

An Analysis of Suicide Attempters Versus Completers in Kerala

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ABSTRACT

This study attempted to differentiate suicide attempters from completers based on their psycho-socio-demographic profile. Suicide attempters admitted to Govt. Medical College, Kozhikode during the period of 1st January to 31st December 2001 were evaluated using a specially designed proforma and for the same period, data of completers were collected using retrospective chart review. The parametric and non-parametric variables between these two groups were compared using appropriate statistics. Both attempters and completers in male gender were in the age of forties and females were in thirties. There was over representation of young females, married and housewives among the victims. In male and female victims, hanging was the commonest method followed by poisoning in males and self-immolation in females. Poisoning was the commonest mode in male attempters and drug over dose in females. Many of the differences in the psycho-socio-demographic profile of suicide attempters and completers reported from western countries could not be replicated in the present study. However comparison of our findings with studies from India and other developing countries shows many similarities.

Key Words - Suicide, Attempted Suicide, Completers, Attempters, Kerala

Introduction

Suicide is a major public health problem in Kerala with a reported rate of 30.6 per 1 lakh population (SCRB, 2002), which is three times higher than the national average (11.6 per 1 lakh population - NCRB, 1999). Kerala contributes 10.1% of all the suicides in India, while it forms only 3% of the nation's populace.

During the last 10 years, the incidence of suicide in Kerala rose at a compound growth of 4.61% as against the population growth rate of 2.2%. Even this reported figure may be an under estimate because of reporting delays, non-reporting, underreporting, and misclassification of suicides. Likewise, there is no way of knowing the number of people who attempt suicide but do not succumb to it. Research in suicidology shows that attempted suicide tends to occur 8 to 20 times more frequently than completed suicides. By applying this ratio, there would be 240-300 per 1 lakh population attempting suicide in Kerala every year. In absolute terms, it is approximately 76,576 to 95,720 individuals in a year.

Whether suicide and attempted suicide along with other suicidal behaviour form a single entity is still a controversial issue. W.H.O. (1968) defines suicidal act as the injury with varying degree of lethal intent and suicide as, such acts with fatal outcome. Suicidal acts with no fatal outcome are labelled as suicide attempts, attempted suicide, para suicide, or acts of intentional deliberate self-harm. The earlier literature on suicide and attempted suicide reveals that these

two phenomena tended to be regarded as one, directed at death, which succeeded in some cases and failed in others (Apopte, 1969; David, 1970; Singh, 1972). Recent investigators (Gelder et al, 1996) have suggested that these are two separate clinical entities with unique psycho-socio-demographic profile, though there is some overlap.

The present study attempted to explore whether suicide attempters and completers differ significantly from one another with respect to their socio- demographic profile and mode of attempt.

Material and Method

This prospective study was conducted at the department of psychiatry, Government Medical College, Kozhikode. This is a large teaching hospital and tertiary referral centre in Malabar region, which caters to the population in Kozhikode district and the adjoining districts Malappuram, Wayanad, Kannur and Kasargode. This study was conducted from 1st January to 31st December 2001. During this period, 750 cases of suicide attempters were admitted in the hospital. Out of these, 120 were discharged from casualty or from the ward within the first few days of admission. 60 attempters died during the hospital stay, 33 were not physically fit to undergo detailed evaluation and 30 attempters declined consent to participate in the study. After excluding these patients, there were 477 patients in the study group. The socio- demographic details of the patients who were discharged from casualty/ward within the first few days of admission were comparable with the

study group. The study group was evaluated in detail using a specially designed proforma documenting the socio-demographic variables, psychiatric and physical illnesses variables, psychosocial stressors and details regarding present and past suicide attempts. Psychiatric diagnosis was based on D.S.M.IV Criteria (APA, 1994).

Data on 689 suicide victims brought for autopsy to the department of forensic medicine of the same hospital during the same period was collected based on retrospective chart review. These data included age, sex, religion, domicile, occupation, education, marital status and mode of attempt. These variables were compared between completers and attempters. Student's 't' test, Fisher's exact test and Chi-square test (with Yate's correction) were used for the comparison of continuous and discrete variables respectively.

Results

Table 1 shows the comparison of sample characteristics of suicide attempters versus victims. Out of 477 suicide attempters, 219 (44.9%) were males and 258 (64.1%) were

females. The male-female ratio was 0.8:1. Out of 689 suicide victims, 426 (61.8%) were males and 263 (38.2%) were females. The male-female ratio was 1.6:1.

The mean age of males in attempt and victim group was significantly higher than that of females. Majority of both groups belonged to Hindu religion, hailed from rural background and had studied upto 10th standard. Majority of both groups were married. In both groups, males were more likely to be employed and females were housewives. Among the victims, the commonest mode of attempt was hanging in both genders. Among the female victims, self-immolation was significantly more common than males. Among the attempters in general, insecticide poisoning was the most frequent method followed by drug over dose. In males the commonest mode of attempt was insecticide poisoning while in females it was drug over dose.

Table 2 shows the comparison of sample characteristics of attempters with past history of attempt (N=96) with that of victims (N=689). There was no significant difference between the two groups.

Table-1

Comparison of Sample Characteristics of Suicide Attempters Vs Victims

		Attempters (N=477)		Victims (N=689)		
		N = 219 M	N = 258 F	N=426 M	N=263 F	P
Mean age (+SD)		44±16	36±17.7	41±17.11	29.76±12.05	0.005
Religion (%)	Hindu	84.9	72.9	73.5	63.1	N S
	Christian	3.2	3.9	21.1	26.2	
	Muslim	11.9	23.6	5.4	9.5	
Domicile (%)	Rural	86.3	80.2	71.4	64.7	N.S
	Urban	13.2	19.4	23.2	26.2	
	Tribal	0.5	0.4	5.4	9.1	
Mean education (+SD)		8.4±4.3	9.6±2.3	9.82±2.9	6.7±3.5	N.S
Marital status (%)		51.6	62.4	77.0	76.0	N.S
Employed (%)		80.8	14.3	66.9	20.9	0.05
Mode of attempt (%)						
	Hanging	16.4	5.0	51.9	42.2	0.05
	Poisoning	51.6	33.7	34.3	20.1	
	Self immolation	1.4	1.9	4.5	30.0	
	Drowning	0.0	1.6	6.3	4.2	
	Drug overdose	21.9	44.6	0.7	1.14	
	Corrosives	4.6	10.1	0.47	1.14	
	Wrist cutting	1.37	0.78	0.94	0.38	
	Others	2.74	2.33	0.94	0.0	

Table-2

Comparison of Sample Characteristics Attempters with Past History of Attempt Vs Victims

Attempters with P.H/O Attempt (N=96)				Victims (N=689)		
		Male	Female	Male	Female	Significance
Mean age (+SD)		40±11.2	34±17.7	41±17.1	29.8±12.1	NS
Sex (%)		57.2	42.8	61.8	38.2	NS
Religion (%)	Hindu	69.1	65.9	73.5	63.1	NS
	Christian	12.7	14.6	21.1	27.4	
	Muslim	18.2	19.5	5.4	9.5	
Mean Education (±SD)		9.4±4.3	8.7±2.4	9.8±3.8	7.8±3.1	NS
Married (%)		72.7	70.7	77	76	NS
Employed (%)		76.4	26.8	66.9	20.9	NS
Mode of attempt (%)						NS
	Hanging	49	46.3	51.9	42.2	
	Poisoning	32.7	19.5	34.3	20.1	
	Self immolation	5.5	22	4.5	30	
	Drowning	9.1	2.4	6.3	4.2	
	Drug overdose	1.8	4.9	0.5	1.1	
	Wrist cutting	1.8	2.4	0.9	0.4	
	Others	0	2.4	0.9	0.0	

Discussion

The present study has attempted to differentiate suicide attempters from completers based on their socio-demographic profile and mode of attempt. A thorough clinical differentiation could not be attempted, as we do not have enough data on suicide victims. More than the differences, more similarities could be observed between the two groups. An analysis of data on suicide in Kerala from 1998 to 2002 (Kumar, 2003) reported predominance of middle aged, unemployed males, house wives, married, Hindu, high school educated and those from rural background. One possible reason for this similarity could be that the index suicide attempters might be more close to victims having stronger suicidal intention, thereby adopting more lethal methods to commit suicide. Because of timely detection and early intervention they might have escaped from completing their attempt. This possibility justifies the similarity between attempters and completers. Studies have shown that attempters with high intent/lethality are similar in certain respects with completers and are overlapping populations (Maris, 1992).

Comparison of the index suicide attempters with the so-called low intention/lethality attempters (those who were discharged from the casualty/ward within the first few days

of admission) did not show any significant difference. Further, comparison of attempters with past history of one attempt versus more than one attempt did not show any difference between these two groups. Comparison of attempters with past history of attempt versus victims also could not reveal any significant difference. These analyses indirectly suggest that the index group of attempters had high lethality/intent and were comparable with completers on most of the variables.

Studies from India (Kumar, 2000) and abroad (Marzuk et al, 1992) have shown a negative correlation between suicidal intention and lethality of attempt. That means that even people with low suicidal intention may end up in completed suicide because of using more lethal methods, inadequate treatment and delay in seeking treatment. This aspect of suicidal behaviour points to lack of clarity in the differentiation of definitions of suicide and attempted suicide. Due emphasis should be given on the intention, lethality and rescuability in killing oneself to differentiate between attempters and completers.

The younger age for attempters and higher age for completers reported in western studies (Roy, 1995) could not be replicated in the present investigation. Both attempters and completers were in their thirties or forties.

Younger age for suicide has been reported in many studies from India (Hegde, 1980; Shukla, 1990). The probable causes for the pronounced age difference between the suicide attempters and completers among the orient and the occident could be due to the difficulties in securing stable jobs, financial problems and problems arising out of marriages (both completers and attempters were over represented among the young married in the present study), which take place increasingly during the early phase of life and might have enhanced the suicidal risk in younger age group. Shukla et al (1990) have reported other possibilities for lower prevalence of suicide among the elderly in India. In our culture, the aged continue to be well integrated and respected in the family. Further, most of their children are settled and ready to shoulder responsibilities, thus making the life of elderly rather free from stress and strain. Yet another factor could be the lower life expectancy of our people compared to that of western societies, and so our population itself is eschewed in favour of the young.

The dominance of men in suicide and women in attempted suicide shown in western literature was not very significant in the present study. In the present study the male-female ratio was 1.6:1 in suicide and 0.8:1 in attempted suicide. This diminishing gender difference is quite interesting. For the last few years, many studies from India as well as from other developing countries have reported an increasing female proportion in suicide. (Aiyappan & Jayadev, 1956; Satyavathi & Murti Rao, 1961; Nandi et al, 1979; Shukla et al, 1990; Philips et al, 2003). Further studies are needed to explore this area.

In both attempters and completers, females were comparatively young and most of them were housewives. This finding is at par with the suicide scenario in Kerala. Similar findings have been reported in other parts of India also (Venkoba Rao, 1989; Shukla et al, 1990). Suicides among women below 30 yrs of Indian origin have been reported from Malaysia (Manian, 1988) and Fiji (Hayner, 1984). It is generally believed that women in India are more submissive, docile and non-assertive and these traits have built into their psyche with the result that they find themselves unable to deal with their negative feelings adequately. Among the stresses, the marital ones appear to be the most common in women. The hostile environment in families is compounded by problems of a difficult husband and dowry demanding by in laws. They feel helpless, as they fear losing their husband's sympathies and often, they do not have anyone to turn to. This results in the choice of suicide as a way out from psychological pain, anguish and suffering (Venkoba Rao, 1989). This calls for measures to

cultivate and improve their coping styles to face the domestic conflicts and dowry related problems.

Contrary to western reports, in both genders, suicide and attempted suicide were significantly high among the married in the present study. Similar observation has been reported from India in suicide (Sathyavathi & Murti Rao, 1961; Shukla et al 1990) and attempted suicide (Kumar, 1998; Narang et al, 2000; Khisty et al, 2002; Kumar et al, 2002). The State suicide data (Kumar, 2003) also shows that suicide was more common among married individuals (75.4%). Shukla et al, (1990) have put forward several reasons for suicide being more common in the married in India. Here marriage is a social obligation and is performed by the elders irrespective of the individuals' preparedness for it. Further, in our culture, marriage is believed to be part of the treatment for mental illness and the mentally ill are therefore, more likely to get married than the mentally healthy. Marital partners in India are virtually strangers to each other (due to arranged marriage) and so are the families. Hence several adjustment problems could arise among the married mentally ill. Divorce being socially frowned upon and difficult, suicide provides the only escape. In the west, on the other hand, marriage is believed to be a measure of emotional stability and married people have a lower rate of mental illness (Slater & Roth, 1986). Conversely, single state could be a consequence of the pre-existing personality problem, rendering the patient unable to find a marital partner. It is quite understandable that in such societies, mental illness as well as suicide would be more common in the unmarried.

The only significant difference between attempters and completers born out of this study was in the method adopted. Organophosphorous poisoning was the commonest mode in male attempters where as, it was drug over dose in female attempters. Similar observation has been reported in previous Indian studies (Kumar, 1998 & 2000; Kumar et al, 2002). Apart from hanging which was equally common in both male and female victims, organophosphorous poisoning was the next common mode in males and self-immolation in females.

Factors like feasibility, accessibility, credibility and rapidity of action and degree of suicide intent could be behind the choice of method for committing suicide. The availability of methods becomes more important when the suicidal act is impulsive in nature. In India, majority of males being farmers, have an easy accessibility to insecticides. Similarly females, because of limited mobility outside home as majority are housewives, have more accessibility to

medicines, corrosives, kerosene etc. However in both genders stronger suicidal intention might have led them to choose more lethal method like hanging as a sure means to commit suicide. Venkoba Rao (1989) has reported that domestic burns as a method of completing suicide by young women is the most lethal one with a promise of a high degree of success. Burns in general are reported more in younger women (ICMR, 1987).

A few limitations of this study needs to be considered before generalising the findings. The current study attempted to differentiate suicide attempters from victims, based on the limited socio-demographic data and mode of attempt. Since the data on victims were based on retrospective chart review, many details pertaining to victims were not available. Hence the findings of current study cannot be generalised to the population at large. The seriousness of suicide attempt is based on two important variables namely lethality of attempt and the degree of intention to commit suicide. Ideally these two variables should be assessed using a rating scale. Follow up of index suicide attempters may give valuable insight regarding the risk factors for successful attempt. There is an acute need to examine these issues by methodologically sound studies using standardised instruments.

In conclusion, many of the differences in the psycho-socio-demographic profile of suicide attempters and completers reported from western countries could not be replicated in the present study. Contrary to western reports, there was an over representation of young, females, married and housewives among the suicide victims. In male and female victims, hanging was the commonest method followed by poisoning in males and self-immolation in females. In male attempters poisoning was the commonest mode and in females it was drug over dose. Comparison of our finding with other studies from India shows many similarities.

This study suggests that for the effective prevention of suicide we should concentrate on attempters as they have a very close resemblance to completers. This highlights that every case of suicide attempt needs a thorough psychiatric evaluation and appropriate intervention at both psychological and pharmacological level depending on the nature of problems. Close follow up is also essential to prevent a sizable number of subsequent successful suicides. A close liaison between psychiatry and other discipline is a prerequisite to detect early signs of suicidality and for immediate referral. Unlike the risk factors for suicide reported in western countries we have to find out our own culture specific risk factors for the effective management of this psychosocial problem. These observations also have

practical implications in suicide prevention. Since there is considerable evidence indicating that suicide attempts are highly correlated with actual suicides, any intervention that decreases the suicide attempt will also have some impact on suicide.

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