ejpmr, 2019,6(10), 493-496

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Research Article

ISSN 2394-3211

EJPMR

PSYCHIATRIC AND TOXICOLOGICAL PROFILE OF PATIENTS ATTEMPTING SUICIDE BROUGHT TO A TERTIARY CARE CENTER IN CAPITAL CITY OF DELHI

Manjeet Singh Bhatia*[1] and Narender Kumar Aggarwal[2]

[1]Director Professor and Head, Department of Psychiatry, U.C.M.S. and G.T.B. Hospital, Dilshad Garden, Delhi-110095, India.

[2]Director Professor and Head, Department of Forensic Medicine, U.C.M.S. and G.T.B. Hospital, Dilshad Garden, Delhi - 110095, India.

***Corresponding Author: Dr. Manjeet Singh Bhatia**

Director Professor and Head, Department of Psychiatry, U.C.M.S. and G.T.B. Hospital, Dilshad Garden, Delhi-110095, India.

Article Received on 05/08/2019 **Article Revised on 25/08/2019** **Article Accepted on 16/09/2019**

ABSTRACT

Every year, almost 1 million people commit suicide worldwide. It is about 1.5% of all deaths, making suicide the 10th leading cause of death globally. Suicide is among the three leading cause of death among those aged 15-44 years in some countries and the second leading cause of death in the 10-24 years' age group. India's contribution to global suicide deaths increased from 25·3% in 1990 to 36·6% in 2016 among women, and from 18·7% to 24·3% among men. 50 consecutive cases (duration two years) of attempted suicide who had consumed pesticide brought to the emergency of the hospital and admitted subsequently in the medicine ward were taken up for the study. There were 34 (68%) females and 16 (32%) males. 20 to 25 years were the commonest age-group (56%). Home was the commonest place of committing suicide (90%). The most common compound used was aluminum phosphide. Mixed anxiety and depressive disorder was commonest psychiatric illness (32%) followed by unipolar depression (24%). Repeat attempters (34%) had a family history of psychiatric illness and suicide, recent trauma, had experienced stressful life events and had expressed suicidal ideas.

KEYWORDS: Suicide, Attempters, Repeaters, Toxicological Profile, Psychiatric Disorders, Etiology.

INTRODUCTION

Suicide is defined as an act of self-inflicted, self-intentioned taking of one's own life.[1] Suicide has been defined variously for psychological, social, administrative and legal purposes.[2] Term, "suicide" was coined by Sir Thomas Browne (quoted by Schneidman[3] and term, "parasuicide" was coined by Kreitman.[4]

Every year, almost 1 million people commit suicide worldwide. It is about 1.5% of all deaths, making suicide the 10th leading cause of death globally. Every 40 seconds another family loses a loved one to suicide.[5] In the last 45 years, suicide rates have increased by 60% worldwide. Suicide is among the three leading cause of death among those aged 15-44 years in some countries and the second leading cause of death in the 10-24 years' age group; these figures do not include suicide attempts which are up to 20 times more frequent than completed suicide.[5]

There is relatively little research on suicide in highly populated nations such as India and China, in which more than half of the world's suicides occur.[6,7] Suicide accounted for 1.4% of all deaths worldwide, making it the 18th leading cause of death in 2016. Of these 79% of suicides occurred in low and middle-income countries in 2016.[8] India's contribution to global suicide deaths increased from 25·3% in 1990 to 36·6% in 2016 among women, and from 18·7% to 24·3% among men.[9] Till before the Mental Health Care Act 2017[10] came in picture, suicide attempt was a punishable offence in India and families would often not report suicides or suicides attempts to avoid facing stigma, shame and legal action. But it was considered that anyone who attempts a suicide must be under extreme stress and hence punishment for such is not right. It was repealed under the Mental Health Care Act 2017 which is expected to encourage people to overcome stigma and seek help.

Suicide is an important issue in the Indian context. There is a wide variation in the suicide rates within the country. The highest SDR (suicide death rates) among women in 2016 was in the states of Tamil Nadu and Karnataka, followed by West Bengal, Tripura, Andhra Pradesh, and Telangana. The eight states with the highest SDR among men in 2016 (above 24 per 100000 men) included the six states that had the highest SDR among women (i.e. Tamil Nadu, Karnataka, West Bengal, Tripura, Andhra Pradesh, and Telangana) as well as Kerala and Chhattisgarh.[9] This variable pattern has been stable for the last twenty years. Higher literacy, a better reporting system, lower external aggression, higher socioeconomic

status and higher expectations are the possible explanations for the higher suicide rates in the southern states.[9,11]

Suicidal behavior is a due to a complex interaction of social, environment, biological and cultural factors. There are several factors which govern the suicidal behavior; these factors operate in an individual's life, cultural belief, social standards, gender bias, educational problems, income levels, living status, growing aspirations and pressure of modern life style. Risk factors for suicidality in youth identified in previous studies includes interpersonal conflict and financial problems[12,13] as well as female gender and exposure to abuse or violence.[14,15] Risk factors vary from one society to another, depending on social, cultural, political and economic features. The hospital based Indian studies suggest that pesticide consumption is the commonest poisoning in India and most of these poisonings are usually with a suicidal intent.[16]

There have been very few studies in the capital city of India analyzing the method, etiology and psychiatric profile of cases attempting suicide by consuming pesticide compounds.

MATERIAL AND METHODS

University College of Medical Sciences and Guru Teg Bahadur Hospital complex is a Tertiary Care Teaching Hospital in the Capital City of India with daily outdoor emergency and indoor services. About 7000 patients attend the various outpatient departments and casualty department of the hospital every day.

The present study was conducted by the Departments of Psychiatry and Forensic Medicine after obtaining clearance from Institutional Ethical Committee. 50 consecutive cases (duration two years) of attempted suicide who had consumed pesticide brought to the emergency of the hospital and admitted subsequently in the medicine ward were taken up for the study. The consent was taken from the patient and a relative. The patients were evaluated for psychosocial, situational, and clinical risk factors.

RESULTS

There were 34 (68%) females and 16 (32%) males. 20 to 25 years were the commonest age-group (56%) followed by 26 to 30 years (24%), 31to 35 years (6%) and 36 to 40 years (4%). The common symptoms were nausea, vomiting, abdominal pain and cramps, salivation, cough, dyspnea, weakness, fasciculation, anxiety, disorientation tremors, palpitations and sweating (Table 1).

Table 1: Common Symptoms of Pesticide Intake.

Symptom	Percentage
Nausea	96
Weakness	90
Vomiting	82
Abdominal pain & cramps	74
Salivation	70
Cough, dyspnea	62
Disorientation	48
Tremors	46
Palpitations, sweating	44
Fasciculation	30

Home was the commonest place of committing suicide (90%), followed by 5% each in hostel and work place. The compounds used were aluminum phosphide (most commonly), chlorpyriphos, acephate, trichlorophos, diazinon, malathion and parathion alone or in combination. They were managed by gastric lavage and maintenance of vital, and in case of organophosphorus compounds by giving atropine, oximes and benzodiazepines.

Mixed anxiety and depressive disorder was commonest psychiatric illness (32%) followed by unipolar depression (24%), adjustment disorder with depressive features (20%) and generalized anxiety disorder (12%). 12% did not have a psychiatric disorder (Table 2).

Table 2: Psychiatric Profile (as per ICD-10).

Diagnosis	Percentage
Mixed Anxiety & Depressive disorder	32
Unipolar Depression	24
Adjustment Disorder with depressive features	20
Generalized Anxiety Disorder	12
No Psychiatric Disorder	12

Repeat attempters (34%) had a family history of psychiatric illness and suicide, recent trauma, had experienced stressful life events and had expressed suicidal ideas. Factors like young age, family history of psychiatric disorders, current psychiatric illness, communication of suicidal ideas, the use of physical methods, and high potential attempts differentiated repeaters significantly from the first-timers. Major psychiatric or physical illness (78%), family and partner conflicts (62%), financial problems (40%), and failure in examinations (28%) were more frequent life events [in 82%, combination of 2 or more life events in last 6 months contributed to suicidal behavior].

DISCUSSION

In the majority of countries, men commit suicide four times as often as females, but females attempt suicide four times higher than male.[14-16] In the present study also, 68% were females. Suicide takes place at all ages with the young (15-34 years) and elderly (over 65 years) being age groups at even higher risk of suicide[14,15] but

in the present study, 20 to 25 years was the commonest age group. Divorced, widowed and single people of a higher risk of suicide.[15] In the present study, majority of attempters were unmarried (58%) followed by housewives (34%) and separated (8%).

Stressful life events may be interpersonal problems, separation from family and friends, job loss, retirement or financial difficulties, rapid political and economic changes.[7,14,15,17-19,20] Major psychiatric or physical illness (78%), family and partner conflicts (62%), financial problems (40%), and failure in examinations (28%) were more frequent life events [in 82%, combination of 2 or more life events in last 6 months contributed to suicidal behavior.

The immediate availability of a method is an important determinant of suicide.[21] In the present study all the cases had easy access to aluminum phosphide and organophosphorus compounds in the house or work place.

Previous suicide attempt is the best indicator that a patient at increased risk of suicide. Studies show that about 40 percent of depressed patients who commit suicide have made a previous attempt and 10-14% of people who attempted suicide eventually die through suicide.[15, 17-19] Repeat attempters (34%) had a family history of psychiatric illness and suicide, recent trauma, had experienced stressful life events and had expressed suicidal ideas. Factors like young age, family history of psychiatric disorders, current psychiatric illness, communication of suicidal ideas, the use of physical methods, and high potential attempts differentiated repeaters significantly from the first-timers.

Suicides attempts have been associated with a history of psychiatric disorders[7,15,17-22], situational context and social stresses also play a major role in suicidal behavior and these social factors may vary across cultures. Both in developing and developed countries majority of people (up to 90%) who commit suicide have a diagnosable mental disorder. Risk of suicide is a 3 to 4 times higher in psychiatric patient than general population. Depressive disorder, schizophrenia, Dementia/delirium, alcohol dependence, substance abuse and antisocial personality disorder are common causes and many have a dual diagnosis.

Chronic physical illness like diabetes, renal, hepatic, cardiovascular and neurovascular diseases are estimated to be important contributing factors in about half of suicides [14,15], but in the present study three patients had diabetes mellitus and one patient had epilepsy.

IMPLICATIONS OF THE STUDY

Some of the major strategies likely to yield significant and positive results are reducing access to organophosphorus compounds, training of primary care physicians (early recognition and treatment of poisoning as well as depression), developing social support networks especially for those at risk, establishing crisis intervention centers, changing public attitudes about suicidal behavior and augmenting social reforms across societies. While developing intervention, the social economic, political and cultural factors need to be considered. The early identification and the appropriate treatment of mental disorders are important strategies for the prevention of suicide because in a majority of studies from India[23], China[24] and Vietnam[25], a significant majority had psychiatric disorders but only 7 to 26% were referred for psychiatric intervention.

CONCLUSION

Suicide is an outcome of complex interactions among neurobiological, genetic, psychological, social, cultural, and environmental risk and protective factors. Multiple risk and protective factors interact in suicide prevention. Development of a national strategy can bring together multiple disciplines and perspectives to create an integrated system of interventions across multiple levels, such as the family, the individual, schools, the community, and the health care system.

REFERENCES

1. Bhatia MS. Dictionary of Psychiatry, Psychology and Neurology. Delhi: CBS Publishers and Distributors, 1992.
2. Aggarwal NK, Bhatia MS, Aggarwal BBL. Pattern of suicide in north-east Delhi. Indian J Soc Psychiatry, 1994; 10: 20-2.
3. Schneidman ES. Current review of suicide: In: Sociology Contemporary Development. Schneidman E(ed). New York: Grune and Stratton, 1976.
4. Kreitman N. Parasuicide. Chichester: Wiley, 1977.
5. http://www.suicide.org/international-suicide-statistics.html
6. Beautrais A L. Suicide in Asia. Crisis, 2006; 27(2): 55-7.
7. Bhatia MS, Aggarwal NK, Aggarwal BBL. Psychosocial profile of suicide ideators, attempters and completers in India. Int J Soc Psychiatry, 2000; 46: 155-63.
8. WHO. Mental health and suicide prevention. (Online). 2011; available from: URL: http://www.Who.Int/mental_health/prevention/suicide/suicideprevent/en/(2017) accessed on 27/08/2018
9. India State-Level Disease Burden Initiative Suicide Collaborators. Gender differentials and state variations in suicide deaths in India: The Global Burden of Disease Study 1990–2016. Lancet Pub Health, 2018; 3: e478–89.
10. Mental Health Care Act 2017. Available from: http://www.Prsindia.Org/uploads/media/mental%20health/mental%20healthcare%20act,%202017.Pdf
11. Vijaykumar L. Suicides and its prevention: the urgent need in India. Indian J Psychiatry, 2007; 49: 81-4.

12. Kar N. Profile of risk factors associated with suicide attempts: A study from Orissa, India. Indian J Psychiatry, 2010; 52: 48-56.
13. Nagenda Gouda MR, Rao S M. Factors related to attempted suicide in Davanagere. Indian J Community Med., 2008; 33: 15-8.
14. Pillai A, Andrews T, Patel V. Violence, psychological distress and the risk the suicidal behavior in young people in India. Int J Epidemiol, 2008; 38: 459-69.
15. Sidhartha T, Jena S. Suicidal behaviors in adolescents. Indian J Paediatr, 2006; 73: 783-8.
16. Singh S, Wig N, Chaudhary D, Sood N, Sharma B. Changing pattern of acute poisoning in adults: experience of a large north west Indian hospital (1970-1989). J Assoc Physicians India, 1997; 45: 194-7.
17. Parker S R, Dawani V, Weiss M G. Gender suicide and the sococultural context of deliberate self-harm in a urban general hospital in Mumbai, India. Culture Med Psychiatry, 2008; 32: 492-515.
18. Sarkar P, Sattar F A, Gode N, Basannar D R. Failed suicide and deliberate self-harm: A need for specific nomenclature. Indian J Psychiatry, 2006; 48: 78-83.
19. Bhatia MS, Aggarwal NK, Millo T, Murty OP. Suicide, suicide note and psychological autopsy. Int J Med Toxicology Legal Med., 1999; 1: 43-4.
20. Bhatia MS, Verma SK, Murty OP. Suicide notes: psychological and clinical profile. Int J Psychiatry Med., 2006; 36: 163-70.
21. Parchake MB,.Kachare RV, Tumram NK, et al. Suicides in females of Southern Marathwada region of India. Eur J Pharma Med Res., 2015; 2(3): 469-481.
22. Aggarwal NK, Bhatia MS, Aggarwal BBL Deaths due to poisoning in children. Indian Pediatr, 1999; 36: 415-6.
23. Vijaykumar L. Country report on suicide. Document prepare for Hong Kong workshop, develop strategies for suicide prevention In Asia, November 2006. www.scribd.com/doc/.../Times-of-India-Bangalore-6-Oct-2010.
24. Phillips M R Li, Xi Zhang Y. Suicides rates in China, 1995-99. Lancet, 2002; 359: 835-40.
25. Suominen K H, Isonesta F T, Ostamo A I, Lonnqvist J K. Health care contacts before and after attempted suicide. Soc Psychiatry Psychiatr Epidemiol, 2002; 37(2): 89-94.