Reprinted from the German Journal of Psychiatry · http://www.gjpsy.uni-goettingen.de · ISSN 1433-1055

Life Events in Acute and Transient Psychosis - A Comparison with Mania

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Abstract

Background: The temporal association between stressful life events and the onset of psychiatric disorders necessitates clinical investigation. In acute and transient psychoses (ATPD) such stressors have been considered of sufficient significance to warrant inclusion in diagnostic codification classification. This study examines the extent to which stressful life events play a triggering etiologic role in ATPD. Objectives: To compare the frequency of such events preceding ATPD and manic episodes. Method: This project involved a cross-sectional hospital based study. Eighteen persons who met the clinical criteria for ATP participated in the study. These were compared with twenty diagnosed as suffering from Bipolar Affective Disorder, currently manic episode. Diagnosis was made according to ICD-10 (WHO, 1992). Frequencies of life events in different dimensions and in different time frames in both groups were measured by application of Presumptive Stressful Life Event Scale (Singh et al, 1983). Their degree of psychopathology was rated by means of the Expanded Brief Psychiatric Rating Scale (Lukoff et all, 1986). Results: Impersonal events were found to be higher in the six months prior to ATPD episodes, especially in the two weeks preceding the onset of their illness. Significantly more undesirable events as well as higher presumptive stress scores were also observed in the two weeks preceding the ATPD episodes. A final finding was that those with ATPD were more commonly from rural background and tended to suffer a shorter duration of illness. Conclusion: These differences may indicate that psychological stressors and stressful life conditions have a greater triggering pathophysiologic role in ATPD than in Bipolar Affective Disorder, manic phase (German J Psychiatry 2007, 10:36-40).

Keywords: life event, acute and transient psychosis, mania

Received: 31.1.2006
Revised version: 5.1.2007
Published:1.4.2007

Introduction

Life events are objective experiences that disrupt or threaten to disrupt an individuals usual activities, causing a substantial readjustment in that individuals behaviour (Dohrenwend & Dohrenwend, 1974). Although the basic somatic mechanisms are not understood, it is believed that such behavioural readjustments somehow trigger pathophysiologic reactions underlying mental illness. Proponents of classic concepts like 'reactive psychosis', 'bouffée délirante' or 'hysterical psychoses' claim that there is a certain variety of acute psychosis, which is always preceded by a life event. However the ICD-10 (WHO, 1992) conceptualization of acute and transient psychotic disorders (ATPD) fails to recognize this, apart from providing classifiers like "with/without" stressors. Scandinavian researchers as proponents of reactive psychosis have criticized the ICD-10 (WHO, 1992) ATPD construct as inadequate (Ungvari & Mullen, 2000). According to them, this conceptual model has only given low priority to the reactivity to stress (Jorgensen

et al., 1997). This under emphasis on the triggering role of stress may not be justified in view of research evidence (Guldberg et al., 1996).

Such contradicting viewpoints provide motivation for further research to clarify the possible triggering role of life events in ATPD. Studies of the psychological effects of exposure to life events by research designs employing matched controls have been comparatively rare (Thoits, 1983). Without such comparisons it is difficult to assign triggering effects to stressors in a clinically meaningful fashion. Moreover little is known about the exact duration prior to a psychotic episode during which life events might exert an influence on brain function. Researchers have suggested different time periods such as one year (Singh et al., 1983), six months (Thoits, 1983), three to four months (McCabe, 1975;Goodyer et al., 1987) or three to four weeks (Brown & Harris 1978; Paykel, 1974). In ICD-10 (WHO, 1992), classification, the duration is arbitrarily set as two weeks.

By contrast, the literature is much more extensive with regard to studies on life events in affective disorders (Chung et al., 1986; Aronson & Shukla, 1987; Kendler et al., 1993; Brochier & Olie, 1993). Clinical experience suggests that in the affective disorders spectrum, the presenting clinical presentation features of manic episode often resemble ATPD (Jorgensen et al., 1997). It often requires a period of time before the presumptive diagnosis of ATPD is revised to bipolar manic disorder (Deb, 2001; Sajith et al., 2002). This diagnostic confusion is understandable. Manic patients often present with agitation, excitement, irritability, and overactivity all of which are common in ATPD (Okasha et al., 1993).

Bipolar disorder research has now generated a considerable database regarding the relative role of life events in the causation of this illness. In contemplating the present investigation, it was considered that this literature would provide a useful background. It was hoped that designing a comparison study might clarify the relative importance of life events in triggering of ATPD.

Method

This study was done in an Indian tertiary care psychiatric training and research institute. Patients were recruited from those who visited the outpatient department from the month of September 2002 to March 2003. This time frame was chosen in consideration of the resources available and technical feasibilities. Diagnosis was made by consensus decisions by treating psychiatric teams blind to the study. They were reconfirmed by the first author by application of ICD-10 (WHO, 1992) Diagnostic and Research Criteria.

Patients with a diagnosis of ATPD and single manic episode or bipolar affective disorders, currently manic episode were asked to participate in the study. They constituted the experimental group and the control group respectively. They were of 18-55 years of age. No participants had any comorbid organic or psychiatric disorders, including substance use problems. Informed consent was taken prior to enrolment in the study.

Subjects

Forty people diagnosed in their first contact as suffering from ATPD were initially enrolled for the experimental group. Because the diagnosis of ATPD often gets changed later in follow-up (Sajith et al, 2002; Jorgensen et al, 1997), we decided to include only those persons in final statistical analyses who retained their diagnosis on follow-up at six months. Twenty-one patients did not maintain the diagnosis and were omitted. Data from another individual had to be dropped after withdrawal of consent. Ultimately eighteen patients meeting criteria for ATPD were studied.

The control group consisted of twenty randomly selected people suffering from mania (single manic episode or bipolar affective disorders, currently manic episode).

In conducting the study, the second author, remained blind to the clinical diagnosis. She administered the Presumptive Stressful Life Events Scale (PSLES) (Singh et al, 1983) to all the participants. The PSLES is a fifty-one item scale with proven reliability and validity. It was developed for use in Indian population and subsequently widely used in India. The items include events generally considered stressful in Indian context like death of spouse, loss of job, marriage, theft, monetary loss, loss in agriculture, substance related problems in family etc.

The rating was done on the basis of semi structured interviews with the persons. Information was verified from reliable key informants to eliminate biased recall (Paykel, 1974). The first author rated psychopathology in all the participants by using the Brief Psychiatric Rating Scale (BPRS), expanded version (Lukoff et all, 1986).

Statistical analysis

The Mann-Whitney U test was applied to examine group differences in frequencies of life events and presumptive stress scores. Group differences in socio-demographic continuous variables like age, education in years and duration of illness were examined by Student's t test. For comparing differences between discrete socio-demographic variables the Chi-square test and Fisher's exact test when statistically applicable were utilized. We applied the exact significance 'P' that was held significant at <. 05 level. SPSS for Windows version 10.0 was used for the statistical calculations.

Results

There was no significant difference between the two groups regarding age, education in years, sex distribution, marital status or socioeconomic status (SES) (Table 1a).

It may be observed that ATPD episodes were shorter in duration compared to manic episodes ($p = .041$).

Table 1a: Comparison of continuous socio-demographics variables (Student's t test). SD = standard deviation; df = degrees of freedom; * = p < .05.

Variable	ATPD Mean ± S.D	Manic Mean ± SD	t	df	p
Age	30.27 ± 9.18	27.80 ± 7.95	.891	36	.379
Duration in days	13.88 ± 9.85	29.50 ± 29.70	-.179	36	.041*
Education	7.11 ± 5.02	7.40 ± 4.91	-2.124	36	.859

Significantly more patients suffering from ATPD were from a rural background (p = .021; Fisher's exact test→ significance = .033; Table 1b).

Next, frequencies of life event variables (total life events, undesirable events, ambiguous events, desirable events, personal events, impersonal events) as well as total presumptive stress scores were measured. These estimates were done in lifetime, within 6 months, within 3 months and within 2 weeks preceding the index psychotic episode (Table 2).

Patients diagnosed with ATPD had significantly more undesirable events (p = .013), impersonal events (p =. 012) as well as total presumptive stress score (p= .033) within the 2 weeks preceding the episode (Table 2). They also had more impersonal life events in the preceding six months (p=. 031) as well as three months (p= .022) compared to the patients suffering from mania.

The groups had no differences in other life events variables.

Discussion

This study detected differences in frequencies of different type of life events preceding ATPD, as contrasted with mania. It might be inferred that life events might be more important in as triggering events in ATPD than is generally recognized.

Persons with ATPD experienced significantly more impersonal life events compared to persons with mania. This was evident in six months, three months as well as 2 weeks preceding the index episode. Moreover, the observed differences became more evident as the time frame approached the onset of the psychotic episode. This is consistent with the notion that the physiologic impact of various stressors can add up. Some may be potentially more toxic in the precipitation of overt clinically detectable ATPD. By definition, impersonal events are events on which individual has little control e.g. death of a loved one, theft, unpredicted heavy loss etc. (Singh et al., 1983). Studies have strongly indicted such uncontrollable events to be associated with greater psychological distress rather than controllable events (McFarlane et al., 1980; Streiner et al., 1981).

Undesirable life event and total presumptive stress score were also significantly more toxic in the two weeks prior to ATPD episodes. Research evidence suggests that chance of developing psychological disturbance in relation to life events highly depends on the undesirability of the events (Ross & Mirowsky, 1979). The more severe a life event or the more undesirable events are perceived to be, the more likely a person's coping resources will be overwhelmed. This state of perceptions can enhance vulnerability to a disorder (Brown & Harris, 1986).

Hence the consideration of the data in the present study may throw new light on the triggering role of life events in ATPD. These may be of sufficient potency that they can transiently alter brain function prior to the development of the florid psychotic state. It would appear that more impersonal events throughout the past six months over which a person had little control might be especially toxic. These might make the individual highly vulnerable for the development of minor psychological disturbances but when sufficiently strong acutely psychotic. The data are consistent with the view that impersonal events, along with undesirable events resulted in more stress in the preceding two weeks of an ATPD episode, as evidenced by greater presumptive stress scores. It appears that excessive stress depletes the defensive resources of an already vulnerable person. The final pathway may lead to development of a psychotic episode.

Persons with ATPD hailed more from rural background compared to persons with manic episode. Similar rural preponderance has been observed in other studies about ATPD (Sajith et al, 2002; Deb, 2001). The importance of this finding needs to be clarified. Are there factors unique to rural lifestyle that may lead to ATPD?

Also there was a shorter duration of ATPD episodes compared to mania. Whether this means a better prognosis in ATPD patients needs to be seen. It is also consistent with the traditional clinical course of the bipolar array of disorders, with their apparent genetic predis-

Table 1b. Comparison of discrete socio-demographic variables (Chi-square test) * = p < .05

Variable		ATPD	Manic	X^2	p
Sex	Male	11 (61.1%)	11 (55.0 %)	.145	.703
	Female	7 (38.9%)	9 (45.0%)		
Marital Status	Married	13 (72.2%)	13 (65.0%)	.229	.632
	Unmarried	5 (27.8%)	7 (35.0%)		
Socio-economic Status	Lower	9 (50%)	10 (50%)	.000	1.00
	Middle	9 (50%)	10 (50%)		
Residence	Rural	16	11	5.290	.021*
	Urban	2	9		

Table 2. Life events in different time frames in ATPD and Mania. Mann Whitney U test; SD= standard deviation; CI= confidence interval; *significant at < .05; life event = LE; undesirable event = UE; ambiguous event = AE; desirable event = DE; impersonal event = IE; personal event = PE; presumptive stress score = PSS

Variable	ATPD Mean ± S	Manic Mean ± SD	U	p
Total LE	9.16 ± 6.16	7.00 ± 2.75	145.5	.318
Total UE	5.38 ± 3.39	3.90 ± 2.44	133.5	.174
Total AE	1.00 ± .84	1.05 ± .75	167. 0	.769
Total DE	3.00 ± 2.63	2.05 ± 1.43	147. 0	.330
LE within 6 months	4.00 ± 3.10	2.90 ± 2.73	143. 0	..281
UE within 6 months	2.61 ± 2.20	1.90 ± 1.80	149. 0	.364
AE within 6 months	.44 ± .51	.25 ± .55	140.	.164
DE within 6 months	1.00 ± 1.13	.60 ± 1.04	138.5	.191
TE within 3 months	1.50 ± 1.46	1.30 ± 1.45	162.5	.608
UE within 3 months	1.16 ± 1.24	.70 ± .97	136.5	.178
AE within 3 months	.11± .32	.10 ± .30	178. 0	1.00
DE within 3 months	.27 ± .46	.35 ± .67	180. 0	1.00
TE within 2 weeks	.77 ± 1.00	.30 ± .57	124. 0	.073
UE within 2 weeks	.72 ± .95	.20 ± .52	110. 0	.013*
AE within 2 weeks	.00 ± .00	.10 ± .30	162. 0	.488
DE within 2 weeks	.11 ± .32	.00 ± .00	160. 0	.218
Total PSS	422.55 ± 267.20	313.80 ± 133.33	142.5	.280
PSS within 6 months	181.11 ± 128.00	154. 59 ± 124. 84	147. 0	.342
PSS within 3 months	68.61 ± 63.62	56.60 ± 61.04	155.5	.475
PSS within 2 weeks	38.50 ± 46.31	14.65 ± 29.28	114.5	.033*
Total PE	4.50 ± 2.95	3.55 ± 2.62	145.5	.316
Total IE	4.94 ± 2.62	3.50 ± 2.11	124. 0	.099
PE within 6 months	1.83 ± 1.88	1.80 ± 2.23	169.5	.760
IE within 6 months	2.22 ± 1.86	1.00 ± 1.52	110. 0	.031*
PE within 3 months	.77 ± 1.35	.85 ± 1.04	160.5	.545
IE within 3 months	1.00 ± 1.08	.40 ± .94	110. 0	.022*
PE within 2 weeks	.50 ± 1.04	.15 ± .48	148. 0	.179
IE within 2 weeks	.44 ± .61	.00 ± .22	118.5	.012*

positions, severity, need for long term medication management, and life time course. Much more than the ATPD, these psychotic states are considered by many psychiatrists to more accurately conceptualized employing a "Medical model" of mental illness. In this formulation, "life stress" is considered but one factor acting upon multiple biologic determinants.

In both groups there was a male preponderance. Perhaps this might be due to gender difference in help seeking attitudes prevalent in this region. Men being the predominant bread earners might have been brought preferentially to medical attention (Deb, 2001). Finally, it was observed that the majority of patients in both groups were from low or middle socio-economic status. The predominance of low and middle socio-economic status in patients with acute psychoses has been reported in literature (Malhotra et al., 1998). As observed by the authors (Malhotra et al.; 1998), economic hardship might increase the vulnerability of precipitating acute psychosis in patients. It remains to be seen whether it has any special significance in ATPD.

Our study had some limitations. Unfortunately, the sample size was too small for the performance of any regression analysis, which could have confirmed any predictive value of the above observations. At present it can be only said that the observed factors do show an association with occurrence of ATPD episode. The findings need to be confirmed in studies with bigger sample size. We did not have requisite corrections of p-values for multiple comparisons, which is another limitation.

Conclusion

Impersonal life events on which a person can exert little control occur more frequently in ATPD in six months prior to the onset of the episode. These events gradually cluster near the onset of the psychotic breakdown, being concentrated in the preceding two weeks. In these two weeks undesirable life events also become common with higher total presumptive stress. Rural people appear to be particularly vulnerable to ATPD. ATPD episodes appear to resolve faster than manic episodes.

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The German Journal of Psychiatry · ISSN 1433-1055 · http:/www. gjpsy.uni-goettingen.de
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