ORIGINAL ARTICLE

Study of Suicide Cases in Bhopal Region: An Autopsy Study

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Abstract:

The act or incident of voluntarily and intentionally taking one's own life. Suicide is not a new phenomenon in human history; suicide is as old as mankind itself, and its origins may be traced all the way back to the dawn of civilization. The present study was conducted in the department of Forensic Medicine and Toxicology Gandhi Medical College, Bhopal, Madhya Pradesh on a total of 686 cases of suicide brought to the mortuary for post-mortem examination. Highest proportions of cases 243 (35.3%) were in their third decade of life, implying that suicide is most common in younger age group, followed by people in their fourth decade of life 160 (23.3%). Male victims predominated (68.6%). Present study predicts unemployment and poverty as being one of the important risk factors for suicide. Most of the victims belonged to the Hindu religion (93.6%). In my study maximum proportion of cases were married 490 (71.4%), When we look at the presence of any past illness, 19.4% cases were having some form of chronic physical and mental disorders at the time of committing suicides. Although seasonal variation is also significant, the present study reveals highest number of cases in summer season (75.7%). Most common mode of committing suicide was hanging 306 (44.61%), followed by poisoning 283 (41.25%). Least proportion i.e., 1 (0.15%) of deceased chooses firearms as mode of committing suicide.

Keywords: Autopsy; Suicide methods; Poisoning; Hanging.

Introduction:

The act or incident of voluntarily and intentionally taking one's own life. Suicide is not a new phenomenon in human history; suicide is as old as mankind itself, and its origins may be traced all the way back to the dawn of civilization. Suicide is linked to a wide range of factors in India, including poverty, low literacy, unemployment, family violence, the breakdown of the joint family system, unfulfilled romantic ideals, inter-generational conflicts, crop failure, rising cultivation costs, huge debt burden, unhappy marriages, harassment by in laws and husbands, dowry disputes, depression, chronic physical illness, alcoholism/drug addiction, and easy access to means of suicide, expected fear of failing in school/exams or performing below expectations, as well as anxiety of being unable to cope with the circumstance, harassment in the workplace or sexual harassment, people with impulsive personalities and those with a borderline personality.

Suicide, according to Durham, is "death resulting directly or indirectly from a positive or negative act of the victim himself, which he knows will create this result." Suicide is common, and no society or culture has been spared from it, albeit the toll varies by location. Suicide is a very common occurrence in today's world. In 2015, 828,000 people died by suicide around the world.[1]

Suicides in India surged to 230, 314 in 2016, accounting for 17% of all suicides worldwide. In both the 15–29 and 15–39 years age group, suicide was the most common cause of death.[2] In India, over 46,000 suicides occurred in the 15–29 and 30–44 age ranges in 2012, accounting for about 34% of all suicides. In India the National Crime Research Bureau (NCRB), 2010, in their annual report on Incidence and Rate of Suicides during the Decade (2000-2010) have reported that, more than one lac persons (1,34,599) in the country lost their lives by committing suicide during the year 2010.[3] Recognizing the pattern of suicide in a certain location not only aids in the early care of such cases, but also proposes implementing preventative actions at an earlier stage.

Developing suicide prevention programs requires determining the cause(s) of suicide and the factor(s) that caused the suicidal behavior. In India, community based preventive programs must be established with an awareness of the region's economic and cultural norms, with a focus on primary and secondary prevention of factors linked to suicide risk. Help agencies in society should be enhanced to support persons in interpersonal crisis, and mechanisms to limit access to pesticides and other suicide techniques must be developed.

The view that suicide cannot be prevented is commonly held view among health professionals. In light of these facts, and the severity of the problem and the lack of recent data, the current study attempted to conduct a complete and detailed analysis of suicides in terms of many epidemiological factors.

Materials and methods:

This is prospective study of suicidal deaths conducted at the mortuary of Gandhi medical college, Bhopal from January 2020 to September 2021. After ruling out exclusion criteria by general

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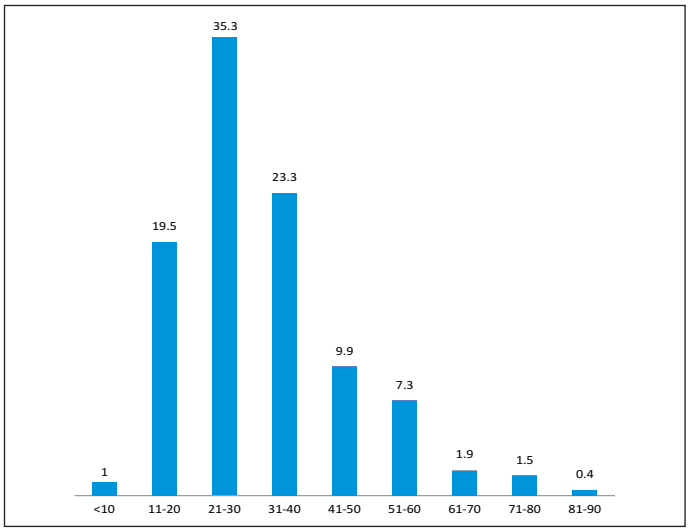

Figure 1. Distribution of cases according to age.

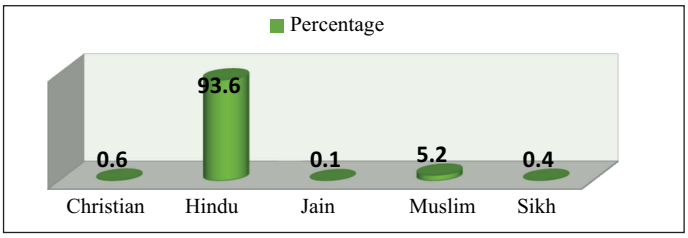

Figure 2. Proportional distribution of cases according to religion.

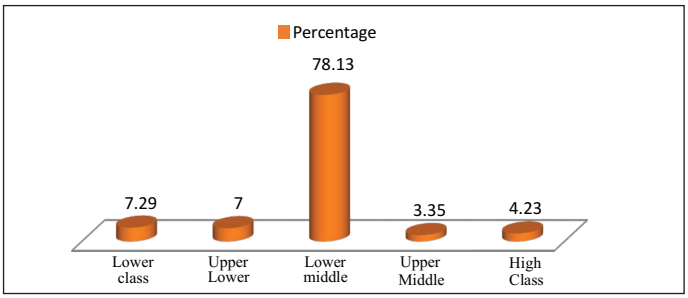

Figure 3. Distribution of deceased according to their socio-economic status.

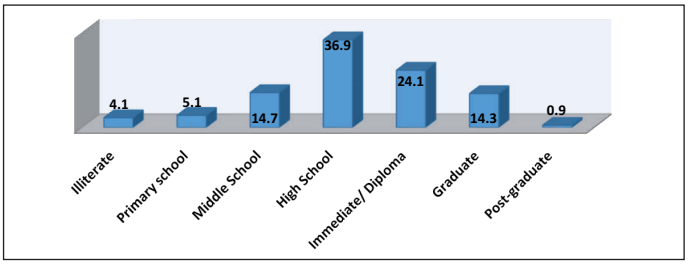

Figure 4. Proportional distribution of cases according to the education.

questions (age, religion, marital status, education, occupation, socio-economic status etc. who has apparently died by suicide?) from the closest persons or next of kin.

Material: A simple question paper sheet containing valid questions containing relevant information about the cases.

Limitations: The family members' hesitation to disclose reasons due to social stigma and not giving whole history is a limitation to this study.

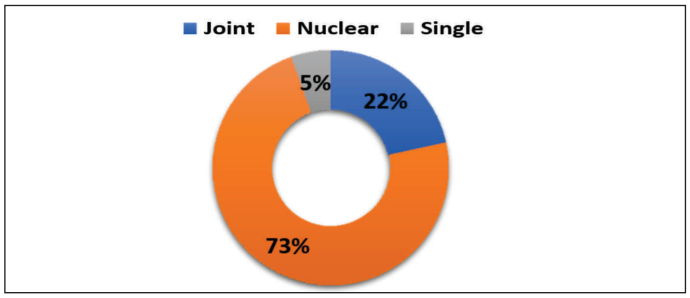

Figure 5. Distribution of cases according to the family type.

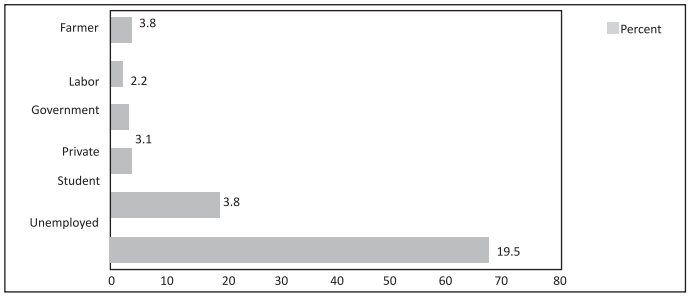

Figure 6. Proportional distribution according to occupation.

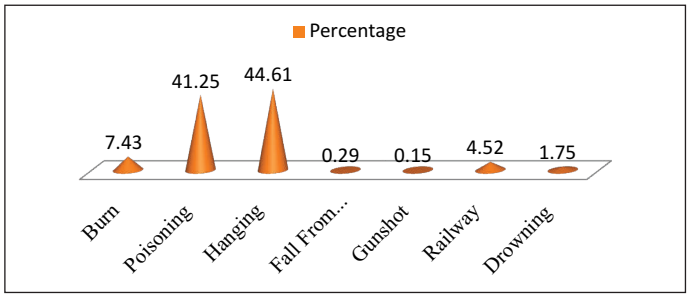

Figure 7. Distribution of cases according to means adopted for committing suicide.

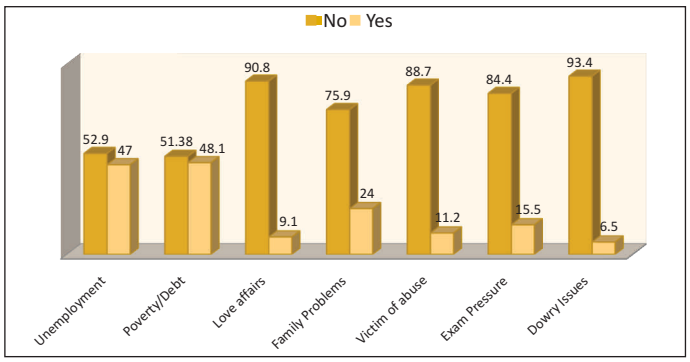

Figure 8. Proportional distribution according to causes of suicide among total cases.

Result and observations:

During the period from January 2020 to September 2021 a total of 686 cases were reported as suicidal deaths which were studied. Suicidal deaths constituted 15.3% of the total autopsies 4478 conducted during the study period in the department of forensic medicine and toxicology, Bhopal. Male predominate the study with the gender ratio of 2.2:1 showing that males are more prone to suicidal deaths. The maximum incidence of cases was seen in the third decade of life closely followed by fourth decade of life mainly younger age group was affected.

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Table 1. Distribution of cases according to age.

Age (in years)	Frequency	Percentage
<10	7	1.0
11-20	134	19.5
21-30	243	35.3
31-40	160	23.3
41-50	68	9.9
51-60	50	7.3
61-70	13	1.9
71-80	10	1.5
81-90	3	0.4
Total	686	100.0

Mean age ± SD of the cases in study 32± 13.9.

Table 2. Proportional distribution of cases according to religion.

Religion	Frequency	Percentage
Christian	4	0.6
Hindu	642	93.6
Jain	1	0.1
Muslim	36	5.2
Sikh	3	0.4
Total	688	100.0

Table 3. Distribution of deceased according to their socio-economic status.

SES	Frequency	Percentage
Lower class	50	7.29
Upper Lower	48	7.00
Lower middle	536	78.13
Upper Middle	23	3.35
High Class	29	4.23
Total	686	100

In present study majority of people committing suicide were Hindus followed by Muslims. Highest proportion of deceased belongs to lower middle socio-economic class. Majority of the deceased had education up to High school followed by those who had Immediate/Diploma, least proportion of deceased were postgraduates i.e., 0.9%. Majority of the suicide cases were literate i.e., 95.9%.

In present study majority of deceased who committed suicide were living in nuclear family 501 (73.03%), followed by joint family 148 (21.57%) and least number of them were those who were living alone 37(5%). In present study majority of the cases that committed suicide were unemployed (67.6%), followed by students (19.5%), then followed by farmers (3.8%), who were employed by private companies (3.8%), government employees (3.1%) and least proportion were labor (2.2%) by occupation. Maximum proportion of cases were married 490 (71.4%), followed by cases who were unmarried i.e., 187 (27.3%). Least proportion was comprised by cases that were separated i.e., 1 (0.1%). Most common mode of committing suicide was hanging 306 (44.61%), followed by poisoning 283 (41.25%). Least proportion i.e., 1 (0.15%) of deceased chooses firearms as mode of committing suicide. Majority of the suicide were committed in the summer season 519 (75.7%), followed by Rainy season 89 (13%), while least number of suicides were committed in winter season 78 (11.4%). April was the month with a greater number of mortality cases. Majority of the deceased did not leave suicide note i.e., 646 (94.16%). Majority of the deceased did not attempted suicide before. Majority proportion (80.6%) did not have any history of long-term illness. Main risk factors for committing suicide in males were unemployment followed by poverty/debt, exam pressure.

Main risk factors for committing suicide in females were family problem, abuse, dowry issues. Love affair was equally seen in both genders. Substance abuse, hopelessness, guilt, despair of life, panic attacks were most common symptoms associated with

Table 4. Proportional distribution of cases according to the education.

Education	Frequency	Percentage
Illiterate	28	4.1
Primary school	35	5.1
Middle School	101	14.7
High School	253	36.9
Immediate/ Diploma	165	24.1
Graduate	98	14.3
Post-graduate	6	0.9
Total	686	100.0

Table 5. Distribution of cases according to the family type.

Type of family	Frequency	Percentage
Joint	148	21.57
Nuclear	501	73.03
Single	37	5.39
Total	686	100.00

Table 6. Proportional distribution according to occupation.

Occupation	Frequency	Percentage
Unemployed	464	67.6
Student	134	19.5
Private	26	3.8
Government	21	3.1
Labor	15	2.2
Farmer	26	3.8
Total	686	100.0

Table 7. Distribution of cases according to means adopted for committing suicide.

Means adopted for committing suicide.	Frequency	Percentage
Burn	51	7.43
Poisoning	283	41.25
Hanging	306	44.61
Fall from Height	2	0.29
Firearm	1	0.15
Railway	31	4.52
Drowning	12	1.75
Total	686	100.00

Table 8. Correlation between gender and causes of suicide.

Cause of attempting suicide		Male	Female	Total	Chi-square	p-value
Unemployment	No	157	206	363	234.551a	.000*
	Yes	315	8	323		
Poverty/Debt	No	164	192	356	178.250a	.000*
	Yes	308	22	330		
Love affairs	No	431	192	623	.449a	.503
	Yes	41	22	63		
Family problems	No	403	118	521	73.715a	.000*
	Yes	69	96	165		
Victim of violence/abuse	No	466	143	609	150.427a	.000*
	Yes	6	71	77		
Exam pressure	No	409	170	579	5.819a	.016*
	Yes	63	44	107		
Dowry issues	No	472	169	641	106.220a	.000*
	Yes	0	45	45		

males which also shows statistical significance. The most common symptoms associated with females were emotional instability and regret to be born.

Discussion:

Suicide has a wide range of reasons and conditions that are difficult to classify and categories. Poisoning, hanging, drowning, and other methods of suicide are commonly used in India. Others are leaping from a great height, jumping in front of a moving train, etc. Suicide trends differ greatly depending on period, place, age group, sex, and race. The present study was conducted from January 2020 to September 2021 to assess the load of suicide related deaths.

In present study, the age group which is affected is mainly 21 to 30 years of age group and Mean age ± SD of the cases in study 32± 13.9. Highest proportions of cases 243 (35.3%) were in their third decade of life, implying that suicide is most common in younger age group, followed by people in their fourth decade of life 160 (23.3%). (Table-1) (Figure-1) Least proportion of patient belonged to elderly age group of 80-90 years i.e., 3 (0.4%) which is similar to other studies like Rastogi and kocheret et al.,[4] SC Gupta,[5] Charan K Shetty,[9] B S Chavan et al.,[10] Binaya K Bastia et al.,[11] J Prasad et al.,[15] Manjeet et al.,[12] Anil Rane et al.,[17] Sachidananda Mohanty et al.,[18] Binaya k Bastia et al.,[19] M arun et al.[23]

In our study majority of cases were Male 472 (68.6%) implying male have higher tendency to commit suicide. Female proportion was comparatively less i.e., 214 (31.1%). This is similar to studies of Suneet et al.,[6] P.N. Suresh et al.,[8] Charan K Shetty [9] Manjeet et al.,[12] J Prasad et al et al.,[15] Tanuj Kanchan et al.[20] Tanuj Kanchan et al.[21] Tanuj Kanchan et al.[22] M Arun et al.[23] In contrast with the studies like Rastogi and kocher et al.,[4] Vandhan Gajalakshmi[7] where female suicide are more than male suicide and in studies like Sachidananda Mohanty et al.[18] number of male suicide is equal to female suicides.

According to our study majority of cases who committed suicide were Hindu (93.6%), followed by Muslims (5.2%), Christians (0.6%), Sikh (0.4%) and least proportion were Jain (0.1%) (Table-2) (Figure-2). The findings are similar to P.N. Suresh et al.,[8] Charan K Shetty[9] Tanuj Kanchan et al.[20] In India, a major part of the population follows Hinduism as their religion.[23] Except for a few rare cases of Christians and Muslims, practically majority of the victims were Hindus.

From the present study the highest proportion of deceased belong to lower middle socio economic class i.e., 536 (78.13%), followed by Lower class 98 (14.29%) including both Lower class and Upper Lower class. Least proportion of deceased was from Upper-middle class i.e., 23 (3.35%) (Table-3) (Figure-3). The findings are different from studies like Sunil et al., [6] Anil Rane et al.,[17] Sachidananda Mohanty et al.[18] were highest proportion of deceased belong to lower socio-economic status. The socioeconomic disadvantage includes low income, unmanageable debt, lack of good housing conditions, and lack of educational qualifications, unemployment, and living in a socioeconomically deprived area. In present study majority i.e., 36.9% of the deceased had education up to High school followed by those who had Immediate/Diploma (24.1%). Least proportion of deceased was post graduates i.e., 0.9% (Table-4) (Figure-4). The findings were identical with the studies done by Ashish Srivastava et al [13] and Sachidananda Mohanty et al.[18] According to my study Majority of the suicide cases were literate i.e., 95.9% and only a small proportion of them were illiterate i.e., 4.1%. This is in contrast with the study conducted by Sachidananda Mohanty et al.[18] in which majority of cases committed suicide were illiterate and less educated. Majority of deceased who committed suicide were living in nuclear family type 501 (73.03%), followed by joint family 148 (21.57%) and least number of them were those who were living alone 37 (5%) (Table-5) (Figure-5). These results are consistent with the study done by Suneet et al.[6] Majority of the cases that committed suicide were unemployed (67.6%), followed by students (19.5%), then followed by Farmers (3.8%), who were employed by private companies (3.8%), government employees (3.1%) and least proportion were labor (2.2%) by occupation. My results are consistent with the studies done by Suneet et al,[6] P.N. Suresh et al,[8] Binaya K Bastia et al.,[19] in which unemployed males and students mainly commits suicide.

Majority of the cases that committed suicide were unemployed (67.6%), followed by students (19.5%), then followed by farmers (3.8%), who were employed by private companies (3.8%), government employees (3.1%) and least proportion were labor (2.2%) by occupation (Table-6) (Figure-6). My results are consistent with the studies done by Suneet et al.,[6] P.N. Suresh et al,[8] Binaya K Bastia et al.,[19] in which unemployed males and students mainly commits suicide.

In my study maximum proportion of cases were married 490 (71.4%), followed by cases who were unmarried i.e., 187 (27.3%). Least proportion was comprised by cases that were separated i.e.,1 (0.1%). 490 cases out of 686 cases were married that is similar to studies conducted in other parts of India [18, 23, 24] In fatal deliberate self-harm married people outnumbered unmarried people in studies done by Rastogi et al,[4] Suneet et al.,[6] P.N. Suresh et al. [8] Charan K Shetty et al., [9] Ashish Srivastava et al.[13] Shubangi et al., [16] Sachidananda Mohanty et al,[18] M arun et al.[23] According to study done by Binaya K Bastia et al.,[19] married females and unmarried males are more prone for suicide. The two main reasons for this are marital disharmony and financial burden. In western studies there is high incidence of suicide in unmarried people.

According to our study highest proportion comprised of people who choose mode of committing suicide as hanging 306 (44.61%), which was closely followed by people who committed suicide by poisoning 283 (41.25%). Least proportion i.e., 1(0.15%) of deceased chooses firearms as mode of committing suicide. (Table-7) (Figure-7) Our findings are similar to BS Chavan et al., [10] Manjeet et al.,[12] P.N. Suresh et al,[8] Tanuj Kanchan et al.,[21] J Prasad et al.,[15] Anil Rane et al.[17] Sachidananda Mohanty et al.[18] But in contrast to the studies done by Rastogi et al.,[4] Charan K Shetty et al.,[9] M Arun et al.[23] poisoning is the most common mode of suicide. Hanging is universally available and it is the most common method of suicide globally[18,23] in a study conducted by Alok Sinha et al.,[14] most common method of suicide was

firearm. The easy availability of weapons in many regions makes them potentially harmful, particularly among male teens and young adults.[25, 26] Majority of the deceased did not leave suicide note i.e., 646 (94.16%) while only 40 (5.83%) of them left a suicide note for their kin. These same finding witnessed in study of Sachidananda Mohanty et al.[18] in which out of 588 cases 5% people leave a suicide note behind. Leaving a suicide note means it was not a sudden thought the person was planning the suicide for a long time so majority of suicides were sudden and in anguish.

As reported by the family members majority i.e., 629 (91.69%) of the deceased did not attempted suicide before, while 57 (8.3%) had history of previous attempt at suicide. These people having history of previous attempts are a group of people that we can help and counsel. Majority proportion (80.6%) did not have any history of long-term illness, whereas on 19.4 % had history of past illness suffering from a variety of chronic physical and mental illnesses at the time of their deaths mainly hypertension, diabetes, lung, breast, and stomach cancers, as well as mental illnesses including schizophrenia, bipolar disorder, and depression. Findings consistent with the studies of Charan k Shetty et al.,[9] BS Chavan et al.[10] which 26.5% and 33.6% people having previous illness. In studies done by S.C. Gupta et al.,[5] 62 % people present with previous psychiatric problems in which 24% were suffering from depression, 14% from neurosis and 12% from schizophrenia. According to Manjeet et al[12] study and Ashish Srivastava et al[13] 52.5% and 54% people were suffering from depression respectively. In study by Tanuj Kanchan et al [22] 10.9% males and 27.8% females were in depression.

According to our study there was increased number of incidences of suicide during moths of April (25.7%), May (24.1%) and March (18.8%) this coincides with the time period of 1st and 2nd wave of Covid-19 in India. Least incidences were noted during the month of September i.e., 1.5%. Findings are similar to Tanuj Kanchan et al.[20] The COVID-19 epidemic has resulted in the imposition of severe restrictions that are having a significant impact on the global economy, including a rise in the global unemployment rate, and isolation. The month of April and May are post harvesting period and make it more prone for farmers and also exams in India are mainly held in these months.

In our study cause of death due to unemployment (66.7% among males and 3.7% in females), poverty/debt (65.2% among males and 10.2% in females) and exam pressure (13.3% among males and 20.5% in females) were mainly seen in the males which shows statistically significant association. Family problems (14.6% among males and 44.8% in females), Victim of abuse (1.2% in males and 33.1% among females) and Dowry issues (0% males and 21.0% Females) were mainly the risk factors of suicide in Females that shows statistically significant association (Table-8) (Figure-8).

Whereas, love affair was equally seen in both genders hence do not show any statistical significance. Unemployment is main reason in males for suicide this is similar to study done by Binya K Bastia et al.[19] Intense competition among school children, high expectation from parents and teachers, and inability to attain their goals are the main reasons for such suicides.[27] It may be due to ignorance of parents related to the problems of their child or may be due to lack of good communication with their children. There is no doubt that many dowry death instances go unreported, implying that the true number of dowry fatalities and atrocities is higher than the current data suggest. Approximately 15000 dowry deaths are estimated per year in which mostly are kitchen fires designed to look like accidents[28, 29] Mukherjee et al.[30] tried to figure out why dowry killings and other crimes against women differed so much across the country. They determined that the geographical concentration of dowry fatalities is in the northern region of India, based on NCRB data from three years (1995 to 1997). Women's age upon marriage has a significant impact on their family life. To avoid having to pay a large dowry and to relieve their daughters of their responsibilities, parents are marrying off their daughters as soon as possible. Young females are not able to cope with the harassment from the husband side and they think that there is no option rather than suicide.

According to our study we found there is substance abuse (29.6% among males and 0% in females), hopelessness (80.2% among males and 0.9% in females), guilt (73.7% among males and 0.9% in females), panic attack (7.2% among males and 0% in females) and despair with life (46.3% among males and 30.8% in females) was the most common symptoms associated with males which also shows statistical significance. The most common symptoms associated with females were emotional instability (0% males and 54.2% among females) and regret to be born (11.2% among males and 26.6% in females).

Whereas symptoms like isolation, self-criticism and talking about dying was equally seen in both the genders. Substance abuse is a slow methods and chronic method of self-intoxication and suicide. Substance abusers want to escape the reality. Drug abuse and drinking is more in males mainly because it is considered as male masculinity in our society. It is looked like a masculine role coping mechanism.

Conclusion:

Suicide is considered a public health issue that requires immediate attention in terms of prevention and additional study into the social and psychological aspects. The World Health Organization's (WHO) suicide prevention multisite intervention research on suicidal behavior (SUPRE-MISS) has indicated that it is feasible to prevent suicidal behavior to lessen the number of people who die by suicide by using a low-cost, quick intervention nations in development. To establish and implement a national plan that is cost-effective, appropriate, and relevant to community needs, collaboration, coordination, cooperation, and commitment are required. Suicide prevention in India is more of a social and public health goal than a standard mental health intervention. The moment has come for mental health professionals to take a proactive and leadership role in suicide prevention, saving thousands of young Indians' lives. Further it is concluded that psychological autopsy just like physical autopsy can be a useful tool to investigate the antecedent of death and revels the deceased contribution to their own death.

Conflict of Interest : The author has no conflict of interest to declare.

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Ethical clearance: the study was approved by Institutional Ethical Committee.

Reference:

1. Wang H, Naghavi M, Allen C, Barber RM, Bhutta ZA, Carter A, et al. Global, regional, and national life expectancy, all-cause mortality, and cause- specific mortality for 249 causes of death, 1980–2015: a systematic analysis for the Global Burden of Disease Study 2015. The lancet. 2016 Oct 8;388(10053):1459-544.
2. Dandona R, Kumar GA, Dhaliwal RS, Naghavi M, Vos T, Shukla DK, et al. Gender differentials and state variations in suicide deaths in India: the Global Burden of Disease Study 1990–2016. The Lancet Public Health. 2018 Oct 1;3(10): e478-89.
3. Mohanty S, Sahu G, Mohanty MK, Patnaik M. Suicide in India–A four year retrospective study. Journal of forensic and legal medicine. 2007 May 1;14(4):185-9.
4. Pooja R, Kochar SR. Suicide in youth: Shifting paradigm. Governing Council 2010-2012. 2010 Jan; 32:45.
5. Gupta SC, Singh H. Psychiatric illness in suicide attempters. Indian journal of psychiatry. 1981 Jan;23(1):69.
6. Upadhyaya SK, Nijhawan M, Sharma DK. Study of Sociodemographic and Family Factors in Suicide Attempters in Kota. Journal of Medical Science and Research. 2012;3(1):6.
7. Gajalakshmi V, Peto R. Suicide rates in rural Tamil Nadu, South India: verbal autopsy of 39 000 deaths in 1997–98. International journal of epidemiology. 2007 Feb 1;36(1):203-7.
8. Kumar PS. An analysis of suicide attempters versus completers in Kerala. Indian journal of psychiatry. 2004 Apr;46(2):144.
9. Shetty CK. Suicide cases in Manipal, South India: an autopsy study. Int J Forensic Sci Pathol. 2014 Aug 19;2(7):50-6.
10. Chavan BS, Singh GP, Kaur J, Kochar R. Psychological autopsy of 101 suicide cases from northwest region of India. Indian journal of psychiatry. 2008 Jan;50(1):34.
11. Bastia BK, Kar N. A psychological autopsy study of suicidal hanging from Cuttack, India: Focus on stressful life situations. Archives of Suicide Research. 2009 Jan 9;13(1):100-4.
12. Bhatia MS, Verma SK, Murty OP. Suicide notes: psychological and clinical profile. The International Journal of Psychiatry in Medicine. 2006 Jun;36(2):163-70.
13. Srivastava A. Psychological attributes and socio-demographic profile of hundred completed suicide victims in the state of Goa, India. Indian journal of psychiatry. 2013 Jul;55(3):268.
14. Sinha A, Gupta S, Ray M, Kumar S, Gupta AK. Lessons learned from psychological autopsies in armed forces. Indian Journal of Psychological Medicine. 2021 Mar;43(2):150-3.
15. Prasad J, Abraham VJ, Minz S, Abraham S, Joseph A, Muliyil JP, et al. Rates and factors associated with suicide in Kaniyambadi block, Tamil Nadu, South India, 2000–2002. International Journal of Social Psychiatry. 2006 Jan;52(1):65-71.
16. Parkar SR, Nagarsekar BB, Weiss MG. Explaining suicide: identifying common themes and diverse perspectives in an urban Mumbai slum. Social Science & Medicine. 2012 Dec 1;75(11):2037-46.
17. Anil RA, Nadkarni A. Suicide in India: a systematic review. Shanghai archives of psychiatry. 2014 Apr;26(2):69.
18. Mohanty S, Sahu G, Mohanty MK, Patnaik M. Suicide in India–A four year retrospective study. Journal of forensic and legal medicine. 2007 May 1;14(4):185-9.
19. Bastia BK, Kar N. A psychological autopsy study of suicidal hanging from Cuttack, India: Focus on stressful life situations. Archives of Suicide Research. 2009 Jan 9;13(1):100-4.
20. Kanchan T, Menezes RG. Suicidal hanging in Manipal, South India– victim profile and gender differences. Journal of forensic and legal medicine. 2008 Nov 1;15(8):493-6.
21. Kanchan T, Menon A, Menezes RG. Methods of choice in completed suicides: gender differences and review of literature. Journal of forensic sciences. 2009 Jul;54(4):938-42.
22. Kanchan T, Menezes RG. Suicidal poisoning in Southern India: gender differences. Journal of forensic and legal medicine. 2008 Jan 1;15(1):7- 14.
23. Arun M, Palimar V, Menezes RG, Babu YR, Bhagavath P, Mohanty MK. Autopsy study of fatal deliberate self-harm. Medicine, science and the law. 2007 Jan;47(1):69-73.
24. Pridmore S (2011). Download of Psychiatry. Suicide: a broad view Chapter 31. April.
25. Shields LBE, Hunsaker DM, Hunsaker JC (2005). Suicide: A Ten- Year Retrospective Review of Kentucky Medical Examiner Cases. J Forensic Sci. 50(3): 1-5.
26. Suicide methods. Source: http://en.wikipedia.org/w/index.php?oldid=499004707 {accessed on 25th September 2012}.
27. Vijayakumari N. Suicidal hanging: a prospective study. Journal of Indian Academy of Forensic Medicine. 2011;33(4):353-5.
28. Banerjee P. A matter of extreme cruelty: bride burning and dowry deaths in India. Injustice Studies. 1997; 1. http://www.sikhspectrum.com/122002/partha banerjee.htm. [accessed 12 December 2010].
29. Bunch C. The intolerable status quo: violence against women and girls. In: Bellamy C, editor. The Progress of Nations. New York: UNICEF; 1997. p. 41–5
30. Mukherjee C, Rustogi P, Krishnaji N. Crimes against women in India analysis of official statistics. Econ Polit Wkly 2001;36:4070–80.