

Table IV : Finding in 17 cases when Appendix found to be normal.

	Male	Female
No pathology	3	7
Rupture of corpus luteum	-	3
Ovarian cyst	-	2
Ovarian heamangiom	-	1
Acute cholecystitis	0	1
Total	3	14

Discussion :

In this series-male, female ratio was equal. But to much stress can't be given on this point as we failed to include all patients with pain in the RIF. Male female ratio in Lewis⁴ series was 2 : 1

About half of the total patients (46.52%) of this series were in the second decade of life. Ali KMA³ also found similar result (48%). Median age in this series was 20 years in male and 21 years in female as compared to 33 years in the Ali's³ series.

Overall 68.52% patients in this series had histopathologically proved appendicitis with 31.48% negative results. Overall rate of negative appendicectomy in several series were as follows Harding¹ -39.6%, Hobson and Rosenman² - 28%, Ali³ - 41, Lewis et al⁴ - 20%, Lau et al⁵ - 11.4%, Gilmore et al⁶ - 22%. In the present series negative appendicectomy rate in male was 11.1% and in female was 51.85%. Lewis et al⁴ found more than 40% negative appendicitis in female between 20 to 40 year age group though his overall negative rate was 20%. Gilmore et al⁶ also found negative result in female twice as common in female as in male. 12 out of 14 female with negative appendicitis were in second decade. Higher propotion of negative result in female of second decade also noted in other series¹. So acute appendicitis is more common in second decade and negative result is also high in this age group. So surgeons are in trouble with pain in RIF in female patients of second decade.

In 7 cases some other intra-abdominal pathology were detected and 4 patients required surgery for it. That is 41.18%

of negative appendicectomy had some other intraabdominal pathology. Again it means 12.9% of patients clinically diagnosed as acute appendicitis had some pathology other than appendicitis. Lau et al⁵ found 29.9% of negative appendicectomy had other intra-abdominal pathology. Rupture of corpus luteum detected in 3 (5.56%) cases in this series and Ali³ found 6%. Rupture of corpus luteum may occur due to some sort of trauma (eg. coitus) but it can occur spontaneously⁷. Rupture of corpus luteum occurs more frequently during the stage of maturity or regression. Most of the cases it cause minimal bleeding but on rare occations it may cause massive intra-peritoneal bleeding requiring immediate resuscitation and surgery⁷. Ovarian cyst detected in two cases, in one it was twisted overian dermoid, and in the second case there were multiple small cysts in the right ovary and chocolate cyst in the left ovary. Acute cholecystitis was the cause of pain in RIF in only one case. In the present series, there was no ureteric stone, rupture of tubal pregnancy, meckel's diverticulitis.

13 out of 17 cases of negative appendicectomy, operation was unnecessary. Though appendicectomy in this group considered as minor operation, but about 14% early or late complications detected⁵. So any thing, which reduce the rate of unnecessary operations will be welcome my patients, doctors and hospital adminstration. But even a single case of perforation may be too costly. So it is really crucial question, how much delay for observation and how much risk of perforation are acceptable to achieve higher percentage of correct result. To elminate risk of perforation, we must accept removal of certain number of normal appendix.

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PSYCHOSOCIAL STRESSORS IN SCHIZOPHRENIA

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Abstract :

A sample of 100 schizophrenic patients was matched with

equal number of nonpsychiatric patients to compare the psychosocial stressors 12 months prior to the onset of illness

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in schizophrenic patients and comparable period in control patients. Significantly more of stressors were reported by the schizophrenic patients than control patients. Family and occupational stressors were particularly significant. Overall severity of the stressors was found much higher in schizophrenic patients than control patients which suggests its greater risk. The mean duration of all stressors was 6 months in schizophrenic patients before the onset of illness. The findings support the importance of psychosocial stressors in causation of schizophrenia.

Introduction :

Schizophrenia is the commonest of the major psychiatric disorders in Bangladesh. In a rural community survey the prevalence rate of 2.54/1000 population was reported.¹ Schizophrenia was reported to be 32.76% and 30% amongst psychiatric patients of attending in outpatients department in a psychiatric institute and in a psychiatric clinic respectively.^{2,3} Although the aetiology of schizophrenia is multifactorial and difficult to evaluate, but there is less doubt about the part played by psychosocial stressors in precipitating this disorders.⁴⁻⁶

Several controlled studies reported that psychosocial stressors were experienced with greater than expected frequency before the onset of schizophrenia.^{4,7-10} These stressors were described as independent, possibly independent, desirable, severe and triggering in nature. No work has so far been reported on this aspect in our country. The present study was designed to assess the pattern of psychosocial stressors in schizophrenia and to find out the relationship between them. The different observations may give some idea about the extent of stressors in schizophrenia in Bangladesh.

Materials and Methods :

The study was conducted between April, 1993 and June, 1993. A consecutive series of 100 schizophrenic patients satisfying DSM II-R criteria for schizophrenia¹¹ were selected from the outpatients department of Institute of Mental Health & Research and psychiatric outpatients department of SSMC Mitford Hospital at Dhaka as study group. Schizophrenic patients who were mentally retarded, those with substance abuse of epilepsy and those where adequate information were not found were excluded. Of these, 60 were male and 40 were female. The male : female ratio here was 1:0.67. Their age ranged between 15 and 43 years with a mean of 22.35 years (SD = 4.79). Majority of the subjects were either illiterate or primarily educated with 31 cases for each group and graduates were only 4. Among the subjects, 22 were housewives, 16 were unemployed, 15 were service holders, 13 were students 10 were cultivators and the rest were of other occupations. 52 cases were of urban and 48 cases were of rural background. 54 and 44 cases were middle and lower income group respectively. Only 2 cases were of higher economic group. 57 cases were unmarried and 39 cases were married. The separated and divorced were found only 3 and 1 cases respectively.

The controls (N=100) were nonpsychiatric medical inpatients from the SSMC Mitford Hospital matched for relevant socio-demographic variables. All of the patients of both group and at least one informant for each schizophrenic were interviewed by one of the authors with the informed consent. In addition to the stressors, the interview covered socio-demographic variables, physical and mental health status.

Psychosocial stressors were assessed on the basis of axis-IV of the multi-axial evaluation system of DSM III-R which provides the Severity of Psychosocial Stressors Scale (SPSS).¹¹ Stressors in the 12 months prior to the onset of schizophrenia or (for control group) prior to the interview were recorded. Individual stressors and their types were considered according to this scale with slight modification which was necessary in our socio-economic-cultural context. The severity of stressors were evaluated and rated clinically according to code 0-6 given in the 7 point SPSS. The individual stressors were grouped into monthly durations and further specified as either : predominately acute events (duration less than 6 months) or predominantly enduring circumstances (duration greater than 6 months).

The data was processed and comparison was made between study and control group. Statistical analysis involved two tailed t-tests and Chi-square tests with Yates' correction.

Results :

In the first set of analyses, the schizophrenic patients and control patients were compared on measures of psychosocial stressors. The schizophrenic patients reported a total of 138 stressors, with a mean of 1.38 (SD=1.23) and control patients reported a total of 80 stressors with a mean of 0.8 (SD=0.75). This revealed that overall, the schizophrenic patients reported one and three-fourth times as many stressors as the control patients. This difference was highly significant (Table-I)

Table I

Comparison of schizophrenic patients and control patients on measures of stressors

Measure	Schizophrenic group	Control group	t-test
Total stressors	1.38(SD=1.23)	0.8(SD=0.78)	4.03, P<0.001
Severity rating on SPSS	3.43(SD=1.34)	2.56(SD=1.66)	4.08, P<0.001
Duration in month	5.97(SD=4.25)	5.82(SD=3.61)	0.27, P<0.05

* Data are expressed as X ± SD

Table-II shows the frequency of psychosocial stressors among the schizophrenic patients and control patients. For each stressors, the significance of difference between the two group was tested by Chi square, using Yates' correction when appropriate. This analysis indicated that overall increased frequency of stressors in the schizophrenic patients was paralleled by increased frequency of the most of

the individual stressors but for only three stressors, the difference was significant at 5% level or better : (1) lack of family support; (2) birth of first child; (3) family arguments. Most of the other stressors were also reported more frequently in the schizophrenic patients but they occurred too infrequently in either population for differences to achieve statistical significance. Nine stressors were reported more frequently in the control patients than in the schizophrenic patients – serious chronic illness in self, extreme poverty, sex difficulties, recurrent physical abuse by husband and or his family members, serious physical illness diagnosed, death of child, failure to go abroad for employment, serious illness of child and unwanted pregnancy. The general frequency of these stressors was also very low and except for the serious chronic illness in self their differences between two groups were not significant.

Table II
Frequency of individual stressors

Stressor	Schizophrenic group(N=100)	Control group (N=100)	Significance*
1. Lack of family support	18	0	<0.001
2. Birth of first child	6	0	<0.01
3. Family arguments	20	8	<0.05
4. Serious financial problem or loss	19	11	NS
5. Marital discord	15	14	NS
6. Marriage	12	5	NS
7. Unemployment	8	5	NS
8. Loss of job	4	4	NS
9. Marital separation	4	1	NS
10. Divorce	1	1	NS
11. Second marriage of husband	1	1	NS
12. Neglect of parent	2	0	NS
13. Death of spouse	1	1	NS
14. Death of parent	2	0	NS
15. Death of family member	1	0	NS
16. Brokeup with boy/girl friend	3	1	NS
17. Problem with neighbours	3	1	NS
18. Excessive work load	2	0	NS
19. Trouble with boss	3	0	NS
20. Repeated failure in exam.	2	0	NS
21. Problem in the college	1	0	NS
22. Extreme job dissatisfaction	1	0	NS
23. Threat to personal safety	2	0	NS
24. Husband left home/absconded	1	1	NS
25. Physical injury	1	0	NS
26. Physical abuse by other	1	1	NS
27. Serious chronic illness in self	1	10	<0.01
28. Sex difficulties	0	2	NS
29. Extreme poverty	2	4	NS
30. Death of child	1	2	NS
31. Serious physical illness diagnosed	0	2	NS
32. Serious illness of child	0	1	NS
33. Unwanted pregnancy	0	1	NS
34. Recurrent physical abuse by husband and or his family members	0	2	NS
35. Failure to go abroad for employment	0	1	NS

*X²

The types of psychosocial stressors are set out in Table-III to further explore the implication of general increased frequency of most of the individual stressors in schizophrenic patients. The individual stressors were grouped into types according to the social area of activities. For each type, frequencies were again calculated and significances of differences were tested. Eight types were found to be present. Of these, family and

occupational stressors were significantly higher in schizophrenic patients than control patients. Stressors related to physical illness or injury were found significantly higher in control patients than schizophrenic patients. The difference of other types failed to reach the level of significance.

Table III
Stressor grouped by types

Type	Schizophrenic group	Control group	Significance*	Stressors included in type
Family	50	10	<0.001	Arguments Neglect of parent Neglect of son Lack of support Death of parent Death of closed family member Death of child Birth of first child
Occupational	21	10	<0.05	Unemployment Loss of job Excessive work load Trouble with boss Extreme job dissatisfaction Failure to go abroad for employment Problem in the college Failure in exam.
Conjugal	34	25	NS	Marriage Discord Divorce Separation Engagement Death of spouse Sex difficulties Second marriage of husband
Other Interpersonal	6	2	NS	Broke up with boy/girl friend Problem with neighbours
Financial	21	15	NS	Serious financial problem or loss Extreme poverty
Living circumstances	3	1	NS	Threat to personal safety Husband left home/abroad
Physical illness or injury	2	13	<	Serious physical illness diagnosed Serious chr. illness in self Serious chronic illness of family member Serious illness of child Serious physical injury
Other stressors	1	4	NS	Recurrent physical abuse by husband and or his family members Physical abuse by others Unwanted pregnancy

*X² with Yates' correction

Severity of psychosocial stressors was rated on SPSS and mean score for schizophrenic patients was 3.43 (SD=1.34) and that for control patients was 2.56 (SD= 1.66). This difference was highly significant (Table-I). Again the severity was recorded in Table-IV according to the individual codes with frequencies and level of significances were tested. Only the significantly higher frequency of severe form of severity was found in schizophrenic patients which was three and half times more than control patients.

The mean duration of psychosocial stressors was found 5.97 months (SD=4.25) in schizophrenic patients and that was found 5.82 months (SD=3.61) for control patients. The difference here was not significant (Table -I). Predominantly acute events were found much higher in schizophrenic group with 90 (65.22%) events and predominantly enduring circumstances were found slightly higher in control patients with 44 (55%) events. Predominantly acute events were found three times greater in schizophrenic patients than control patients which was highly significant ($p < 0.001$). When monthly distributions of frequency of stressors were tested between two groups, it revealed that though general increased frequencies were found in schizophrenic patients at all levels, the significantly higher differences were found in 1st, 5th and 6th months in schizophrenic group before the onset of illness than control group.

Table IV
Severity of Stressors

Severity Code	Term	Schizophrenic group (n= 100)	Control group (n=100)	Significance *
1	None	15	39	NS
2	Mild	7	17	NS
3	Moderate	20	16	NS
4	Severe	40	9	<0.001
5	Extreme	14	15	NS
6	Catastrophic	4	4	NS

* χ^2 with Yates' correction

Discussion :

Before the evaluation of the findings of this study, the possibility must be considered that their might be reporting or methodological artifacts. Retrospective reporting of the experience of psychosocial stressors before the onset of schizophrenia may be distorted by the presence of illness and may be due to its prolong durations. Again onset is harder to date in schizophrenics than control patients. Schizophrenics may search for stressors to explain the onset of illness. Stressors which occurred after the onset and consequences of illness may be confused with its causes. A number of precautions were taken against these problems. Interviewing was delayed until after improvement and information was also obtained from the informants as high agreement between patients and relatives for schizophrenics were reported in the previous study.¹²

In this study, SPSS was used to measure the psychosocial stressors which was not standardized in our socio-cultural setting, hence some difficulties were experienced during their administration on subjects. It contains some events which are not to be considered as stressors and lacks many events which are perceived as stressful in this setting. Again some severe stressors which are actually not so severe in our society. Reverse is also true in cases of some other stressors. Though slight modification was done to overcome some gross anomaly, yet we admit the existence of limitation of scale to quantify stressors in the subjects.

In this study, overall, schizophrenics were reported to experience more psychosocial stressors before the onset of schizophrenia than control patients and has general similarity with the findings of others studies.^{4,7-10} In well-known Camberwell study, the schizophrenic patients experienced a significantly higher of stressors in 3 months prior to onset of their symptoms than did a matched group of nonschizophrenic controls.⁴ In the New Haven study, the result obtained were also similar to our findings for one year antecedent period from the illness.⁷

In the present study, though overall increased frequency of the individual stressors were found in schizophrenic patients than control patients, only three stressors : lack of family support, birth of first child and family arguments had significant difference. This indicates that except a few, most of the individual stressors were found non-specific in schizophrenic patients for precipitation of the illness. Similar findings were also reported in the New Haven study. In the replication study of Camberwell, the authors suggested that schizophrenics may be particularly sensitive to disruptions of family life.¹³ Our findings support this statement. The result obtained by combining stressors into types further confirmed these findings in our study. In addition to family stressors, occupational stressors were also found significantly higher in schizophrenic patients than control patients which differs with the findings of other report where it was insignificant.⁷ Significantly higher rate of stressors related to physical illness and injury in schizophrenic patients reveals the fact that control in our study were hospitalized physically ill patients and a portion of these illness were considered as stressors.

In general, overall severity of the psychosocial stressors was found significantly higher in schizophrenic patients than control patients in our study which suggests that severity of the stressors increase the risk of developing schizophrenia.

Though there was no such difference in mean duration of psychosocial stressors between two groups, significantly increased rate of stressors were found in the schizophrenics 6 months before the onset than did in the control patients. In monthly break up, increased frequency of stressors were found significantly higher at 2% level in schizophrenic patients in 1 month and 5 months period before the onset than the control patients. These findings were partially consistent with the Camberwell study where the entire difference appeared to occur in three week period immediately before the onset of schizophrenia at higher significant level in schizophrenic patients than that in the general population sample, but outside those three-week the rate was much the same in the two groups.⁴ A portion of this inconsistency partly due to indefinite or vague reply by the respondents regarding duration of stressors in our study which reflects the reluctant nature of our people about the time specification.

Conclusion :

Psychosocial stressors play a definite role in precipitating attacks of schizophrenia. Moreover, they specify certain

types of stressors which are particularly important in this respect. Whether this association has triggering effect or formative effect in schizophrenic onset needs further evaluation.

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