

Life Experiences and the Onset of Schizophrenia

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Using an Arabic version of the PSE, one hundred patients (20 with 1st schizophrenic episode and 80 with acute exacerbation) were selected from Psychiatric Department of Mansoura University Hospital. Their life events histories for 4 weeks before onset or relapse were studied using the Schedule of Recent Experience (SRE). A positive association between stressful life events and onset of first schizophrenic episode was established. However, the role played by stressful events in precipitation of relapse was less pronounced.

The nature of life experience may also influence the severity of illness expressed in PSE scores. The undesirable experiences were associated with higher PSE scores, while desirable experiences were associated with lower scores.

(Egypt. J. Psychiat., 1993,16:85- 90).

Introduction

Empirical studies first examined the relationship of life stress to the onset of psychiatric disorders in the second half of the 1960s. Brown & Birley (1968) reported an excess of threatening life events in the three weeks prior to onset of acute episodes of schizophrenic illness. There have since been many studies in this area (Dohrenwend & Egri, 1981; Day, 1981 and Rabkin,1980), but the evidence that stressful events play a substantial role in the onset or exacerbation of schizophrenia is still relatively weak. The aim of the present study was to evaluate the effect of various modalities of stressful life events

on schizophrenic process as regards its onset, relapse, severity and prognosis.

Subjects and Method

One hundred patients who were diagnosed as schizophrenia according to the criteria described by Diagnostic Manual of Psychiatric Disorders DMPI (Egyptian Psychiatric Association, 1975) were selected from the Psychiatric Department of Mansoura University Hospital. The disease in all patients presented in an active condition whether this activity coincided with the first presentation of schizophrenia (acute attack), or with an exacerbation of an already existing illness (i.e. a relapse). The majority of patients (63%) was in the third decade of life, while teenagers (21%) were more presented in male patients. Among the whole sample, both males and females were equally represented. All patients were subjected to the following study:

Clinical assessment using Present State Examination PSE (Wing et al.,

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1974), translated into Arabic Language by Okasha and Ashour, 1981.

The clinical interview was accomplished within the first few days of presentation (maximum one week).

Assessment of the current life events that were encountered during the first month prior to the present illness with the aid of the Schedule of Recent Experiences (SRE) which was designed by Holmes and Rahe (1967). SRE structure consisted of forty items to which the subjects were asked to respond. The forty items referred to life events. In addition to these forty items, two other items were added in this study, namely troubles with workmates and scholastic failure. The Forty-two items were divided into five sections: work and finance (10 items), health (3 items), social and familial condition (17 items), personal events (9 items), and study (3 items).

For each item, two scales were rated; the first one concerned the presence or absence of such event in the last month preceding the current relapse. The second scale was the "desirability" of each event (if rated as present), which was derived from the study of Yager et al., (1981). It was rated as follows:

- 0= The event was desirable by the patient.
- 1= The event was neutral to the patient.
- 2= The event was relatively undesirable.
- 3= The event was absolutely undesirable.

If more than one event was rated, an aggregate score was then obtained for both scales.

Patients were divided into 2 groups according to clinical status:

Group I: (n=20, 20% of sample) were

first episode cases with symptoms of less than one month duration.

Group II: (n=80, 80% of sample) presented with relapses of previously existing illness.

Recent life experiences were compared in the two groups.

Statistical Analysis

As appropriate, the Chi square test, Student t test for comparison of two independent samples means (Surwillo, 1980) and t test for comparison of two independent samples proportions (Koenker, 1976) were used.

Results

Frequency and qualities of SRE (Table 1): 41% of the whole sample reported that they had been exposed to stressful events of variable nature within the month prior to the onset or recurrence of schizophrenic symptoms. Experiences related to study (including start of new scholastic year, exam failure, etc ...) were the most common presenting in 15% of patients, followed by intra-familial troubles (7%), marital and engagement disturbances (5% for each) and pregnancy and delivery (3%). Females reported a significantly higher ratio of these RLE than males (52% and 30% respectively).

Prevalence of RLE between Group I and Group II (Table 2):

More patients of Group I reported the occurrence of stressful life events during the month prior to onset of their illnesses than those recorded to occur prior to relapses in Group II (60% and 36.25 respectively). Yet, the difference did not reach statistical significance. Desirability of RLE (Table 3):

43.9% of the recent life experiences

Table 1
Qualities of Recent Life Experiences (RLE) Type of Event in Relation to Sex

Life Experiences	Males (50)		Females (50)		Total (100)	
	No.	%	No.	%	No.	%
- Study troubles.	8	16	7	14	15	15
- Work disturbances	1	2	2	4	3	3
- Familial	4	8	3	6	7	7
- Failure in love	-	-	2	4	2	2
- Engagement	1	2	4	8	5	5
- Marital troubles	-	-	5	10	5	5
- Delivery / pregnancy.	-	-	3	6	3	3
- Immigration	1	2	-	-	1	1
Total	15	30	26	52	41	41

$t = 2.295$ $p < 0.01$

Table 2
The Prevalence of RLE in Group I and II

	Group I (20)	Group II (80)
No of RLE	12	29
%	60	36.25
t		1.946
p		> 0.05

Table 3
Desirability of the RLE

	No.	%
- Undesirable	18	43.90
- Neutral.	12	29.27
- Desirable	11	26.83
Total	41	100

Table 4
PSE Scores in Patients With +Ve or -Ve RLE

	+ve RLE (41 patients)	-ve RLE (59 patients)
Mean $\pm$ S.D.	50.769 $\pm$ 10.1007	53.45 $\pm$ 12.39
t	1.176	P > 0.05

Table 5
Differences in PSE Scores According to the Desirability of the RLE.

	+ ve RLE (41)	Mean $\pm$ S.D.	t	p
- Undesirable	(18)	54.78 $\pm$ 9.53	2.294	<0.05
- Neutral	(12)	48.20 $\pm$ 5.63		
- Desirable	(11)	45.46 $\pm$ 10.99	2.235	<0.05

reported by the patients were identified by them as "undesirable", while 26.83% were "desirable" and the remaining 29.27% "neutral".

Table (4 & 5) show the PSE, total scores in + ve and - ve life experiences. No significant difference was calculated between patients with either +ve or -ve history of recent life experiences. However, among those with + ve history, the PSE total scores were significantly higher in patients with undesirable experiences than those with neutral or desirable experiences.

Discussion

In 1968, Brown & Birley presented some findings that suggested that life changes and crises frequently precipitated the acute onset, relapse or exacerbation of schizophrenic states. These life changes included moving house, starting or leaving a job, admission to hospital, birth, marriage or death provided that these events took place within twelve weeks prior to the onset or the exacerbation. Many studies carried in the same context, but with some methodological differences, showed more or less supporting findings (Jacob, 1975; Brown & Harris, 1978 and Leff et al., 1973). However in a recent study utilizing the DSM III, diagnostic criteria, the relation of life events to the onset of schizophrenia was checked.

The schedule of recent experience used in the present study was a self-administered questionnaire which was designed by Holmes and Rahe (1967), to elicit information about an individual's personal and social history. Instructions concerning the aim and method of rating were supplied to the patients by the investigator before

starting the rating process. In the present study, many patients were illiterate or just with a minimal level of education, and for those patients the interviewer had to read clearly and explain, if needed, each item for the patient. 41% of the whole sample reported that they had been exposed to stressful events of variable nature within the month prior to onset or recurrence of schizophrenic symptoms.

Females reported a significantly higher ratio of these RLE related to marital problems. Similar findings were also previously reported by a Saudi Arabian study carried out by Khani et al. (1988) who found a positive relation between life events and only married female schizophrenics.

In the present study, we found higher frequency of RLE before the first attack of illness than before relapses. This observation, which was also noted by Birley and Brown (1970), could be explained by the maladjustment and the disturbed coping devices of the preschizophrenic during the prepsychotic period in a way that made him more fragile and more reactive to stressful life experiences, even if those experiences were desirable. On the other hand, the decreased frequency before relapse may also be secondary to the decreased reactivity of the schizophrenic patient even if unadapted with the environment and prone to much stresses.

Although severity of the condition, as presented by the total PSE score, seemed not to be affected by the presence or absence of RLE, yet, the nature of those experiences showed an influence. The desirable experiences were associated with lesser PSE scores.

The present study also revealed that patients who had experienced recurrent relapses showed a lower incidence of RLE, pointing to the probability of a reactive element which was expected to have a better prognosis than the genuine schizophrenic elements. A similar finding was revealed in the study of Wallis (1970) who found that the overall prognosis was better for these patients.

Within the scope of our study a positive association between stressful life events and onset of first schizophrenic episode was established. However, the role played by stressful events in precipitation of relapse was less pronounced. The observed impact of life events was limited to 4 weeks before onset. The nature of life experience may also influence the severity of illness expressed in PSE scores. The undesirable experiences were associated with high PSE scores while the desirable experiences were associated with low scores.

References

- Birley L.T and Brown G.W. (1970) Crises and life changes preceding the onset or relapse of acute schizophrenia: Clinical aspects. *Brit. J. Psychiat.*, 116:327-333.
- Brown G.W. and Birley J.L. (1968): Crises and life changes and the onset of schizophrenia. *J. Heal. Soc. Behav.*, 9:203-214.
- Brown G.W. and Harris T. (1978) *social origins of depression: A study of psychiatric disorders in women*. London: Tavistock.
- Day, R. (1981) Life events and schizophrenia, *Acta Psychiat. Scand.* 64:97-122.
- Dohrenwend B.P. and Egri G. (1981) Recent stressful life events and episodes of schizophrenia. *Schizop. Bull.*, 7:12-23.
- Egyptian Psychiatric Association (1975) *Diagnostic Manual of Psychiatric Disorders (DMPI)*. Cairo.
- Holmes S.T.H and Rahe R.H. (1967) The social readjustment rating scale. *J. Psychosom., Res.* 11:213-218.
- Jacob, T. (1975) Family interaction in disturbed and normal families, A methodological and substantive review. *Psychological Bull.*, 82:33-65.
- Khani M.A.F.; Bebbington P.E.; Watson J.P. and House F. (1988): Life events and schizophrenia: A Saudi Arabian Study. *Brit. J. Psychiat.*, 148:12-22.
- Koenker, R.H. (1976). *Simplified Statistics For Students in Education and Psychology*. Totowa: A Littlefield, Adams & Co.
- Leff J.P. ; Hirsch S.R.; Gajnd R. Rohed P.D. and Stevens, B.C (1973): Life events and maintenance therapy in schizophrenic relapse. *Brit. J. Psychiat.*, 123: 659-660.
- Rabkin J.G. (1980) Stressful life events and schizophrenia. *Schizop. Bull.*, 37:408-425.
- Surwillo, W.W. (1980). *Experimental Design in Psychiatry*. New York: Grune & Stratton, Inc.
- Wallis G.G. (1970) Stress as a predictor in schizophrenia, *Brit. J. Psychiat.*, 120:375-384.
- Wing J.K.; Cooper J.E. and Sartorius N. (1974), *Measurement and Classification of Psychiatric Symptoms*. Cambridge: Cambridge University Press.
- Yager J., Grant I. and Hervey L. (1981) Life events reports by psychiatric patients, non patients and their partners, *Arch. Gen. Psychiat.*, 38:343-345.

Les Expériences de la Vie et Le Commencement de la Schizophrénie

En utilisant la version arabe du PSE, cent malades (20 ayant le premier épisode schizophrénique et 80 en exacerbation accentuée) ont été choisis du département de psychiatrie à l'hôpital de l'Université de Mansoura.

L'histoire des événements de la vie a été prise descriptivement pour 4 semaines avant le commencement ou la rechute de la maladie. Ils ont été étudiés en utilisant "L'horaire des dernières expériences".

On a trouvé une association positive entre la présence des événements stressants de la vie et le commencement du premier épisode de la schizophrénie. En tout cas le rôle joué par les événements stressants dans la précipitation de rechute est moins marqué.

La nature des expériences de la vie peut aussi influencer la sévérité de la maladie exprimée dans les scores du PSE.

Les indésirables expériences sont associées avec des plus grands scores en PSE tandis que les désirables expériences sont associées avec les plus bas scores.

الفصام وخبرات الحياة القريبة

أجرى هذا البحث على مائة مريض مصاب بمرض الفصام (عشرون منهم في حالة حادة، وثمانون مريضاً في حالة انتكاس) اختيروا من قسم الأمراض النفسية بمستشفى المنصورة الجامعي وقد استعمل مقياس الحالة الحاضرة لمرض الفصام مضافاً إليه اختبار مصاعب الحياة في فترة أربعة أسابيع قبل بداية المرض.

وقد توصل البحث إلى وجود علاقة إيجابية بين بدء حدوث أعراض مرض الفصام وبين التعرض لمصاعب الحياة بالرغم من أنها لم تكن واضحة في الحالات المنتكسة، وأيضاً وجد أن هناك علاقة بين شدة المرض والتعرض لنوع أو أكثر من مصاعب الحياة.