

A cross-sectional study to assess the role of stressful life events in suicide attempters

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Abstract:

Suicide is a complex human behaviour, which has biological, psychological, and social causes. It is among the leading causes of premature death among the economically productive population. Stressful life events are one of the reasons for attempted suicide. A cross-sectional study of among 80 suicide attempters admitted in intensive care unit was done. Presumptive stressful life events were assessed in relation to the suicidal intent and coping strategies. In this study half of the suicide attempters were having high intent and negative life events like interpersonal conflicts which were marriage related, financial difficulties and personal illnesses were commonly seen. High intent attempters were having more stressful life events and there was no statistically significant correlation between coping strategies and stressful life events.

Keywords: Suicide attempt, Stressful life events, Coping, Suicide intent, Marriage conflict .

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I. Introduction:

Suicide attempts are one of the most significant predictors of suicide, a meta-analysis estimated that the risk of completed suicide among individuals who attempted suicide is 38–40 times higher than that of the general population. Stressful life events have often been associated with impulsive suicide attempts. Negative life events (NLEs), defined as objective occurrences of sufficient magnitude to cause negative or adverse life pattern changes for most individuals who experienced them, are one of these risk factors. NLEs have been reported to be significantly associated with suicidal and the risk increased with the frequency of experienced events. The odds (O.R=1.57, 95% CI=1.016–2.269, p=0.042) of attempted suicide was high among group which had high stressful life events was reported in an study by large epidemiological study by McFeeters et al [1]. According to Weyrauch et al [2] in all suicide attempters a background of interpersonal loss and disruption occurred in the year preceding the suicide attempt. Effective coping may act as a deterrent from suicidal behaviours in certain individuals by helping them to deal well with stress in life. On the other hand, certain types of coping like avoidance may predispose a person to suicidal behaviours. Hence in our study we aim to assess the role of stressful life events in suicide attempters.

II. Materials And Methods:

This cross-sectional study was done in a tertiary care teaching hospital in Chennai, India. For the purpose of the present study a case of attempted suicide was defined as “A person who had reported the act to be deliberate and the expected outcome was to end their life”. The participants who are admitted in intensive care unit and they must be 18 – 65 years of age.

Study design: Cross-sectional study

Study location: Sree Balaji medical college Chrompet, Tamilnadu, India.

Study duration: March 2021- June 2022

Sample size: 80

Inclusion criteria:

1. Individuals who have reported the act to be deliberate and the expected outcome was to end their life.
2. Individuals who are willing to give their consent to participate in the study
3. Age 18-65 years of both gender

Exclusion criterion:

1. Critically ill patients who are unable to give interviews.
2. Persons who have H/O of cognitive impairment/Intellectual disability.

Methodology:

Critically ill patients unable to give interview were excluded from the study. 80 individuals admitted in intensive care unit were interviewed shortly after his/her medical condition became stable. Semi-structured

proforma was used to collect basic sociodemographic details and clinical variables of the study population. Suicide intent was assessed using Beck's suicide intent scale followed by Beck's suicide intent scale (BSS)^[4] was used to measure the intent of the attempt. The scale is a 19-item scale with 2 sections each item is rated on an ordinal scale of 1,2,3 with a total score ranging from 0 to 30. Section 1 consists of items dealing with objective circumstances. Section 2 contains items based on the patient's self-report of their internal concept of intent. In which 15-19 was considered low intent, 20-28 as medium intent and more than 29 as high intent.

Presumptive stressful life events scale (PSLES)^[5] is a scale consists of 51 life events used to measure stressful life events experienced by an individual in the last 1 year. One hundred was the highest stress score and zero no perceived stress. Scale items were further classified into Major personal illness, Family conflict, Marriage related LE, Financial loss/problem, Minor violation of law, Death in family member, Work related LE, Unemployment: self/family member, sexual problems and positive life events according to the response of the study population.

Brief COPE^[6] a shorter edition of the original 60-item COPE was used to measure coping strategies used in the study population. It was divided into three categories: problem focused coping, emotion focused coping and avoidant coping. The participant was instructed to recall a particular stressful event they may have gone through in the previous year. Active coping, use of informational support, positive reframing, planning belonged to problem focused coping. Emotional support, venting, humour, acceptance, religion, self-blame was categorised as emotion focused coping. Self-distraction, denial, substance use, behavioural disengagement was categorised as avoidant coping.

Statistical analysis: Descriptive analysis was carried out and the continuous variables were described in terms of mean and standard deviation, whereas frequency and proportion were used to describe categorical variables.

III. Results:

The mean age of the population was 34.75±13.65, with 54 (67.5%) females and 26(32.5%) males. 48(60%) of the population was married, 23 (28%) were single and 9(11.25%) were divorced/widowed/separated. 44 (55%) were of lower middle socioeconomic status according to modified kupuswamy's scale.

The PSLES scale was divided into 10 types of stressful life events depending upon the life events that was commonly reported in our study demography. The mean stress score was 113.24±95.09 (refer table no:1) and every attempter had 2-3 stressful life event in the last 1 year (refer table no :2). Marriage related conflict was reported by 36.7%, financial loss/ problem by 18.1%, major personal illness by 17.5%, death in family members by 6.9%, family conflict by 6.4%, Positive life events by 5.3%, work related life events by 2.1%, unemployment 3.2%, sexual problems by 2.7% and minor violation of law 1.1%. Half of our study population belonged to high intent suicide group 40(50%) (refer table no:3).

Among the suicide attempters according to Beck's Suicide intent scale the mean score of suicidal intent was 28.05±7.3, in which 40(50%) of the patients had high intent followed by 33(41.25%) with medium intent and 7(8.75%) with the low intent. High intent suicide attempters have experienced more stressful life events (123.22 ± 95.62) than low (92.14 ± 84.56) and medium (105.61 ± 97.77), However the scores were not statistically significant.

Emotion focused coping (28.76±6.70) was predominantly used in the study population followed by avoidant coping (18.56±4.79) and problem focused coping (15.28±6.37) (refer table no:4) was the least used strategy in the study population. There was no statistically significant correlation between types of coping and presumptive stressful life event scores. However avoidant coping strategies were the mostly comparable with a rs=0.7 which meant avoidant coping was practiced more as the number of presumptive life events increased (refer table no :5).

Table no:1 Descriptive analysis of PSLES-SCORE in the study population (N=80)

Name	Mean ± S.D	Median	Minimum	Maximum	95% CI	
					Lower CI	Upper CI
PSLES-SCORE	113.24±95.09	119.50	0.00	344.00	92.40	134.08

Table no:2 Descriptive analysis of Number of Stressful life events in the study population (N=80)

Name	Mean ± S.D	Median	Minimum	Maximum	95% CI	
					Lower CI	Upper CI
Number of stressful life events	2.76±1.12	3.00	1.00	6.00	2.52	3.01

Table no:3 Descriptive analysis of type of stressful life events in the study population (N=80)

S.NO	Stressful life event	Percentage
1	Major personal problems (Physical and psychological) (Broken engagement or love affair, Major personal illness Prophecy of astrologer , Break up with friend)	17.5%
2	Family conflict (Excessivedrug use in family members, Illness in family member, Familyconflict, Trouble with neighbour)	6.4%
3	Marriage related LE (Extra marital relations of spouse, Marital separation or divorce, Lack of child, Marital conflict, Conflict with in laws, Lack of son)	36.7%
4	Financial loss/problem (Property or crop damage, Robbery or theft, Financial loss or problem ,Large loan)	18.1%
5	Minor violation of law	1.1%
6	Positive life events (Change of residence, or expansion of business, in work condition, Beginning/end/mid of college, Marriage of daughter)	5.3%
7	Death in family member Death of spouse, close family member, friend)	6.9%
8	Work related LE (Suspension from job, Problem at work)	2.1%
9	Unemployment: self/family member	3.2%
10	Sexual problems	2.7%

Table no:4 Comparison Between BSS-INTERPRETATION with presumptive stressful life events in the study population (N=80)

Parameter	Low intent	Medium intent	High intent	P value
PSLES-SCORE	92.14 ± 84.56	105.61 ± 97.77	123.22 ± 95.62	0.6129

$P < 0.05$ is considered statistically significant

Table no:5 Correlation Between PSLES scores with Coping strategies in the study population (N=80) [spearman correlation]

Parameter	PSLES-SCORE	P Value(spearman)
	rs Value	
EMOTION FOCUSED COPING	0.15	0.1964
PROBLEM FOCUSED COPING	0.17	0.1305
AVOIDANT COPING	0.07	0.5142

IV. Discussion:

In our study population suicide attempters admitted in the intensive care unit were taken and half of the population were high intent suicide attempters. The stressful life events are all negative events according to the PSLES scale this correlates with the findings by Suresh kumar.P.N et al^[3] who found that undesirable life events were reported commonly in cases than controls

In light of the population being married and being predominantly females, we can see that the stressful life events which are reported are mostly marriage related including marital conflict 36.7%, financial problems 18.1% and major personal illness 17.5%. Which is similar to studies by Kattimani et al^[7] in impulsive attempters, Latha K.S et al^[11], Radhakrishnan et al^[12] found interpersonal conflicts, financial issues and health related and failed love affairs were major stressful life events. Nilamadhabkar et al^[9] in their paper also found Major personal illness (43.6%). Family conflict (36.9%) and Marriage-related LE (34.9%) in their paper assessing suicide attempters in India. This could be due to the various unique marital situations in India like dowry demands and forced marriages these situations are more prevalent in certain parts of the country and among certain cultures like our study setting. Since marriage related conflicts are quite usual in everyone's house hold other factors like personality traits and undiagnosed or untreated mood disorder like depression could have caused this study population to resort to committing suicide.

In our study high intent suicide attempters have experienced more stressful life events (123.22 ± 95.62) than low (92.14 ± 84.56) and medium (105.61 ± 97.77). Mcfeeter et al^[1] in their paper reports the same.

In our study population emotion focused coping was commonly used it was similar to a study done by Kattimani et al. avoidant was the second commonest coping mechanism used by the study population (18.56±4.79). Similar to our study, Previous studies by Curry JF et al^[13] and Weyrauch KF et al^[2] have

suggested that avoidance coping is more common in suicide attempters in general. Avoidant coping was significantly correlated with suicide attempters both in current and attempters followed up after 12 years in a study by L.Ambrus et al^[8]. Veisani et al^[10] in their paper assessing associating between coping and common stressful life events in community setting showed that problem focused styles had lower risk of mental health problems and negative stressful life events in general population. In our study population individuals have used more unhelpful coping strategies like self-distraction from the stressful situation, behavioural disengagement, substance use and self-blame than useful coping skills like acceptance, venting, turning to religion, seeking emotional support and planning

V. Conclusion:

Negative life events were commonly reported than positive Interpersonal conflicts which were marriage related, financial difficulties and personal illnesses were commonly reported among suicide attempters. events. High intent suicide attempters were found to have experienced more presumptive stressful life events that medium and low intent. However, there was no statistically significant correlation between coping and stressful life events. Adverse life experiences can cause significant biological changes in endocrine and immune system which in presence of other unfavourable psycho social environment like low socio-economic status and poor coping skills can make a person resort to committing suicide. However not all individuals exposed to stressful life events have resorted to suicide attempts other factors like presence of mood disorder, impulsivity and cohesiveness of the family can also play a major role in this decision. The current study helps to distinguish the type of stressful life events that may induce the most pronounced psychological impact among suicide attempters. Hence studying about these factors will be useful in preventing future attempts of suicide.

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