

A STUDY OF IMPACT OF STRESSFUL LIFE-EVENTS IN NEUROTIC PATIENTS¹

SHIV GAUTAM², PREET KAMAL³

SUMMARY

Stressful life events preceding neurotic disorders, their impact on neurotic patients in comparison to normal subjects and relationship of impact of stressful life-events to depression and anxiety scores were studied prospectively in 100 consecutive neurotic patients, diagnosed according to ICD-9 and 100 matched normal subjects in psychiatric O.P.D. of S.M.S. Hospital, Jaipur, by administering presumptive stressful life event scale, Beck's depression inventory and Max Hamilton anxiety rating scale. It was found that number of stressful life events was higher in neurotic patients and their impact was also perceived significantly higher in them. Significantly higher depression and anxiety scores had positive correlation to number and impact of stressful life events in neurotic patients. Cause and effect relationship of impact of stressful life events to neuroses has been discussed.

Life stress is a product of changes that occur in one's life that require adaptation, coping and social readjustment. Although everyone experiences life changes, it is usually assumed that stress arouses when major changes are experienced within a relatively short period of time. Based on this assumption, numerous studies have been undertaken to determine the relationship between life stress and problems of health and adjustment.

Measured in various ways, life stress has been found to be related to a wide variety of variables that reflect health status (physical as well as mental), adjustment and effectiveness of performance. Studies have found life stress to be significantly correlated to heart disease, pregnancy and birth complications, seriousness of illness and the displaying of symptoms among people with chronic illness (Bedell et al., 1977; Gorsuch and Key, 1974; Nuckolls et al., 1972); Raha and Lind, 1971; Theorell and Rahe, 1971; Wyler et al., 1971); psychiatric symptomatology (Dekker and Webb, 1974; Paykel, 1974), anxiety, depression, social maladjustment, neuro-

ticism, somatic preoccupation, aggression, paranoia and suicidal tendencies (Johnson and Sarason, 1979; Winokur and Selzer, 1975; Paykel et al., 1969; 1957; Brown et al., 1973; Horowitz et al., 1977; Jacob et al., 1975; Sethi and Prakash, 1979; Prakash et al., 1980; Bhatti and Channabasavanna, 1985; Sharma and Ram, 1988).

Contrary to the above, others (Forster, 1965; Hudgens et al., 1967; Venkoba Rao and Nammalvar, 1976) have found no significant difference with respect to occurrence of life events in depressed patients and normal controls.

Therefore, it is worth stating that people vary considerably in how they are affected by potential stressors. Some individuals experience hardships and mishaps, and appear to suffer from a few serious long-term physical or psychological set backs. At the same time, others break down even though they have experienced what would objectively seem to be a relatively low level of stress. Moreover, previous studies of life stress have usually been designed simply to assess the relationship between life changes

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2. Associate Professor
3. Research Psychologist } Psychiatric Centre, S.M.S. Medical College, Jaipur.

or stressful life events and other variables without considering that individuals may vary in how much they are affected by life changes or stressful life events.

Aims of the study

The present study aims to find out:

1. What are common stressful life events preceding neurotic disorders,
2. Whether stressful life events differ in normal and patient population,
3. What is the impact of stressful life events in neurotic patients in comparison to normal population,
4. Whether the impact of stressful life events has any relationship to depression and anxiety scores.

Material & Method:

Sample— The total sample consisted of 200 subjects divided equally into two groups. One group was formed by 100 neurotic patients with age group of 20-50 years, attending psychiatric OPD at S.M.S. Hospital, Jaipur and were suffering from psychiatric disorders of this kind for the first time. Diagnosis of neurotic disorders was made according to ICD-9 by a consultant psychiatrist. A screening was done for all the patients to exclude psychotic symptoms & clinical, physical examination was carried out to exclude patients suffering from systemic disorders. Wherever there was a doubt relevant investigations were done and patients suffering from other disorders were excluded.

The other group consisted of 100 normal controls i.e. other adult member of the family, who had no symptoms of neurosis. Hence socio economic status and family environment was controlled and the groups were matched groups.

Instruments Following instruments were used:

1. Presumptive Stressful Life Event Scale
2. Beck's Depression Inventory
3. Max Hamilton Anxiety Rating Scale

Procedure

First of all, the patients with the age group of 20-50 yrs., attending the psychiatric O.P.D. at S.M.S. Hospital during the period of August, 1985 to October, 1985 were evaluated and a clinical diagnosis was made according to ICD-9. All patients were given presumptive stressful life events scale and the patients were asked to check the life events which occurred to them within six months prior to the onset of illness and mark their impact on them. The patients who had at least one stressful life event were included in the study while rest were dropped, because the purpose of study was to measure the relationship of the impact of stressful life events to genesis of neurosis. All the patients were scored on Beck's Depression Inventory and Max Hamilton anxiety rating Scale in order to find out severity of depression and anxiety.

In order to find out the SES, information regarding education, occupation & income was obtained according to Kuppaswamy's socioeconomic status scale and the subjects were divided in SES categories.

The group consisting matched normal controls was also evaluated in the same manner as was done for the experimental group. Finally, all the raw scores were put to suitable analyses and following results were obtained.

Discussion

Life stress does not have uniform effects on individuals. Whether a given individual is adversely affected by life changes or stressful life events depends on how much, they are affected by them or how much impact that event had on them. At a theoretical level several authors (McGrath, 1970; Lazarus et al., 1974; Mechanic, 1970) have suggested that individual characteristics (e.g. needs, skills, values) and stress stimulus properties (e.g. demands) be jointly con-

TABLE-I Number of life events in various diagnostic categories

Diagnostic Category	Number of life events present				
	N	One Event	Two Event	Three Event	More than Three Events
Depression	56	4	6	26	20
Anxiety	24	2	4	6	12
HCR	14	—	4	2	8
OCN	6	—	4	—	2
Normal Controls	100	64	22	8	6

considered as determinants of the stress response leading to psychiatric disorders. This contention has the support of previous studies (Paykel et al., 1957, 1969; Sethi and Prakash, 1979) as well as of the present one at the empirical or measurement level.

The findings of the present study show that there exist a significant difference in the occurrence of number of life events and their impact on patients and normal controls (table-II). Furthermore, the number of life events as well as their impact both are correlated with depression and anxiety scores of patients and normal controls (tables-IV, V). It may be mentioned here that the scores of Depression (BDI) and

TABLE-II Number of life events and their impact in two groups

Number of Life Events	Number of Subjects		Mean Impact Score*		s.d.	t	Significance	
	Patients	Normal	Patients	Normal			d.f	P
1	6	64	3	.75	.84	6.27*	68	<.001
2	18	22	4.89	1.90	1.29	7.27*	38	<.001
3	34	8	7.82	2.72	1.66	7.81*	40	<.001
3	42	6	12.81	3.67	2.26	9.27*	46	<.001

TABLE-III CHI square in various life events

Number of Life Event in order	Life Event	Frequency		Chi square	P
		Patients	Normal		
6	Lack of child	8	8	0	N.S.
7	Death of close family members	12	12	0	N.S.
8	Marital conflict	28	22	0.72	N.S.
13	Conflict with in-laws (other than dowry)	18	0	18.00	<.01
15	Major personal illness	14	0	14.00	<.01
17	Financial loss or problems	34	16	6.48	<.01
18	Illness of family members	20	28	1.32	N.S.
19	Trouble at work with colleagues etc.	32	16	5.32	<.05
29	Family conflict	64	38	6.62	<.01
43	Change in working condition or transfer	16	2	4.80	<.02
11	Change in sleeping habits	32	0	32.00	<.01

TABLE-IV Correlation between number of life events to depression and anxiety scores of neurotics and normal controls

Nature of Score	N	Mean Life events	Score	d.f.	r	p
<i>A. Neurotics</i>						
Depression	100	3.34	33.56	98	0.42	<.01
Anxiety	100	3.34	26.34	98	0.63	<.01
<i>B. Normal Controls</i>						
Depression	100	1.56	1.98	98	0.66	<.01
Anxiety	100	1.56	1.32	98	0.71	<.01

TABLE-V Correlation between impact of life events to depression and anxiety scores of neurotics and normal controls

Nature of Score	N	Mean Impact Score	Score	d.f.	r	p
<i>A. Neurotics</i>						
Depression	100	9.18	33.56	98	0.62	<.01
Anxiety	100	9.18	26.34	98	0.55	<.01
<i>B. Normal Controls</i>						
Depression	100	1.34	1.98	98	0.59	<.01
Anxiety	100	1.34	1.32	98	0.68	<.01

Anxiety (MHARS) in patient population were significantly higher. Mean score of Depression being 33.56 in Neurotics as compared to 1.98 in normals ($p < .01$) while mean anxiety scores of Neurotics 26.34 in comparison to 1.32 of normal subjects ($p < .01$).

These observations suggest that the neurotic patients are more prone to be stressed and experience more stressful life events as compared to the normal individuals (table-I). This leads to another hypothesis that it is the illness which leads them to experience more number of stressful life events, which is evident from the fact that control group living in similar milieu did perceive less number of stressful life events.

An event itself differs with the other event in its quality to produce stress. Some events are considered to be more stressful,

whereas the others are taken to less stressful. In the present study 12 out of 51 life events were found to be more stressful (table III). Out of these 12 events only 5 were more common among both the groups, namely marital conflict, financial problems, illness of family members; trouble at work with colleagues, supervisors etc. and family conflict.

So far as the relationship between stressful life events and neurosis is concerned it was found that family conflict emerged out as the most frequently occurring life event present in neurotics being present in 64% of the subjects. Next came financial problems or loss (34%), trouble at work (32%), change in sleeping habits (32%) and marital conflict (28%). In the control group also most frequently occurring event was family conflict (38%) followed by illness of

family members (28%), marital conflict (22%), financial losses (16%) and trouble with colleagues (16%).

The authors feel that higher number of perceived life events having more impact on the individuals positively correlated to scores of depression and anxiety is casually related to development of neurosis. Neurotic patients appeared to be prone to higher impact of stressful life events in comparison to normal control. This impact is likely to be determined by psychological process in neurotic patients. Quite likely neurotic patients have higher psychoendocrinal susceptibility to stress leading to neurotic behaviour and the quantity and quality of stressful life event is culturally determined. That may be the reason that one life event having higher impact in one cultural setting may not arouse similar response in another setting, this needs to be explored in cross cultural setting.

REFERENCES:

- Bedell, J.R.; Giordani, B.; Amour, J.L.; Tavormina, J. and Boll, T. (1970). Life Stress and the psychological and medical adjustment in chronically ill children. *Journal of Psychosomatic Research*, 21, 237-242.
- Bhatti, R.S. and Channabasavanna, S.M. (1985). Study of Neurosis: I Life events and personality of dimension. *Indian Journal of Psychiatry*, 27, 127-138.
- Brown, G.W.; Sklar, F.; Harris, O.T. and Birley, J.L.T. (1973). Life events and psychiatric disorders. *Psychological Medicine*, 3, 74.
- Dekker, D.L. and Webb, J.T. (1974). Relationship of the social readjustment rating scale to psychiatric patient status, anxiety and social desirability. *Journal of Psychosomatic Research*, 18, 125-130.
- Forester, C. (1965). Classification of Behaviour pathology research in behaviour modification. New York: Holt, Rinehart & Winston Inc.
- Gorsuch, R.L. and Key, M.K. (1974). Abnormalities of pregnancy as a function of anxiety and life stress. *Psychosomatic Medicine*, 36, 352-361.
- Horowitz, N.J.; Schaefer, C.; Hiroto, D.; Wilner, N. and Lavin, N. (1977). Life event questionnaires for measuring presubjective stress. *Psychosomatic Medicine*, 39, 413-23.
- Hudgens, R.; Morrison, J.; Barecha, R. (1967). Life events and onset of primary affective disorders. *Archives of General Psychiatry*, 16, 134-145.
- Jacob, S.; Prusoff, B.A. and Paykel, E.S. (1975). Recent life events in schizophrenia and depression. *Archives of General Psychiatry*, 22, 332.
- Johnson, H.J. and Sarason, I.G. (1979). Recent developments in research on life stress. In: (Eds.) V. Hamilton & D.M. Warburton. *Human stress and Cognition: An information processing approach*. London: Wiley.
- Lazarus, R.S.; Averill, J.R. and Opton, E.M. Jr. (1974). The psychology of coping: Issues of research and assessment. In: (Eds.) G.V. Coelho, D.A. Hamburg and J.E. Adams. *Coping and adaptation*, New York: Basic.
- Mechanic, D. (1970). Some problems in developing a social psychology of adaptation to stress. In: (Eds.) J.E. Mc Grath, *Social and Psychological factors in stress*. New York: Holt.
- Mc Grath, J.E. (1970). A conceptual formulation for research on stress. In: (Ed.) J.E. Mc Grath, *Social and psychological factors in stress*. New York: Holt.
- Nuckolls, K.B.; Cassel, J. and Kaplan, B.H. (1972). Psychosocial assets, life crisis and the prognosis of pregnancy. *American Journal of epidemiology*, 95, 431-441.
- Paykel, E.S.; Prusoff, B.A. and Myers, J.K. (1957). Suicidal attempts and recent life events: A controlled comparison. *Archives of General Psychiatry*, 32, 327-333.
- Paykel, E.S.; Myers, J.K.; Dianelt, M.H.; Klerman, G.L.; Lindenthal, J.J. and Pepper, M.P. (1969). Life events and depression: A controlled study. *Archives of General Psychiatry*, 21, 753-760.
- Paykel, E.S. (1974). Life stress and psychiatric disorder: Applications of the clinical approach. In: (Eds.) B.S. Dohernwend and B.P. Dohernwend. *Stressful life events: Their nature and effects*. New York: Wiley.
- Prakash, R.; Trivedi, J.K. and Sethi, B.B. (1980). Life events in depression. *Indian Journal of Psychiatry*, 22, 56-60.
- Rahe, R.H. and Lind, E. (1971). Psychosocial factors and sudden cardiac death. A pilot study. *Journal of Psychosomatic Research*, 15, 19-24.
- Singh, G.; Kaur, D. and Kaur, H. (1981). Stressful life events development of stressful life events scale (for use in India). *Mental Health Research Monograph No.1*
- Sharma, I. and Ram, D. (1988). Life events in Anxiety neurosis. *Indian Journal of Psychiatry*, 30, 61-67.

- Sethi, B.B. and Prakash, R. (1979). A sociodynamic study of depression. Paper presented at Symposium on Depression, held at Madurai.
- Theorell, T. and Rahe, R.H. (1971). Psychosocial factors and myocardial infarction: I. An inpatient study in Sweden. *Journal of Psychosomatic Research*, 15, 25-31.
- Venkoba Rao, A. and Nammalvar, N. (1976). Life changes and depressive disease. *Indian Journal of Psychiatry*, 18, 293-300.
- Winokur, A. and Selzer, M.L. (1975). Desirable versus undesirable life events: Their relationship to stress and mental distress. *Journal of Personality and Social Psychology*, 32, 329.
- Wyler, A.R.; Masuda, M. and Holmes, T.H. (1971). Magnitude of life events and seriousness of illness. *Psychosomatic Medicine*, 33, 115-122.