

Original Research Paper

Socio-Demographic and Clinical Profile of Para-Suicide Cases: One Year Prospective Study

*Anand Mugadlimath, *J P Agarwal, **S P Choukimath, *Nagesh Kuppast, ***Mandar Sane, ****S R Hibare

Abstract

Study of socio-demographic and clinical profile of Para-suicide cases was carried out for duration of one year between 15th June 2009 and 14th June 2010 at Sri B. M. Patil Medical College and Hospital, Bijapur, a tertiary referral centre in Karnataka state, South India. Knowledge of para-suicides in North Karnataka region of South India is still limited due to lack of published data; India being a large country with great diversity, factors responsible for para-suicide in one region cannot be generalized and may not be the same at other place. The aim of this study was to describe the socio-demographic and clinical variables of para-suicide cases admitted, risk factors associated with para-suicidal gestures, the presence of psychiatric disorders, etc. All the patients admitted with history of para-suicide were interviewed using a pretested proforma. Psychiatric morbidity was determined with help of consultant psychiatrists by DSM-IV criteria and detailed interview.

Key Words: Para-Suicide; Attempted Suicide; Psychiatric Morbidity; Socio-Demographic Factors

Introduction:

Para suicide is defined as a 'conscious and voluntary act which the individual has undertaken in order to injure himself, and which the individual could not have entirely be certain of surviving, but where the injury has not led to death'. The term 'Para suicide' is used synonymously with 'attempted suicide' or 'deliberate self-harm' to express the fact that it is a phenomenon which is close to or similar to suicide but nevertheless different. [1]

Para-suicide is one of the top five causes of acute medical admissions for both women and men. [2] The rate of para-suicide is 10 times more than the completed suicide. [3] In India, suicide rate is approximately 10.3 per 100,000 populations. [4] Para-suicide is a very important predictor for suicide.

An eight year follow-up showed that, amongst patients who were previously admitted with para-suicide, about 13% eventually took their own lives and about twice the expected number died from natural causes. [5]

There are not many published studies regarding para-suicide from North Karnataka region of South India. India is a large country with great diversities of culture, customs, values, socio-economic status. Hence etiological factors responsible for para-suicide in one region cannot be generalized and may not be same at other place. This is evident by the great difference in the prevalence of suicide across the country.

Material and Methods:

This was a prospective cross-sectional study designed for duration of one year between 15th June 2009 and 14th June 2010. After getting clearance from ethical committee, all patients of para-suicide admitted in Sri. B.M. Patil Medical College and Hospital, Bijapur were evaluated on a pretested proforma.

Proforma contained demographic details, along with details of method adopted, intention of the patient, history of previous such attempts. Psychiatric morbidity in this group of patients was determined with help of consultant psychiatrists by DSM-IV criteria and detailed interview.

Results:

• Socio-demographic correlates:

Out of 110 cases, there were 60 (54.5%) males, as against 50 (45.5%) females. Age of

Corresponding Author:

*Assistant Professor,
Dept. of Forensic Medicine and Toxicology,
BLDEA's B M Patil Medical College,
Bijapur, Karnataka
E-mail: dranandmdfm@gmail.com

*Assist. Prof., Dept. of Psychiatry

**Prof. & HOD, Dept of Psychiatry,

*Assist. Prof, Dept. of FMT

SSIMS & RC, Davangere; Karnataka

***PG, Dept of FMT, KIMS, Bangalore, Karnataka.

****Lecturer, Dept of FMT

BLDEA's B M Patil Medical College
Bijapur, Karnataka

DOR: 17.2.12 DOA: 18.6.12

subjects ranged from 12 to 65 years. The peak age range for attempting suicide in both sexes was 16-25 years (57.3%) followed by 26-35 years (24.5%). Married subjects (60%) were more in comparison to the unmarried (37.2%). Hindus constituted the majority (94.6%). Majority (58.2%) of the cases came from rural areas of Bijapur and adjoining districts. Agriculturists (26.4%) were the commonest occupational category followed by house wives (22.7%), students (18.2%) and unemployed (12.7%). Most (36.4%) of the victims were educated only up to secondary school and 24.6 % being illiterate. Nearly half (49%) of subjects were from lower socioeconomic status. Majority (59%) were residing in joint families. (Table 1 & 2)

- **Psychiatric Disorders:**

Psychiatric Disorders were not seen in 59 cases (53.6%). In those diagnosed with psychiatric disorders, major depressive disorders formed majority (24.6%), others in that order being alcohol dependence 8 (7.3%) and depression with alcoholism 5 (4.5%). (Table 3)

- **Methods of Attempting Suicide:**

A vast majority of the cases (80.9%) consumed one or other kind of Organophosphorus compounds, followed by drug over dosage (9%). Other methods like hanging, consumption of glass pieces were less common methods of attempting suicide. (Table 4)

- **Causes of Attempting Suicide:**

Family stress (51.8%), marital disharmony (16.4%) and financial crisis (12.7%) were identified as most significant which lead to attempted suicide. (Table 5)

Discussion:

Out of the total 131 cases reported, 110 cases survived the attempt of suicide and 21 succumbed to it. In this study males (54.5%) surpassed females (45.5%) and this is consistent with the other Indian studies. [6-8] Majority of the victims (57.3%) were in the age group 16- 25 years, followed by 26-35 years (24.5%). Most of the Indian studies have also observed 16-35 years as the most risky age group for attempting suicide. [9, 10]

However, a study from Japan reported suicidal attempts to be most common in the age group 50-59 years and one of the reasons suggested by them for this finding is stronger suicidal ideas in older people than that in younger people in Japan. [11] In this study, it is evident that 94.6% of suicide attempt cases were Hindus and 5.6% were Muslims. It seems to be in accordance with general distribution of these religions in general population. Some

studies report low suicide rate among Muslims. [12] Regarding the domicile, it is seen that majority (58.2%) of the suicide attempt cases belong to rural background. Our findings are consistent with other Indian studies. [4, 6, 13] Reasons for the higher rates of suicidal attempts in many rural areas may include easy availability of pesticides, lower socioeconomic status and lower levels of education. In contrary to these findings, two studies noted most of the suicidal attempters were urban dwellers. [8, 14]

In our study 60% of cases were married, 37.2% were unmarried and 2.8% were divorced, separated or widowed. Our findings are consistent with Ponnudurai R. [15] Our results are also consistent with Gupta SC et al [16] showing 62% of suicide attempters as unmarried, 32% married, & 6% divorced, separated or widowed.

It is observed that 24.6% were illiterate and only 11.8% of the cases were educated above senior secondary level, whereas 36.4% were educated up to secondary school. This shows that lower educational status is a strong predictor of suicidal tendency. Similar findings have been observed by Shrivastava MK et al. [17] from the occupation of para-suicide victims, it is observed that 26.3 % were agriculturists and 22.7% cases housewives.

A large percentage (31%) was of unemployed (12.7%) and students (18.2%) taken together. Similar findings have been mentioned by Sethi et al [10] who found 29.3% students and 18.7% housewives whereas; Gupta SC et al [16] noted 31% as students and 16% as housewives amongst the suicide attempters. In this study 49% of the para-suicide cases had income less than Rs 5,000 per month and 34.6% had family income ranging from Rs 5,000-10,000 per month. The family income of 16.4% of cases was more than Rs 10,000 per month. These results are in concordance with the study done by Sethi BB et al [10] who also reported that economic hardships are important vulnerability factor for para-suicide.

It is evident that 59% para-suicide cases were residing in nuclear family as compared to 22.8% in joint families and 18.2 % in extended joint family. It is seen that nuclear family status is a significant predictor of suicide probability. Perhaps living in nuclear family in the present time is becoming more stressful because of growing competition and increased demands on the part of the individuals. [8]

It is observed that 53.6% of the cases did not have any significant psychiatric illness whereas depression was found in 24.6% of suicide attempters and schizophrenia was

present in 1% of the cases. Our findings supports the view of Radomsky ED et al [18], Vijaykumar L et al [19] and Bhatia MS et al [20] who found that depression, schizophrenia and other psychiatric illnesses were significantly present in suicide attempters than general population. Sethi BB et al [10] found neurotic depression in 22.7% , schizophrenia in 10.7% and drug and alcohol addiction in 9.3% of the cases whereas, Gupta SC et al [16] reported neurotic depression in 24%, major depression in 6%, schizophrenia in 12% and drug dependence in 6% of the cases. Ponnudurai R et al [15] and Sato T et al [11] have also observed psychiatric ailment as a significant causative factor in 14% and 16.3% of the attempters respectively. Most (91%) of cases had attempted suicide for the first time while 9% had a single suicidal attempt in the past. A study in India reported a previous suicide attempts in 22% of cases. [21]

Most frequent method of para-suicide was by consuming Organophosphorus compounds (80.9%), followed by over dosage of drugs (9%), consumption of kerosene (4.5%), burns (2.7%) and hanging (2.7%). Similar findings are also reported by the findings of other Indian studies. [6, 15, 21]

Regarding precipitating factors responsible for attempting suicide more than half of the individuals (51.8%) attempted suicide because of family conflicts and quarrels, followed by marital disharmony (16%), financial difficulties (12.7%), failure in examination (5.4%) and psychiatric illness (12.7%). Our findings match with findings of Vijay Kumar et al [19] and Nagendra Gouda MR et al [13]¹ who also found the same reasons for para-suicide. They found that the immediate cause for para-suicide is marital problem (51%) followed by other family problems (42%).

Conclusion:

Para-suicide is a major public health problem in North Karnataka region of South India, high incidence was noted among- the age group of 16-25 years, males, rural domicile, married persons, those residing in nuclear family, agriculturists and housewives, low education level, low socio-economic status. Designated psychiatric illness was absent in most of the cases and family stress was identified as most common precipitating factor responsible for para-suicide.

Para-suicide cases are on the rise in third world but they are under-reported due to various reasons and thus the cases that we see, are probably the tip of the iceberg. In order to curb the incidence of para-suicide, effective

prevention measures need to be taken in the form of, early identification of suicide prone individuals, provisions of better psychosocial support and a restriction in the sale of Organophosphorus compounds. More importantly psycho-social intervention is needed to alleviate precipitating factors and expert psychiatric evaluation of every para-suicide case must be done.

References:

1. **Reisterstol N.** Introduction and definitions in Suicide: A European Perspective. 4th Edition, Cambridge University Press, Cambridge, 1993; 9-20.
2. **Hawton K, Fagg J.** Trends in deliberate self poisoning and self injury in Oxford, 1976-90. *BMJ*, 1992; 304:1409-11.
3. **Diekstra RF, van Egmond M.** Suicide and attempted suicide in general practice, 1979-1986. *Acta Psychiatr. Scand*, 1989; 79:268-75.
4. **Vijay Kumar L.** Psychosocial risk factors for suicide in India. *Suicide Prevention: Meeting the challenge together.* Ed Vijayakumar L Orient Longman, 2003; 49-162.
5. **Cullberg J, Wasserman D, Stefansson C.** Who commits suicide after a suicide attempt? An 8 to 10 year follows up in a suburban catchment area. *Acta Psychiatry Scand*, 1988; 77:598-603.
6. **Latha KS, Bhat SM, D'souza P.** Suicide attempters in a general hospital unit in India: Their socio-demographic and clinical profile, emphasis on cross-cultural aspects. *Acta Psychiatry Scand* 1996; 94:26-30
7. **Gururaj G, Isaac MK.** Epidemiology of suicides in Bangalore. National Institute of Mental Health and Neuro Sciences, 2001 publication no 43.
8. **Narang RL, Mishra BP, Mohan N.** Attempted suicide in Ludhiana. *Indian J Psychiatry*, 2000; 42:83-7.
9. **Venkoba Rao A.** Suicide attempters in Madurai. *Journal of Indian medical Association*, 1971; 57(8): 278-284.
10. **Sethi BB, Gupta SC, Singh H.** Psychosocial factors and personality characteristics in cases of attempted suicide. *Indian Journal of Psychiatry*, 1978;20, 25-30
11. **Sato T, Takefchi M. & Hara T.** Suicide attempts by agricultural chemicals. *Indian Journal of Psychiatry*, 1993;35(4); 209-210
12. **Venkoba Rao A.** Suicidology: The Indian Context. In: Agarwal SP, Goel DS, Ichhpujani RL, Salhan RN, Shrivastava S, editors. *Mental Health: An Indian Perspective 1946-2003.* New Delhi: Directorate General of Health Services Ministry of Health and Family Welfare, 2005: 277-83.
13. **Nagendra Gouda MR, Sambaji M Rao.** Factors Related to Attempted Suicide in Davanagere. *Indian J Community Med.* 2008 January; 33(1): 15-18.
14. **Arun M, Yoganarasimha, Palimar V, Kar N, Mohanty M.** Para suicide: An approach to the profile of victims. *J Indian Assoc Forensic Med.*, 2004; 26:58
15. **Ponnudurai R., Jeyakar J, Saraswati M.** Attempted suicide in Madras. *Indian Journal of Psychiatry* 1986; 28:59-62
16. **Gupta SC, Singh H.** Psychiatric illness in suicide attempters. *Ind. J. of Psychiatry* 1981; 23(1): 69-74.
17. **Srivastava MK, RN Sahoo, LH Ghotekar, Srihari Dutta, M. Danabalan, TK Dutta, AK Das.** Risk Factors Associated with Attempted Suicide: A Case Control Study. *Indian Journal of Psychiatry*, 46(1) 33-38. January-March, 2004, 46(1):33-38.
18. **Radomsky ED, Haas GL, Mann JJ, Sweeney JA.** Suicidal Behavior in Patients With Schizophrenia and Other Psychotic Disorders. *Am J Psychiatry*, 1999; 156:1590-1595.
19. **Vijayakumar L, Rajkumar S.** Are risk factors for suicide universal? A case control study in India. *Acta Psychiatrica Scandinavia*, 1999:407-411.
20. **Bhatia MS, Aggarwal NK, Aggarwal BB.** Psychosocial profile of suicide ideators, attempters and completers in India. *International Journal of Social Psychiatry*, Autumn.2000; 46(3), 155-63

21. Bansal P, Gupta A, Kumar R. The psychopathology and the socio-demographic determinants of attempted suicide patients. Journal of

Clinical and Diagnostic Research, 2011 October, Vol-5(5): 917-920.

Table 1: Socio-Demographic Factors of Para-Suicide

Socio-demographic factor	Male (%)	Female (%)	Total (%)
Sex	60 (54.5%)	50 (45.5%)	110 (100%)
Age	<15 yrs	00 (00.00)	01 (100%)
	16-25 yrs	33 (52.38%)	30 (47.62%)
	26-35 yrs	15 (55.56%)	12 (44.44%)
	> 35 yrs	12 (63.16%)	07 (36.84%)
Religion	Hindu	58 (55.77%)	46 (44.23%)
	Muslim	02 (33.33%)	04 (66.67%)
Domicile	Rural	36 (56%)	28 (43.75%)
	Urban	24 (52.17%)	22 (47.83%)
Marital status	Married	35 (53.03%)	31 (46.97%)
	Unmarried	23 (56.10%)	18 (43.90%)
	Widow/Divorced	02 (66.67%)	01 (33.33%)
Education	Illiterate	13 (48.15%)	14 (51.85%)
	Primary	11 (55.00%)	09 (45.00%)
	Middle	06 (60%)	04 (40%)
	Secondary	23 (57.50%)	17 (42.50%)
	Graduate or more	07 (53.85%)	06 (46.15%)

Table 2: Socio-Demographic Factors of Para-Suicide (Continued)

Socio-demographic factor	Male (%)	Female (%)	Total (%)
Occupation	House Wife	---	25(22.7%)
	Agriculture Labor	19 (65.52%)	10 (34.48%)
	Manual labor	8 (72.73%)	3(27.27%)
	Student	12 (60%)	8(40%)
	Government Employee	6 (100%)	0
	Private Employee	4 (80%)	1(20%)
	Unemployed	11 (78.57%)	3(21.43%)
Socio-economic Status	< Rs 5,000	30 (55.56%)	24 (44.44%)
	Rs 5,000-10,000	21 (55.26%)	17 (44.74%)
	> Rs 10,000	09 (50.00%)	09 (50.00%)
Type of family	Nuclear	35 (53.85%)	30 (46.15%)
	Extended	10 (50.00%)	10 (50.00%)
	Joint	15 (60.00%)	10 (40.00%)

Table 3: Psychiatric Morbidity and History of Previous Para-Suicide

Psychiatric morbidity	Male (%)	Female (%)	Total (%)
Major Depression	13 (48.15%)	14 (51.85%)	27 (24.6%)
Alcohol Dependence	8 (100%)	0 (0.0)	8 (7.3%)
Depression with Alcohol dependence	5 (100%)	0 (0.0)	5 (4.5%)
Schizophrenia	1 (100%)	0 (0.0)	1 (0.9%)
Bipolar Affective Disorder	1 (1.7%)	0	1 (0.9%)
Acute and Transient Psychotic Disorder	0 (0.0)	1 (100%)	1 (0.9%)
Borderline Personality Disorder	1 (33.33%)	2 (66.67%)	3 (2.7%)
Multi- drug dependence	3 (100%)	0 (0.0)	3 (2.7%)
No Psychiatric illness	28 (45.90%)	33 (54.10%)	61 (55.5%)
History of previous attempt	06 (60.00%)	04 (40.00%)	10 (9%)

Table 4: Methods Tried for Para-Suicide

Method tried	Male (%)	Female (%)	Total (%)
O.P Poisoning	46 (51.69%)	43 (48.31%)	89 (80.9%)
Drug over dosage	6 (60.00%)	4 (40.00%)	10 (9%)
Consumption of kerosene	4 (80.00%)	1 (20.00%)	5 (4.5%)
Hanging	2 (40.00%)	1 (60.00%)	3 (2.7%)
Burns	2 (66.67%)	1 (33.33%)	3 (2.7%)

Table 5: Precipitating Factors for Para-Suicide

Precipitating factors	Male (%)	Female (%)	Total (%)
Family stress	29 (50.88%)	28 (49.12%)	57 (51.8%)
Marital disharmony	08 (44.44%)	10 (55.56%)	18 (16.4%)
Financial debt/crisis	12 (85.71%)	2 (14.29%)	14 (12.7%)
Exam stress/failure	3 (50.00%)	3 (50.00%)	6 (5.4%)
Failed love affair	3 (60.00%)	2 (40.00%)	5 (4.5%)
Physical illness	1 (25.00%)	3 (75.00%)	4 (3.6%)
Psychiatric illness	2 (50.00%)	2 (50.00%)	4 (3.6%)
Job stress	2 (100%)	0 (0.0)	2 (1.8%)