

A SURVEY ON SUICIDE IN CHINA DURING THE PAST DECADE

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SUMMARY

Using the method of document metrology, the authors reviewed the literature published in the past decade on suicidal behaviour (suicide and parasuicide) including epidemiological data, clinical characteristics of suicide and social factors presumably contributing to suicidal behaviour. Between 1986 and 1996, 211 papers were published about suicide and parasuicide in Chinese journals, 76 % of which were clinical observations, controlled studies or epidemiological surveys. Mortality of completed suicide varied according to the regions sampled; in rural areas it was 3.21 - 21.01 / 100,000 (median: 17.9) as compared to 2.78 - 9.43 / 100,000 (median : 6.60) in urban or suburban areas. The age at which suicidal behaviour occurred ranged from 7 to 95 years. Young adults (aged 20-29) had the highest rate of suicide while the elderly (over 60 years) had the lowest rate. More female than male attempted/committed suicide (m/f: 0.4 - 0.8 / 1.0); however, the prevalence of completed suicide showed no predominance with respect to sex. Well-educated people were more likely to attempt/commit suicide than poorly educated ones. Common causative factors of suicidal behaviour included interpersonal conflicts, the presence of psychiatric disorders and difficulties related to chronic somatic ailments. Poisoning, hanging and drowning were the three most common methods for committing suicide.

Key words: suicide, parasuicide, epidemiology, causative factors, Chinese

INTRODUCTION

Suicide is a critical social issue which has been intensively studied for more than 100 years in most developed countries. A subspecialty, suicidology, has been developed over the past decades with its own scientific journals. In China suicidology started in the 1940s with an epidemiological study but until the 1980s there was not even a symposium organized on the subject (Da Dan, 1995). Recently, more and more attention has been paid to suicide but still few specialized institutes exist for its prevention and treatment. Systematic documentation on suicide is lacking. In this paper we review the literature on suicide published in China during the past decade. Our aim is to take stock of the advances psychiatric research has made and to provide a background for further development in this field.

METHOD

All scientific documents related to the keyword 'suicide' in the "CD Database of Chinese Biological Medicine" between 1986 and 1996 were examined in our survey. We used document metrology (Qiu Yunping, 1986) to identify all relevant documents on the epidemiology of suicidal behavior (suicide and parasuicide) and also on causative factors and various forms of suicidal behaviour.

RESULTS

DATA BASE

We reviewed 211 papers related to suicide which were published in 96 Chinese journals during the period of 1986-1996. The yearly distribution of the number of papers was uneven during the period examined. One hundred and sixteen (76 %) of them were clinical observations including controlled clinical and epidemiological studies, while the rest were case reports and basic research papers. We found 50 review papers on suicide in mainland China.

MORTALITY DUE TO SUICIDE

Mortality due to suicide varied with the site sampled. In rural areas it was 3.21 - 1.01 per 100,000 population (median =17.9) compared to 2.78 - 9.43/100,000 (median =6.60) in urban or sub-urban areas (Liu Xianchen et al,1994; Hu et al, 1992; Chen & Gao, 1993; Liu Jianbuo et al, 1994; Liu Keli et al, 1996; Wang Yuting & Wang, 1994).

Five to ten percent of patients who attempted suicide died from their self-inflicted injuries in emergency departments (Ren & Xu, 1993; Xu Chunsheng et al, 1993; Yang Jiwei et al, 1995; Wang Ruiru & Zhang, 1994; Zhao & Qi, 1996).

SEX AND SUICIDAL BEHAVIOUR

More women attempted suicide or parasuicide in both urban and rural areas with a male - female ratio of 0.4-0.8/1 (Ren & Xu, 1993; Zhu Xueping et al, 1994; Li Wenshi et al, 1995; Fan Xianxiong et al, 1994; Fan Xiuhua & Zhang, 1993; Li Xufeng & Li, 1994).

There was no difference in the rate of completed suicide with respect to sex in the whole population. However, considering separately, more men in urban regions and more women in the countryside committed suicide (Hu et al, 1992; Chen & Gao, 1993; Liu Jianbuo et al, 1994; Liu Keli et al, 1996; Wang Yuting & Wang, 1994; Liu Meijin, 1993).

AGE AND SUICIDAL BEHAVIOUR

Age for suicidal behaviour ranged from 7 to 95 years (Liu Keli et al, 1996; Wang Yuting & Wang, 1994; Wang Ding et al, 1995). Young adults (aged 20-29) had the highest rate of suicidal behavior while the aged (above 60) had the lowest rate, the latter being only one third of the former. After standardization, suicidal behaviour was most prevalent in the 20-29 age bracket followed by adolescents (aged 15-20). Suicidal behaviour was negatively correlated with age (Liu Jianbuo et al, 1994; Liu Keli et al, 1996; Wang Yuting & Wang, 1994; Xu Chunsheng et al, 1993; Zhu Xueping et al, 1994; Yang Jiwei et al, 1995). (See Table 1)

LEVEL OF EDUCATION AND SUICIDAL BEHAVIOR

The majority of people with suicidal behaviour were poorly educated (Liu Keli et al, 1996; Wang Yuting & Wang, 1994; Wang Ruiru & Zhang, 1994; Li Wenshi et al, 1995). However, due to the high percentage of people with low education in the general population, persons with suicidal behaviour represented a small percentage among them. The inverse situation was true for highly educated individuals; less suicidal behaviour in absolute figures meant higher percentage in the highly educated segment of the population (Table 2).

SEASONAL DISTRIBUTION OF SUICIDAL BEHAVIOUR

The most frequent season for all types of suicidal behaviour was summer (June to September) followed by spring (Ren & Xu, 1993; Xu Chunsheng et al, 1993; Zhu Xueping et al, 1994; Li Wenshi et al, 1995; Liu Meijin, 1993; Feng et al, 1993; Fan Xianxiong et al, 1994). For completed suicide there was no remarkable seasonal distribution with only a few centers reporting more completed suicide in the spring (Liu Jianbuo et al, 1994; Liu Keli et al, 1996; Wang Yuting & Wang, 1994).

Table 2. Level of education and suicidal behavior

<i>level of education</i>	<i>percentage in the population with suicidal behavior</i>	<i>median(M)</i>	<i>percentage in the standard population (S)</i>	<i>M / S</i>
<i>primary school or less</i>	15.0-62.7	46.2	53.3	0.87
<i>middle school</i>	29.6-56.0	35	23.3	1.5
<i>high school</i>	3.5-35.0	14.9	8	1.86
<i>college or above</i>	0.7-15.0	3.8	1.4	2.71

CHARACTERISTICS OF THE SUICIDAL ACT

The most common way of suicidal behavior was self-intoxication. In cities sleeping pills or neuroleptic drugs were the most frequent method of suicide while in the countryside organic phosphate insecticides was the most commonly used method. Hanging and drowning came second and third respectively in both types of locality (Liu Jianbuo et al, 1994; Liu Keli et al, 1996; Wang Yuting & Wang, 1994; Fan Xianxiong et al, 1994; Zhao Yuanhui & Qi, 1996; Fan Xiuhua & Zhang, 1993; Weng Zheng et al, 1993). (See Table 3) Men preferred more violent and high risk methods than women.

FACTORS LEADING TO SUICIDAL BEHAVIOUR

Marriage and family problems or other inter-personal conflicts were the commonest factors leading to suicidal behaviour. According to the literature surveyed, these factors played a major role in more than half of completed and attempted suicide cases. The second main group of factors was the presence of psychiatric disease contributing to 1/6 of all suicidal behaviours. Suffering due to chronic physical disease was the third factor in persons with suicidal behaviour and the most frequent one in the elderly (Zhu Xueping et al, 1994; Wang Ruiru & Zhang, 1994; Feng et al, 1993; Zhao & Qi, 1996; Weng Zheng et al, 1993).

Table 1. Age distribution of persons with suicide

<i>age</i>	<i>percentage in the population with suicide (%)</i>	<i>percentage in standard population (M)</i>	<i>percentage in standard population (S)</i>	<i>M / S</i>
15-	8.45-19.15	16	8.76	1.83
20-	26.78-58.30	38.42	20.83	1.85
30-	12.50-28.50	20.25	14.37	1.41
40-	4.0-24.0	9.44	10.75	0.88
50-	5.50-10.40	7.76	7.93	0.98
60-	3.21-12.35	5.58	9.31	0.6

Table 3. Characteristics of the suicidal act

<i>suicidal act</i>	<i>percentage</i>	<i>median</i>
<i>poison</i>	30.8-94.4	61
<i>hanging</i>	3.1-30.0	16.8
<i>drowning</i>	1.4-17.4	8.5
<i>others*</i>	2.5-17.0	4.5

* others included: cutting the neck/wrists, jumping from high, electrocauterizing, etc.

SUICIDAL BEHAVIOUR & PSYCHIATRIC DISORDER

Forty-two percent of psychiatric patients with suicidal behaviour were diagnosed with schizophrenia while 39.0% of them suffered from depression. Taking into account the point prevalence of schizophrenia (5.69 ‰) and that of depressive disorder in the population (0.76 ‰) (Shen Yucun, 1994), higher percentage of depressive than schizophrenic patients committed suicide.

Suicidal behaviour was associated with other psychiatric disorders including alcohol dependence, epilepsy-related psychiatric disorders, reactive disorder, neuroses, mania and personality disorders (Qin Zhihua et al, 1995; Yang Huogao & Yang, 1994; Tong et al, 1996; Liang Xinrong, 1995; Zhao Guifan et al, 1996; Chen Degan et al, 1996; Yao Keming, 1993; Qi Shuguang et al, 1993).

Hallucinations and delusions were the predominant factors leading to completed or attempted suicide in 65% of schizophrenics with suicidal behavior. In remitted schizophrenic patients negative attitude to psychiatric illness and its social stigma were the main factors contributing to suicidal behaviour (Lu & Li, 1995). Occasionally suicide was attributable to other factors such as pathological impulse. More delusional than non-delusional depressive patients committed suicide.

DISCUSSION

Publications on suicidal behaviour in China in the past decade gave an approximation of the scope and gravity of the problem. Reviewing the literature, a number of methodological flaws became obvious including the lumping together of completed and attempted suicide, the lack of population data, etc. It seems very likely that differing economic development and quality of public health services have also contributed to the variability of prevalence of suicidal behaviour across mainland China.

In developed countries the prevalence of suicide in urban areas was higher than in the countryside; for instance in Hamburg and west Berlin it was 32.5 – 35.9 /1000,000 in 1981, while in rural areas in Germany the rate of suicide in the same year was 9.1 – 11.6 /1000,000. However, the opposite was true for the Chinese mainland. More men than women committed suicide in developed countries (Shen & Gao, 1988); for example in Japan the male/female ratio was 1.65 : 1 and in some European countries two to three times more men committed suicide (Shen & Gao, 1988; Ren Shauhua, 1995). The prevalence of suicide in mainland China did not have a significantly different distribution with respect to sex. In many countries the prevalence of suicide is increasing with age, but in China the highest rate hits the 20 to 29 age group (Liu Xianchen et al, 1994). Following the peak in young adulthood and adolescence, the rate of suicide in China showed a decreasing tendency with age in the elderly being only one third of the figure found in young adults.

Our analysis indicated that well educated people were more susceptible to suicide. Of the seasons, summer had the highest risk for suicidal behaviour. These results were similar to those reported from western countries. Interpersonal conflicts were

the main causes inducing suicide or attempted suicide followed by the presence of psychiatric disorders. Psychiatric patients in remission were also more likely to commit suicide than normal individuals.⁽¹³⁾

Annually about 500,000 lives are lost to suicide worldwide i.e., more than 1,000 death per day according to WHO. Suicide has been, and still is, a major social problem drawing increasing attention all over the world. It is our obligation to continue mobilizing huge resources on research and suicide prevention.

CONCLUSION

The following brief statements summarize our findings :

The prevalence of completed suicide varied according to the region sampled ; in rural areas it was 3.21 – 21.01 /1000,000 while in urban/suburban areas it reached only 2.78 – 9.43 / 100,000.

More women than men presented with suicidal behaviour (male/female ratio : 0.4 – 0.8 : 1.0) while the prevalence of completed suicide in females was similar to the of the males.

Young adults (aged 20- 29) were most likely to commit suicide; following that age bracket the prevalence of suicide was negatively correlated with age; in the elderly it was only one third of that encountered in young adults.

Education was positively correlated with suicide. Summer was the season of highest risk for suicidal behaviour. Causative factors of suicide in decreasing order of frequency were interpersonal conflicts, psychiatric disorders and the long-term impact of chronic somatic diseases.

The three most frequent method to commit suicide were poisoning, hanging and drowning.

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