PSYCHIATRIC ILLNESS IN ADOLESCENCE: PRESENTATION AND PROGNOSIS

By

P. T. ANNESLEY, M.D.(Cantab.), D.P.M.

Assistant Psychiatrist

St. Ebba's Hospital, Epsom

INTRODUCTION

A UNIT for adolescent psychiatric patients was opened at St. Ebba's Hospital in 1949 by the late Dr. D. E. Sands. At that time, there were few in-patient facilities for this group of patients and the unit therefore received many of the most disabled cases from all parts of the country. Sands (1953)* wrote of the need for such a unit. "In the juvenile period there is psychiatric breakdown to a degree which from medical and social standpoints is as much of a problem as such illness in later life. There are some who have stated that all children's and juvenile psychoses should be treated at home. Experience with these patients has shown that, however desirable this may be in theory, it is no more practical or safe for some types of juveniles than for adults. The truth of this view might have been inferred in any case from the frequency with which such cases have found their way for years into all kinds of makeshift in-patient accommodation because home for one reason or another proved impossible or practically non-existent". He then gave an account of the classification, aetiology and treatment of patients on the unit and the results on discharge. The present article discusses the presentation of psychiatric illness in adolescence, reviews the follow-up on patients admitted between 1949 and 1953 and compares these follow-up results with those of Sands on discharge.

The unit has 30 male and 30 female beds and a school, run by the local education authority, is attached to it. The ages of the patients have ranged between seven and eighteen years but the majority are over twelve. They are referred from child guidance clinics, psychiatric out-patients, juvenile courts, special schools and remand homes. They therefore form a selected group of patients, who are too incapacitated to be treated at home or in various institutions.

Patients suffering from irreversible organic states have been excluded from this survey. These conditions consisted mainly of epilepsy without psychiatric disorder, post-encephalitic states and severe subnormality. This has left 362 patients, who have been followed up for a period of two to five years.

The diagnostic categories are shown in Table I. Over half the patients came into the group of behaviour disorders. This term has been used in preference to psychopathic reaction as the diagnosis of psychopath suggests a poor prognosis which should not be assumed in the developing adolescent. The main symptoms shown by these patients are violence, stealing, truancy and sexual disorders. About a quarter of the patients suffered from schizophrenia, contrasting with the rarity of affective disorders in this age group. The remainder presented with neuroses, of which the least common were obsessional states.

* Sands, D. E., *J. Ment. Sci.*, 1953, **414**, 123.

TABLE I

Diagnosis	Male	Female	Total	Percentage Total
Behaviour disorder	131	67	198	55
Schizophrenia	39	39	78	22
Anxiety state	25	8	33	9
Hysteria	14	16	30	8
Affective disorder	13	2	15	4
Obsessional state	6	2	8	2
Total	228	134	362	

Table II summarizes the condition at discharge of each diagnostic category. Affective disorders and obsessional states have a favourable outcome in this age group. Neuroses and behaviour disorders occupy an intermediate position, the prognosis of a psychopathic reaction in adolescence being far better than in the adult. In contrast, schizophrenia has a worse prognosis than in the adult where recovery can be expected in a third of patients.

TABLE II

Diagnosis	Recovered (Per cent.)	Improved (Per cent.)	No Change (Per cent.)	Worse (Per cent.)
Behaviour disorder	38	22	37	3
Schizophrenia	19	23	58	—
Anxiety state	55	24	6	15
Hysteria	40	43	7	10
Affective disorder	80	13	7	—
Obsessional state	50	50	—	—

Table III shows that psychiatric illness was commoner in eldest children and that only children were not at particular risk.

TABLE III

Eldest	Middle	Youngest	Only	Not Known
109	80	80	83	10

Table IV illustrates the relationship of a stable home or stable institutional background to each diagnostic category. Patients with behaviour disorders were more liable to have unstable homes. This may be a reflection of environmental or hereditary factors or the two combined. Although psychoanalytic theories often postulate a disturbance in early family relationships as a cause of schizophrenia, this was not apparent in this survey. Those with affective disorders and obsessional states usually had a stable home background.

TABLE IV

Diagnosis	Background	
	Stable	Unstable
Behaviour disorder	83	115
Schizophrenia	51	27
Anxiety state	21	12
Hysteria	16	14
Affective disorder	13	2
Obsessional state	7	1

Each diagnostic category will now be considered in relation to presenting symptoms and factors affecting prognosis.

Behaviour Disorder

This forms a miscellaneous group of psychiatric disorders in the adolescent. Its incidence is comparatively high, as adolescents are more outgoing and tend to externalize their problems in a "social neurosis". Adults are more prone to internalize their conflicts and express them in the form of a conversion hysteria, generalized anxiety or anxiety transformed into somatic manifestations. The following two cases illustrate one type of behaviour disorder, which may be constitutional in origin and produce the adult psychopath.

Case 1—A girl, aged 16, was admitted from an approved school after threatening to strangle people and killing the school cat.

Her father was unstable and callous. A maternal grandmother had served a prison sentence for manslaughter. Her father's viciousness made the home a very disturbed one and her parents separated a year before her admission. She was always in trouble at school but passed the 11+ examination and went on to a grammar school from which she was expelled after a year for truancy. She adjusted no better at a comprehensive school.

She started prostitution at 13 and began work in a night club as soon as she left school. She sometimes earned forty pounds a week and could see no incentive to change her way of life, which suited her temperament. She enjoyed prostitution as a means of degrading men and only obtained sexual gratification in relations with women under the age of thirty. She was addicted to Preludin. She intended to live until the age of 25 when she would commit suicide.

She was sent to an approved school after being picked up in a police raid on the club. She had no wish for treatment and soon absconded.

Case 2—A girl, aged 16, was referred for persistent truancy. She was an illegitimate child of a schizophrenic mother. She had been in three institutions, started to steal and play truant at the age of 14 and the episodes became more frequent. She absconded from the hospital about once a fortnight and there was rarely any discernible cause. She allowed herself to be picked up by lorry drivers and would then go to the police and accuse them of assault. Her conduct was not influenced by firm or permissive handling, she always blamed others and told fantastic stories. She had to be placed under permanent institutional care.

In contrast, the following two cases show that disordered behaviour may be the equivalent of a neurotic reaction to situations of severe stress.

Case 3—A girl, aged 16, was referred with a history of stealing and promiscuity.

Her parents were strict, respectable, orthodox Jews. Her brother conformed to the family ideals and was always held up as an example to her. Her parents were well suited but there was an antagonism between herself and her mother from early childhood. She made an average adjustment to school until her last years when she occasionally played truant. She then had four jobs in quick succession until settling down as a telephonist.

The incompatibility with her mother and the contrast between the ideals of her teen-age contemporaries and her strict home led her to associate with local delinquent society as a form of rebellion. She became promiscuous with the intention of spiting her mother and got into trouble after stealing forty pounds to pay off the fine of her boy friend.

She made genuine attempts to meet her parents half-way but the incompatibility proved insoluble on both sides and she was finally placed with an aunt who was tolerant of her adolescent ideas and dress.

Case 4—A girl, aged 14, was referred for truancy from school.

Her mother was placid and sympathetic. Her father had been nervy for some time. She was an only child. The home was stable and the girl's adjustment satisfactory until the age of ten when her father, who was a teacher, obtained a job in Cyprus. They changed house four times, lived under the strain of guerilla warfare and her parents began to quarrel. Her father started an association with a local girl with the tacit consent of her mother, who felt it would be good for his nerves. In addition, the patient had to adjust to a school where most of the pupils were Greek and much of the teaching was in that language.

She showed disturbed behaviour soon after arrival in Cyprus. She shut herself in cupboards at school or truanted and hid in the country. At other times, she associated with soldiers and was often picked up by the military police. The crisis came when she complained to the school authorities that her father had tried to have relations with her and he lost his job.

She returned to England with her mother and her disturbed behaviour gradually subsided after a period in hospital.

These four patients show the type of case placed in the category of behaviour disorder. Prognostic factors will now be considered in more detail. Table V gives the prognosis and duration of follow-up in this group of patients. It will be seen that 60 per cent. are recovered or improved after a follow-up of two to five years. Six of the patients were estimated as being worse. Two male patients developed schizophrenia, showing that this disease is a rare sequel to a behaviour disorder. One male patient was charged with transvestism and one female patient with prostitution. One female patient was in Broadmoor for murder and another had been charged with attempted murder.

TABLE V

Follow-up in Years	Sex	Recovered	Improved	No Change	Worse	Total
Two	Male	7	4	3	0	19
	Female ..	1	1	2	1	
Three	Male	9	6	6	0	40
	Female ..	5	5	9	0	
Four	Male	8	4	13	1	44
	Female ..	6	5	6	1	
Five	Male	30	14	24	2	95
	Female ..	10	4	10	1	
Total		76 (38%)	43 (22%)	73 (37%)	6 (3%)	

The prognosis was slightly improved by a negative family history, but the difference was too small to be significant. This is shown in Table VI.

TABLE VI

Family History	Recovered	Improved	No Change	Worse	Total
Positive	33 (36%)	17 (19%)	38 (42%)	3 (3%)	91
Negative	43 (40%)	27 (25%)	34 (32%)	3 (3%)	107

Similarly, although the prognosis was a little better with a stable home or institutional background, the difference was not significant when recovered and improved cases are combined.

TABLE VII

Background	Recovered	Improved	No Change	Worse	Total
Stable	40 (48%)	15 (18%)	26 (32%)	2 (2%)	83
Unstable	36 (31%)	29 (25%)	46 (40%)	4 (4%)	115

Table VIII shows no marked difference in prognosis between the sexes.

TABLE VIII

Sex	Recovered	Improved	No Change	Worse	Total
Male	54 (41%)	29 (22%)	45 (34%)	3 (3%)	131
Female	22 (33%)	15 (22%)	27 (40%)	3 (5%)	67

The duration of hospitalization averaged five months and the outcome showed no relation to the length of stay. The prognosis was worse in patients of low intelligence. The test used in this study was mainly the Wechsler I.

TABLE IX

I.Q.	Recovered	Improved	No Change	Worse	Total
Under 80 ..	8	7	11	1	27
80–100	26	22	35	3	86
100–120	25	9	18	1	53
Over 120 ..	4	2	3	0	9

EEG findings have been classed as stable, non-specific unstable and epileptic. There was no marked difference in prognosis between the first two, but an epileptic record was more often associated with a poor outcome.

TABLE X

EEG	Recovered	Improved	No Change	Worse	Total
Stable	28	17	25	1	71
Non-specific unstable	38	21	31	4	94
Epileptic	5	1	6	0	12

The clearest guide to prognosis was the symptomatology, which has been categorized under the five headings of stealing, violence, truancy, sexual disorders and pyromania. Stealing and pyromania as isolated symptoms had an excellent prognosis. In contrast, the combination of stealing, violence and truancy in the same patient indicated a very poor outcome. This is shown in Table XI which gives the various symptom combinations.

TABLE XI

Symptoms	Recovered	Improved	No Change	Worse	Total
Stealing	10	3	1	0	14
Violence	20	12	14	0	46
Truancy	2	12	14	0	28
Pyromania	3	0	1	0	4
Sexual disorders	6	5	10	2	23
Stealing, violence ..	11	6	9	2	28
Stealing, truancy ..	5	9	10	0	24
Violence, truancy ..	12	6	9	1	28
Stealing, violence, truancy	7	2	18	0	27

SCHIZOPHRENIA

There is no difference in the presentation of schizophrenia in adolescence. It may commence with a simple, catatonic, hebephrenic or paranoid picture as in the adult. The following three cases illustrate this.

Case 5—A girl, aged 11, was referred because of excessive shyness.

Her mother had been treated for depression. The family history was otherwise negative. She walked at 15 months, talked at 18 months. She was always shy but coped satisfactorily at her primary school. On transfer to a secondary school, she gradually became mute and refused to take any part in school activities. She remained almost mute with adults but would talk to some of the other patients and did simple lessons if allowed to work at her own pace. It was later possible to treat her as a day patient.

Case 6—A girl, aged 12, had been deluded for a year.

Her father's mother was paranoid. The family history was otherwise negative. She was late in walking at two years. She was a shy child who did not mix. She made an average adjustment at school until the onset of her illness.

Her delusions started at the age of 11. She was tense, suspicious, believed her food was being poisoned and thought a neighbour had told the police her parents were going to murder

her. She heard people in the street saying she was going to die. She was admitted when she became uncontrollable at home, with a diagnosis of paranoid schizophrenia.

Case 7—A girl, aged 14, was referred because of increasing withdrawal.
The family history was negative. Her home background was stable and affectionate and her early development normal. She was a very shy child. She adjusted to primary school but broke down at her secondary school after being falsely accused of pilfering. She became increasingly solitary and withdrawn. She was manneristic, giggled to herself and, on occasion, attempted to injure herself. She presented a classical hebephrenic picture.

Table XII gives details of the duration of follow-up and prognosis in this group of 78 patients. The category of "worse" has been omitted because of the intrinsic seriousness of this illness. Recovered patients have no symptoms of schizophrenia. Improved patients have residual symptoms but are making an adequate social adjustment and are fully employed. Those unchanged are either in hospital or unemployed at home with gross psychotic symptoms.

TABLE XII

Follow-up in Years	Sex	Recovered	Improved	No Change	Total
Two	Male	1	0	4	11
	Female	1	2	3	
Three	Male	3	1	5	19
	Female	2	4	4	
Four	Male	0	3	7	20
	Female	2	2	6	
Five	Male	1	2	12	28
	Female	5	4	4	
Total		15 (19%)	18 (23%)	45 (58%)	78

Table XIII summarizes the relation of family history to prognosis. Unexpectedly, there were proportionately more recoveries in patients with a positive family history of mental illness. But when recovered and improved patients are combined there is no significant difference. Therefore hereditary factors are not a guide to prognosis.

TABLE XIII

Family History	Recovered	Improved	No Change	Total
Positive	7	3	18 (64%)	28
Negative	8	15	27 (54%)	50

The general prognosis was better in patients with a stable background but the number of recoveries was proportionately the same in each group.

TABLE XIV

Background	Recovered	Improved	No Change	Total
Stable	10	15	26 (51%)	51
Unstable	5	3	19 (70%)	27

There was a striking correlation between sex and prognosis in adolescent schizophrenia. Twice as many females recovered or improved in this series.

TABLE XV

Sex	Recovered	Improved	No Change	Total
Male	5	6	28	39
Female	10	12	17	39

The duration of hospital stay averaged nine months. As might be expected, the prognosis was best in patients with a short stay in hospital. Recovered and improved patients stayed for an average of six months while the unchanged patients averaged fifteen months. As with behaviour disorders, the prognosis was worse in those of low intelligence. This is summarized in Table XVI.

TABLE XVI

I.Q.	Recovered	Improved	No Change	Total
Under 80	0	4	12	16
80–100	6	1	11	18
100–120	4	4	4	12
Over 120	1	1	1	3

In cases where an EEG was done, recovery was favoured by a stable record.

TABLE XVII

EEG	Recovered	Improved	No Change	Total
Stable	5	4	11	20
Non-specific unstable	2	6	20	28
Epileptic	0	0	2	2

The standard treatment for schizophrenia during the period under review was deep insulin therapy. There was no significant difference in the results with deep insulin compared with those treated by psychotherapy alone and this treatment is no longer given on the adolescent unit. The prognosis was not influenced by any particular form of treatment.

TABLE XVIII

Treatment	Recovered	Improved	No Change	Total
Phenothiazines ..	1	0	3	4
E.C.T.	1	0	3	4
Leucotomy	1	0	3	4
Psychotherapy alone ..	5 (25%)	4 (20%)	11 (55%)	20
Deep insulin therapy ..	7 (15%)	14 (30%)	25 (55%)	46
Total	15 (19%)	18 (23%)	45 (58%)	78

In summary, the prognosis tended to be better in patients with a stable background, high intelligence and stable EEG record. But the only factor having a striking effect on prognosis was sex, there being twice as many remissions in female adolescents.

ANXIETY STATE

Adolescents with anxiety states tend to have the same symptoms as adults. But a form of anxiety state peculiar to the adolescents is the condition known as school phobia or separation anxiety. This is illustrated by Case 8.

Case 8—A girl, aged 14, had refused to attend school for a year.

Her mother was affectionate and tolerant. Her father died during her infancy. Her three sisters and brother, all older than her, were well-adjusted. Her non-identical twin had a congenital heart lesion.

Her mother remarried when she was six and she remained with her mother and step-father, Although they did not quarrel openly in front of the children, they had separated on three occasions, the most recent being three weeks before her admission. She was a quiet, shy child. attached to her home, and her mother often confided her troubles in her.

She had refused to go to school since her mother had had a cholecystectomy a year previously and would scream and struggle if attempts were made to take her. Her school phobia was an expression of anxiety associated with the long-standing marital disharmony and was precipitated by her mother's operation which threatened her only stable attachment. Her phobia had prevented her mother from going out to work and allowed the patient to be near her all the time.

Table XIX shows the duration of follow-up and prognosis in this group of 25 male and 8 female patients. Five were worse on follow-up. Four males and one female had developed schizophrenia and they were all in hospital. Therefore, in this small series, 15 per cent. of patients presenting with an anxiety state became schizophrenic.

TABLE XIX

Follow-up in Years	Sex	Recovered	Improved	No Change	Worse	Total
Two	Male	1	1	0	0	5
	Female ..	3	0	0	0	
Three	Male	4	3	0	2	12
	Female ..	1	1	0	1	
Four	Male	4	0	0	1	5
Five	Male	3	3	2	1	11
	Female ..	2	0	0	0	
Total	.. ..	18 (55%)	8 (24%)	2 (6%)	5 (15%)	33

Although there was a family history of mental illness in thirteen patients, none of these became schizophrenic. Therefore a negative family history tended to be associated with a bad prognosis, perhaps because there were less reactive factors in this group.

Table XX shows that a stable background favoured a good prognosis.

TABLE XX

Background	Recovered	Improved	No Change	Worse	Total
Stable	15	2	1	3	21
Unstable ..	3	6	1	2	12

There was no relationship between sex, duration of hospital stay or intelligence and prognosis. But the outlook was better in this small series when the EEG record was stable.

TABLE XXI

EEG	Recovered	Improved	No Change	Worse	Total
Stable	7	2	1	1	11
Non-specific unstable..	3	2	1	1	7

HYSTERIA

There were 14 male and 16 female patients with hysterical symptoms, severe enough to warrant hospital treatment. Presentation did not differ from adults. In Table XXII, it will be seen that three patients were worse. One male was in a Borstal institution for persistent psychopathic behaviour. Two females were in hospital with schizophrenia, forming 7 per cent. of the series.

TABLE XXII

Follow-up in Years	Sex	Recovered	Improved	No Change	Worse	Total
Two	Male	3	0	0	0	4
	Female	0	1	0	0	
Three	Male	2	3	0	0	10
	Female	2	2	0	1	
Four	Male	0	1	0	1	7
	Female	2	2	0	1	
Five	Male	1	2	1	0	9
	Female	2	2	1	0	

There was no relation between family history, duration of hospital stay or sex and prognosis. The home background also failed to influence outcome. The prognosis was better in the more intelligent patient.

TABLE XXIII

I.Q.	Recovered	Improved	No Change	Worse	Total
Below 80	0	2	0	1	3
80–100	4	6	1	1	12
100–120	4	3	1	1	9

There were also more recoveries amongst patients with a stable EEG.

TABLE XXIV

EEG	Recovered	Improved	No Change	Worse	Total
Stable	5	4	0	1	10
Non-specific unstable	2	5	2	1	10
Epileptic	0	1	0	0	1

AFFECTIVE DISORDER

The clinical presentation was similar to that in adults. There were fifteen patients in this group, forming only 4 per cent. of a total of 362 admissions. Thirteen were male. The rarity of adolescent affective illness contrasts with its frequency in the involutional period. The male preponderance also contrasts with middle age, where these disorders are commoner in females. Table XXV shows that over half the patients were suffering from depression, reactive to severe stress. This leaves only six patients with an affective psychosis.

TABLE XXV

Diagnosis	Recovered	Improved	No Change	Total
Reactive depression	8	1	0	9
Mania	2	1	0	3
Manic-depressive	1	0	1	2
Depressive psychosis	1	0	0	1

There were no patients in the category "worse" at follow-up.

Nine patients had a reactive depression and the two female patients came into this group. There was a positive family history in four and they all recovered. The improved patient came from a large, unstable family of eleven.

Three patients were suffering from mania. Two had a positive family history, the improved patient having an alcoholic parent. Two patients had a

manic-depressive illness; one with a negative family history and stable home recovered, the other with an unstable home and psychopathic father was still in hospital. The only patient with a depressive psychosis had a severe physical disability, pseudo-hypertrophic muscular dystrophy, but made a good recovery from the depression and remained mentally well until his death four years later. This group of illnesses was therefore characterized by a good prognosis.

The EEG was stable in four patients and showed a non-specific abnormality in ten. The prognosis was not related to those findings.

Obsessional State

An obsessional state is the rarest psychiatric illness in adolescence but may start at an early age, as shown by the following case history.

Case 9—A girl, aged 14, complained of repetitive habits for five years.

Her father had a peptic ulcer. Her mother was methodical and tidy. Her home background was stable and the only cause of discord between her parents was the patient's illness. Her obessional symptoms started at the age of nine and consisted of compulsions to touch things and slowness in dressing. These symptoms were worse at home than at school. They gradually increased in severity and she ended up by following her mother everywhere and imitating anything she did or said. She was frightened her mother might die of cancer and believed her imitations would prevent this happening. However, these symptoms did not prevent her from getting to school on time.

She lost her symptoms soon after admission and group therapy revealed considerable aggression beneath her placid exterior.

The prognosis of this disorder was good, half being recovered and half improved at follow-up. There were six male and two female patients. Prognosis was not related to sex. The outcome was improved by a negative family history, three of the four recoveries coming from this group. Seven of the eight patients had a stable home. The one patient from an unstable home was assessed as improved at follow-up. The duration of hospital stay was the same in the recovered and improved groups, averaging seven months.

Discharge and Follow-up Results

Table XXVI summarizes the results found by Sands on discharge and compares them with the findings at follow-up after two to five years.

Table XXVI

Diagnosis	Recovered	Improved	No Change or Worse	Total
Behaviour disorder:				
(*a*) Discharge ..	1 (1%)	40 (58%)	28 (41%)	69
(*b*) Follow-up	76 (38%)	43 (22%)	79 (40%)	198
Schizophrenia:				
(*a*) Discharge ..	12 (26%)	23 (50%)	11 (24%)	46
(*b*) Follow-up	15 (19%)	18 (23%)	45 (58%)	78
Neuroses:				
(*a*) Discharge ..	10 (21%)	33 (70%)	4 (9%)	47
(*b*) Follow-up	34 (48%)	25 (35%)	12 (17%)	71
Affective disorder:				
(*a*) Discharge ..	6 (43%)	7 (50%)	1 (7%)	14
(*b*) Follow-up	12 (80%)	2 (13%)	1 (7%)	15

It will be seen that the results at follow-up were better than at discharge in behaviour disorders, neuroses and affective disorders. This was most marked in the first group, suggesting that stability commonly returns with maturation of

the adolescent patient. Neurotics improved at discharge recovered twice as often as they deteriorated, and affective disorders progressed to remission. In contrast, the outcome in schizophrenia was worse at follow-up, confirming the seriousness of this condition and its poor response to psychotherapy, deep insulin and leucotomy. Further follow-up studies will be required to determine whether the phenothiazine derivatives produce better results than these earlier treatments.

Summary

This paper reviews 362 patients admitted to the adolescent unit at St. Ebba's Hospital between 1949 and 1954 and followed up for over two years.

Behaviour disorders accounted for half the admissions. The prognosis was good in comparison with the adult psychopath, 38 per cent. making a complete remission. The most valuable guide to prognosis was the symptomatology. Stealing as an isolated symptom had an excellent outcome whilst a combination of stealing, violence and truancy in the same individual was of poor import. Heredity and background showed little relationship to prognosis.

A quarter of admissions suffered from schizophrenia with symptoms similar to those in adult life. The prognosis was poorer than in adults, only a fifth recovering compared with a third of adults. Heredity and background had little influence on outcome. The most significant prognostic factor was sex, twice as many females making a complete remission. Results were similar with deep insulin and psychotherapy.

A quarter of patients suffered from neuroses and affective disorders. Obsessional states and affective psychoses were rare, each forming 2 per cent. of admissions, and their prognosis was excellent.

Schizophrenia developed in a few patients originally placed in other diagnostic categories. This was most common with anxiety states (15 per cent.), less with hysteria (7 per cent.) and rare in behaviour disorders (1 per cent.). No patients with obsessional states or affective disorders developed schizophrenia at follow-up.

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