



UN FAVOURABLE OCCASION PROXIMAL TO SUICIDE AN AMALGAMATION FROM CONTEMPLATION : PSYCHOLOGY AUTOPSY CENTRAL REGION BHOPAL

Forensic Medicine

Dr. Minakshi S* Department of Psychiatry, M.D.STD, NIMHANS Bangalore. *Corresponding Author

Dr. Sandeep Singh Professor and H.O.D Department of forensic Medicine L.N Medical College Bhopal M.P.

ABSTRACT

Background: Psychological autopsy is the reconstruction of events leading to death. There are few studies on psychological autopsy.

Aim: To understand the profile of suicide completers and find out ways of dealing with it.

Method: 200 randomly both sex age cases were analyzed. Using a semi-structured, self-designed questionnaire, the family, friends and relatives of the deceased were interviewed.

Results: The presence of some type of psychiatric disorder and stressful life events are two important reasons for committing suicide.

Conclusion: Psychological autopsy is a very important tool for assessing the causes and precipitants of suicide. More and more studies in this field are required with a larger sample size further evaluation of suicides.

KEYWORDS

Psychological autopsy, suicide, psychiatric disorders

INTRODUCTION

Suicide represents major health problem. Suicide is the second commonest manner of unnatural death flanked by accident and homicide. Human suicidal behavior has always been a source of dread and wonder. There is no single cause or group or a course that give a complete explanation on about the suicide rate. Prevalence studies shows that between 4-12% of the general population have made one attempt and the repetition. According to National crime record bureau in India every 5 minutes a person commits suicide 7 attempts to kill themselves forming about 1,00,000 suicide per day.

According to Durkheim –“each victim of suicide gives a personal stamp which expresses his temperament, the special condition in which he is involved and which consequently cannot be explained by the social and general cause of the phenomenon.”¹

Despite historical recognition of the predisposing role of social factors in the onset of illness, it is only during the last 40 years that scientists have attempted to study these phenomena systematically. Claude Bernard (1865/1961) noted that the maintenance of life is critically dependent on keeping our internal milieu constant in the face of a changing environment. Cannon (1929) called this “homeostasis”²

In 1936 Hans Selye articulated his concept of stress as the “general adaptation syndrome,” a set of nonspecific physiological reactions to various noxious environmental agents related and somatoform disorders.³

We all talk about stress, but we are not very clear about what it is! Stress may result from both desirable and undesirable events in life. It is not possible to imagine life without stress, as it is a part and parcel of everybody's life. Stress is a source of problem only when we cannot cope up with it. Individuals may react differently to the same stressful situation. Thus it is our perception and reaction to the event which determines the stress, rather than the event itself. One's reaction to stress can affect his mental and physical health.

Studies relating social factors and life events to illness appear with remarkable regularity in the major psychological, psychiatric, psychosomatic, and sociological journals, and to a lesser extent in those of clinical medicine and epidemiology. While some of these publications derive from the cumulative efforts of investigators who have worked in this field for many years, concern has been expressed that many recent studies repeat both the findings and the flaws of earlier ones, delaying a hierarchical growth and development of knowledge in the field.²

The term “social stressors” refers to personal life changes, such as bereavement, marriage, or loss of job, which alter the individual's social setting. A more specific definition is proposed by *Holmes and Rahe*, who define as Epical-stressors any set of circumstances the advent of which signifies or requires change in the individual's ongoing life pattern.² According to this conception, exposure to social stressors does not cause disease but may alter the individual's

susceptibility at a particular period of time and thereby serve as a precipitating factor².

The role of stressful life events in the etiology of various diseases has been a field of research for the last 25 years. Derived from *William B. Cannon's* early observations of bodily changes related to emotions and *Adolph Meyer's* interest in the life chart as a tool in medical diagnosis, the field was first given formal recognition at the 1949 Conference on Life Stress and Bodily Disease sponsored by the Association for Research in Nervous and Mental Diseases.⁴

Accordingly, there is a need for critical evaluation of this literature, to review selectively the research on the relations of life events, stress, and the onset of illness; to identify major variables mediating the impact of stressful events on individuals.

Hence it is imperative that each case of suicide singly as well as in comparison with others. The needs to study the various factors cannot be emphasized enough. In our country there is paucity of studies regarding the psychological autopsy of victims. Various psycho-social characteristics of suicide victims in the central region of India, which had been witnessing a large number of suicides inadequately. The stress response refers to the hormonal and metabolic changes in the body following physical or emotional trauma or critical illness that cause disequilibrium and threaten homeostasis.^{5,6}

Homeostatic threats include arterial and venous pressure derangements, changes in volume, osmolality, pH, and arterial oxygen content. Also, temperature, pain, anxiety, and toxic mediators from tissue damage and infection can trigger the response⁶. These threats alert the central nervous system; reach the hypothalamus in the brain which then releases corticotrophin-releasing hormone (CRH). This stimulates the release of adrenaline and noradrenalin from the adrenal medulla and triggers the sympathetic nervous system⁷. Heart rate and respiratory rate therefore increase in order to facilitate a greater delivery of nutrients and elimination of waste products.⁷ This is the body's stress response, commonly referred to as the ‘fight or flight’ response, which aims to protect the body against aggression⁸. CRH also activates the hypothalamic-pituitary-adrenal axis (HPA), which triggers the release of cortisol from the adrenal medulla to return systemic homeostasis once the threat has been dealt with. Prolonged activation of this stress response erodes the capacity of cells and tissues to respond to changes in physiological need, and depletes metabolic reserve.

The sympathetic nervous system becomes overactive in a number of diseases, and underlies mental health conditions such as anxiety, depression and chronic stress. When it is too intense and lasts for longer periods, it is associated with higher morbidity and mortality.⁸

The body's response will depend on the magnitude and duration of the stress, as well as the nutritional status of the patient⁷. It is therefore important to be acquainted with the complex mechanisms of the stress response in order to act early and prevent more harmful effects.⁸

In-depth study of suicide prior even prior to the act is known as psychological autopsy it is defined by Shneidman, E.S. "A behavioural scientific impartial investigation of the psychological (motivational, intentional) aspects of a particular death. It legitimately conducts interviews (with a variety of people who knew the decedent) and examines personal documents (suicidal notes, diaries, and letters) and other materials (including autopsy and police reports) that are relevant to the role in the individual's death."

Hence the present study is was undertaken to evaluate the causes responsible for suicide whether psychological tool is an important tool to unravel the such associated factors responsible for suicide and if any preventive strategy could be made on these factors to reduce the rate of suicide.

AIMS AND OBJECTIVES :

1. Age
2. Sex
3. Education
4. Employment
5. To assess the age psycho social factors responsible for suicide with respect to
 - Marital status
 - Type of family
 - Internal personal relation ship
 - Suicide note
6. To asses any associated psychiatric and physical co morbidity
7. To find out any relation with substance abuse
8. To assess the utility of psychological autopsy an important tool to study the responsible factors in case of death.

MATERIAL AND METHODS:

This studies Psychological autopsies on 200 suicide cases from Bhopal region of central India" was done in mortuary of Gandhi Medical College Bhopal on the deceased brought for the medico legal autopsies. 200 cases of both sexes and ages were randomly selected over the period for the three years from 2007 to 2009 after ethical approval.

Inclusion Criteria:

Only those bodies were taken which were confirmed to be suicide at the time of autopsy and this include the hanging and poisoning cases.

Exclusion Criteria:

Drowning, burn, train run over fatal from the height and fire arm cases were excluded. Due to the dubious manner of death: more over such cases were not commonly seen in locality.

Studies included both rural and urban in all age groups and sexes. Study involved self semi structural interview get approved from peer group from peer group for psychological interview. Psychological autopsy which were asked to the family member, relatives and friends of the deceased, prior to the interview questionnaire full explained and consent was taken from each individual. Police information and Panchanama also taken into consideration along with old medical records, deliberate self ham and substance abuse signs were noted. Retrospectively diagnosis of psychiatric disorder was made with help of psychiatrist consultation and put finally into the category of DSM criteria.

RESULTS AND DISCUSSION:

Method Of Suicide:

Out of 200 number case 118(59%) were poisoning and 72 (41%). The age group 21-40 years constitute the major chunk that is 62.5% and less than 20 year group second that is 27.5%. In 61-80 yrs no female.

Age:

While studying suicide by hanging and use of poisonous substances the mean age of people who committed suicide by hanging was 30.79 yrs and the mean age of people commit suicide by using poisonous symptoms was 25.6 yrs. This shows that older people tend to commit suicide by hanging as compared to younger people who use methods⁹ noted elderly used violent methods of suicide like hanging and fire arm.

Indian studies at by lagaraj et al (2005) said that two groups were related to age while attempting suicide 15-19 yrs group and 30-44 yrs group. According to Indian studies by josephs at all the older men were

likely to commit suicide than younger man.

Sex:

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This shows that younger people commit hanging as compare to older. This shows that older people tend to commit suicide by hanging as compared to younger people who use methods. McIntosh et al (1986) noted f elderly used violent methods of suicide like hanging and fire arm. Indian studies at by lagaraj et al (2005) said that two groups were related to age while attempt in suicide 15-19 yrs group and 30-44 yrs group According to Indan study by josephs at all the older men were likely to commit suicide than younger man.

Marital Status:

It was found that out of 82 i.e that is 49(59.75%) were married. In the group who commit suicide by poisonous substance 71(60.17%) out of 118 were married. This shows that larger number of people were married. This shows that larger number of people are married people committed suicide as compare to un married. One of the probable reasons for observing this trend could be that the mean age of people who commit suicide was 27.74 yrs i.e. older age group.

Study in Tsuang et al (1992) stated that suicide for the single person is twice that of married person and that of divorced widowed or separated in four to five times. This is not keeping with our study regarding marital status in both groups. Among the data provided by Kerala state mental health authority marriage was not having a protective effect or suicide in their culture. 75.25% of the studies in Kerala was married.

Religion:

It was found that among suicidal hanging was people 91.5% were Hindus and 97.45% of committer by poisons from HINDUS. Various have cited from that in literature. It is claimed that monotheistic religions Christianity and Islam propagate suicide as sin and that may be the reason for decrease number of suicide this religion.

But in our stud the fact that taken from a population predominantly following Hinduism may the high number of increased number of cases in Hindus According to⁹. In study¹⁰, it was found that religious persuasion failed to distinguish between suicide attempter and non attempter. But on the contrary according to study¹¹.

Occupational Status:

In our study of 82 deceased who committed hanging 29(35.37%) were employed 14.63% of them were unemployed and 23.175 housewife. 14 out of the 33 (42.4%) who attempted suicide by consumption of poisons were employed 30% were unemployed and 18.2% were house wives. Surprisingly it was noted that students formed 26.83% of the hanging group & 9.4% of the poisonous substance group.

In a study done.¹² According to the 2002 data of the Kerala State Mental Authority 19.8% of the suicide cases in the state were unemployed, 15.6% were farmers & 14.8% were those employed in the private sector.

Types Of Family:

In our study out of 159 deceased were living probably due to poor family support, loneliness and poor family in comparison to joint family nuclear, loneliness an joint family sport In our study out of 159 deceased were living probably due to poor family support, loneliness and poor family in comparison to joint family nuclear, loneliness an joint family sport.

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Time Of Committing Suicide:

According to our study nearly 35.1% of suicide was committed between 12 noon and 6 pm and 35% between 6 pm to midnight. According to¹³ their study on suicidal attempts showed that 35.4% of patients attempted suicide between 12 noon and 6 pm and another 34% between 6 pm and midnight. According¹⁴ in a descriptive review study, it was found that most suicide acts (led to death) were estimated to

occur between evening (10 pm) and morning (10 am).

Place Of Committing Suicidem:

In our study we found that all the suicide attempters by hanging (i.e. 100%) and 94% of attempters by poisonous substances attempted at home. This finding is similar to the study by ¹⁵ in which two thirds of cases (106 out of 162 i.e. 65.4%) of the people hanged themselves at their homes.

Past History Of Suicide Attempts:

It was noted that 14.6% of the hanging cases had previous attempt. Out of these 7 had attempted more than 2 times. 85.4% of people did not have any past attempts. In comparison, it was found that among using poisonous substances no had a history of past attempt.

Our finding was different from the study conducted by ¹⁶ in which nearly half i.e. 44.7% of the suicides by hanging had previously self harmed. In a study conducted by ¹⁷ while studying a group of people comprising suicide ideators, attempters and completers, it was found that 6.9%, 24.1% and 18.2% had past history of attempt, respectively. The importance of this parameter cannot be undermined, since patients with suicidal attempt need evaluation, early intervention and long term follow up.

History Of Suicidal Threats:

In our history of suicidal threats present in 143 cases out of 200 cases and having almost similar distribution in both the groups. Suicidal ideas were expressed by more than 2/3 and clear intent was present in more than a third. Often warning was given to more than one person according to ^{19,20} said 60% made direct verbal threats and 20% gave indirect indications.

In a study comparing two cities it was noticed that in L.A, 72% made direct reference against 27% in Vienna. Indirect reference was made by 25% in LA and 2% in Vienna. It is likely that cultural factors determine extent of signaling ²¹.

Medical Illness:

Among the deceased studied in both the groups, 9 (11%) of the hanging group had a morbid medical illness. 2 (1.7%) of the poisonous substances group had a history of medical illness. Among the 3 had hypertension 2 had respiratory disease 1 had hypothyroidism. According study conducted by ²² medical illness may predispose to suicide and the most common methods involved were firearms (28%) and hanging (24%).

Family History Of Suicide:

In our study we found that 22(26.8%) of our hanging group had family history of Psychiatric illness. According to ²³ both a family history and a family psychiatric history significantly increased suicide risk. According to ²⁴ the off springs of mothers with suicide attempts are at a markedly increased risk for suicidality themselves. Suicidal Completes are likely to come from families with a history of suicidal behavior ²⁵.

Probable Psychiatric Diagnosis:

In our study we have found that alcohol related disorder diagnosis given to 33%, adjustment disorder was seen in 23%, 1% of patients i.e. 2 had schizophrenia and 1 of them had attempted under influence of hallucinations. Major depressive disorder was the diagnosis given to 39.5%. Among the attempters using poisonous substances 60% were given diagnosis of Adjustment Disorder whereas 15% were impulsive, 23% had border line personality disorder and 17% had bipolar disorder.

According to ²⁶ impulsive attempts were associated with low lethality and lack of depression. found psychiatric diagnosis leading to hospitalization was the most prominent risk factor for suicide and risk was extremely high for those recently discharged from hospital. According to of alcohol dependent persons in their study attempted suicide. Hekkinen et al (1995) found that excessive alcohol use may be related to suicide. According to Palmer et al the estimated lifetime risk of suicide for first admission and new onset cases of schizophrenia is 5.6%.

According to Suicide & Mental Health Association International children with ADHD are plagued with overall feeling of low self worth, increased incidence of depression and suicide. According to

James et al (2004) an association of ADHD and completed suicide was found.

PSYCHIATRIC ILLNESS	OUR STUDY	BABY (2006) et al	PREUS S (2003) et al	LNSKI P (1998) et al	SOLO FF (2000) et al	ROY (2000)
Alcohol Related Disorder	16.5%	10%	52%	7%		
Schizophrenia	1%			4%		
Border Line Personality Disorder	23%				84%	50%
Adjustment Disorder	11.5%	40%				
Bipolar Disorder	8.5%			6%		
Major Depressive Disorder	39.5%					40

CONCLUSION:

We aimed to study the profile of those who had completed suicide on sociodemographic status, psychiatric morbidity, substance abuse, previous suicide attempts, stressful and also emphasized the deciphering the prevalent psycho social and psychiatric risk factors associated with its importance. Study revealed the various factors. We conclude that psychological autopsy is a very important tool for assessing the causes and Precipitants of suicide. It is very difficult to assess the exact reason or pinpoint the cause of suicide. More studies in this field is required to include all the types of suicide this type of study could further be elaborated to made for future preventive plans.

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