



A study of Life Events in Bipolar Disorder

KEYWORDS

Bipolar mood disorder, perceived life events, negative and positive life events.

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ABSTRACT *Biological, genetic and psychological factors play an important role in causation of bipolar disorder. We present a study of life events in Bipolar Disorder.*

Objectives: Objective of the study was to assess the significance of perceived positive and negative life events in patients suffering from bipolar mood disorder and to know the relationship between Life events and onset of episode of bipolar mood disorder.

Method: 50 consecutive patients of bipolar mood disorder according to ICD 10, attending a general hospital psychiatric unit were selected as case group. 50 healthy persons amongst the visitors to the hospital with no history of psychiatric illness were selected as control group. Holmes and Rahe Social Readjustment rating scale was used for life events. The data was statistically analyzed.

Results: The patient population with bipolar disorder had more negative life events and total number of positive and the negative life events than the control group in the preceding one-year before the onset of illness and the difference was statistically significant.

Conclusion: Perceived negative life events were found to play a role in causation of bipolar mood disorder at onset, but did not predict the episode.

Introduction:

Bipolar mood disorders have a long history. Mania and melancholia, oldest terms and descriptions used in Psychiatry, were created in Homeric times by the Greeks and conceptualized by Hippocrates and his school 2500 years ago. But even before that in around 4000 BC, mania and melancholia were properly described in Ayurveda (Varma LP, 1982).

Bio-psychosocial model for causation of Bipolar Disorder is well known. Psychosocial or environmental factors also play a major role in the causation of bipolar mood disorder. Kraepelin was the first to point out that psychological stresses could precipitate individual episodes. A long-standing clinical observation states that the stressful life events more often precede first, rather than subsequent episodes of mood disorders. Stress accompanying the first episode results in long lasting changes in brain biology. These long lasting changes may alter the functional states of various neurotransmitters and intra neuronal signaling system, or even loss of neurons and an excessive reduction in synaptic contacts. Hence, a person has a high risk of undergoing subsequent episodes of mood disorder, even without an external stressor. These factors could be stressors as of due to marital conflicts, parental relationships, job problems, family discord, somatic illness, financial trouble, unemployment, separation, death and illness in the family. The present study attempts to find the correlation between the life events and bipolar mood disorder.

Method:

It was a cross-sectional study. Subjects willing to give informed consent were enrolled in the study. 50 consecutive patients of bipolar mood disorder as per ICD 10, attending a general hospital psychiatric unit and 50 healthy persons who were visitors to the hospital having no history of psychiatric illness were selected as control group. Subjects suffering from co- morbid psychiatric illness in Case group and sub-

jects with substance dependence in Case and Control group were excluded from the study. All the case subjects were clinically assessed for Bipolar Mood disorder according to ICD 10 criteria. A clinical interview according to the proforma was conducted. Holmes and Rahe rating scale administered and the life events were scored for the one year preceding the illness in case subjects. Similarly, in control subjects, life events in last one year were recorded and life change units were scored. Perceived positive and negative life events were scored separately. The data was statistically analyzed using the Epi – Info developed by WHO/ CDC, Atlanta.

Results:

Mean age of patient was 33.2 years in case group and 33.4 years in control group, the difference was not statistically significant. In case group 42% patients were female and 58% of patients were male while in control group 46% of patients were female and 54% of patients were male, the difference was not significant statistically. No statistically significant difference was found for educational status, marital status and family history of psychiatric illness in case and control group. 24 % of the case subjects had depression and 76 % had mania at the onset of bipolar disorder illness.

Table 1: Association of Episode at onset of illness

Association of Episode at onset of illness		Depression	Mania	P value
Positive life events	Mean	10.0833	15.5789	Not significant 0.7907
	Standard deviation	19.1190	30.8682	
Negative life events	Mean	158.7500	140.7105	Not significant 0.3119
	Standard deviation	59.7618	55.0807	

Total life events	Mean	168.0000	157.0263	Not significant 0.4602
	Standard deviation	59.0362	57.0175	

No statistically significant difference was found for the mean values of depression and mania suggesting that the positive and negative life events do not predict the episode at onset of bipolar illness (Table 1).

Table 2: Association of Life events score

Association of Life events		Bipolar disorder	Control	P value
Positive Life events	Mean	14.2600	24.7143	0.1508 (not significant)
	Standard deviation	28.4108	39.4815	
Negative Life events	Mean	145.0400	69.5306	0.0000 significant
	Standard deviation	56.1536	49.2249	
Total Life events	Mean	159.6600	91.9600	0.0000 significant
	Standard deviation	57.0934	61.3830	

No statistically significant difference was seen for the mean positive life events score but the difference was significant in mean negative life events score in case and control group in preceding one year (Table 2). The patient population with bipolar disorder had more total number of positive and negative life events than the control group in the preceding one-year before the onset of illness and the difference was statistically significant.

Discussion:

76% of case population had mania and 24% had depression as the first episode at onset of bipolar illness in our study. Kessing et al. (2004) concluded that occasion of death in the family and the experience of major life events are associated with increased risk of first admission with bipolar disorder. Kennedy et al. (1983) showed a two fold increase in life events during the four-month period before admission to hospital. It was seen that the major negative impact (i.e. traumatic) was significantly more common. Ambelas A. (1979) found in his study that stress in the form of loss or threat closely preceding their admission to hospital for a manic episode were four times more than other patients admitted to hospital without such negative life event at the onset of illness and concluded that stress in the form of loss or threat is a common precipitant for mania. Ambelas A. (1987) in his other study found that first manic admissions were linked with life events up to 66 % of the study population. But Sclare and Creed (1990) did not find any relationship between life events and mania. In our study also significant difference was seen in case and control group on exposure to negative life events.

The mean positive life events score in case of mania (15.5789) was more than that of depression (10.0833), but the difference was statistically insignificant ($p = 0.7909$). The patients with depressive episode at onset of bipolar illness had less perceived positive life events than those who had mania as first episode. In case of negative life

events, the depressive patient had more perceived negative life events (mean = 158.7500) than the patients who had mania (mean = 140.7105), but the difference again was not statistically significant ($p = 0.3119$, Table 4). Similar results were seen with total life events score (i.e. positive and negative life events score together) (Table 1). In our study, it was found that though the patients who had depressive episodes at the onset of bipolar illness had more perceived negative life events than the patients with mania, the life events did not predict the episode at onset of illness.

Association of Perceived Positive Life events with Bipolar disorder:

Table 2 shows that the mean perceived positive life events in bipolar disorder patients were 14.2600 and in control sample, it was 24.7143 with the p value 0.1528 which was not significant. Thus, it was seen that the perceived positive life events did not predict the onset of bipolar illness.

Association of Perceived Negative Life events with Bipolar disorder:

The mean value of perceived negative life event score in case sample diagnosed with bipolar disorder was 145.0400 and in control sample, it was 69.5306 (Table 2). Thus, the number of perceived negative life events in diagnosed bipolar cases were much more than in control subjects and was statistically significant ($p = 0.00$). Hammen and Gitlin (1997) suggested that bipolar disorder was significantly associated with the occurrence of major negative life events. In our study similar association has been found.

Association of Total Life events (i.e. perceived positive and negative life events) with Bipolar Disorder:

Table 2 shows that the mean score for diagnosed cases of bipolar disorder is 159.6600 and 91.9600 for control. The mean of total life events i.e. positive and negative combined was high in case of bipolar patients than that of control sample. The significant p value (0.0000) suggested that the patient population had more number of positive and negative life events than the control sample. Dunner et al. (1979) reported in his study that almost half of the patient sample (N=79) reported a life event within 3-months interval before their initial episode. Ellicott et al. (1990) found significant associations between life events and relapse or recurrence of bipolar disorder. Another study done by Glassner and Haldipur (1995) reported the occurrence of significantly more stressful life events before the first and current episode of affective illness. It was seen in our study that the life events had a role in the causation of bipolar illness.

Conclusion:

Our study concluded that, perceived negative life events in the preceding one-year before the onset of illness had a role in the causation of bipolar mood disorder at the onset. Perceived positive life events did not have significant role in the causation of bipolar mood disorder at the onset. Perceived positive and negative life events did not predict the episode at onset of bipolar mood disorder.

REFERENCE

- Ambelas, A. (1979) Psychologically stressful events in the precipitation of manic episodes. *British Journal of Psychiatry*, 135, 15-21. | Ambelas, A. (1987) Life events and mania. A special relationship? *British Journal of Psychiatry*, 150, | 235-240. | Dunner, D.L., Patrick, V., & Fieve, R.R. (1979, April) Life events at the onset of bipolar affective illness. *American Journal of Psychiatry*, 136(4B), 508-511. | Ellicott, A., Hammen, C., Gitlin, M., Brown, G., & Jamison, K. (1990) Life events and the course of bipolar disorder. *American Journal of Psychiatry*, 147, 1194-1198. | Glassner, B., & Haldipur, C.V. (1983, February) Life events and early and late onset of bipolar disorder. *American Journal of Psychiatry*, 140(2), 215-217. | Hammen, C., & Gitlin, M. (1997) Stress reactivity in bipolar patients and its relation to prior history of disorder. *American Journal of Psychiatry*, 154, 856-857. | Kennedy, S., Thompson, R., Stancer, H.C., Roy, A., & Persad, E. (1983) Life events precipitating mania. *British Journal of Psychiatry*, 142, 398-403. | Kessing, L.V., Agerbob, E., & Mortensen, P.B. (2004) Major stressful life events and other risk factors for first admission with mania. *Bipolar Disorders*, 6, 122-125. | Sclare, P., & Creed, F. (1990) Life events and the onset of mania. *British Journal of Psychiatry*, 156, | 508-514. | Varma, L.P. (1982) History of Psychiatry in India. In CME program booklet. Ahmadabad, Indian Psychiatric Society, 1, 1-14. |