

## Stressful Life Events and Coping Strategies among Patients with Relapse in Psychosis: A Pilot Study Report

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### Abstract

*Background and Objectives:* Patients with psychosis are more sensitive and more susceptible to the effects of even minor life stressors. The stressful life events and coping strategies among patients with psychosis are examined, with an objective to determine it as a risk factor for relapse in psychosis. *Materials and Methods:* Patients who are diagnosed with psychosis as per ICD-10 criteria have been included. A case control study design has been adopted to investigate the stressful life events and coping strategies among patients with relapse and without relapse. Convenience sampling technique is used to select 30 patients with psychosis, among which 15 subjects were in the relapse group and 15 subjects were in the non-relapse group. *Results:* The study results shown that in relapse group, 60% of subjects had more stressful life events and 40% had less stressful life events. In non-relapse group, 73.3% of subjects had less stressful life events and only 26.7% had more stressful life events. Besides, it was also found that presumptive stressful life events is co-related with the coping strategies in the relapse group ( $p < 0.05$ ) and there was no co-relation between these two in the non-relapse group. *Conclusion:* Stressful life events in patients with psychosis remained as one of a major risk factor for relapse. Adequate coping strategies among patients with relapse are essential in order to achieve a speedy recovery from the illness.

**Keywords:** Stressful Life Events; Coping Strategies; Psychosis; Relapse.

### Introduction

Psychosis is a chronic disabling illness, with the majority of patients experiencing multiple relapses during the course of illness. Relapse characterized by acute psychotic exacerbations may have serious implications, not only on the over-all health status of the patients but also on the socio-occupational functioning of the patients [1]. Stressful life events are often associated with the onset of a psychotic relapse, usually in the 3 weeks prior to the relapse. Individuals utilize a variety of coping mechanisms to manage and forgo difficult life events, including

mental illness. Over two decades of research have suggested a positive association between stressful life events and subsequent illness. The influence of stressful life events and coping strategies was studied in 50 depressed and 50 non-depressed persons. It was observed that the depressive patients experienced significantly more stressful life events and were also using significantly more avoidance coping strategies as compared to their non-depressed counterparts [2,3]. Myin-Germeys et al conducted a study on impact of daily stress on psychosis. It was found that there was significant increase in psychosis intensity associated with increase in stress related events in patients [4].

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### Materials and Methods

The study was carried out in the Department of

psychiatry (both inpatient and outpatient units) JIPMER, Puducherry. A case control study design was adopted for this study. Patients who were diagnosed with psychosis (ICD-10 criteria), aged between 18 and 60 years of age were included for the study. As case control study design was chosen, two groups namely relapse group (study group) and non-relapse group (control group) were made. Non-probability convenience sampling method was used to select 30 subjects (15 subjects in each group).

Subjects included in the study group (relapse group) were inpatients with a history of at least one episode of psychosis in the past and with symptoms of relapse in the past two months. In the control group (non-relapse group) outpatients without symptoms of relapse in the past six months and on regular treatment were included. Patients with organic mental disorders and mental retardation were excluded from the study. The following instruments were used for the study.

#### *Part I: Interview Guide for Collecting Socio-Demographic and Clinical Details of the Patient*

This included the patient's age, gender, locality, marital status, educational status, occupation, family income per month, type of family, diagnosis, age of onset, duration of illness, and duration of untreated illness, substance use and number of previous hospitalization.

#### *Part II: Presumptive Stressful Life Events Scale (PSLES)*

This is a standard scale consisting of 51 items of stressful life events and for each item, the mean stress score is given. Higher score indicated a more stressful life. This scale has been developed and validated in the Indian population and measures stressful life events for an individual. It includes both positive and negative life events, each having different scores [5].

#### *Part III: Coping Strategies Inventory [Short form]*

This brief 16 item scale was derived from the 78 item Coping Strategies Inventory. The items are rated on a 5 item Likert scale from 1 to 5 rated as never, seldom, sometimes, often, and almost always. The different forms of self reported coping responses that are generally used when faced with difficult situations are evaluated through this scale. Coping responses are classified into emotion focused and problem focused, which are further sub classified as either engagement type or disengagement type of

strategy [6,7].

## **Results**

The data is analyzed using the SPSS version 22. The descriptive (frequency, percentage, mean and standard deviation) and inferential statistics (independent t test & chi-square test) are computed. The results of the study are discussed as follows,

#### *Sample Characteristics*

An interview guide was used to collect the information about the socio-demographic and clinical details of the patients. As indicated in the Table 1, in the relapse group, among the 15 subjects, a majority of subjects (60%) belonged to the age group of 18-29 years. Females were more, contributing to about 53.3%. A maximum of 60% subjects were from rural background. In relation to the marital status, a majority of (40%) subjects were unmarried. Nearly 40% of subjects had secondary school education. 33.3% of subjects were house wives and a similar number of subjects were not having any job. In regard to the family income per month, about 64% of subjects were having an income of  $\geq 5000$  and 26.7% participants had a monthly income of  $>10,000$ . As far as the type of family is concerned, a majority of (86.7%) subjects were living in nuclear family.

As shown in Table 1, in the non-relapse group, among the 15 subjects, majority of (53.3%) subjects were in the age group of 30-39 years. Among them, females were more (53.3%). Like relapse group, a maximum of 60% of subjects were from rural background. In relation to the marital status, a 53.3% of subjects were unmarried. Nearly 53.3% of subjects had secondary school education and 40% of subjects were jobless. In regard to the family income per month, almost one third of the subjects (33.3%) were having income between 1001 – 5000 and a similar number of subjects had income between 5001 – 10,000. Almost, 86.7% of subjects were living in nuclear family.

Table 2 denotes the distribution of subjects in the relapse group and the non-relapse group according to the clinical variables. In the relapse group, nearly 26.7% of subjects were diagnosed to have Bipolar Affective Disorder – Manic episode. Majority of subjects (73.3%) had the onset of illness between 21 and 30 years of age. Nearly 66.7% of subjects had the duration of illness to about lesser than 50 months. All the subjects (100%) had the duration of untreated illness to about lesser than 50 months as well. A majority of 93.3% were not using any substance and a maximum of 73.3% of subjects had been

hospitalized once for their illness.

Among the subjects in the non-relapse group, nearly 26.7% of subjects were diagnosed to have Schizophrenia. Majority of subjects (46.7%) had the onset of illness between 21 and 30 years of age. About

60% of subjects had the duration of illness between 101 and 200 months. Almost 93.3% of subjects had the duration of untreated illness to about lesser than 50 months. A majority (73.3%) of subjects were not using any substance and a maximum of 60% of

**Table 1:** Distribution of subjects in the relapse group and the non-relapse group according to the socio-demographic variables. (N = 30)

Socio-demographic variables		Relapse Group (n=15)		Non-Relapse Group (n=15)		$\chi^2$	p Value
		f	%	f	%		
<b>Age (in years)</b>							
a)	18 - 29	9	60	2	13.3	9.055	0.029*
b)	30 - 39	2	13.3	8	53.3		
c)	40 - 49	2	13.3	4	26.7		
d)	50 - 60	2	13.3	1	6.7		
<b>Gender</b>							
a)	Male	7	46.7	7	46.7	0.000	1.000
b)	Female	8	53.3	8	53.3		
<b>Locality</b>							
a)	Rural	9	60	9	60	0.000	1.000
b)	Urban	6	40	6	40		
<b>Marital Status</b>							
a)	Single	6	40	5	33.3	4.117	0.249
b)	Married	5	33.3	8	53.3		
c)	Widowed	3	20	---	---		
d)	Separated	1	6.7	2	13.3		
<b>Educational Status</b>							
a)	No formal education	---	---	2	13.3	4.619	0.464
b)	Primary school	3	20	1	6.7		
c)	Secondary school	6	40	8	53.3		
d)	Higher secondary school	2	13.3	1	6.7		
e)	Graduate	3	20	3	20		
f)	Post-graduate & above	1	6.7	---	---		
<b>Occupation</b>							
a)	Daily labor	2	13.3	5	33.3	4.996	0.416
b)	House wife	5	33.3	2	13.3		
c)	Business	1	6.7	---	---		
d)	Professional	1	6.7	---	---		
e)	Non-professional	1	6.7	2	13.3		
f)	No job	5	33.3	6	40		
g)	Any other (specify)	---	---	---	---		
<b>Family Income (per month in rupees)</b>							
a)	< 1000	---	---	1	6.7	1.091	0.779
b)	1001 - 5000	---	---	5	33.3		
c)	5001 - 10000	5	33.3	5	33.3		
d)	> 10000	6	40	5	33.3		
		4	26.7	4	26.7		
<b>Type of Family</b>							
a)	Nuclear family	13	86.7	13	86.7	0.000	1.000
b)	Joint family	2	13.3	2	13.3		

\* Significant at p<0.05

subjects had been hospitalized once for their illness.

#### Presumptive Stressful Life Events

As indicated in Table 3, in relapse group, 60% of subjects had more stressful life events and 40% had less stressful life events. In non-relapse group, 73.3% of subjects had less stressful life events and only 26.7% had more stressful life events. There was no

statistically significant association between the number of presumptive stressful life events and relapse in psychosis.

When the mean score and standard deviation of specific presumptive stressful life events in the relapse group and the non-relapse group were computed (Table 4), it was found that there was no statistically significant association between the

**Table 2:** Distribution of subjects in the relapse group and the non-relapse group according to the clinical variables (N = 30)

Clinical variables	Relapse Group (n=15)		Non-Relapse Group (n=15)		$\chi^2$	p Value
	f	%	f	%		
<b>Diagnosis</b>						
a) Schizophrenia, Schizotypal	2	13.3	4	26.7	8.000	0.534
b) Schizoaffective	---	---	---	6.7		
c) Persistent Delusional Disorder	2	13.3	1	6.7		
d) Acute Transient Psychotic Disorder	1	6.7	1	---		
e) Induced Delusional Disorder	---	---	---	---		
f) BPAD - Manic episode	4	26.7	1	6.7		
g) BPAD - Depressive episode	---	---	1	6.7		
h) Mania with psychotic symptoms	3	20	3	20		
i) Depression with psychotic symptoms	---	---	1	6.7		
j) Recurrent depressive disorder	---	---	1	6.7		
k) Psychosis (NOS)	3	20	2	13.3		
<b>Age of onset (in years)</b>						
a) < 20	2	13.3	4	26.7	2.222	0.528
b) 21 - 30	11	73.3	7	46.7		
c) 31 - 40	1	6.7	2	13.3		
d) > 40	1	6.7	2	13.3		
<b>Duration of illness (in months)</b>						
a) < 50	10	66.7	3	20	9.103	0.028*
b) 51 - 100	---	---	2	13.3		
c) 101 - 200	3	20	9	60		
d) > 200	2	13.3	1	6.7		
<b>Duration of untreated illness (in months)</b>						
a) < 50	15	100	14	93.3	1.034	0.309
b) 51 - 100	---	---	1	6.7		
c) > 100	---	---	---	---		
<b>Substance Use</b>						
a) No substance use	14	93.3	11	73.3	2.160	0.412
b) Tobacco	---	---	---	---		
c) Alcohol	1	6.7	4	26.7		
d) Alcohol & Tobacco	---	---	---	---		
e) Others (specify)	---	---	---	---		
<b>Number of previous hospitalization</b>						
a) Nil	2	13.3	1	6.7	1.867	0.601
b) 1	11	73.3	9	60		
c) 2	1	6.7	2	13.3		
d) 3 & above	1	6.7	3	20		

\*significant at  $p < 0.05$

**Table 3:** Distribution of Relapse Group and the Non-Relapse Group according to the presumptive stressful life events. (N = 30)

Presumptive stressful life events	Relapse Group (n=15)		Non-Relapse Group (n=15)		$\chi^2$	p Value
	f	%	f	%		
Less stressful life ( $\leq 5$ events)	6	40	11	73.3	3.394	0.065
More stressful life ( $> 5$ events)	9	60	4	26.7		

presumptive stressful life events and the relapse in psychosis.

#### *Coping Strategies*

The mean and standard deviation of the sub-scale scores of coping strategies inventory as shown in Table 5, denotes a strong statistically significant

association between the subscales such as problem focused engagement, problem focused disengagement, emotion focused engagement and the relapse in psychosis ( $p < 0.001$ )

The co-relation of presumptive stressful life events with the coping strategies (Table 6) reveals a positive

**Table 4:** Mean and Standard deviation of presumptive stressful life events in the Relapse Group and Non-Relapse Group (N = 30)

Presumptive stressful life events	Relapse Group (n=15)		Non-Relapse Group (n=15)		t-test	p Value
	Mean	S.D.	Mean	S.D.		
Death of spouse	19	39.334	0	0	1.871	0.072
Extra marital relation of spouse	5.33	20.656	5.33	20.656	0.000	1.000
Marital separation / divorce	5.13	19.881	10.27	27.094	-.592	0.559
Lack of child	4.47	17.229	0	0	1	0.326
Death of a close family member	4.4	17.041	8.8	23.223	-.592	0.559
Marital conflict	21.33	31.229	29.87	33.049	-.727	0.473
Conflict with in laws	19	27.813	7.6	20.056	1.288	0.208
Major personal illness or injury	7.47	19.704	0	0	1.468	0.153
Financial loss or problems	28.8	27.885	36	26.349	-.727	0.473
Illness of family member	3.47	13.426	3.47	13.426	0.000	1.000
Trouble at work with colleagues	20.8	26.369	20.8	26.369	0.000	1.000
Conflict over dowry	3.4	13.168	0	0	1.000	0.326
Sexual problems	3.4	13.168	6.80	17.945	-.592	0.559
Large loan	3.27	12.652	0	0	1.000	0.326
Family conflict	37.6	19.46	34.47	21.514	0.418	0.679
Break up with friend	9.4	19.46	3.13	12.135	1.058	0.229
Failure in examination	11.47	19.68	5.73	15.13	0.894	0.379
Appearing for an examination or interview	2.87	11.103	5.73	15.13	-.592	0.559
Trouble with neighbor	5.33	14.075	0	0	1.468	0.153
Unfulfilled commitments	26.67	19.518	18.67	20.656	1.090	0.285
Change in working conditions or transfer	2.2	8.521	4.4	11.612	-.592	0.559
Change in sleeping habits	17.6	17.041	13.2	16.734	0.714	0.481
Reduction in number of family functions	9.67	14.151	5.8	12.007	0.807	0.426
Changes in social activities	13.07	14.459	11.2	14.199	0.357	0.724
Changes in eating habits	12.6	13.943	9	13.175	0.727	0.473

**Table 5:** Distribution of the Relapse Group and the Non-Relapse Group according to the sub-scale scores in the coping strategies inventory - short form (CSI - SF) (N = 30)

Sub-scales of CSI - SF	Relapse Group (n=15)		Non-Relapse Group (n=15)		t-value	p Value
	Mean	S.D.	Mean	S.D.		
Problem focused engagement	9.8667	2.294	15.466	2.065	-7.024	0.000 ***
Problem focused disengagement	9.800	1.934	14.800	1.473	-7.963	0.000 ***
Emotion focused engagement	11.133	1.597	14.200	1.521	-5.384	0.000 ***
Emotion focused disengagement	10.466	1.125	9.866	1.060	-1.503	0.144

\*\*\*significant at p<0.001

**Table 6:** Co-relation of presumptive stressful life events with the coping strategies in the Relapse Group & Non-Relapse Group (N = 30)

Presumptive stressful life events	Relapse Group (n=15)		Non-Relapse Group (n=15)	
	χ <sup>2</sup>	P value	χ <sup>2</sup>	P value
Coping strategies	-0.521	0.047*	0.259	0.352

co-relation in the relapse group (p<0.05) and there was no co-relation found in the non-relapse group.

### Discussion

The findings of the present study showed that , in relapse group, 60% of subjects had more stressful life events and 40% had less stressful life events. In non-relapse group, 73.3% of subjects had less stressful life events and only 26.7% had more stressful life events. It is also clear that there is a co-relation

between the presumptive stressful life events and coping strategies in the relapse group. These findings are supported by a study conducted by Van et al on coping styles and cognitive dysfunction in schizophrenia patients. They found that the patients with schizophrenia, were generally thought to be sensitive to stressors in their daily living, and at the same time were considered to be deficient in coping skills [8,9]. Thus, they tend to have limited adaptation capabilities, and hence were prone to relapse in the face of stress.

Besides, the findings of the present study is also supported by a retrospective assessment done by Das et al [10] on life events over a period of one year and was carried out in two groups of schizophrenia patients. Each group had 30 patients. One group comprised of "relapsing" schizophrenic patients and the other consisted of "stable" patients. The group of relapsing schizophrenics had experienced a significantly greater number of life events and also had a significantly higher stress than the non-relapse group.

### Conclusion

The present study was conducted with an objective of determining the stressful life events as one of the major risk factors for relapse in patients with psychosis. The findings showed that stressful life events were found to be higher in patients with relapse than those without relapse. It is also evident that presumptive stressful life events have a positive co-relation with the coping strategies in patients with psychotic relapse. Several patients from the study reported that unfavorable life events have in one way or another contributed to a number of relapse in their lives. Hence, the common stressful life events should be taken into account with a primary focus of preventing it in order to prevent relapse. This would also help the mental health team members to develop guidelines for the prevention of relapse among patients with psychosis.

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