Socio-demographic and clinical correlates of attempted suicide

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Abstract :

***Background**: Despite the increasing trend of attempted suicides in the Security Forces (SF), there is a paucity of Indian publications in this field.*

***Aim**: To determine the socio-demographic and clinical profile of attempted suicide patients admitted in SF hospitals.*

***Method**: Analysis of socio-demographic and clinical characteristics of attempted suicide patients admitted to SF hospitals over the past decade.*

***Conclusion**: Non-service related factors seemed to be the immediate precipitating factors for attempted suicide in a majority of service personnel. As compared to data from western countries the suicide attempters showed several cross-cultural differences.*

Key words : *Suicide, deliberate self harm, psychiatric co-morbidity, service population.*

Introduction

The relationships between service conditions of security Forces (SF) and suicide is not clear. Comparatively little is known about the characteristics and correlates of suicide ideation and attempts among those with history of SF service [1]. However, suicide and attempted suicide in service personnel has attracted media attention all over the world. The lifetime prevalence of attempted suicide or deliberate self-harm (DSH) within currently serving and ex-service personnel of the United Armed Forces of the United Kingdom was 5.6%. DSH was associated with psychiatric morbidity (post-traumatic stress disorder in particular) and adverse experiences in childhood. Ex-service personnel reported lifetime prevalence more than double that of serving personnel (10.5% vs 4.2%, respectively). Participants reporting DSH were younger (Average 34.4 years vs average 39.8 years) [2]. Assessment of a large sample of United States of America (U.S.) Air Force active duty members (N = 52,780) revealed that 3% of male and 5.5% of female participants had experienced noteworthy suicidal ideation during the previous year, and 8.7% of those with ideation reported a recent suicide attempt. Demographic factors predicting significantly increased risk for suicidal ideation included female gender, low rank, and non-Christian religious affiliation; Unmarried men were also at increased risk [3].

Research on DSH has revealed that this phenomenon has now assumed the proportions of a major health problem. Suicide is the second most common cause of death in the United States military. It also accounts for substantial mortality in the Russian military, as also among Irish defense forces, and in the soldiers who participated in the Iraq conflict [4-7]. The incidence of DSH in developing countries has also been increasing, but these often go unreported for various reasons [8]. In India, a suicide attempt being a punishable offence, is

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often 'covered up' or labeled as 'accidental' to avoid legal consequences and social stigma [9, 10]. Reliable estimates of DSH in India are not available. It is however generally accepted that there are roughly 10-20 DSH for each suicide, and projecting this to national figures, a probable incidence of 108.3 per 100,000 (for the year1997) may be expected [11]. Compared to this, the suicide rate in soldiers, as per media reports, is approximately 8.3 per 100,000. This translates into a current DSH rate of 83 per 100,000 for security forces, which is considerably lower than the national figures. However, in an earlier study, Goel in 1974 projected an approximate DSH rate of 6.6 per 100,000 for the Security forces, indicating a sharp increase in DSH rate in Indian security personnel [12]. Rates of suicide have also been generally lower in armed forces personnel of the United Kingom than in people of similar age in the general population, with similar findings from the USA and Ireland; although higher than expected rates have been reported for young male army personnel in the UK [13]. Lower suicide rates might be expected in the military compared to individuals of similar age in the general population because of the "healthy worker effect", pre-enlistment selection or screening, and the structured, supportive, often interrelated occupational and social environments in the military. To maintain battle fitness, military forces have well-developed medical services, which together with the cohesiveness of the organization, might protect against suicide. On the other hand, risk of suicide may be increased in the SF, because of access to weaponry, access to marksmanship training, and possible self-selection of more aggressive individuals; aggression being a possible suicide risk factor, particularly in young male subjects[6].

An increasing number of DSH cases are being treated as emergencies in SF hospitals and are also being referred for psychiatric evaluation. The burden on the medical services of caring for suicide attempters is of growing concern to medical and mental health professionals, therefore there is a need for information about various aspects of suicide attempters so that further strategies can be planned to aid this particular group. Much of the data on DSH is based on information from western countries. All such data needs to be evaluated cross-culturally. Due to paucity of studies in the field on service population, the present work was undertaken to determine the socio-demographic and clinical profile of DSH cases admitted in SF hospitals.

Material and Method

The study included patients assessed consecutively at three SF hospitals during the period 1995-2004. All patients admitted to the psychiatry ward for psychiatric evaluation following DSH during the period of study or referred to the psychiatrist for evaluation after undergoing treatment from different wards were included in the study with their informed consent. They were assured full confidentiality and they were told that their names would not be recorded in the proforma, specially prepared for the study. History was recorded from the patient, relatives, colleagues, and report from units in case of service personnel. Based on information from multiple sources, an attempt was made to determine the immediate precipitating factors for the present episode of DSH. Special enquiry was made about history of substance abuse and consumption of psychoactive substances prior to the DSH and persisting sources of stress. All patients underwent a physical examination, mental status examination, and other relevant investigations. Psychiatric diagnoses were made as per ICD 10 DCR.

Results

Demographic characteristics:

The 107 DSH patients evaluated for the present study comprised 76 SF personnel, 2 retired personnel and 29 dependents of SF personal. Men constituted 77.6% and women 22.4% of the sample. The mean (± SD) age of men was 27.66 (± 6.91) years and that of women was 27.63 (± 11.26) years. The youngest attempter was an 11 years old girl and the oldest was a 60 years old widow. The youngest and oldest male attempter was 15 years and 47 years respectively. A total of 90.6% of the sample belonged to the age group of 15-39 years. Age distribution of DSH patients is shown in Table 1. The majority of the subjects (61.68%; n=66) were married while 37.3 % (n=40) were unmarried and 0.93% (n=1) widowed. Education, religion and rank/relation of the patients are shown in Table 1.

Clinical features:

Among the 107 DSH patients, more attempted self-poisoning (58.8%) than self-injury (41.2%) (Table 2). A psychiatric diagnosis was made in 61 (57.1%) while a physical disorder was found in 6 (5.61%) patients (Table 3). Apart from 4 patients with alcohol dependence, at least 3 patients had definitely consumed alcohol prior to the DSH. Four patients gave history of previous DSH (1-3 attempts).

Immediate Precipitating factors:

Immediate precipitating factors could be identified in 66 (61.7%) of the 107 cases. Further analysis revealed that this included 42 (55.26%) of 76 service personnel and 24 (77.42%) of 31 ex-servicemen and dependents.

Immediate precipitating factors in SF personnel:

The immediate precipitating factors in the 42 service personnel could be classified into: Service related factors in 12 and Non-service related factors in 30 subjects (Table 3).

Immediate precipitating factors in retired SF personnel and dependents:

The immediate precipitating factors that could be identified in 24 ex-servicemen and dependents are shown in Table 4.

Discussion

Data from western countries indicate that DSH is more likely to occur in women, young adults, and people who are single or divorced, of low education level, unemployed, disabled, or suffering from a psychiatric disorder, particularly depression, substance misuse, borderline and antisocial personality disorders, severe anxiety disorders, and physical illness [14-18]. The high prevalence of psychiatric disorders (57.1%) in the present study is in agreement with both Indian and western studies and thus seems to be a universal characteristic [12, 21].

Certain notable characteristics reflect the need for concern with regard to this special group of patients belonging to the security forces. DSH patients were shown to be generally young with more than 50% of all cases in the present study, less than 30 years of age. The proportion is comparable to reports from other Western as well as Indian studies which show that suicide attempters tend to be under 30 years of age [7,8]. The average age of suicide attempters during the past few decades appear to have decreased and the high proportion of 20-29 year old patients in this study support this downward trend. The finding of low proportion of DSH by subjects over 40 years of age was in agreement with Indian studies but not with western data from general population [8]. However, in agreement with our findings, a recent study in British Armed forces reported that the majority of individuals who self harmed (95.2%) were under 35 years of age [9].

The predominance of male suicide attempters in the present study is contrary to western studies in the general population but is in agreement with western study on armed forces and Indian studies [9, 14, 22, 23]. This finding might be explained by psychological, occupational and socio-cultural factors. Despite the fact that a greater proportion of women in all social classes are now gainfully employed, India continues to be a male dominated society. The increased educational level and consequent economic independence of women, has not, as yet, made much impact on their social role as 'homemakers'. Men continue to dominate all spheres of life, especially within the home, where they are regarded as the main bread-winners, manage the finances and make all major decisions. The culturally accepted 'stereotype' of the man's role makes him more vulnerable to stress, as he has to fulfill the expectations inherent to his ascribed role. In the event of a crisis he is faced with a dilemma, and he may neither express nor share his distress with others. Hence to cope with the situation he might start to drink alcohol which is socially sanctioned, or he might indulge in various forms of self-destructive behavior due to his inability to fulfill his commitments [9].

Common methods of deliberate self-harm include self-cutting and self-poisoning, (overdosing on medicines) [23,24]. Self-poisoning using organophosphates is particularly common in developing countries [24]. A large hospital (catering for 900 000 people) in Sri Lanka reported 2559 adult hospital admissions overa period of 2 years with 41% occupancy of medical intensive care beds by DSH patients with organophosphate poisoning [10] . Similarly, in the present study the commonest method of DSH was ingestion of organophosphorus compounds. This finding is also in agreement with earlier Indian studies but not data from western countries [10,22,23]. In fact a recent U.K. study reported that 80.1% of self-harm episodes by the armed forces personnel involved self-poisoning alone. However, the substances involved in these cases were non-opiate analgesics (77.3%), minor tranquillisers and sedatives (9.3%), followed by antidepressants (7.3%). Nearly a third of the overdoses involved a range of other prescribed drugs (31.3%), including substances such as non-steroidal anti-inflammatory drugs and antibiotics [14].

The fact that the most common precipitating factor for DSH in service personnel was non-service related factors (72%) is in agreement with the findings of an earlier study on Indian SF personnel [12]. However this should not give rise to complacency, since in the remaining 28%, service factors were blamed. Even in the case of the ex-

service men and family members, family quarrels was the most common precipitating factor (Table 5). This finding is in agreement with a recent British study which reported that the most common type of problem faced by armed forces personnel involved a relationship with a partner; with nearly two-thirds (62.0%) having such problems. Employment problems were the next most frequent (43.9%). An important finding of the present study was that among the service factors, denial of leave emerged as the most important preventable cause of DSH. It is imperative that this should be targeted on a war footing, because this surely is one precipitating factor for DSH which can easily be eliminated.

Table 1. Socio-demographic characteristics of patients with DSH

Characteristic	Number	Percentage (%)
Age distribution		
10-14	2	1.87
15-19	10	3.35
20-24	28	26.17
25-29	28	26.17
30-34	22	20.56
35-39	10	8.85
40-44	4	3.72
45-49	1	0.93
50-54	1	0.93
55-59	0	0.0
60-64	1	0.93
Education		
0-5 class	9	8.4
6-10	59	55.14
11-12	21	19.62
12+	18	16.82
Religion		
Hindu	92	85.98
Muslim	2	1.86
Sikh	5	4.67
Christian	7	6.54
Buddhist	1	0.93
Rank/Relation		
Recruit	1	0.93
Sepoy	42	39.25
NCO	28*	26.17
JCO	2	1.86
Officer	5	4.67
Civilian (Ordnance factory)	1	0.93
Mother	1	0.93
Wife	15	14.02
Daughter	6	5.61
Son	5	4.67
Nephew	1	0.93

*includes 2 retired persons

Table 2. Methods of Deliberate self harm.

Method	Number	Percentage
Self poisoning:Insecticide*	35	32.72
(N=63; 58.8%) DMP oil	6	5.61
Drinking Phenyl	3	2.80
Drinking Kerosene	1	0.93
Drugs	19	17.75
Self injury:Slashing	19	17.75
(n=44; 41.2%)	12	11.22
Gunshot wounds		
Burns	5	4.67
Stab	3	2.80
Hanging	3	2.80
Jumping from height	2	1.87

* One patient consumed insecticide and drugs

It has been postulated that post-modern society is typified by institutional deconstruction, decreased collectivism, increased normlessness and helplessness and exacerbated personal risk for stress. It is therefore possible to hypothesize that postmodernity characteristically loosens the bonds between the individual and society, thereby increasing vulnerability to depression, related pathologies (such as substance abuse), and suicide [25]. In India, the social structure is changing rapidly and the nuclear family cannot provide the level of support that was provied by extended families. Today the social support network is much smaller, with competition being the main driving force for achievement. This can wreck havoc on people's personal lives, especially when trust has been eroded. In the present study, most of the subjects who resorted to DSH were young, representing a move to resolve difficult situations conflict, to punish individuals who play an important role in their lives, or to escape an intolerable family situation. Thus the general picture of these individuals appears to be one of vulnerability caused by many life stresses or their struggle to cope with threatening situations. Consequently, anxiety, depression, substance abuse, substance dependence and eventually DSH could be the natural outcomes. The data on the precipitating factors show that these individuals appear to be in conflict with themselves, significant other members of their family and/or the world around them. This is consistent with growing evidence that DSH often occur in the context of a recent and serious conflict [26].

Table 3. Psychiatric and physical diagnosis in patients of deliberate self harm.

Method		Number	Percentage
Psychiatric diagnosis : (N=61; 57.1%)	1. Adjustment disorder with depressed mood	29	27.7
	2. Schizophrenia	12	11.2
	3. Depression	11	10.3
	4. Alcohol Dependence Syndrome	4	3.7
	5. Dysthymia	2	1.87
	6. Generalized anxiety disorder	2	1.87
	7. Conversion disorder	1	0.93
	8. Personality disorder	1	0.93
Physical diagnosis: (n=6; 5.61%)	1. Complex Partial Seizures	3	2.8
	2. HIV/AIDS	2	1.9
	3. Cancer of cervix	1	0.93

Table 4. Immediate precipitating factors for deliberate self harm in service personnel (n=42)

Sr.No.	Immediate precipitating factor	Number (Percentage)
A	**Service related factors:**	
	1. Denial of leave	4 (9.52)
	2. Fear of punishment	4(9.52)
	3. Undue punishment	1(2.38)
	4. Rebuked by Physical Training instructor	1(2.38)
	5. Not wanting to serve and discharge application rejected	1(2.38)
	6. Dislike for trade but change of trade refused	1(2.38)
	Total Service related factors	**12(28.57)**
B	**Non-service related factors :**	
	1. Family quarrel	7(16.67)
	2. Marital disharmony	8(19.05)
	3. Extramarital relations	4(9.52)
	4. Failure in love	2(4.76)
	5. Worry about repaying loan	3 (7.14)
	6. Marriage not agreed by parents	2(4.76)
	7. Boyfriend not marrying	1(2.38)
	8. Husband suspicious	1(2.38)
	9. Worry about family	1(2.38)
	Total Non-service related factors	**30(71.43)**

Table 5. Immediate precipitating factors for deliberate self-harm in ex-service personnel and dependents (n=24)

Sr.No.	Immediate precipitating factor Percentage)	Number
1	Family quarrel	16(66.67)
2	Scolding by parents after failure/ performance in examinations	06 (25.00)
3	Son cancelled arranged marriage	01(4.17)
4	Quarrel with friend	01(4.17)

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