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Perceived Expressed Emotion as a Risk Factor for Attempted Suicide – A Case Control Study

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Research Article

Abstract: **Background:** Relatively little is known about the role of perceived expressed emotion in attempted suicide. **Objective:** To identify whether perceived expressed emotions are a risk factor for attempted suicide. **Method:** Sixty seven consecutive adult suicide attempters who attended a tertiary care hospital in South India were recruited as cases. One hundred and thirty four controls were selected from the adult relatives and friends of other patients who attended the hospital for reasons other than attempted suicide. Assessment included details regarding socio-demographic data, psychiatric and physical morbidity, their stressors and perceived expressed emotions. Stressors were assessed using Presumptive Stressful Life Event Scale (Singh *et al.*, 1983) and Perceived Expressed Emotions using Family Emotional Involvement and Criticism Scale (Shields *et al.*, 1992). Multidimensional Scale of Perceived Social Support (Zimet *et al.*, 1988) was used to assess perceived family support. **Results:** Analyses revealed that a specific component of expressed emotion, namely perceived criticism (Odds Ratio=1.88; 95% Confidence Interval=1.01-2.04) was a significant risk factor for attempted suicide whereas emotional involvement was not (Odds Ratio=0.90; 95% Confidence Interval=0.55-1.46). Analyses also showed that psychiatric disorders, recent stressful life-events and lack of perceived family support were risk factors for attempted suicide. **Conclusions:** This study concludes that perceived expressed emotion, mainly perceived criticism is a significant risk factor for attempted suicide. Its implications in the genesis, treatment and prevention of attempted suicide are discussed.

Keywords: Attempted Suicide, Family Emotional Involvement, Perceived Expressed Emotion, Perceived Social Support.

Introduction

The World Health Organization, in its message on Suicide Prevention Day (2011), reported that on an average, almost three thousand people commit suicide each day. For every person who complete suicide, twenty or more may attempt to end life.[1] According to the National Crime Records Bureau, the official agency responsible for suicide data collection in India, more than one lakh (1,35,445) persons committed suicide in the year 2012 and the National average was 11.2 per one lakh population. Kerala has recorded the rate of 24.3 per one lakh population which is more than twice the National average. Family problems have been cited as the single most common cause for suicide. [2] Suicidal behavior is a complex human behavior, the cause of which consists of a constellation of components that act together and includes a variety of biological, psychological and social factors. Attempts were made by earlier researchers to study the role of family dysfunction in precipitating suicidal behaviour.[3] There is a consistent literature which links family discord with adolescent suicide attempts.[4] Family psychopathology, recent life events and presence of psychiatric morbidity were found to be significant predictors for completed suicide in an Indian study.[5] The construct of expressed emotion was introduced more than 40 years ago, to show how family attitudes and behaviors affect psychiatric disorders. Expressed emotion is not a measure of overall emotionality but, rather, a measure of the extent to which a family member expresses critical, hostile, and/or emotionally over involved attitudes toward a psychiatric patient.[6, 7] When patients return home from the hospital to live with relatives who are rated as high in expressed emotion, relapse is two to three times more likely to occur in the following 9–12 months.[8] Expressed emotion was initially developed and validated as a predictor of relapse in patients with schizophrenia.[9] However, subsequent work has established that the construct has predictive validity across a variety of psychiatric and medical conditions, including mood disorders,[10,11] alcoholism,[12] borderline personality disorder,[13] obsessive compulsive disorder,[14] obesity[15] and diabetes.[16] A recent meta-analysis demonstrated that expressed emotion is an even stronger predictor of poor outcome for patients with mood disorders and eating disorders than it is for patients with schizophrenia.[17] Studies on the role of expressed emotion and attempted suicide are few. In a study that examined the relationship between parental expressed emotion and adolescent self-injury, it was seen that parental criticism was significantly associated with adolescent self injurious thoughts and behavior.[18] Connor and Birchwood, in their study on perceived expressed emotion of voices and their impact on depression and suicidal thinking highlighted the emotionally supportive dimension of the voice-hearing

relationship that may have a protective role in the affective response of voice hearers.[19] In a nine month follow-up study examining the relationship of expressed emotion and parasuicidal behavior, it was found that families with higher expressed emotion showed more recurrent parasuicidal behaviors.[20] Very few Indian studies explore the role of expressed emotion and there has been no published study which explored its relation to adult attempted suicide. This study is an effort to identify whether the perceived expressed emotions are a risk factor for attempted suicide so that necessary steps could be implemented to cut down the rates and prevent the family and the society from such a heavy loss. The aim of our study was to identify whether the perceived expressed emotions are a risk factor for attempted suicide in adults.

Materials and Methods

Setting

Government Medical College Hospital, Thiruvananthapuram.

Period of Study

From April 2012 till July 2012. The study was conducted after the clearance from the Human Ethics Committee of the Institution.

Study Design

Hospital based Case-Control Study

Sample

Sixty seven consecutive cases were recruited from the Suicide Prevention Clinic of the Department of Psychiatry where the attempters have follow up soon after they get discharged from inpatient care (within a month of the attempt). One hundred and thirty four controls were selected from the relatives and friends of other patients who attend the Outpatient Department of various departments for reasons other than attempted suicide.

Inclusion Criteria

1. A case of attempted suicide was defined as a person, more than eighteen years of age, who has made a deliberate act of self harm consciously aimed at self destruction with non fatal outcome. Cases were assessed in the Suicide Prevention Clinic of the Department of Psychiatry where the attempters have follow up soon after they get discharged from inpatient care.
2. A Control was defined as a person who has never attempted suicide and was recruited from the relatives and friends of other patients who attend the Outpatient Department of various departments for reasons other than attempted suicide.

Method

The nature of study was explained to the cases and controls and a written informed consent was taken from them. Assessment of cases included details regarding socio- demographic data, psychiatric and physical morbidity, their stressors and perceived expressed emotions. Controls were assessed in similar lines except for the attempt. Stressors were assessed using Presumptive Stressful Life Event Scale and perceived expressed emotions using Family Emotional Involvement and Criticism Scale and Multidimensional Scale of Perceived Social Support.

Sample Size

Calculated with two sided confidence interval 95%, Power 80% and Expected Odds Ratio 2.5, the required sample size was estimated to be 67 for cases and 134 for controls.

Instruments

1. Proforma

Designed for the purpose of the study. Details regarding the socio-demographic characteristics, relevant past and family history of mental illness, present physical or psychiatric morbidity were included. Details regarding the suicide attempt were included in the evaluation of cases. Psychiatric morbidity was assessed through a clinical interview by a qualified psychiatrist and diagnosed using Diagnostic and Statistical manual of mental disorders IV edition, text revision. [21]

2. Presumptive Stressful Life Events Scale **(PSLES)** (Singh, G, Kaur, D and Kaur, H, 1983)

This standardised scale consists of items which are shown to be relevant to Indian culture and are representative of the common life events experienced by our population. It consists of 51 items and mean stress scores are available for all items. The 51 items are further classified according to (a) whether they are personal or impersonal (not dependent on the individual's action) (b) according to whether they are (1) desirable (eg, Outstanding personal achievement) (2) undesirable (eg, marital conflict, failure in examination) and (3) ambiguous (eg, change in working conditions, change in eating habits, etc). The number of life events patient had experienced in the past one month was assessed and stress scores calculated.[22]

3. Family Emotional Involvement and Criticism Scale **(FEICS)**

A fourteen item Likert type questionnaire,[23] developed by Shields *et al.* and measures the perceived expressed emotion. In this study, the scale was used to assess the perceived expressed emotion of both cases and controls. In this fourteen item scale, the items are clubbed to derive two subscales: Perceived Criticism (PC) and Intensity of Emotional Involvement (El). The initial standardisation of the scale was done on 83

respondents from a Family Medicine Centre (Shields *et al.*., 1992). Both the scales have 7 items each and are scored on a Likert scale ranging from 0-5 (minimum 0 to a maximum of 35 on each scale).

4. Multi dimensional Scale of Perceived Social Support **(MSPSS)** (Zimet *et al.*, 1988)

A twelve item, self rated measure of social support from family, friends and significant others as perceived by the individual.[24] In this study, the scale was used to assess the perceived social support by both cases and controls. The MSPSS has very good internal consistency with reported alpha coefficients of 0.91 for the total score and 0.90 to 0.95 for each of the three subscales.

Statistical Analysis

Data were analyzed using computer software, Statistical Package for Social Sciences (SPSS) version 20. Data are expressed in its frequency and percentage as well as mean and standard deviation. To elucidate the associations and comparisons between different parameters, Chi square (χ^2) test was used as nonparametric test. Student's t-test was used to compare mean values between two groups. Multivariate logistic regression analysis was performed to assess the risk factors (Odds ratio) of different factors for each group. For all statistical evaluations, a two-tailed probability of value, <0.05 was considered significant.

Observations and Results

Majority of the cases belonged to 20 to 29 years of age and were females. Most of them were married, unemployed, educated upto high school, belonged to low socio-economic status, nuclear families and Hindu religion. Cases and Controls were well comparable, as none of the baseline variables were significant. Simple analysis using Chi-square test showed that psychiatric morbidity, past history of mental illness, family history of mental illness; substance use disorder and suicide were significant risk factors ($p < 0.05$). Table 1 shows the comparison of mean stress scores, perceived expressed emotion (perceived criticism & emotional involvement) and perceived social support of cases and controls.

Table 1: Comparison of different scores between cases and controls

Parameter	Status	Mean	± SD	t value	P value
Mean Stress Scores (PSLES)	Controls	106.99	68.68	-10.68	< 0.001
	Cases	224.97	83.30		
Perceived Criticism	Controls	8.33	5.03	-14.16	< 0.001
	Cases	18.16	3.74		
Emotional Involvement	Controls	20.08	5.08	13.67	< 0.001
	Cases	10.70	3.40		
Perceived Social Support	Controls	22.67	5.46	13.84	< 0.001
	Cases	10.69	6.40		

The results of multivariate logistic regression analysis to assess the risk factors (Odds ratio) are shown in Table 2.

Table 2: Multivariate logistic regression analysis

Variables	B	± SE	OR	95% CI
Psychiatric Morbidity	-6.96	1.31	1.36	1.09-2.33
Mean Stress Scores	0.02	0.01	1.72	1.13-3.72
Perceived Criticism	0.41	0.11	1.88	1.01-2.04
Emotional Involvement	-0.39	0.11	0.90	0.55-1.46
Lack of perceived family support	-0.35	0.05	1.08	1.01-1.32

A specific component of expressed emotion, namely perceived criticism (Odds Ratio=1.88; 95% Confidence Interval=1.01-2.04) was a significant risk factor for attempted suicide whereas emotional involvement was not (Odds Ratio=0.90; 95% Confidence Interval=0.55-1.46). Analyses also showed that psychiatric disorders, recent stressful life-events and lack of perceived family support were risk factors for attempted suicide.

Discussion

Findings of our study in adult suicide attempters are similar to Wedig and Nock's study in adolescent attempted suicide.[18] Expressed Emotion is not a single unidirectional concept but should be viewed in connection with other family and cultural factors like the attitude of family members towards illness or patient, role expectations from patient, social relationships, cultural dynamics and type of society.[25] In a sociocentric society like India, where individuals are integral part of kinship that takes precedence over individuals, emotional involvement may be the norm and if absent, may be regarded as lack of care. Hence, an attempt was made to look into the role of emotional involvement as a potential protective factor but did not emerge as significant (Odds Ratio=0.6). This may be due to a Type II error but it is logically appealing to consider emotional involvement as a protective factor in a collectivist society like India. Moreover, emotional connectedness has been viewed as a suicide counter. Focusing on expressed emotions to prevent suicide attempts is important as it is a modifiable construct. While managing patients who have attempted suicide, involving family members in the therapy may bring down expressed emotion so that these patients will be benefitted. Limitations of our study include selection bias (hospital based) and recall bias (case control design). Future research should include population based studies, interventional studies addressing expressed emotion and development of culture sensitive research tools.

Conclusions

A specific component of expressed emotion, namely perceived criticism is a significant risk factor for attempted suicide in adults. Presence of psychiatric disorders, recent stressful life-events and lack of

perceived family support were also significant risk factors for attempted suicide. Careful assessment of the family environment and interventions focusing on family interactions will help to catalyze healing process, providing hope and positive growth for all those who are involved.

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