Premorbid Personality in First-Onset Psychosis[1]

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The data presented are those from a two-year prospective study of 69 patients identified in the Nottingham field centre of the WHO Study of Determinants of Outcome of Severe Mental Disorders. Premorbid personality, childhood adjustment and adolescent adjustment were assessed at the patients' first presentation to psychiatric services with a psychotic illness. Ratings were made blind to diagnosis. Premorbid explosive and paranoid traits were commoner in patients with schizophrenia than in patients with other non-organic psychoses, and these traits were associated with later onset of schizophrenia. Premorbid schizoid traits were significantly commoner in patients with schizophrenia compared to patients with other psychoses, but only in those patients for whom a parent was the informant. Schizoid traits were no commoner in men with schizophrenia than in women, and were not associated with earlier age of onset. The findings suggest that premorbid personality, in men and women, may shape the expression of symptoms produced during an illness episode.

It is well established that some adults with schizophrenia have abnormal premorbid personalities – the classical schizoid personality was recognised by Bleuler (1911) and Kraepelin (1919) and described by Kretschmer (1921). Subsequent identification of subtle abnormalities of thinking and speech in association with schizoid traits has led to the concept of schizotypal personality (American Psychiatric Association, 1980). Studies of subjects at high risk and adoption studies suggest that schizophrenia and schizotypal personality share a common genetic aetiology (Kety *et al*, 1968; Mednick *et al*, 1987). Cutting (1985) reviewed early studies of personality and schizophrenia: premorbid schizoid traits were present in around a quarter of schizophrenic patients, but one-sixth showed a range of other personality abnormalities. Similarly, Watt (1972) and Nyman (1978) found schizoid personality to be the commonest premorbid personality type, but traits of overactivity, anger, irritability and aggression were present in around 10%.

These premorbid impairments have been shown to correlate with early disease onset, poor overall prognosis, negative symptoms, cognitive deficits and structural brain abnormalities on CT scan (Offord & Cross, 1969; Strauss *et al*, 1977; Weinberger *et al*, 1980; Williams *et al*, 1985).

More recently attention has focused on the relationship of gender with premorbid functioning and long-term outcome (Lewis, 1992). The incidence of schizophrenia may be greater in men than women (Cooper *et al*, 1987) and the age of onset is earlier (Hafner *et al*, 1989). Ventricular enlargement is more frequent in schizophrenic men than women (Andreasen

et al, 1990), negative symptoms are more prominent (Goldstein & Link, 1988), and premorbid adjustment is poorer (Childers & Harding, 1990; McGlashan & Bardenstein, 1990).

The nature of the link between abnormal premorbid personality and schizophrenia remains unclear. Such a state may act as a vulnerability factor for the development of schizophrenia or may represent the earliest manifestation of illness. It has not been established if these abnormalities are specific to schizophrenia or whether they relate to severe psychiatric disorder in general.

The study of Foerster *et al* (1991) is important for two reasons. Firstly, they assessed the premorbid personality of patients with schizophrenia and a comparison group of patients with psychotic affective disorders. Secondly, they assessed adjustment in childhood and adolescence. Men with schizophrenia showed greater premorbid impairment than women with schizophrenia or men with affective psychoses. It is important to note, however, that patients were included in the study only if their mother was available as the informant, and this could well have introduced a sampling bias.

Methodological limitations of previous studies make generalisation from their findings difficult. The issue of the representativeness of the sample is important. For example, patients are increasingly treated in the community, and samples drawn from in-patients are likely to result in males with early age of onset being over-represented (Wahl & Hunter, 1992). Retrospective assessment of personality, particularly when carried out a number of years after the onset of illness, is likely also to be a source of bias. Other methodological problems include case-note diagnosis, non-standardised

assessment of personality, and lack of psychiatric control groups.

In the World Health Organization Study of Determinants of Outcome of Severe Mental Disorders (Sartorius *et al*, 1986), data on premorbid personality were collected on a representative sample of patients making their first presentation to psychiatric services with a psychotic illness. Though this does not avoid the problem of retrospective personality assessment, the data relate to a representative sample of patients, and the assessments were carried out close to the time of onset of the illness. Results from the pooled data from all field centres have recently been published (Jablenksy *et al*, 1991) but the analysis of premorbid personality data has yet to be carried out in detail.

This paper presents a detailed analysis of the data from all patients with a psychosis of first onset, consecutively identified from a defined catchment area. Childhood adjustment, adolescent adjustment and premorbid personality were assessed at entry into the study, and thus close to the onset of the psychosis. All ratings were made by the same interviewer, who was blind to the diagnostic status of the patient. Although primarily a study of schizophrenia, the method of case finding identified all patients with a non-organic psychosis of first onset, and this allowed patients with schizophrenia to be compared with patients with other non-organic psychoses.

A reading of the literature highlights a number of hypotheses. The following were tested:

(a) schizoid personality traits are commoner in schizophrenia than in non-schizophrenic psychoses

(b) abnormal premorbid personality, predominantly of the schizoid type, is commoner in men than women

(c) the age of onset of schizophrenia is earlier in patients with abnormal premorbid personalities.

Method

The method of case finding and assessment is described in detail elsewhere (Cooper *et al*, 1987). In summary, the study included all patients living in the catchment area of the Mapperley group of hospitals making their first ever contact with the psychiatric services during a two-year period because of a probable psychotic illness. Patients with a clear organic cause for their illness were excluded from the study. All patients whose screening schedule suggested they had a psychotic illness were interviewed using the Present State Examination (PSE; Wing *et al*, 1974). Diagnoses according to ICD-9 (WHO, 1978) were made by consensus by the research group, all experienced clinicians. Two groups of patients were identified: patients

with schizophrenia and a heterogeneous comparison group of patients with other non-organic psychoses.

In a separate interview with an informant (usually the parent or spouse) an assessment was made of emotional and behavioural difficulties in childhood and adolescence, and of adult premorbid personality. The child and adolescent ratings were made using an itemised checklist (see Appendix). Global ratings were also made at the time of interview of childhood adjustment and adolescent adjustment. These were overall ratings which took into account both the range and severity of any disturbance. Adult premorbid personality was established by the same interviewer using a similar semi-structured itemised checklist (see Appendix) designed to elicit features of personality disorders as classified in ICD-9. All of the personality assessments were carried out by one interviewer who was blind to the patients' diagnosis.

Considerable attention was given to establishing the age of the patient at the onset of their symptoms. As not all patients were admitted to hospital, the estimated age at onset rather than age at admission was used in this study as the index point for the start of the illness.

Childhood and adolescent data were analysed only for those patients for whom the parent was the informant. Clusters of symptoms corresponding to emotional disorders, conduct disorders and a schizoid measure were created for both childhood and adolescence. Adult premorbid personality data were analysed for patients in whom a parent or spouse was the informant and re-analysed for those in whom a parent only was the informant. A score was obtained corresponding to each of the ICD-9 personality disorders by summing the number of positive items within each cluster. The range of possible scores was between 0 and 3, except for the schizoid cluster, in which a maximum score of 5 was possible.

Data were analysed using SPSS-X. Mann–Whitney U tests were performed on continuous data and χ^2 tests were performed on categorical data. The Spearman rank correlation coefficient was used to measure association between variables.

Results

Using the screening instrument in the original study, 95 psychotic patients were identified, 63 men and 32 women. Four patients were excluded because the final

Table 1
Differential diagnoses in 69 subjects where parent or spouse was interviewed

Diagnosis	n
Schizophrenia	52
Schizoaffective disorder	4
Manic–depressive psychosis, manic type	6
Manic–depressive psychosis, depressed type	4
Acute paranoid reaction	2
Psychogenic paranoid psychosis	1
	69

consensus diagnosis was of a non-psychotic disorder. In all, 67 patients received a diagnosis of schizophrenia. Of the 95 psychotic patients, there were 69 patients (45 male; 24 female) for whom it was possible to interview a parent or spouse. The data reported here are confined to this group of 69 patients, although analyses were not always possible on all patients due to some missing items of information. Of the 69 patients, 52 received a diagnosis of schizophrenia and 17 patients had other diagnoses: both groups are shown in Table 1.

The median age of onset for the 69 subjects was 27 years (range 15–54 years). The median age of onset of schizophrenia was 26 years for men and 31 years for women. Men were significantly more likely to present in their 20s than women ($P<0.01$). The median age of onset of the comparison group of non-schizophrenic psychoses was 28 years for men and 32 years for women, and did not significantly differ from the schizophrenic group. Patients for whom a parent was the informant were significantly younger at the onset of their illness than those with a spouse as informant (median ages 22 years and 40 years respectively; $P<0.001$).

Of the original patient sample of 95, 26 were excluded because the informant was neither a parent nor spouse. There were no significant differences in diagnostic distribution, sex distribution and age of onset between the 26 excluded patients and the 69 patients reported.

Premorbid personality assessments

The results of the premorbid personality assessments for the schizophrenic and the comparison psychoses are shown in Table 2.

Childhood and adolescent adjustment

There were no differences between the schizophrenic group and the comparison group in the childhood emotional, conduct or schizoid clusters, and in overall childhood functioning. In adolescence the patients with schizophrenia showed more premorbid schizoid traits than those with other psychoses ($P<0.05$). There were no other significant differences between the groups.

Adult premorbid personality

Comparisons were made between the diagnostic groups, and within the schizophrenic group between sexes.

The schizophrenic group overall showed more paranoid traits ($P<0.03$) and more explosive traits ($P<0.02$) than the non-schizophrenic group. Both groups scored highly on the presence of schizoid traits – 56% of schizophrenic patients and 35% of the comparison group scored on at least one schizoid item. Where the parent was the informant, patients with schizophrenia showed more schizoid traits ($P<0.04$). For the group as a whole, however, this difference did not reach statistical significance. Patients with schizophrenia had fewer histrionic traits than patients with other psychoses ($P<0.03$).

Gender differences in schizophrenia

Only one significant difference was found between the sexes; this was that women with schizophrenia had more explosive traits than men ($P<0.002$). Schizoid traits were equally common in both sexes for the whole group with schizophrenia, and also in the parent-informant subgroup.

Premorbid personality and age of onset of schizophrenia

Variables which differentiated the schizophrenic patients from the comparison group of patients were examined with regard to their association with the age of onset of schizophrenia. Paranoid premorbid personality traits and explosive premorbid personality traits were associated with later age of onset of schizophrenia ($P<0.008$; $P<0.007$ respectively). No association was found between premorbid schizoid traits and age of onset of schizophrenia.

Discussion

This study did not avoid the problem of retrospective assessment of personality, and the results must be interpreted with caution because of the lack of normative and reliability data for the personality checklists. The strengths of the study, however, include the representative nature of the sample, the use of standardised mental state assessments, and personality ratings made blind to the diagnostic status of the patient, soon after the onset of the illness.

Table 2
Premorbid personality assessment

	Mean rank, Mann–Whitney		Significance
	Schizophrenia	Other psychoses	
Childhood			
emotional	21.6	18.9	NS
conduct	21.3	20.0	NS
schizoid	21.0	18.9	NS
global	22.2	16.7	NS
Adolescent			
emotional	20.5	22.5	NS
conduct	21.5	23.7	NS
schizoid	22.5	14.6	$P<0.05$
global	22.9	19.2	NS
Adult			
paranoid	28.9	21.5	$P<0.03$
schizoid	27.9	21.3	NS
schizoid (parent)	16.9	10.0	$P<0.04$
explosive	29.15	21.0	$P<0.02$
histrionic	24.0	30.8	$P<0.03$
passive	26.7	24.4	NS
antisocial	27.6	25.5	NS
obsessional	27.2	24.8	NS
cyclothymic	27.1	28.6	NS
'positive'	26.6	26.1	NS

The finding that schizophrenic patients had more premorbid paranoid traits than the comparison group, and that these traits were associated with later onset of schizophrenia, is in keeping with other work (Zigler & Levine, 1973). Paranoid traits predicted later onset in both men and women. In contrast, the excess of explosive traits and its association with later onset was confined to women and it is of interest that Goldstein & Link (1988) found women with schizophrenia showed more impulsivity and anger than men with schizophrenia during the course of an acute illness.

For the subgroup of patients where a parent was used as the informant, patients with schizophrenia were more likely to have premorbid schizoid personality traits, both in adolescence and in adulthood, supporting the findings of previous studies (e.g. Foerster et al, 1991).

These findings regarding schizoid personality traits should be interpreted with caution. They are confined to the parent-informant group, which was significantly younger than the spouse-informant group. However, the excess of schizoid traits only in the parent-informant group was not due to a simple relationship between early age of onset and schizoid personality; there was no association between these two factors over the whole group. The key to these findings probably lies in the method of selecting the informant, chosen on the basis of being the person having the most regular contact with the patient over a period of time before the onset of illness. In the case of married patients the spouse was usually chosen as the informant. Of those subjects for whom the parent was the informant some would have been too young to have found a partner while others may have been without partners because of the schizoid nature of their personalities. It is likely, therefore, that studies which include only patients for whom a parent can act as informant will tend to select young patients. They may well be single and living at home with parents because of their schizoid personality traits. While it may be argued that parents give a better overall judgement about personality, particularly for adolescent adjustment, this finding underlines the need for caution in the selection of informants.

Two other points warrant attention in relation to the group of psychoses as a whole. Firstly, it should be noted that a high proportion of both schizophrenic and non-schizophrenic psychotic patients were rated positive for schizoid traits, and the instrument may have lacked sufficient specificity to discriminate between normal characteristics such as solitariness, and true schizoid traits. That is, differences which were present may not have been detected. Secondly, personality assessment is known to be subject to retrospective distortions determined in part by the patient's illness. This study, carried out at the onset of the psychosis, would be less prone to bias than other studies carried out at a time more distant to the first illness. Thus the findings presented here are likely to be a more accurate reflection of the prevalence of schizoid personality traits at the onset of psychotic illness.

With regard to the issue of gender, unlike previous studies (Childers & Harding, 1990; McGlashan & Bardenstein, 1990; Foerster et al, 1991), men were found to be no more schizoid than women. There are several reasons for this. Limitations in the instrument used and small cell numbers may both be important. In addition, as argued above, patients for whom a parent is the most available informant may have failed to make other relationships, and may self-select for 'schizoid' traits. There may be a differential effect of retrospective personality assessment between men and women. Men develop schizophrenia five years earlier than women (Hafner et al, 1989), but tend to marry later (OPCS, 1987). Both of these factors increase the likelihood that the mother of a male schizophrenic patient will have had a greater exposure to the patient's symptoms than will the mother of a female patient. Mothers' reports of premorbid personality are, therefore, more likely to be contaminated by effects of the illness itself for men than for women.

In summary, these findings from a well defined and representative sample of first-onset psychoses suggest a positive association between premorbid schizoid, paranoid and explosive personality traits and schizophrenia, compared with other psychotic disorders. However, it is suggested that firm conclusions about premorbid personality, gender, and age of onset of schizophrenia cannot be reached until methodological issues regarding sample size, case definition, selection bias and problems of retrospective assessment are adequately addressed.

Appendix. Checklist designed to rate premorbid personality according to ICD-9 classification

Ratings in childhood

A. Emotion items
1. Waking in the night in a state of severe fright or terror
2. Sleep walking
3. Nocturnal enuresis
4. Persistent fears beyond those of most children
5. Fear and aversion to school, to the extent of persistently not wanting to go there

B. Conduct items
1. Excessive excitability, screaming and tantrums
2. Persistently does the opposite of what told to do
3. Purposefully destructive
4. Violent attacks on other children without provocation

C. Schizoid items
1. Extreme shyness in the presence of others, more marked than in most children
2. Fear and aversion to school
3. Prefers to play alone for most of the time
4. Teased and rejected by other children

D. Overall rating
0 = overall impression of good adjustment (e.g. good in communicating, confident and contented, cooperative, well liked by other children, adapting well to new situations)
1 = evidence of transient conduct or emotional problems in childhood
2 = evidence of severe or persistent conduct or emotional problems in childhood

Ratings in adolescence

A. Emotional items
1. Easily frightened, constantly worried about ordinary things
2. Prone to moodiness, crying spells or elation, or rapid change from one to the other without adequate reason

B. Conduct items
1. Serious school difficulties, e.g. marked rebelliousness
2. Marked disobedience of parental authority
3. Constantly tells lies
4. Running away from home on more than one occasion
5. Involved with a gang engaged in dyssocial activities
6. Frequent drug or alcohol abuse
7. Behaves in a violent or aggressive manner towards other people
8. In trouble with the police because of bad behaviour

C. Schizoid items
1. Reserved and quiet, preferring not to talk with other people
2. Sensitive, timid and shy, easily hurt by other people
3. Persistent and marked mistrust and suspiciousness
4. Lack of feeling or sympathy for others
5. Absorbed in unusual interests to the extent of neglecting other work and obligations

D. Overall rating
0 = overall impression of good adjustment (e.g. had at least one close friend of the same age, sociable, reasonably stable and consistent, showed sympathy and understanding for other people, good capacity to deal with stresses, culturally normal interest in sexuality)
1 = evidence of transient conduct or emotional problems in adolescence
2 = evidence of severe or persistent conduct or emotional problems in adolescence

Ratings in adulthood

A. Paranoid items
1. Suspicious of others' intentions
2. Complains of being picked on by others
3. Excessive jealousy

B. Schizoid items
1. Prefers to be alone rather than with people
2. Difficulty making friends
3. Considered in the community to be eccentric
4. Impresses others as being emotionally cool and withdrawn
5. Never had a close relationship, or never showed interest

C. Explosive items
1. Loses temper at the slightest thing
2. Often shouts and argues
3. Violent outbursts of anger

D. Histrionic items
1. Enjoys displaying feelings to an audience
2. Expresses feelings in an exaggerated way
3. Clings to others for support
4. Tends to exaggerate facts

E. Passive dependent items
1. Easily dominated by others
2. Needs to be pushed to do anything alone
3. Finds difficulty coping with everyday life

F. Antisocial items
1. Hurts other people without seeming to care
2. Behaves in an aggressive or violent way without appearing angry

G. Obsessional items
1. Appears to be extremely tidy and meticulous
2. Impossibly high standards
3. Becomes upset if unable to keep to set routines or fixed habits

H. Cyclothymic items
1. Gloomy and pessimistic about the future
2. Generally excited and energetic
3. Mood goes up and down all the time

I. 'Positive' items
1. Generally optimistic and hopeful about the future
3. Marked capacity to endure stress
3. Dependable, loyal and reliable in social relations
4. Independent and autonomous in judgements and decisions

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