

A STATISTICAL STUDY OF ATTEMPTED SUICIDES IN SINGAPORE

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SYNOPSIS

This is a statistical survey of all the recorded attempted suicides in Singapore for the year 1971. Such a study is not easily carried out in other countries. There are 1133 cases of attempted suicides and 239 cases of suicides, giving a rate of 55* and 11*, and a ratio of 5 attempted suicides to 1 suicide. Females in the age group 20 to 29 have the highest rate of 207*. The rate is highest (103*) in the Indian group and lowest (18)* in the Malay group. Self-poisoning accounts for 94% of the cases compared with only 14% for the suicide cases. The rate for Housing and Development Board flat dwellers is 41.4* compared with 62.8* for the rest of Singapore. 2.4% of the total cases repeated the attempt within the period of survey. (*rate per 100,000 population).

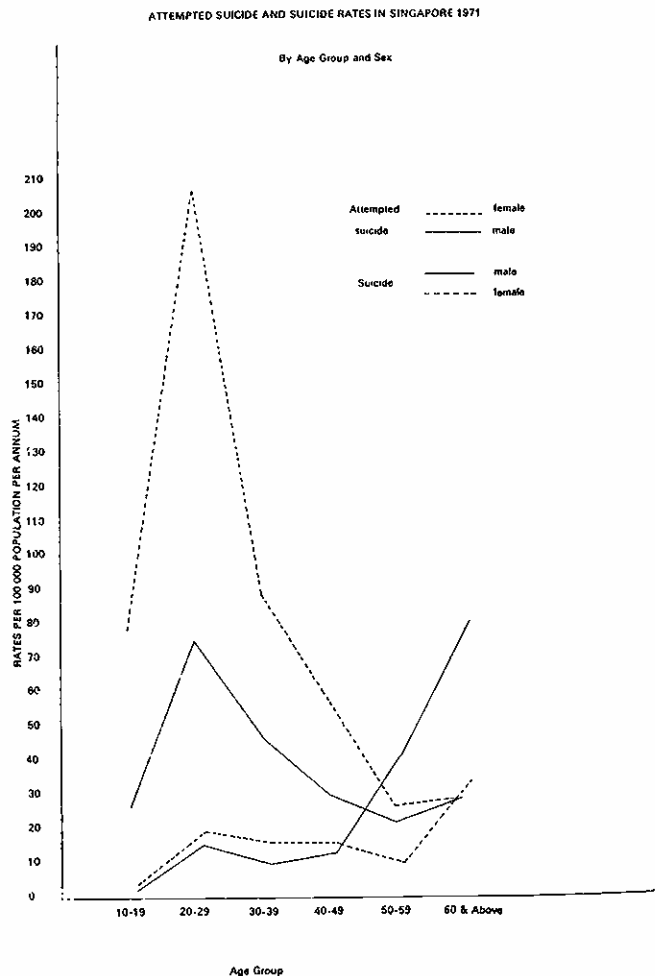
INTRODUCTION

The compilation of figures on attempted suicides is so poor that few if any countries could ever carry out a survey to estimate the total number of suicide attempts for any one year. The Czechoslovakian Ministry of Health (1966) in its report on suicide in which special efforts were made to include all cases, reported that the number of registered suicidal attempts was only double that of the number of registered suicides. However systematic studies carried out in Sheffield by Parkin and Stengel (1965) showed the ratio of attempted to commit suicides to be 9.7 to 1 for the year 1960 to 1961.

The difficulties in undertaking country-wide surveys are immense because of the following reasons. Firstly, unlike suicides there is no legal obligation in many countries to report, let alone investigate into every case of suspected suicidal attempt and hence there is no one central registry from which cases of suicidal attempts can be traced and studied. Secondly, the definition of attempted suicide by Stengel (1969), as the "non-fatal act of self-injury undertaken with conscious self-destructive intent, however vague and ambiguous" appears fairly clear but can be subjected to a wide difference in interpretation. Also this is complicated by the fact that many patients with obviously suicidal intent are known to deny the suicidal act, as noted by Tsoi (1970). Thirdly, not all suicidal attempts are brought to the notice of the doctors and not all cases treated by doctors are reported or diagnosed as

'attempted suicide', in order to maintain the confidence of the patients. Inquiries at Sheffield by Parkin and Stengel (1965) revealed that about 20% of the suicidal attempts seen by General Medical Practitioners were not sent to hospitals. Fourthly, suicidal attempts have in the past decade been given a variety of diagnoses as 'attempted suicides' by Stengel (1969), as 'deliberate self-poison and self-injury' by Kessel (1965), as 'pseudocides'

Figure 1



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by Lennard-Jones and Asher (1959) and 'as para-suicides' by Krietman *et al* (1970). Fifthly, surveys covering a period of more than a few months in any city or district is beset with the problem of potential patients moving in and out of the areas of survey.

Unlike other countries Singapore is unique in that she is a small compact island city of 220 square miles with a relatively static non-migratory population, a high standard of medical record keeping and up-to-date demographic statistics. Moreover suicidal attempt is still an offence, as a result of which all patients admitted to a government hospital for treatment for 'attempted suicide' have to be reported to the police from whose records most of the cases can be traced.

MATERIALS AND METHODS

Only those cases which were admitted to a hospital were included in this study. The data were obtained by making a study of all the cases of self-poisoning and self-injury reported to the police in government hospitals by the doctors in charge. In a proportion of the cases, the case-files or out-patient cards were also traced to obtain further information. All private hospitals were visited and cases reported as "attempted suicides" were also collected and data obtained. For data on suicides, all cases in which the verdict of "suicide" was returned by the State Coroner during the year 1971 were also studied.

RESULTS AND DISCUSSION

Incidence

A Total of 1133 cases of attempted suicides and 239 cases of suicides were collected for the year 1971. This gives a ratio of 5 attempted suicides to 1 suicide

and a rate of 54 per 100,000 population for attempted suicide and 11 per 100,000 population for suicide. Unlike suicide for which every case is carefully determined and documented, few countries could produce even fairly reliable data for attempted suicide and therefore it is difficult to make any detailed comparative studies with other countries.

From Table I, it is observed that the overall sex ratio is slightly more than 2 females to 1 male. A further breakdown shows that this ratio is highest at the age group 10 to 19 nearly 3 females to 1 male and falls steadily to about equal when it reaches the 60 years and above age group. The most susceptible age group is between 20 to 29 and for females this reaches the peak of 207 per 100,000. The high incidence of attempted suicide amongst young females is an accepted finding. Kessel (1965) in a study of 500 cases of self-poisoning in Edinburgh obtained a rate of 280 per 100,000 for girls in the age group 20 to 24 for any year.

ETHNIC DISTRIBUTION

It is possible to postulate many factors to account for the differences in rate amongst the 3 main ethnic groups in Singapore representing roughly the three major oriental cultures. However, until detailed psycho-analytical cross-cultural studies such as conducted by Hendin (1964) in Scandinavian countries are carried out, explanations would be partial and speculative.

In this survey (see Table II) it is interesting to note that unlike the suicide rate which is highest amongst the Chinese, the attempted suicide rate is highest amongst the Indian group. The low rate among the Malay group is understandable from the influence of the Islamic religion and culture, which

TABLE I
DISTRIBUTION AND RATES ACCORDING TO AGE and SEX

Sex Age Group	Number of cases			M/F Ratio	Rate per 100,000 pop. (above age 10 years)		
	M	F	Total		M	F	Total
10 - 19	72	212	284	1:2.9	26	80	52
20 - 29	134	358	492	1:2.7	75	207	140
30 - 39	61	113	174	1:1.9	47	89	68
40 - 49	30	50	80	1:1.7	30	57	43
50 - 59	16	18	34	1:1.1	22	27	25
60 & above	17	19	36	1:1.1	29	29	29
Unknown	17	16	33	—	—	—	—
TOTAL	347	786	1133		42	100	71

TABLE II

DISTRIBUTION AND RATES ACCORDING TO ETHNIC GROUPS

Ethnic Groups	Number of Cases			M/F Ratio	Rates per 100,000		
	M	F	Total		M	F	Total
Malay*	22	36	58	1:1.6	14	23	18
Chinese	267	597	864	1:2.2	33	75	54
Indian†	42	110	152	1:2.6	48	186	103
Others	12	21	33	1:1.8	60	111	85

*Includes Indonesian.

†Includes Pakistani, Bengali and Ceylonese.

may also have accounted for the extremely low suicide rates in Egypt of 0.1 per 100,000 population in 1961. Yap (1958) explained the high incidence among young females as the result of a "hypereridic state, defined by Lindermann (1950) as a morbid state of hostile tension, arising from a series of repeated provocations, which might result in explosive behaviour rather more aggressive than is appropriate to a given set of circumstances." This leads to impulsive and inefficient execution of the suicidal acts.

METHODS USED IN ATTEMPTED SUICIDES

In this survey, as shown in Table III, self-poisoning accounted for 94% of the cases leaving only 6% to self-injury. Of the poisons used, "drugs" topped the list with 57% followed by household detergents (21%), methyl salicylate (11.1%) and insecticides (5.8%). The methods of attempted suicides vary from country to country, and in any one country there is also a change in the methods used with the passage of time as the population becomes more educated and certain methods become more accessible. Stengel and Cook (1958) reported gas poisoning to account for 46% for males in a series from a London hospital in 1953, but this was reduced to only 9% in the series from Edinburgh during 1961 to 1962 by Kessel (1965),

TABLE III

COMPARISON OF METHODS FOR ATTEMPTED SUICIDES AND SUICIDES

Methods	Attempted Suicide %			Suicide %		
	M	F	Total	M	F	Total
Self-poisoning	95	93	94	10	18	14
Self-injury	5	7	6	90	82	86

in which "drug poisoning" accounted for 55%. In Singapore, in a series covering the period 1967 to 1969 described by Tsoi (1970), "drug poisoning" accounted for only 28% of the cases. In the present survey this was 57%, indicating that Singapore is fast catching up with Britain. A comparison of the methods used by the suicide and attempted suicide group further enhance the bipolarity of the suicidal population.

SOCIAL AND DEMOGRAPHIC FINDINGS

Unlike the findings of Kessel (1965) in Edinburgh where the highest rates were found in the city slums and the lowest rates in the stable middle class wards, the distribution of attempted suicides in this survey is erratic and haphazard from which no simple meaningful conclusions can be drawn except that it is generally lower in the predominantly rural and low density districts, as indicated in Table IV. The notable exception is Kreta Ayer District (Urban) which had the lowest rate of 16.3 per 100,000 for attempted suicides and yet the

TABLE IV
ELECTORAL DISTRICTS WITH THE LOWEST RATES FOR ATTEMPTED SUICIDES

Electoral Districts		Rates per 100,000 population	
		Attempted Suicides	Suicides
Geylang Serai	rural	31.7	6.3
Kampong Chai Chee	rural	29.3	6.2
Ponggol	rural	24.8	2.5
Pasir Panjang	rural	22.5	8.4
Thomson	rural	21.4	11.9
Kg. Kembangan	rural	16.6	1.1
Bukit Timah	rural	16.4	3.3
Kreta Ayer	urban	16.3	40.6

TABLE V
COMPARISONS BETWEEN HOUSING AND
DEVELOPMENT BOARD FLAT DWELLERS
AND REST OF THE POPULATION

Rate per 100,000	Flat Dwellers	Non-flat Dwellers
	41.4	62.8
<i>Methods used</i>		
Drugs	53.8%	51.0%
Domestic Poisons	41.6%	45.1%
Self-injury	2.8%	2.5%
Unknown	1.8%	1.4%

highest rate of 40.6 per 100,000 for suicides during the year 1971.

The Housing and Development Board flats to which reference has been made now and then in the relationship between high rise living and mental health, had a lower rate for "attempted suicide" of 41.4 per 100,000 population as compared with the rest of Singapore which had a rate of 62.8 per 100,000. However, the methods used by the former group did not differ much from that of the latter as shown in Table V.

REPEATED SUICIDE ATTEMPTS

In this sample there are 27 cases of repeated suicidal attempts—18 males and 9 females representing 2.4% of the total cases. The reversal in the male and female pattern is striking. 50% fall within the age-group 20 to 29 and 65% repeated the act within a period of 2 months of the first attempt. The numbers would very probably increase if the cases are followed for a longer period.

The rate of repeated attempted suicide in other countries is about 2-4% per year except in Edinburgh in which Kessel (1965) reported 15%. Repeated suicide attempts of more than twice are highly indicative of an underlying Personality Disorder as observed by Kessel (1965) and Tsoi (1970).

CONCLUSION

This study although conceded to lack absolute accuracy, will bring out the characteristic of the attempted suicide population in Singapore and the frequency with which this syndrome is encountered. It also serves as a basis or point of reference from which future studies can be based. Lastly, it is hoped that the data presented would help the doctor to have a better perspective of the cases of suicidal attempts that he encounters in the course of his practice.

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