

ORIGINAL PAPER

Suicide Among Adolescent and Young Adults

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ABSTRACT

Background: Suicide is an act of intentionally causing one's own death. It is a common cause of death among adolescents and youths in the current scenario of the World and presents a serious social and public health problem. That's the thought behind the present study to perform in our centre in order to highlight the current prevalence, pattern and risk factors of suicidal deaths in these subjects in Manipur and to formulate proper strategy and recommendation to limit the incidence.

Results: A total of 1879 medico-legal autopsies were conducted during the study period and 98 cases were suicidal deaths. Out of these suicidal deaths our study group consisted of 52 cases (2.76% of total medico-legal autopsies and 53.06% of the total suicidal deaths). Males out-numbered female in the ratio 2.47:1. Hanging was the commonest means of suicide (46.16%), occurred mostly inside the house (67.31%) and family problems (40.37%) are the major risk factor.

Conclusion: Rigorous evaluation of new and existing prevention programs is essential to identify and establish the most effective interventions for reducing suicide among young persons.

Key Words: Suicide, Adolescent, Youth, Hanging, Poisoning, Firearm injury

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INTRODUCTION

Suicide is the act of intentionally causing one's own death. Suicide is often carried out as a result of despair, the cause of which is frequently attributed to mental disorders, alcoholism, or drug abuse, and broken family. The most commonly used method of suicide varies by country and is partly related to availability. Common methods include hanging, pesticide and firearms etc.

More than one lakh persons (1, 34,779) lost their lives by committing suicide in India during the year 2013. Tamil Nadu (12.3%), Maharashtra (12.3%), Andhra Pradesh (10.8%), West Bengal (9.7%) and Karnataka (8.4%) together contributed 53.5% of total suicide victims. Pondicherry and Sikkim have reported 35.6 and 29.3 suicidal deaths per one lakh of population respectively as against the national average of 11.0. Manipur have reported 1.5 suicidal deaths per one lakh population.¹ This national data also have shown an increasing trend of suicidal deaths in most of the state including Manipur. The published data obtained from various countries as well as from India shown that incidence of suicide is highest amongst youths.^{2,3,4,5,6,7} These age group represent the most active and productive section of the society. Here comes the importance of conducting an observational study thoroughly to highlight the current prevalence of suicide among adolescent and young adults in Manipur and to formulate proper strategy and recommendation to limit the evil menace from the society.

METHODS

A retrospective observational study has been conducted in the Department of Forensic Medicine, Regional Institute of Medical Sciences, Imphal for a period of 5 years from January 2009 to 2013 December. Data were

collected from the medico-legal autopsy record book of the department. 52 cases of suicides amongst adolescent and young adults were documented and divided into three age groups i.e. 16-20, 21-25 and 26-30 years. Supportive evidence and histories were obtained from the relatives of the victim and investigating police officers and inquest reports. Data were analyzed with regard to incidence, sex, pattern and characteristic of suicide and different method used to commit suicide and accordingly presented in Tables.

OBSERVATION AND RESULTS

During the study period, a total of 1879 medico-legal autopsies were conducted in Department of Forensic Medicine, RIMS, Imphal and 98 cases were suicidal deaths. Out of these suicidal deaths our study group consisted of 52 cases (2.76%) of total medico-legal autopsies and 53.06% of the total suicidal deaths. As shown in **Table 1**, there is increasing trend of incidence from 2% to 4.3%. Maximum number of cases occurred in age group 21-25 years (40.38%) followed by age group 26-30 years (32.69%) as presented in **Table 2**.

In the present study, male outnumbered the female with a ratio of 2.47: 1(M=37, F=15). Maximum number of incidence occurred amongst Meitei community (53.84%). Lower socio-economic status (46.15%) and people with secondary level of education (48.08%) had maximum number of cases. As presented in Table-3, most preferred means of suicide was hanging (46.16%) followed by poisoning (21.15%) and firearm injury (17.31%). The victims of suicidal firearm fatalities were all security persons. Suicides by jumping from height and by stabbing were least common comprising of 1.92% each. In the present series of suicidal deaths, 35(67.31%) cases preferred their house whereas 17(32.69%) were found to have preferred places outside their houses for self destruction as depicted in **Table 3**.

Table 2 Age wise distribution of cases

Age wise(Years)	Number of cases	Percentage (%)
14-18	14	26.92
19-26	21	40.38
27-30	17	32.69
Total	52	100%

Table 1 Year Wise Distribution

Year wise	No. of ML autopsies (%)	Number of cases	Percentage
2009	591	12	2.03
2010	364	7	1.92
2011	313	8	2.55
2012	310	10	3.23
2013	301	13	4.32
Total	1879	52	2.76

Table 3 Place of occurrence and means of suicide

Place	Hanging	Poisoning	Firearm injury	Burns	Jumping from height	Stab injury	Total (%)
Inside house	17 (32.69%)	9 (17.31%)	2 (3.85%)	5 (9.62%)	1 (1.92%)	1 (1.92%)	35 (67.31%)
Working place	0	0	4 (7.69%)	0	0	0	4(7.69%)
Field/ Jungle	4 (7.69%)	1 (1.92%)	2 (3.85%)	0	0	0	7(13.47%)
Courtyard	3 (3.85%)	1 (1.92%)	1 (1.92%)	1 (1.92%)	0	0	6(11.53%)
Total	24 (46.16%)	11 (21.15%)	9 (17.31%)	6 (11.54%)	1(1.92%)	1(1.92%)	52 (100%)

Table 4 Predisposing factors

Factors	Number of cases	Percentage
Family problems	21	40.37
Mental illness	7	13.47
Disappointment in		
Love affair	6	11.54
Drug addicts	6	11.54
Financial issue	4	7.69
Unemployment	3	5.77
Failure in examination	2	3.85
Dispute with superior	1	1.92
Not known	2	3.85
Total	52	100%

Incidence of family problems (40.37%) as a precipitating factor is the highest, followed by mental illness (13.47%), disappointment in love affairs (11.54%) and drug addiction (11.54%) as shown above in **Table 4**. It was also found that maximum number of suicidal deaths occurred in summer months (28.85%) followed by spring (26.93%) and least cases were reported in winter months (19.22%). In the present study, maximum number of suicides occurred during 12 noon to 6pm (42.30%). As presented in Table -5, it was found that out of 52 cases of suicide 38 cases (73.09%) died on the spot, 11 cases (21.15%) survived for less than 6 hours and only one case survived for more than 7 days which was a case of burn. Most of the spot deaths were due to hanging 22 cases (42.32%).

Table 5 Period of Survival

Methods of Suicide	Survival Time						
	On the spot	<6 Hrs	6-12 Hrs	12-24 Hrs	2-3 days	3-7 days	>7 days
Hanging (24)	22(42.32%)	2 (3.85%)	0	0	0	0	0
Poisoning(11)	6(11.54%)	4(7.69%)	1(1.92%)	0	0	0	0
Firearm injury(9)	7(13.47%)	2(3.85%)	0	0	0	0	0
Burn(6)	3(5.76%)	1(1.92%)	0	1(1.92%)	0	0	1(1.92%)
Jumping from height(1)	0	1(1.92%)	0	0	0	0	0
Stab wound(1)	0	1(1.92%)	0	0	0	0	0
Total (52)	38(73.09%)	11(21.15%)	1(1.92%)	1(1.92%)	0	0	1(1.92%)

DISCUSSION

Suicide is the result of an act deliberately initiated and performed by a person in the full knowledge or expectation of its fatal outcome. In the present study, it was observed that out of total 1879 cases of medico-legal autopsies conducted, 52 cases (2.76%) were suicidal deaths among adolescent and young age group comprising of 53.06% of total number of suicides during the study period. This finding is in agreement with the study conducted by several authors.^{2,8} Highest incidence in youth is due to the fact that this particular age group is the most active group and instead of facing defeat, they might have preferred to end their life.

In this study, males out-numbered the females in the ratio of 2.47:1. This is also in agreement with different studies.^{2,6} It might be due to aggressive nature, high unemployment, the ever increasing demand to run the family, financial instability among male. In the present series, the most common age group is 21-25 years with

40.38% which in accordance with the study observation by Johnson GR et al.⁹ and Moscicki EK et al.¹⁰

Majority of cases occurred inside the house and during summer months mainly followed by spring, autumn and winter and the preferred time being 12 noon to 6pm which is in accordance with the observation made by other author⁶.

It was found that the commonest means of suicide was hanging 24 cases (46.15%) followed by poisoning and firearm injury. The findings observed are in agreement with other studies⁶. Hanging as the most common means of suicide is in sharp contrast with other studies where poisoning is the method of choice.^{2,3,4,5,9} The reason of higher incidence of hanging could be because people generally believe that hanging is easy availability of materials needed for the act, simplicity of act, guaranteed fatality and belief of a prompt and painless death. Poisoning as a means is also common among adolescent age group staying in rural areas. Family problems which

lead to depression and anxiety and other mental illness are the major risks factor. Unemployment, disappointment in love affair, drug addiction etc. are other common factors of suicidal deaths among adolescents and young adults. These findings are in accordance with other authors.²⁻⁹

CONCLUSION

Suicide rate is increasing and emerging as a major health problem worldwide. In addition to the tragedy of a life not lived, suicide has devastating consequences for the family and the community. According to recent development attempt to commit suicide is no more punishable under IPC. So, it can be regarded as public health problem and indirect indicator of mental health of the community. Suicide prevention is still a challenge and an accurate and population based study is a must to rule out all possible causes and reasons behind all fatalities among this vulnerable age group. More attention should be made from medical profession and the public health agencies as well. Primary care clinicians are key professionals in recognizing youth at risk for suicide.⁸ From the present study, it can be concluded that risk of suicide in Manipur is higher among the adolescents and youths who are facing the problem of first adverse social exposures, family problem, job insecurity, financial instability, frustration because of local law and order situation leading to severe stress. So serious deliberate thoughts and means of decreasing the evil menace or burden of stress should be given to the mass. Before taking up of the stringent act to commit suicide very often some hint or mention about the plans are directed to the friend, family or relatives. Learning about the warning signs and make use of it in favour of the adolescent is the first step in the prevention process. Those individual with high risks of suicide or attempted suicide should be consulted with a mental health professional immediately. The safest course of action is hospitalization, placing the individual in a safe and protected environment. Proper medical intervention and treatment are essential for stabilization and management of such cases.¹¹ Life styles need to be modified to reduce stress problem.

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Conflict of interest: None

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