Indian Journal of Psychological Medicine, 2000, 23 (1) PP 47-55

Paper

A DESCRIPTIVE ANALYSIS OF METHODS ADOPTED, SUICIDE INTENT AND CAUSES OF ATTEMPTING SUICIDE

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ABSTRACT

This hospital based cross sectional descriptive study evaluated hundred consecutive suicide attempters admitted to a Medical Intensive Care Unit using a specially designed psycho-socio-demographic proforma, Suicide Intent Scale and D.S.M. III R Diagnostic Criteria. Organophosphorous poisoning was the commonest method employed for the present (56%) and past suicide attempts (37.5%). Fateful hour of suicide attempt falls between 6.00P.M. - 6.00 A.M. in 61% of cases. 60% attempted suicide within a period of 1 week of the stressful experience. 46% had medical contact prior to the attempt and 39% had expressed suicide threats. 9% had left behind suicide notes prior to the attempt. Suicide intent was moderate to severe in 81% of cases. Mental illness (22%), family friction (20%), friction with spouse (17%) and financial problems (14%) were the most common causes of attempting suicide. The implication of these findings are discussed in Indian context and preventive strategies are suggested.

Keywords : Suicide, intent, method, causes.

INTRODUCTION

Suicide and attempted suicide persists as a major public health problem. There has been documented recent increase in the number of suicides and it is a matter of global concern. Highest prevalence has been reported in Hungary, Australia and West Berlin between 20-40 per 1,00,000. Lowest rate is from Middle East countries with a rate of 1-3 per 1,00,000. India ranks 10th in its figure of suicide with a prevalence rate of 9.74 per 1,00,000 (Government of India, 1994). The investigation of trends in suicide attempt and suicide over time has revealed considerable variations in the psycho-socio-demographic profile, methods adopted and co-existing factors. Fashions change for suicide too and relative popularity of different methods have changed over time. Moens et al (1989) have reported recent trends in methods of suicide in developed countries. There have been some thought provoking studies on the trends in suicide including the mode attempt from India (Sathyavathi & Murthi Rao, 1962; Ganapathi & Venkoba Rao, 1966; Venkoba Rao, 1971; Nandi et al, 1978, Hegde, 1980, Shukla et al, 1990, Sureshkumar et al, 1997; Ponnudurai et al, 1997, Sharma, 1998). The studies pertaining to psychological and social causes of attempting suicide are helpful in formulating suicide prevention strategies at State and national level. The present study was therefore undertaken with the objectives of finding out the details of suicide attempt including the methods adopted, suicide intent and causes of attempting suicide and to compare this data base with reports available from India and West.

MATERIAL AND METHOD

This investigation was a hospital based cross sectional descriptive study. Hundred consecutive suicide attempters admitted to the medical intensive care unit of Christian Medical College, Vellore, during the period December 1991 to December 1992 formed the study material. Patients with questionable suicide attempt (parasuicide) were generally managed in casualty or medical ward and were excluded from the

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study design. The data regarding the psycho-socio-demographic profile including the details of current suicide attempt were documented in a proforma specially designed for the study. Patients were interviewed within the first few days of admission. Additional information was collected from close relatives on friends accompanying the patient. Patients whose physical condition prevented detailed evaluation were interviewed later as and when their condition improved.

Suicide intent was assessed by Suicide Intent Questionnaire (Gupta et al, 1993). This questionnaire has been used in a number of studies. It consists of 10 statements relating to suicide intent. A cut off score of 5 is suggestive of the presence of suicidal indications. Higher score shows more intense suicide pre-occupations. For the purpose of present study the score was categorised as mild (0-4), moderate(5-10) and severe (11-150). Psychiatric diagnosis was made in accordance with D.S.M. III R Criteria (APA,1987). The data were analysed using SPSSPC Window Software System.

RESULTS

Psycho-socio-demographic profile of the sample is shown in Table1. Table 2 shows the details of the current suicide attempt. Organophosphorous poisoning (56%) was the commonest mode of present suicide attempt followed by medicine overdose (21%) and native poisoning (8%). 15% adopted other methods like jumping, hanging, cutting etc. 24% had attempted suicide in the past. Of these 9 (37.5%) had used organophosphorus compounds, 6 (25%) medicine overdose, 3 (12.5%) native poisons and 6 (25%) adopted other methods like hanging, drowning etc. The intent of the suicide attempt was judged to be mild in 19%; moderate in 49% and severe in 32%. 60% attempted suicide within a period of 24 hours to 1 week of the stressful experience. 46% had medical consultation within a period of one month of attempting suicide. 39% had expressed suicide threats prior to the attempt. The fateful hour of attempting suicide in a considerable proportion of cases (61%) falls between 6.00 P.M. and 6.00 A.M 9% had left behind suicide notes prior to the attempt. 13% had consumed alcohol at the time of attempting suicide. 10% died during the first week after admission. The causes of attempting suicide were mental illness (22%), family friction (20%), marital friction (17%), financial stress (14%), physical problem (11%) failure in love (4%) and failure in studies (2%). 10% had other causes like bereavement, failure to beget children, pregnancy before marriage, legal problems of closely related one etc. Interviewer's reaction to the patient was highly positive in 52% of cases.

DISCUSSION

Discussion of the psycho-socio-demographic characteristics of sample has been published elsewhere (Sureshkumar et al, 1997). This section will be focusing on the details of the suicide attempt including present and past, suicide intent and causes of attempting suicide. An interesting observation was that organophosphorous poisoning was the commonest method for the present and past suicide attempt in this sample. Poisoning with organophosphorous compounds appears to be the most favourable method in Indian suicides. Nandi et al (1978) reported that a century ago poisoning and hanging were the commonest mode of suicides in Calcutta (44.2% and 41.3% respectively). However the trend shifted towards remarkable preponderance of poisoning in his later study which he attributed to the easy availability in modern times. Similar observation has been made by recent studies as well (Shukla et al, 1990; Suresh kumar et al, 1997; Ponnudurai et al, 1997). In samples studied by Sathyavathi &

Murthi Rao (1962) and Ponnudurai & Jayakar (1980) consuming poisonous substances was the next choice, first choice was hanging, drowning etc. However, during the last decade there has been a consistency in reporting that organophos - phorous poisoning seems to be the commonest mode of attempting suicide in India. In countries like Florida (Reich et al, 1968), Srilanka (Berger, 1988), Jordan (Daradhek, 1989) and Japan (Sato et al, 1993) poisoning by agricultural chemicals was the method most often used. Factors like feasibility, credibility, accessibility and rapidity of action could be behind the choice of method for attempting suicide. The relationship between the availability of lethal methods of injury and suicide rate is an important unresolved question. Marzuk et al (1992) in a study on the effect of access to lethal methods of injury on suicide rates concluded that difference in suicide rate between communities are, in large part, due to difference in accessibility to lethal methods of injury. Evidence has grown in recent years that restricting a method used for suicide reduces the suicide rate by that method. Suicide rate has reduced in the United Kingdom as a result of the detoxification of domestic gas in 1960s, in the United States as a result of strict gun control laws and in Scandinavian countries as a result of detoxifying car exhaust in car owners (Lester & Frank, 1989). Probably there could be some relationship between the occupation and the method of choice. In the present investigation majority were agricultural workers having an easy accessibility to organophosphorous compounds. Sato et al (1993) in a study conducted in Japan have noted a relationship between occupation (agriculture) and the method used (organophosphorous poisoning). It is reported that the availability of a method is important when it is impulsive in nature (Marzuk et al, 1992). Considering the high rate of suicide attempt with organophosphorous compounds in India, Ganapathy & Venkoba Rao (1966) and Nandi et al (1979) have pleaded for the restriction of the sale of these compounds. Systematic studies are needed to evaluate the effect of reducing the availability to specific lethal means on suicide rates.

The Fateful hour of suicide attempt in a considerable proportion of cases falls between 6.00 P.M. and 12.00 midnight. The next choice was from midnight to 6.00 a.m. Similar finding has been reported earlier (Sathyavathi & Murthi Rao, 1962 Ponnudurai & Jayaker, 1980) Miley & Miley (1992) have observed that suicide attempt occurred mainly after 2.00 P.M., with the maximum frequency between 6.00 P.M and midnight. The high incidence of suicide attempt in the evening and night hours gives room for the speculation whether there is any association between suicidal behaviour, diurnal variation of the mood, and abnormal plasma cortisol levels in the evening and night hours as reported in many depressed patients (Carrol & Mendels, 1976). This speculation becomes more important when considering the diagnosis of our sample of which majority were suffering from depressive disorders. Choosing night time for suicidal behaviour also involves secrecy of action that at this time others will be asleep thereby minimising the chance of detection and intervention by others.

The present investigation shows that a significant proportion attempted suicide within a period of 1 week of the stressful experience. Nearly half of the sample had medical contact within one month prior to the attempt. A good number had openly expressed suicide threats prior to the attempt. Despite all the evidences of impending suicide attempt/suicide, none of the potential risk factors were detected and conveyed to the relatives of the index

case. A survey by Diekstra from 1979-1986 at Leiden University in the Netherlands conclusively showed that roughly half of the patients received treatment for a short time and general practitioners did not play an active role in the prevention of suicide attempts (Diekstra & Van Egmond, 1989). A study conducted in India revealed that 38.5% of subjects were known to be in contact with some type of Health Care Agencies prior to their attempts (ICMR, 1988). Again, the most frequent diagnosis of adjustment disorder in this study sample points towards acute psychological crisis after a stressful experience. Keeping these points in mind, the author feels that primary care physicians should always be on the look out for the risk of suicidality in persons with apparently no previous problems present with an acute psychological crisis. Westreich (1991) in a study assessed adult patient's suicide risk in primary care settings. He could not find any pathognominc sign or symptom that predicts suicide. However, it is suggested that suicide threats, hopelessness, and other risk factors may signal a patient's interest for self harm. Through careful history taking and examination, the physician can assess the patient's risk profile for suicide and construct an appropriate treatment plan, which may include hospitalisation, drug therapy, counselling and/or referral to a psychiatrist, It is in this area of general medicine that a proper liaison between psychiatrist and the non-psychiatrist is most essential.

Suicide intent refers to the degree of apparent intention to die that is associated with an attempt. Several scales have been developed for assessing suicide intent. In the present investigation Suicide Intent Scale formulated by Gupta et al (1983) was used which is specially designed for Indian population. Majority of patients had moderate to severe suicide intent. The high suicide intent score and the severe psychological crisis could be the reason for selecting the most lethal method for attempting suicide in this sample. There has been considerable debate about whether anything can be inferred about the risk of subsequent suicide from the medical dangerousness of the attempt. Fox & Weissman (1975) have found that medical seriousness of attempts did not correlate with psychiatric seriousness (suicide intent) whereas Hamdi et al (1991) found a significant correlation between medical condition at the time of admission and lethality of the method used and the degree of intent. Beck et al (1975) found that the correlation between suicide intent and the medical dangerousness in their over all series of attempters was very low, the correlation was very high when they examined separately the attempters who were able to assess accurately the probable outcome of their attempts if treatment had not been received. The disparity in these reports necessitates further work in this area to settle the controversy. However the mortality of 10% in our sample definitely points towards the medical dangerousness of the act.

Analysis of stressors leading to the suicide attempt showed that mental illness was the most frequent cause of attempting suicide in this study. Several studies conducted in India have found mental illness as the chief leading cause of attempting suicide (Ponnudurai & jayakar, 1980; Shukla et al, 1990; Sharma, 1998). The data since second world war indicates that of those who commit suicide, nearly half suffer from depression, about a quarter from alcohol problems and another but a small number from schizophrenia (Monk, 1987). Maladjustment with significant family members and spouse have also been found to be important causes of attempting

suicide in this study. Many studies from India have also cited domestic problems to be behind a substantial proportion of suicides (Nandi et al, 1978; Hegde, 1980; Shukla etal, 1990; Ponnudurai et al , 1997). Shukla et al (1990) have suggested that mental illness besides directly causing suicide, could have contributed indirectly in other vulnerable actiological groups. Domestic strife could, in many cases, have been related to mental illness, or even aggravating the other and thus, leading to a vicious circle, culminating in suicide of the subject because of his being more sensitive and vulnerable. Further, some causes like financial problems, failure in studies and premarital pregnancy could have been the results of mental illness in the first place. Lastly, the remaining causes also could have led to suicide because of their being perceived as "too much" by the subject to his underlying mental state.

In the present series only 9% had left behind suicide notes. On the other hand 39% had expressed suicide threat prior to the attempt. In a study conducted by Sathyavathi & Murti Rao (1982) 6.89% had left behind suicide notes. Many factors such as illiteracy, inhibition, availability of writing materials, subjective urge to communicate their wish and nature of circumstances, may be contributory for leaving behind suicide notes. Another finding was that a small proportion of patients had consumed alcohol at the time of attempt. Ponnudurai & Jayakar (1980) in their study reported that among males 10.3% had committed suicide while they were under the influence of alcohol. A study conducted on social and toxicological data of suicide attempters in Germany (Breuer et al, 1986) also reported that 24% had taken alcohol in addition to other drugs. The intake of alcohol at the time of attempt could be for minimising the inhibition of suicidal act on to mask the unpleasant taste of the poisonous substance consumed. Studies in this direction are sparse.

Assessment of interviewer's reaction to the person who attempted suicide was highly positive in more than half the number of cases. It was found in other studies that psychiatrists have the most empathic attitude of all physicians towards patients who attempt suicide (Hawton et al, 1981). There are plenty of studies showing a negative attitude of physicians, nurses and other staff members towards those who attempt suicide (Rund & Hotsler, 1996). The busy, stressed emergency staff and paraprofessional care team at the emergency department often see the victim of self inflicted harm as a nuisance and consider them as not deserving treatment like a medical illness or accident. Such punitive hostile approach amplifies the patient's self destructive tendencies. When a respected authority figure like the physician rejects the patient, the patient's own feeling of diminished self -worth are reinforced and chances of another attempt are increased.

In conclusion, this study suggests that organophosphorous poisoning persist as the commonest mode of suicide attempt in India even after decades. A significant proportion choose night time for suicide attempt at which chance of detection and intervention will be minimal. History of suicide threats and medical contact within one month prior to the attempt necessitate greater awareness of suicide risk in vulnerable population so that suitable preventive strategies can be instituted earlier. Mental illness, domestic strife, friction with spouse and financial problems were the common causes of attempting suicide. The emergency staff should maintain a supportive, accepting, and non judgmental attitude towards a person who attempted suicide with managment of medical or surgical problem created by the

attempt and should have appropriate psychiatric consultation in all cases.

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