Life Events, Social Support, Coping Strategies and Quality of Life in Attempted Suicide - A Case Control Study

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Abstract

Background

Deliberate self harm is a major issue in the health care all over the world. Though it encompasses a wide variety of medical and social disciplines some of the important psychosocial variable such as life events, social support, coping strategies and quality of life have not yet been explored in depth in India.

Aims

To analyze and compare the type and severity of life events, coping strategies, social support and quality of life of suicide attempters versus matched normal controls and to identify the risk factors leading to suicide.

Method

50 consecutive suicide attempters were compared with same number of age, sex and martial status matched healthy controls using Presumptive Stressful Life Events Scale, Social Support Questionnaire, AECOM Coping Style Scale and WHO QOL – Bref.

Results

Suicide attempters experienced significantly more life events especially untoward events where as the control group experienced more desirable and impersonal life events. Social support, positive coping behaviours and of QOL were significantly lower in attempters. Among all risk factors desirable life events, good education and good social support were found to be protective against suicide.

Conclusions

Suicide attempters were differentiated from healthy controls based on more stressful life events, lower social support, less healthy coping behaviours and poor QOL. Positive life events, good education and good social support were found to be protective factors against suicide. However, it is difficult to pinpoint a single factor responsible for suicidal behaviour. It is the complex interplay of various interrelated factors and the resultant buffering effect, which is protecting the individual against deliberate self harm.

Key Words- deliberate self harm, life events, social support, coping, quality of life.

Introduction

The World Health Organization (1968) defines suicide act as "the injury with varying degrees of lethal intent and that suicide may be defined as a suicidal act with fatal outcome." Deliberate self harm is major issue in the health care all over the world. Many factors including biological and socio-cultural ones can modify this complex behaviour. Suicide is a significant problem in India with a reported rate of 10.6 per 100,000 population (National Crime Record Bureau, 2003). However it may be

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considerable under estimate due to under reporting and false reporting of many of the cases of suicides in India (Gajalakshmil & Peto, 2007). Certain thought provoking studies on suicide have been reported from India (Kumar, 2004). However, some of the important psychosocial variable such as life events or stressors, social support, coping strategies and quality of life have not yet been assessed in relation to deliberate self harm in India.

Life change could act as a stressor causing physiological arousal and enhanced susceptibility it illness. Life event research is one of the ways of systematically assessing the relationship between stress and illness. Suicide victims have experienced more changes in living conditions, work problems and object losses than normal controls (Hagnell & Rorsman , 1980). A review of Indian studies on stressors in suicide shows maladjustment with significant family members and domestic strife as the most important causes, followed by physical factors and mental illness (Ponnudurai, 1996). However, most of the Indian studies have not used a proper scale to assess life events and many of them were descriptive and retrospective studies.

A body of research in recent years has focused on the role of social support in maintaining emotional well-being and moderating the effects of life events There is evidence that social network among suicide attempters are weaker than in non-suicidal individuals (Hart et al, 1988). Life events can alter the social support system ,in terms of size, frequency of interaction and stability, and such changes may be associated with suicidal behaviours.

Coping behaviour, or the things people do to reduce the stress, has been a variable that has recently become the focus of research (Lazarus, 1974). Coping behaviour is operationally defined as the responses to external life stress that serve to prevent, avoid, reduce or control stress and emotional distress. In a study assessing the coping styles of suicidal patients (Horesh et al, 1996) found a negative correlation with minimisation, replacement, mapping and reversal, and a positive correlation with suppression, blame and substitution. Quality of life is another factor to assess with regard to suicide risk and a focus recent research in suicidology (Ponizovsky,et al, 2003). Considering the paucity of such work from India context present study was conducted to analyze and compare the type and severity of life events, coping strategies and social support and quality of life of suicide attempters and matched normal controls and to identify the risk factors leading to suicide attempt.

Material and methods

Study sample

The sample comprised of 50 suicide attempters qualifying the criteria for suicide attempt as defined by WHO (1968) admitted to different departments of Medical College Hospital, Calicut, Kerala, India. These patients were interviewed within the first week of their admission. Patients below the age of 18 years and those whose physical condition did not allow detailed evaluation were excluded from study. Wherever possible, relatives, friends and other possible sources of information such as spouse and colleagues were also interviewed for eliciting further information. There were no other exclusion criteria.

Age, sex and marital status matched healthy controls from the community formed the comparison group. The age was matched by grouping the age at 5 years intervals. These subjects were initially screened by GHQ-12 version (Goldberg & Williams, 1998) to exclude the presence of common mental disorders. Those who scored (out off score 2/3 mode) were excluded from the control group.

Tools

1. Personal Data Sheet

A specially designed proforma was used for documenting socio-demographic variables, illness variables and details of the current suicide attempt.

2. Presumptive Stressful Life Events Scale (PSLE)

This scale consists of fifty-one life events commonly experienced by normal Indian adult population (Singh et al, 1984). One hundred was the highest stress score and zero no perceived stress. Scale items were further classified into (a) desirable, undesirable or ambiguous and (b) personal or impersonal (not dependent on the individual action). Reliability of PSLE scale was conducted on 15 patients and relatives (Sharma & Ram, 1988). Life event data collected from each patient was compared with life events data about the patient given by his relative and was found to be satisfactory (0.8).

3. Social Support Questionnaire

This scale was specially developed by poling items from Social Support Scale of Asha (1996) and the Social Support Scale of Nehra et al (1996) by item analysis. Out 47 items 22 were positively worded and 25 were negatively worded. The positive statements were intermingled with negative statements to reduce the likelihood of response set occurring. This scale has approximately the same number of items from each area. The retest reliability obtained for this scale was 0.89.

4. AECOM Coping Style Scale

This is a 95-item scale (Plutchik et al, 1989) with a four-possibility spectrum ranging from 'never' to 'very often'. The scale measures eight basic coping styles that may be used for reducing stress and coping with life problems. These coping styles are (1) Suppression, (2) Help seeking, (3) Replacement, (4) Blame, (5) Substitution, (6) Mapping, (7) Reversal, and (8) Minimisation. The internal validity of the scale was found to have an α value of between 0.58 and 0.79 with a mean α value of 0.70. The questionnaire had both predictive validity and discriminative validity.

5. WHO QOL – Bref

WHO QOL – Bref (Saxena et al, 2001) contains 26 items with four domains 1. Physical health and well being, 2. Psychological health and well being, 3. Social relations, and 4. Environment. The scale has been shown to have good discriminant validity, sound content validity and good test-retest reliability at several international WHOQOL centres.

Statistical analysis

For comparison of quantitative variables we used paired t test or wilcoxon signed rank test applied depending on whether the data were normally distributed or not. Quantitative variables were compared by Mc-Nemar Chi- Square test. Conditional Logistic regression analysis was used to identify the risk factors. SPSS-10.0 (Bryman, 2001) and Epiinfo 3.2 (Alperin, & Miner, 2002) were used for statistical analyses.

Results

The sample comprised of 50 suicide attempters and 50 controls matched on age, sex and marital status. The mean age of attempters versus control was 30.82 ± 13.56 Vs 31.54 ± 13.1 (P=0.787) and the male female ratio was male attempters 22 (44%) Vs male control 22(44%) and female attempters 28(56%) Vs female control 28(56%) (P=1.0). In both groups 60% were married.

Comparison of mean scores of different types of life events in attempters versus controls showed significantly higher total life events, and undesirable and personal life events in attempters (Table-1).

Comparison of social support variables between attempters and controls showed that confiding relationship was significantly less (35(70%) Vs 49 (98%), Pearson Chi-square p=0.000) often present and loneliness was significantly more frequent (14(28%) Vs 3(6%), Pearson Chi-square p=0.003) in attempters. Comparison of various items from the social support scale showed significantly lower scores in attempters, except for religion (Table-2).

Table-1
Comparison of different types of life events

Variable	Attempters Mean SD	controls Mean SD	t-value
Total LE Score	201.70 153.05	130.54 125.61	2.508**
Desirable LE Score	70.26 80.37	75.92 65.81	0.447
Undesirable LE Score	164.46 120.32	88.14 96.47	3.219*
Personal LE Score	104.92 93.33	55.92 72.43	2.982*
Impersonal LE Score	96.78 86.73	74.62 71.74	1.335

*p<0.01; **p<0.05

Table-2
Comparison of variables in social support scale

Social Support	Attempters Mean SD	Controls Mean SD	t-value
Total score	110.70 17.48	127.20 12.47	5.650*
Reliable attachment	33.38 6.88	38.52 6.28	4.726*
Integration from friends	26.32 8.22	33.64 6.05	4.963*
Teachers/parental figures/elders	15.62 3.23	17.22 2.73	2.729*
Religion	13.82 2.93	14.66 2.06	1.694
Other sources	21.56 4.00	23.16 2.98	2.162**

*p<0.01; **p<0.05

Table-3 : Comparison of coping pattern between attempters and controls

Coping pattern	Attempters Mean SD	Controls Mean SD	t-value
Minimization	30.32 7.08	34.76 4.99	3.491*
Suppression	32.90 5.57	32.52 6.09	0.315
Help seeking	34.36 4.96	34.46 4.71	0.107
Replacement	31.90 7.43	34.98 5.27	2.394**
Blame	27.54 4.53	26.54 4.42	1.040
Substitution	21.88 6.26	23.80 5.77	1.658
Mapping	24.52 4.53	26.88 4.01	2.598**
Reversal	25.88 5.69	27.56 5.12	1.442

*p<0.01; **p<0.05

Table-4 : Comparison of QOL between attempters & controls

	Attempters Mean SD	controls Mean SD	t-value
Physical health & well being	21.52 5.50	25.4 3.18	3.967*
Psychological health & well being	18.08 4.43	21.02 2.71	4.108*
Social relations	9.42 2.63	11.66 2.03	4.758*
Environment	25.04 6.34	29.72 4.10	4.272*

*p<0.01; **p<0.05

Table-5 : Stepwise conditional logistic regression analysis of risk factors in suicide attempters

Significant Factors	Odds Ratio	Z Value	P Value
Desirable LE	0.97	-2.333	0.012
Mean Education (yrs.)	0.55	-2.894	0.004
Total Social Support Score	0.89	-2.457	0.014

Comparison of different types of coping behaviour between attempters and controls showed that scores for minimization, replacement and mapping were significantly higher in controls (Table-3).

The mean scores of all the four domains of QOL (physical health & well-being, psychological health & well-being, social relations and environment) were significantly lower in the attempters (Table-4).

All factors which were significant in one to one comparison were entered into a stepwise conditioned regression analysis. The final result showed that lifetime score of desirable life events, longer education and good social support were protective factors against suicide (Table-5).

Discussion

The present study attempted to differentiate suicide attempters from healthy controls based on their profile of life events, social support, coping strategies, and quality of life. Attempters had accumulation of life events especially unpleasant and personal events, lower social support, poor coping styles and poor quality of life.

Life events and other psychosocial stressors are commonly associated with suicidal behavior when attempters were compared to general population and non-suicidal psychiatric patients (Osvath et al, 2004). Heikkinen et al (1994) reported recent life events in 80% of suicides; job problems (28%), family discord (23%), somatic illness (22%), financial problems (18%), unemployment (16%), separation (14%), death (13%), and illness in a family member. In the present study psychosocial stressors like financial loss (34% Vs 14%), family conflict (30% Vs 6%), marital conflict (18% Vs 05), broken engagement and love failure (12% Vs 2%) and major personal illness (10% Vs 2%) were significantly higher in attempters than controls. Hagnell & Rorsman (1980) found more objective losses and humiliating experience in the week before death among suicide

victims than people dying from natural causes and more changes in living condition, work problems and objects losses in the final year. Maladjustment with significant family members and domestic strife has been cited as the most important causes of attempted suicide in many Indian studies (Latha et al, 1994; Kumar, 2004). Present study also figure outs interpersonal problems as the common life events experienced by attempters.

Coping skills are important protective factors against suicide. In the present study healthy coping behaviors such as minimization (ability to de-emphasize the burden of stressful events), replacement (ability to overcome stressful events by engaging in alternative behaviors) and mapping (ability to collect information for planning and to seek out alternative solutions to problems) were higher in controls. Amir et al (1999) reported negative correlation of healthy coping mechanisms such as mapping, minimization and replacement and positive correlation of coping styles of suppression (avoiding the problem or situation) with suicide risk. Some other coping behaviors such as reversal, substitution (Horesh et al, 1996) and help seeking (Amir et al, 1999) which have been reported to be excessive in suicide attempters, were not found in this study. Excessive use of substitution in attempters is harmful as it may predispose the individual to suicidal behavior reflecting the destructive nature inherent in excessive dependence on the environment.

Social support is another important protective factor against suicide. Social support is provided by networks comprised of family, relatives, friends, neighbours and co-workers, especially when the interaction is positive. The personal networks may provide social support that helps to maintain emotional well-being and buffer the effect of adverse life events, or it can have a direct, independent effect on mental health irrespective of presence or absence of stressful life events (Paykel et al, 1980). In the

present study, confiding relationship, support from reliable attachment, friends, teachers, parental figures, elders and other sources were significantly lower and loneliness was higher in attempters. There is evidence from comparative studies that social support systems are undermined among suicide attempters compared with non-suicidal individuals (Soykan et al, 2003). Religiosity and social support are very important and counter many stressors especially suicidal behaviour. Regular church attendance has been reported to be negatively associated with attempted suicide (Marion & Range, 2003). A psychological autopsy study by Vijayakumar & Rajkumar (1999) from India also showed low religiosity in suicide victims.

Social and family factors, negative life events and medical illness may interact with psychiatric and personality disorders, genetic variables, biological factors and psychosocial stressors and ultimately act as predisposing and precipitating or contributing factors to suicidal behaviour. Morano & Cisler (1993) reported an influence of recent loss on serious suicide attempts, especially when paired with a perceived lack of family support and hopelessness, which provides evidence for a "stress vulnerability" model of suicide behaviour.

Quality of life is an important variable in assessing the suicide risk. Since this is relatively a new area, only few studies have looked into this aspect in suicide attempters (Cui et al (2003). The score on all the four domains namely physical health & well-being, psychological health & well-being, social relations and environment were significantly lower in attempters in this study. Dissatisfaction with life at base line is reported as a risk factor for suicide (Koivumaa-Honkanen et al, 2001). The association was somewhat stronger in the first decade than in the second decade. Throughout the entire follow up, life dissatisfaction still predicted suicide after adjusting for other confounding variables. Subjects who reported dissatisfaction at base line and again six

years later showed a high risk of suicide compared to those who repeatedly reported dissatisfaction. Suicide was significantly associated with low quality of life in China (Phillips et al, 2004).

Stepwise regression analysis shows that desirable life events, good education and good social support are protective factors against suicide. Desirable life events by virtue of its positive nature may prevent the individual from attempting suicide. Good educational achievement may also help the individual to appraise the situation and to seek alternate solutions. Adequate education is also a prerequisite for problem solving skills and to deal adequately with stressful situations. Though lower education has not been directly cited as a risk factor, lower socio-economic status has been repeatedly shown as risk factor for suicide. Moreover lower education may also invite more adverse life events because of related consequences such as unemployment, poverty, lower social economic status etc. Lower education and subsequent poor social status can also indirectly reduce the social support vulnerable individuals. Good social support has always been cited as protective factor against suicide. In an integrative path model analysis of the relationship between several variables and suicidal ideations found a significant relationship between social support and suicidal ideation (Rudd, 1990).

Limitations

Main limitation of this study was the small sample size. Another one is the selection of a biased control group which was purposefully done to match the psycho-socio-demographic characteristics with the study group in order to reduce the confounding variables as much as possible. It seems that the quality of individual life events experienced by attempters and controls is unique. However one to comparison of these events requires higher frequency of events, which can be fulfilled with only larger sample size. Other variables pertaining to suicidal

behavior such as personality profile, proneness to violent behavior and impulsivity should also be considered to differentiate suicidal individuals from controls.

Scope for further research

In the context of the present study, the following few suggestions seems to be relevant in planning for future research. Probably studies with long term follow up would throw more light on suicidal tendency in individuals with lower social support, poor coping skills, poor QOL and excessive life stressors. An interventional study design may provide more information on the role of enhancing social support, improving coping styles and QOL and exposure to better life experiences in reducing the suicidal tendency. Moreover, only qualitative individual case studies can provide in depth exploration of multitude of factors operating in this complex behavioral problem.

Conclusions

This study concludes that suicide attempters experienced significantly more life events especially untoward events where as the control group experienced more desirable and impersonal life events. Social support, positive coping behaviours and QOL were significantly lower in attempters. Among all risk factors desirable life events, good education and good social support were found to be protective against suicide.

However, it is difficult to pinpoint a single factor responsible for suicidal behaviour. It is the complex interplay of various interrelated factors and the resultant buffering effect, which is protecting the individual against suicide. The present finding suggests that enhancing the social support, training individuals to adapt good coping skills, exposing the individuals to positive life experiences, promotion of good physical and psychological health and healthy environment are the most effective preventive strategies against individuals attempting suicide.

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