
Separated / Divorced	5.4%	0.65%	< .001
Widowed	2.7%	6.3%	NS

Method of suicide attempt

More than two-thirds of the attempters took over-doses of drugs or poisons. The drugs used were tranquillizers or analgesics which were obtained in the greater part from drug stores or friends and to a lesser but still significant extent from doctors' prescription. Poisons used were dettol, detergents, bleaching solution, rat poisons and insecticides. Only 2 used gas poisoning (Table 8). It is worth noting that patients who employed more fatal methods like jumping from a height, hanging, drowning and stabbing differed from those taking overdoses or poisons and superficial lacerations in a number of variables, namely, living alone, history of psychiatric illness, occurring in the presence of others and calling for help after attempt as shown in Table 9.

Previous attempts

About one quarter of the patients had previous attempts of suicide. As compared with the first attempters, the repeaters comprised a

much higher proportion of women and of those who considered their attempts as an 'impulsive' act. 70% of previous attempts took place within 18 months and 27% within 3 months.

Precipitating causes

People must have problems before they attempt suicide. The problems encountered shortly before their attempt are regarded as precipitants as distinct from those that are more longstanding. However, the distinction is often not clear. Just like in the case of suicide the precipitant is in many patients just an exacerbation of some problem which has been present for quite a long time. As shown in Table 10 marital or family discord was the most common cause.

Table 8
Marital used in attempt suicide* (N=150)

Drug overdoses Poisons	59	39.3%	} 73.3%
Poisons	51	34%	
Laceration	23	15.3%	
Jumping from a height	8	5.3%	
Hanging	4	2.6%	
Drowning	2	1.3%	
Others	8	5.2%	

* In 3 cases 2 A.S. methods were used

Table 9
More fatal vs less fatal methods used in attempted suicide

	Attempters using more fatal methods (N = 23)	Attempters using less fatal methods (N = 127)	P
Living along	21.7%	3.9%	< .01
History of psychiatric illness	52.2%	25.3%	< .02
Occurring in presence of others	47.8%	78%	< .01
Calling for help after attempt	0%	36%	< .01

Table 10
Precipitating causes* of attempted suicide (N=150)

Marital and family discord	40.7%
Psychiatric illness	31.3%
Love affair	13.3%
Physical illness	6.7%
Job disappointment.	4.7%
Financial difficulty	4.7%
Unemployment	2.7%
Academic failure	2.7%
Bereavement	2%
Others	17.4%

* More than one-quarter of A.S. have more than 1 precipitating cause

Motivational aspect and purpose of attempt

69% (i.e. 104) of our patients claimed that they were determined to die and 49% (i.e. 73) that their attempts had been planned. However, when they were questioned about the purpose behind their attempts, most became evasive. It might be true that many patients could not describe clearly what their intention was. On comparing our findings with western studies a much higher percentage of our patients were determined to die. This could be due to referral bias but when we consider that 66% of them made the attempt in the vicinity of others and 71% were glad that they were saved, we are left with the feeling that the attempters might feel embarrassed to reply that their act was just a gesture or a cry for help. Afterall in the Chinese 'face' is a very sensitive phenomenon and many might not reveal their real intention. Nevertheless, there were 26 patients who indicated that their attempts had served a useful purpose (Table 11).

Attitude of family

12 patients had no relatives or were not visited. The majority of relatives were supportive (Table 12).

Diagnosis

The majority were found to suffer from adjustment disorder (of depressive type) and depression. Table 13 shows the diagnosis given by our visiting psychiatrists after their assessment.

Table 11
Purpose served by suicide attempts (Replies - 26)

Relief from intolerable situation	9
Influencing others to respond to appeal	7
Communicating distress/anger to others	6
Others	4

Table 12
Attitude of relatives towards suicide attempt

No relative/ not visited	8%
Supportive	69.3%
Resentment	16%
Indifferent	6.7%
	100%

Table 13
Psychiatric diagnosis of suicide attempters (N*=150)

Adjustment disorder	42.7%
Depression (Reactive)	22%
Depression (Psychotic)	4.6%
Situation reaction	14%
Schizophrenia	15.3%
Paranoid psychosis	2%
Personality disorder	6.6%
Alcoholism and related condition	3.3%
Mental deficiency plus epilepsy	1.3%

*18 patients had 2 diagnostic labels

Relationship Between Suicide and Attempted Suicide

The current view on the relationship between suicide and attempted suicide is that they are 2 separate phenomena with different motives and outcome and available data tend to support this. Thus, the rates of suicide and attempted suicide have changed independently. Suicide occurs more in men and in the elderly whereas attempted suicide more in women and in younger age groups. The intent to die is strong in suicide who, comparatively speaking, use more deadly methods whereas the appeal element is prominent in attempted suicides who often act in the vicinity of others.

Since the numbers of attempted suicides is large, recent studies have by means of cluster analysis separated at least 2 groups of suicide attempters. One group consisting of more than half of attempted suicide have a very low transitional probability from attempted suicide to complete suicide, only 0.7% in a 5-year follow-up. Another group also of a significant size, have a much higher transitional probability to suicide -as high as 8.3% in a 5-year follow-up.

Preventive Measures

Prevention of attempted suicide

Preventive work includes the following:

(i) Amelioration of adverse socioeconomic factors like poverty, unemployment and overcrowded living conditions but such factors are usually beyond the help of mental health professionals.
(ii) Availability of counselling service for those who need advice and assistance in solving marriage, family and other problems.
(iii) Family doctors/general practitioners should have more psychiatric training so that they are more capable of identifying persons at risk and dealing with symptoms of psychological stress.
(iv) Mental health education with a view to cultivate good mental health, to improve our stress-coping strategy and to pay more attention to more subtle threats of suicide.
(v) Control of substances used in self-poisoning.
(vi) Emergency help like the Samaritans, 24-hour hot-line service and domiciliary visits by crisis intervention team.
(vii) Easy access to community psychiatric services.

Management of suicide attempters

This broadly takes the following steps:

(i) Treatment of physical complications. This should be dealt with by physicians and surgeons.
(ii) Psychological assessment for (a) psychiatric illness and (b) the risk of repeat and mortality. Psychological assessment is best done in a psychiatric unit of the general. If a patient is suffering from a psychiatric illness and still poses a significant risk to himself, hospitalization is advisable in order to protect the patient from further self-harm and to carry out treatment quickly. Exhaustion of family members and diagnostic uncertainty on the part of the psychiatrist are points to be taken into consideration in deciding hospitalization. If not admitted, the patient should receive crisis intervention and continued care in the outpatient clinic has to be ensured.
(iii) Prevention of repeat. The increased risk of mortality with subsequent attempts is shown in Table 14.

Table 14
Increased risk of mortality

Age/sex	:	Elderly/male
Marital status	:	Divorced, separated, widowed
Suicidal act	:	More fatal method, not in presence of others, planned, repeat
Psycho-social environment	:	Social isolation, no supportive relative, chronic disability, poverty, unemployment, drug/alcohol abuse, personality-related stress
Other history	:	History of mental illness, criminal conviction, childhood losses, family history of suicide/mental illness
Diagnoses and symptoms	:	Schizophrenia, depression, alcoholism, personality disorder, suicidal thoughts prompted by psychotic experience

Prevention of further attempts is done by (a) Counselling. After a suicide attempt, especially the first one, there is often a healthy regret both on the part of the patient and his significant others as in the case of family and marital discord. Counselling work at this time will be most helpful because it is readily acceptable to all concerned. (b) Follow-up. The majority of patients will repeat attempts within 18 months. Therefore, if it is practicable, suicide attempters should maintain contact with the clinic for a period of this length. Follow-up is not necessarily only done by psychiatrists but also by psychologists and social workers.