

Assessment of Intention and Risk Factors for Suicide in Elderly: An Autopsy Study

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Abstract

Introduction: Over the past 30 years, Beck's Suicide Intent Scale (SIS) has been the prevailing psychometric scale for assessing suicide intent in suicide attempters. In recent studies showed a positive relationship between SIS scores. Since the proportion of older people in population is rising worldwide, indeed the increase in developing countries like India is even greater than the developed countries. **Material & Methods:** The present autopsy has been carried out in the Department of Forensic Medicine, Bangalore Medical College and Research Institute, Bangalore. All the cases aged 60 years and above brought to the department for medico-legal autopsy with alleged history of suicide were selected. Detailed information regarding the deceased particulars including suicidal scale I as in, presumptive stressful life events as in and the circumstances of death were collected from the relatives and police. **Results:** Previous suicidal attempt was present in 11% of the victims. Most had history of bad physical health prior to death in suicide victims. 68% had Family h/o suicide in elderly suicides. 21% of victims had CVS disorder, 12% diabetes. 80% of victims had low suicide intention. Total number of stressful life events experienced by study population was very high- 5.29±1.05 and 5.05±1.04 for males and females respectively. The mean stressful life event score for life time in study population was also high- 357.37±62.62 and 365.53±86.46 in males and females respectively. **Conclusions:** Total number of stressful life events experienced by study population was very high -5.29±1.05 and 5.05±1.04 for males and females respectively. The mean stressful life event score for life time in study population was also high- 357.37±62.62 and 365.53±86.46 in males and females respectively.

Keywords: Suicide Intent Scale (SIS); Elderly Suicide; Stressful Life Events.

Introduction

A great deal of research has been focused on the suicide in young, but surprisingly, limited research has been under taken in the area of suicide in elderly accomplished by under reporting. In India social studies were more likely to be associated with younger people than with older individuals. Although the number of young people who commit suicide is larger, suicide among elderly also forms a significant group.

It is even more crucial to take seriously, any threats of suicide on the part of older individuals, because of their efforts to take their own lives so often to have a fatal outcome- older people tend to be more "successful" when they try to kill themselves.

Over the past 30 years, Beck's Suicide Intent Scale (SIS) has been the prevailing psychometric scale for assessing suicide intent in suicide attempters. In a recent review article, five out of 13 studies showed a positive relationship between SIS scores and suicide over a follow-up period ranging from 10 months to 20 years [1].

Since the proportion of older people in population is rising worldwide, indeed the increase in developing countries like India is even greater than the developed countries. It has been predicted "even if suicide rate remains stable over a period of time the larger size of the elder population will increase the number of elderly suicides, compared to today's figures".

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Material and Methods

The present autopsy study among elder people has been carried out in the Department of Forensic Medicine, Victoria Hospital, Bangalore Medical College and Research Institute, Bangalore during the period November 2005 to April 2007(18 months). All the cases aged 60 years and above brought to the department for medico-legal autopsy with alleged history of suicide and or detected as suicide by the circumstantial evidences and autopsy findings were selected. A sum total of 70 cases were studied for this prospective and descriptive study during above mentioned period.

Detailed information regarding the deceased particulars including suicidal scale I [1] as in, presumptive stressful life events [2] as in and the circumstances of death were collected from the relatives and police. In some cases this information was supplemented by either visit to the scene of crime, the photographs of scene of crime and also by suicide notes, if any.

The Suicide Intent Scale (SIS; Beck, Schuyler, & Herman, 1974) [2] is an interview-administered measure of the seriousness of the intent to commit suicide among patients who have actually attempted suicide. The Gurmeet Singh PSLE Scale [3] was used to estimate the effect of various psychosocial stressful events.

Results

Previous suicidal attempt was present in only 11% of the victims and 1 in every 8 victims had attempted suicide in the past Table 1. 65% had history of bad physical health prior to death in suicide victims Table 2.

Table 1: Previous suicidal attempts in elderly suicide victims

SI No.	Event	Total	%
1	Absent	62	89%
2	Present	8	11%
	Total	70	100%

Table 2: Physical health prior to death

Sl. No.	Condition	Male	Female	Total
1	Good	24 (34%)	2 (3%)	25 (35%)
2	Bad	27 (39%)	17 (24%)	45 (65%)
	Total	51(73%)	19 (27%)	70

Most cases (68%) had Family h/o suicide in elderly suicides Table 3. With respect to chronic illness and physical pain (some time unbearable)- 21% had CVS disorder, 12% diabetes & 10% each respiratory and Osteoarthritis Table 4. 80% of victims had low suicide intention Table 5. From the Table 6 we can see that, see that the total number of stressful life events experienced by study population was very high and as follows- for one year mean were 5.29±1.05 and 5.05±1.04 for males and females respectively. Similarly for the life time the average number of stressful life events experienced by study population was 7.65±1.34 and 7.74±1.35 in males and females respectively.

The mean stressful life event score for life time in study population was 357.37±62.62 and 365.53±86.46 in males and females respectively. Table 7.

Table 3: Family h/o suicide in elderly suicides

SI No.	Family history	Total	%
1	Absent	68	97%
2	Present	2	3%
	Total	70	100%

Table 4: Showing chronic illness and physical pain (some time unbearable) experienced by study population

SI No.	Disease	%	Total
1	Cardiovascular	21%	15
2	Diabetes	17%	12
3	Respiratory problem	14%	10
4	CNS Problem	7%	5
5	Osteoarthritis	14%	10
6	Pain abdomen	12%	9
7	Malignancy	7%	5
8	Urinary problem	5%	4
9	Liver disease	3%	2
	Total	100%	72

Table 5: Demonstrates gradating of suicide intention

SI No	Suicide intention	No	%
1	Low	56	80%
2	Medium	13	19%
3	High	1	1%
	Total	70	100%

Table 6: Average number of stressful life events experienced by study population

	PSLE (Past 1 year) Mean±SD	PSLE (Life time) Mean±SD
Male	5.29±1.05	7.65±1.34
Female	5.05±1.04	7.74±1.35
Total	5.23±1.05	7.67±1.34

Table 7: Distribution of study population on the basis of SIS, PSLES for past one year and life time

Sex	Total Cases	SIS Mean±SD	PSLES (past one yr) Mean±SD	PSLES (life time) Mean±SD
Male	51	9.31±1.71	230.9±65.78	357.37±62.62
Female	19	8.63±1.80	226.95±55.19	365.53±86.46
Total	70	9.13±1.75	229±61.16	359±69.94

Discussion

Previous suicidal attempt was present in only 11% of the victims and 1 in every 8 victims had attempted suicide in the past. This is in contrast with the findings of Bennet [4], Hude Quan [5], Abraham VJ [6], O' Connel et al. [7] and Blow [8]. This could be due to the reason that when elderly attempt suicide, most of the time they were successful, because of strong suicidal intention.

More than half of the males and 2/3rd of females had ill health prior to death and similar findings were made by Howard Cattell [9], H R Cattell [10] and JN Vyas [11] indicating that exacerbation of chronic illness or ill health precipitates suicidal attempt. Family h/o suicide was present in only 3% of the suicide victims and same result was observed by Bennet [4] and is in contrast with Rubenowitz [12] which may be because of lack of knowledge about family h/o of suicide in the informants.

Cardiovascular problems (21%) were the most common chronic illness faced by study population. Others included diabetes mellitus (17%), respiratory problems (14%), osteoarthritis (14%), pain abdomen (12%), neurological problems (7%), cancers (7%), urinary problems (5%) and liver problems (3%). Similar findings were observed by Howard Cattell [8,9] and H R Cattell [10]. But high rate of cancer incidence among elderly who committed suicide was found by Haakon H Eilertsen [13]. This indicates cardiovascular and diabetes are not only causing financial and health burden on lower and middle class people, in addition they are contributing to increase in suicide rates among elderly.

Suicidal intention of study population was assessed by using suicide intent scale I and was found that 80% had low intention, 19% medium and one of the individual had high intention of suicide. This indicates that elderly suicide victims

had strong intention to end their lives. A suicide note was found in only one of the case (1.4%) in contrast to Hude Quan [5] who noted in his study that 35.5% females and 28.6% males had left the suicidal note. This could be due to the fact that most of the individuals were fed up with their care takers and family conflicts, and not left even suicidal note and also not informed their suicidal ideation and this can also be attributed to a higher rate of illiterate victims in our study.

It was astonishing to see that the total number of stressful life events experienced by study population were very high and as follows- for one year mean were 5.29±1.05 and 5.05±1.04 for males and females respectively and the same events for normal adult population were 1.62±2.21 and 2.46±3.27 in males and females respectively (as found by Gurumeet Singh [3] and the Odds ratio are 7.68 and 8.64 in males and females respectively. This indicates that elderly suicide victims had experienced about 8 times more stressful events in past one year compared to the normal adult population. The actual difference between two means is more than twice the standard error of difference between the two means (for the past one year) [i.e. 3.67 and 2.59 in males and females compared to 0.499 and 0.8733 in males and females], indicating that a statistically significant number of elderly study population had experienced more stressful events for the past one year compared to normal adult population (mean stressful life event score for past one year was 230.9±65.78 in males and 226.95±55.19 in females).

Similarly for the life time the average number of stressful life events experienced by study population was 7.65±1.34 and 7.74±1.35 in males and females respectively but for normal adult population it was 10.18±5.24 and 11.26±5.28 in males and females respectively. The twice the standard error of difference between the two means (for the life time) was 1.0276 and 1.34 in males and females respectively compared to actual difference between two means 2.53 and 3.52 in males and females respectively, indicating that statistically significant number of elderly study population also had experienced more stressful events in their life time compared to normal adult population.

Conclusions

Total number of stressful life events experienced by study population was very high -5.29±1.05 and 5.05±1.04 for males and females respectively. The

mean stressful life event score for life time in study population was also high- 357.37 ± 62.62 and 365.53 ± 86.46 in males and females respectively.

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