Brit. J. Psychiat. (1974), 124, 24–35

Self-Poisoning in Adolescents

By H. C. WHITE

Studies in Great Britain concerning intentional self-harm in adolescents have been few (Haldane and Haider, 1967; Leese, 1969). Such behaviour amongst teenagers is now common, and usually takes the form of self-poisoning with drugs; in fact it is probably becoming commoner, although the reasons for this are not altogether clear. The present survey concerns 50 consecutive patients aged between 14 and 19 years, admitted to the General Hospital, Birmingham, following self-harm behaviour in 1970 and 1971. The lower age limit for the group was determined by hospital admission policy, since children under 14 are admitted elsewhere in the city. All the patients had taken drug overdoses, and none had used other methods of self-harm, such as wrist-slashing. All cases classified as intoxication or poisoning within these age limits admitted to the hospital during the relevant period were scrutinized, and care was taken to make sure that no cases of intentional self-harm were being overlooked amongst so-called accidental poisoning. All patients in the intentional self-poisoning group were interviewed by the psychiatrist within 24 hours of regaining full consciousness. Information was obtained in a standard form covering specific aspects of the history. The parents (when available and willing) were seen either by medical staff or by a social worker in an open-ended interview. The Eysenck Personality Inventory (EPI) and Raven's Progressive Matrices test were administered by the psychiatrist at a later date, when all drug effects had worn off.

Age, sex and civil status

Table I shows the distribution of patients by age and sex. This group represents about 12 per cent of all patients admitted following self-harm episodes during the period studied. Females out-number males in the ratio 4·6 to 1. The ratio of females to males aged 15–19 in the City of Birmingham (1966 census) is 1·01 to 1, and persons in this age group, represent about 10 per cent of the population over 14 years. Thus teenagers are admitted slightly more often following poisoning than would be expected were such admissions proportional to their numbers in the local community; considering the sexes separately, however, the girls are significantly over-represented, and boys under-represented in this series.

TABLE I
Age and sex. 50 patients

Age (years)	Number of patients	
	Male	Female
13	—	1
14	—	—
15	1	5
16	1	8
17	2	13
18	2	6
19	3	8
Total ..	9	41

Three of our patients, all females, were married, compared with 1·8 expected on the basis of census figures. None were divorced, separated or widowed.

Place of origin

Thirty-five patients (70 per cent) were born in Birmingham and 5 (10 per cent) in the remainder of the United Kingdom. Ten (20 per cent) were immigrants, 5 (10 per cent) from Jamaica and one each from Eire, India, Kenya, Mauritius and South Africa.

Immigrants accounted for about 12 per cent of the City population in the 1966 census, about 42 per cent of these coming from places other than Ireland, Canada, New Zealand

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

and Australia, mainly from the West Indies and the Indian subcontinent. The proportion of immigrants in the age group under study is not known for the whole city.

Social class

Patients were grouped according to the social status of their parents, on the Register General's Classification. The majority (41, 82 per cent) were from social classes III and IV (Table II).

Occupation

Table III gives the occupational status of the group. Two of the 'unemployed' females were actually full-time housewives. Amongst the employed group, 1 male and 7 females had an unstable work record, with as many as 9 jobs in a two-year period. Including these with the unemployed (who were frequently in the process of moving from one job to another at the time of the self-harm gesture) 14 (28 per cent), had not established a satisfactory work pattern.

Education

Enquiry was made into the school record of these patients: 36 (72 per cent) attended a secondary modern school or equivalent, 9 (18 per cent) were at grammar school, and 3 (6 per cent) at a comprehensive school. One had attended national school in Ireland, and one a primary school in Jamaica. Of those who had attended secondary modern school, 7 patients were placed at the 5th percentile or below on Raven's Progressive Matrices test. Only one of these had at some time been considered for placement in a special school. Nine patients who had attended secondary modern school scored at the 75 percentile or above (mean 86th percentile). Only one had passed the 11-plus examination. Of the nine patients from grammar schools 8 were placed at or above the 75th percentile (mean 92nd percentile), the remaining girl in this group, however, scored at the 15th percentile, and had a poor school record with frequent truanting.

Among the 9 patients who had attended grammar school there were 6 who had adverse school reports for being idle, trouble makers, truants or a bad influence (the latter referring to a girl who left at 15 because she was pregnant). This contrasts with only 5 adverse reports about the 36 secondary modern pupils. Poor school reports tended to be associated with family difficulties: thus, 5 of the 6 grammar school pupils with a bad school record came from homes with at least one absent parent or a high degree of emotional deprivation; 4 of the 5 secondary modern pupils had an unsatisfactory home background, and the 5th had been on probation for theft and drug abuse.

Those showing disturbed behaviour at school also tended to have lower IQs than their peers. Thus the 6 from grammar school scored on average at the 77th percentile on Raven's Matrices, compared with the 3 with good reports who scored on average at the 97th percentile. The 5 with adverse reports from secondary modern schools scored at the 32nd percentile, compared with the average for the remainder at the 47th percentile.

TABLE II
Social class. 50 patients

Social class	Male	Female
I ..	0	0
II ..	1	1
III ..	5	8
IV ..	2	26
V ..	1	6

TABLE III
Occupational status. 50 patients

Occupational status	Male	Female
Employed ..	6	27
Unemployed ..	1	8
Full-time education	2	6
Total	9	41

Intelligence

The scores on Raven's Progressive Matrices test were adjusted for age. The mean score was at the 52nd percentile. The distribution of scores is shown in Table IV. The difference between these scores and those expected on the basis of normal distribution of intelligence in the self-poisoning group only just fails to reach

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

TABLE IV

Distribution of scores on Raven's Progressive Matrices Scale. 50 patients

Matrices percentile score	0–10	11–20	21–30	31–40	41–50	51–60	61–70	71–80	81–90	91–100
Number of patients	10	4	4	1	5	4	4	2	7	9

the 95 per cent level of significance. Thus it seems likely that the excess of adolescents in this series scoring at the high and low ends of the intelligence scale represents a real difference which requires explanation.

Personality

The mean score for the group on the N scale of the EPI was 14·86 (standard deviation 6·65); this value is significantly higher than Eysenck's value of 9·07 (standard deviation 4·78) for the normal population ($p < 0·1$). The group mean score on the E scale was 12·08 (standard deviation 9·69); this does not differ from Eysenck's norm of 12·07 (standard deviation 4·37).

Religion

Table V gives the stated religious affiliation of the self-harm group. It will be seen that those professing the Roman Catholic faith present with greater than expected frequency calculated from a control of 100 consecutive patients aged 15–19 admitted to the General Hospital, Birmingham, for reasons other than self-poisoning. The difference just fails to reach the 95 per cent level of significance.

TABLE V

Religion. 50 patients. Compared with numbers expected on basis of control group of 100 admissions

Religion	Number of patients	Expected number
Church of England	29	31
Roman Catholic	14	9
Baptist	2	0·5
Methodist	1	2
Hindu	1	—
Moslem	1	1
Agnostic	1	—
Not specified	1	3

Method of self-harm

All these patients employed drug ingestion as the method of self-harm. The drugs claimed to be used are listed with frequencies in Table VI. The use of aspirin or barbiturates was confirmed by laboratory testing of blood levels. No other drugs were tested for routinely, and we depended upon the patients' or relatives' description, plus circumstantial evidence, for drug identification.

Precipitating factors

Patients were asked what, if anything, precipitated the self-harm episode. It will be seen from Table VII that 35 (70 per cent) of the 50 were experiencing difficulties with important persons in their environment. This compares with 42 per cent of 223 self-poisoning cases of all age groups admitted to the same hospital during a one-year period (White, 1972). The cause of the disagreement was sometimes trival. Thus, a 16-year-old girl took 50 aspirin tablets follow-

TABLE VI

Drugs used in self-poisoning

Drugs used	Times used as primary poison	Times used as secondary poison
Analgesic (aspirin, paracetamol etc.)	18	
Barbiturate	8	1
Non-barbiturate hypnotic	7	
Diazepam, chlordiazepoxide	4	
Phenothiazine	3	
Iron preparation	3	
Antidepressant	2	2
Franol	2	
Alcohol	—	3
Other	3	3
Total	50	

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

TABLE VII
Precipitating factors

Precipitating cause	Number of patients
Disagreement	
Marital	3
Family	13
Other	19
Academic worries	4
Concern regarding physical illness	3
Pregnancy	1
Other	2
Unknown to patient	5
Total	50

ing a row with her boy friend concerning the way her hair had been cut. On the other hand patients often felt overwhelmed by their very real difficulties. A 17-year-old girl took 24 butobarbitone tablets after an argument with her father. He had recently suffered a stroke, making it necessary for the patient's mother to go full-time to work. This her mother resented, and by implication placed the burden of the family's financial future on her daughter, who in turn felt trapped in an unrewarding family situation. The overdose can be seen as an explicit demand to escape, and as a covert request to remain within a family with attitudes modified to recognize and reward her contribution.

Among the more impersonal causes of emotional distress, examination worries and physical disease were numerically the most important.

Two girls were pregnant, and one mistakenly believed herself to be so. It is noteworthy that these two patients were not primarily distressed by the idea of pregnancy; but by the fact that the father of the child neglected them. It seems that pregnancy was incidental in these cases, except that it may have accelerated the man's departure.

Intent at time of self-poisoning

All patients were asked what they had intended to achieve by taking the overdose of drugs. The majority (7 M., 20 F., 54 per cent) were unable or unwilling to say, or used some vague expression like 'it just came over me', or most commonly, 'I was fed up'. They were unable to indicate any specific hoped-for outcome.

Twenty-three patients (2 M., 21 F., 46 per cent) were more definite about their motives, and Table VIII records their stated intent. It is noteworthy that by the time of the first interview only three patients, all female, still expressed the wish to be dead. The attitude of these girls was petulant and resentful rather than melancholic. There was a general lack of planning for the overdose, most patients either having the drug immediately available, or acquiring it on the day of ingestion.

Evidence was sought from patients and their relatives about the length of time of suicide had been contemplated, if at all. Two males and 7 girls (18 per cent) had either given hints of self-destruction or admitted to thinking about it in a serious way for a week or more before the overdose. Most parents, justifiably or not, expressed themselves as completely surprised by the event.

Diagnosis

Table IX gives the diagnosis assigned to these patients. It is notable that no one was judged to be suffering from a depressive psychosis. Nineteen females and one male (40 per cent) were thought to present no psychiatric disorder at all, or at the most suffered what could loosely be called an adolescent crisis. By this is meant an episode of acute emotional upheaval, against a background of normal development, precipitated by problems, usually temporary, of the sort that appear peculiarly intense to the adolescent. These include difficulties with

TABLE VIII
Intent at time of self-poisoning stated in retrospect. 23 patients

Stated intent	Male	Female
Death	2	9
Escape		3
Influence others ..		6
Sleep		2
Procure abortion ..		1
Total	2	21

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

TABLE IX

Principal diagnosis. 50 patients

Diagnosis	Number of patients	
	Male	Female
Neurotic depressive reaction	5	11
Adolescent emotional crisis ..	—	8
Personality disorder ..	2	10
Anxiety state	1	—
Hysterical reaction	—	1
No psychiatric abnormality	1	11
Total	9	41

authority figures, uncertainty about sexual identity and apprehension about achieving independence.

Neurotic depression was diagnosed in 16 patients (5 M., 11 F., 32 per cent), who formed the second largest group. This label was used when depression of mood in reaction to environmental problems with consequent failure to adopt an active problem-solving approach had become an important part of the individuals' life style, in the absence of those symptoms regarded as psychotic. Thus depression was not experienced by these patients merely in relation to the events preceding the episode of self-harm.

Twelve patients had personality disorders (2 M., 10 F., 24 per cent), 3 of this group being further defined as schizoid, and one as epileptic. It is difficult to achieve diagnostic precision within this category, and it is likely that different observers would not assign the label with equal frequency. It is used here for those patients who have displayed feckless irresponsibility, reacting to transient pressures rather than to long-term prospects, inability to learn from experience, little thought for the feelings of others, lack of enduring emotional warmth and poor awareness of moral issues.

A typical example was a 17-year-old boy who took Librium and Ampicillin belonging to his mother after returning home from the public house having drunk seven pints of beer. He drank regularly to excess; he had attended a child guidance clinic for four years during which time he ran away repeatedly, had spent three years in an approved school for theft, and was currently on bail for breaking and entering. He had had seven brief jobs in two years, and could name no steady friends of either sex.

One female patient presented with a hysterical neurosis, and one male had an anxiety state of long standing.

Previous medical history

Thirteen patients (26 per cent), 9 female and 4 male, had a history of previous psychological disorder sufficiently severe to have received medical care. Of these, 5 females and one male had presented with behaviour disorders, including drug abuse in one instance. One of these children had received residential care, one had been to an approved school and two had served periods of probation.

Four girls and two males had received previous treatment for depression. These episodes had all occurred after the age of 12 and as far as could be judged had all been of the neurotic variety, though two of the patients had received ECT at the age of 17.

One additional male patient had been treated for anxiety symptoms, stutter and tremulousness.

Ten of the group had been treated for physical ailments, amongst which psychosomatic complaints figured prominently. Thus, there were two cases of epilepsy, two of asthma, two of enuresis, and one of migraine. In all, 22 (44 per cent) of the group had received previous medical care for other than trivial childhood complaints.

Seven (14 per cent) patients, all female, had taken one previous drug overdose, the youngest of these being aged 13 at the time. As a subgroup they had a low mean score on the Matrices Test (36th percentile, 5 patients below 50th percentile), and a high mean score on the N scale of the EPI (mean 16, 6 patients above the mean for the whole group).

Family psychiatric history

Nine patients (1 M., 8 F., 18 per cent) gave a history of psychiatric disability in first-degree relatives of sufficient severity to merit medical treatment. Six mothers were affected, three with depressive psychosis, two with neurotic depression and one with an anxiety state. Of

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

the fathers, three were alcoholic and one suffered from a depressive reaction following a stroke. The one afflicted sibling in the series was an elder brother with a history of mixed neurotic breakdown.

Disturbed behaviour

The following additional indices of disturbed behaviour were encountered in the group.

Absconding from home before age of 15	5 cases
Seriously aggressive behaviour	2 cases
Illegitimate pregnancy	5 cases
Court appearance for theft	4 cases
Court appearance for drug abuse	2 cases
Approved school	1 case
Remand Home	1 case

Family background

Twenty-five patients (4 M., 21 F., 50 per cent) were found to have undergone physical separation from parents before the age of 14. Table X shows the ages at which separation occurred.

In 15 cases the father left the marital home, and in one case the father was murdered; 8 of these mothers were unable to cope with the new situation and passed the child to maternal grandparents, or in one case to an Aunt.

Seven of the children had lost their mothers in childhood; two mothers had died, and five deserted their families. Both bereaved husbands remarried, and relations between the step-mothers and patients were poor.

One girl separated herself from her quarrelsome parents by running away to her grandmother when she was 12. The last patient in this deprived group was placed in care when the parents separated by mutual consent. She had many placements, failed to settle in any of them and frequently absconded.

TABLE X

Age at separation from parents. 25 patients

Age at separation (years)	0–1	1–2	2–3	3–4	8	10	12	14
Number of patients	3	7	3	2	1	3	5	1

A further eight female patients (16 per cent) were found to have had severely disturbed relations with one or both parents. Most often the father was the nuclear problem in the family.

Time in hospital and disposal

The mean duration of hospital stay for the whole group was 2·6 days, range 1 to 14 days. If we exclude the five patients who stayed more than 5 days, the mean stay diminishes to 2·1 days.

Fifteen (30 per cent) of these patients were discharged home in the care of their parents without formal follow-up arrangements. Their general practitioners were informed of the situation, and the patients invited to refer themselves back to the clinic if things became difficult again. Follow-up appointments in the psychiatric department were arranged for 28 patients (56 per cent). Of these, 9 subsequently failed to attend, 6 for the first appointment. Enquiry of general practitioners and coroners' offices showed that none of these had taken a further fatal overdose by the time of the missed appointment. Four patients were referred for out-patient social worker support, one to a medical clinic, and one to the children's department of the local authority. Only one patient was transferred to a psychiatric hospital.

Follow-up

It proved possible to obtain information about 40 (80 per cent) of these patients one year or more after the self-poisoning episode. All 40 were alive. Six had required admission to psychiatric hospitals. The diagnoses in these cases were: schizoaffective reaction (1 case), depressive reaction (2 cases, both received ECT), personality disorder (2 cases), epilepsy with personality disorder (1 case). Four other patients had been involved in self-poisoning episodes. An attempt was made to grade the patients' condition at review on the basis of mood, interpersonal relations, and job stability. Twenty-eight (56 per cent) were thought to be improved, while 12 (24 per cent) showed no change or were worse. Those patients not available for follow-up had all changed addresses or were not known to general practitioners; they

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

seemed an unstable group unlikely to show less morbidity than the rest. Thus probably a quarter of adolescents presenting with overdoses will continue to be disturbed for at least a year thereafter.

Discussion

Intentional self-harm amongst adolescents is particularly a problem of the female. They outnumbered males in the ratio 4·6 : 1 in the present series, and accounted for 22 per cent of all females who had taken overdoses and were admitted to the General Hospital, Birmingham, during the period of this study. This preponderance of females has been found everywhere the problem has been studied, the proportions varying from 6 : 1 to 2 : 1 (Tuckman and Connon, 1962; Leese, 1969; Moch, 1969; Jacobziner, 1965; Haldane and Haider, 1967). The number of married girls in the present group was higher than expected from census figures. A similar trend has been observed by Evans (1967) and White (1972). It seems likely that girls marrying in this age range include a significant proportion of those seeking in marriage an escape from emotional problems. Neither of the two illegitimately pregnant girls in the series mentioned pregnancy as the reason for the overdose, rather it was desertion by their paramour that upset them. In this connection it is interesting to note that of the approximately 1,600 women admitted to this hospital following drug overdose during the eight years 1964 to 1972, about 5 per cent have been pregnant. Some have later undergone abortion, but none, to the best of the author's knowledge, has been admitted, still pregnant, after being refused therapeutic abortion. Hence such refusal is likely to be an uncommon cause of self-harm in women, compared with other factors.

There is a tendency for these patients to come from a rather higher social group than adults taking overdoses (Bergstand and Otto, 1962; Jacobziner, 1965). This contrasts with the findings from studies involving all age groups, where hospital admission after self-harm behaviour is commoner amongst the lower socio-economic groups.

The educational background of the patients deserves comment. A higher proportion than expected had attended grammar school, and these pupils were notable for the number of behavioural problems they presented. There was evidence that transfer to grammar school had placed a further strain upon family stability, already precarious in these cases. Only one of the nine grammar school pupils had a parent who had received similar education, and there was a total lack of academic interest amongst all but one set of parents. Hence these children were forced to work in isolation, without support, guidance or encouragement from home. In some cases, indeed, they were subject to adverse criticism within the home because of the time devoted to study. Perhaps this type of difficulty found by intelligent children from uninterested homes accounts for the high end of the unusual biphasic intelligence distribution in this small series. We found no convincing explanation for the relatively large proportion of children with below-average intelligence as measured by the matrices scale, other than the obvious one that all problems are presumably more difficult for these children to solve. Previous evidence concerning the intelligence of adolescents taking overdoses is conflicting. Belle *et al.* (1970) found a similar clustering at the extremes of intelligence, while Moch (1969), in another study of French children, found that intellectual level was not a related factor.

Where immigrants are present in a community they tend to be over-represented amongst adolescents taking overdoses. In New York, Jacobziner (1965) found that Puerto Ricans, with 11 per cent of the population, constituted 22 per cent of the patients. In the present study, the immigrant group accounted for 20 per cent of the patients, compared with 12 per cent in the local population. There were interesting differences in the place of origin of the adolescent immigrants as compared with the immigrants in a previous group of patients of all ages over 14 admitted to hospital in Birmingham after intentional self-harm. In the latter case, immigrants born in Eire predominated, while of the youngsters in the present series the majority came from the West Indies. This may be related to pattern of immigration, the impression being that more Irish immigrants spend their childhood in Ireland and come to

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

England as adults, while dependants of Commonwealth immigrants may arrive during childhood or adolescence.

There was a strikingly similar background in the case of the five West Indies immigrants encountered in this study. In each instance the child had been left behind in Jamaica, usually with the maternal grandparents, whilst one or both parents went to England. Years later, they were sent to join the family in England. By that time, however, these family units were quite different, parents having married, separated, or found new consorts, and produced more children. Not unnaturally the newcomers found it difficult to re-establish harmonious contact. They complained in particular that the parents continued to treat them like children, as though they had not grown up at all in the years of separation. They tended to resent the rather casual way in which parents had split up and re-formed new family units, into which they were expected to fit without comment and without disturbing the new equilibrium. This process is further reflected in the high numbers of West Indian children in care of the local authority in Birmingham, and would seem to justify official advice and counselling of intending immigrants in the country of origin.

In a previous study from Birmingham (White, 1972), the author commented upon the relatively high incidence of those professing the Roman Catholic faith admitted following intentional self-harm, and other workers elsewhere (Middleton *et al.*, 1961; Whitlock and Schapira, 1967; Gabrielson *et al.*, 1970) have made similar observations. The present author suggested that in the Birmingham series the finding was due to immigrants from Eire being over-represented. However, amongst the present adolescent group there were more nominal Roman Catholics than would be expected from a control group of 100 adolescent patients admitted to the same hospital, whilst there were fewer Irish immigrants than expected from census figures. Hence the incidence of the latter cannot explain the religious differences found in this instance. The significance of such findings is not clear, particularly since rates for actual suicide amongst Roman Catholics are said to be low in predominantly Protestant countries (Stengel, 1964). In Birmingham, Roman Catholics tend to be more devout in the practice of their religion than Protestants (Morphew, 1968). Perhaps this predisposes to a greater sense of guilt and distress when things go wrong, particularly when moral issues are involved, which could precipitate self-destructive behaviour. However, it was not the impression that the Catholics in this study were subject to unusually powerful super-ego restraints.

The present study emphasizes the observation made by previous authors concerning the high incidence of parental deprivation, physical or emotional, suffered by groups of adolescents involved in self-poisoning (Bruhn, 1962; Haldane and Haider, 1967; Leese, 1969; Sabbath, 1969; Tuckman and Connon, 1962). Fifty per cent of the present patients had lost one or other parent before the age of 14, and a further 16 per cent had obviously impaired relations with one or both parents over a long period of time. The life histories of these children revealed quite remarkable vicissitudes.

In the disturbed families where both parents were living, the father was most often the nuclear problem. Two patterns emerged. One (three families) involved fathers who were rigid, strict disciplinarians, displaying marked hostility towards their children. They laid down rules for their offspring's behaviour which were so coercive and divorced from the child's experience outside the family as to invite rebellion and hence further recrimination. Haldane and Haider (1967) noted this type of aggressive dominance in the majority of fathers of thirty adolescents studied in Fife after taking overdoses.

The other pattern noted in four families from the present study was of fathers who were irresponsible, ineffective, habituated to drink and gambling, sporadically violent, but basically indifferent to family needs. They failed to give support to a steady pattern of family life and involved their wives in constant argument and anxiety which left them little time or enthusiasm for the business of consistent child rearing. Porot *et al.* (1968), reporting on suicidal behaviour in forty French adolescent girls, noted a similar background of lack of paternal authority.

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

In discussing the importance of family relations in the genesis of suicidal behaviour, other workers have emphasized the hostility, overt or latent, of the parents towards their children. Schrut (1964) suggested that total rejection by the parents produced depressed children, while rejection disguised and modified in its expression by guilt produced hyperactivity, acting out and delinquency. In both groups he suggested that the adolescent's suicidal behaviour was paradoxical, designed ultimately to secure maternal love. While this parental rejection certainly occurred in some cases in the present series, involving the hostile fathers noted earlier, the commoner family atmosphere was of more generalized disquiet, with aggression erupting intermittently as an inevitable response to unbearable emotional tensions. These in turn were related fundamentally not to personal animosity but to the difficulty family members had in resolving the real life problems which beset them. Quite often, indeed, the parents or parent seemed basically well meaning, but feeble and inefficient in the business of day to day living. This might lead them to place undue burdens or restrictions upon their children, or use them as easily available scapegoats when things went wrong, but there was seldom an attitude of consistent underlying malevolence. In some of these disturbed families, psychiatric illness in first degree relatives clearly placed an additional stress upon the patient.

The reason for the self-harm gesture at the actual moment of decision can seldom be fully understood, and it seems likely that the nature of the motivation shifts over the years with changes in cultural background. Stengel and Cooke in 1958 emphasized the signal value of the action calculated to mobilize long overdue medical and social help. The fact remains that 15 years earlier such 'signals' were a relative rarity in this country, although it is unlikely that conditions for adolescents were any less difficult. Today, some self-poisoning episodes may still have an appeal function, but the appeal is more often interpersonal than directed to any outside helping agency. The patient wishes to modify the outlook of those close to her. If outside help is offered in this situation it is often rejected. Some patients reject medical intervention as soon as they are able, using such expressions as 'What do you want with me, I didn't ask to be brought here in the first place'. In the author's experience, this type of response is commonest in the group who show significant resentment and petulance in their reactions to life, and in these patients the overdose is often a hostile act. Of 28 patients in this series who accepted intervention initially and were offered out-patient psychiatric care, 9 failed without explanation to attend the next appointment. This reluctance or inability to remain in a treatment situation or to ask for help was noted by Tuckman and Connon (1962) and Morrison and Collier (1969). Thus the appeal function of the self-poisoning episodes may be important in fewer cases now than it was. Indeed by 1970 Stengel was suggesting that these patients were incompletely aware of the purpose of the act and wished both to live and to die.

It is tempting to assume that the epidemic of self-harm has an imitative basis like the curious hysterical illnesses that sweep through girls' schools from time to time, and in the U.S.A. Teicher and Jacobs (1966) found that 44 per cent of their patients had a friend or close relative who had committed or attempted suicide. In the present series only 8 patients (16 per cent) admitted to knowing or being influenced by an acquaintance who had taken a tablet overdose.

Clinical assessment of these patients revealed two main patterns of reaction, which related to motivation. Those patients who were judged to be experiencing a neurotic type of depression were found to be miserable, pessimistic, and hopeless about their chances of altering circumstances in their favour. This mood had often been precipitated by withdrawal of or rejection by an important person, and the overdose was a way of expressing inability to cope with this. The mood of depression often proved transient in hospital, although likely to return with fresh problems. The other group of patients with personality disorders were inclined to be petulant and aggressive, sometimes presenting initially with mute anger only thawed with difficulty or not at all. These patients saw themselves at odds with a hostile world, which had rejected them, and the self-harm was a

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

further gesture of defiance. Often the episode was part of an endless series of acceptance-testing acts by the patient which only too often resulted inevitably in further rejection. Schrut (1964) found a similar dichotomy, but we were unable to confirm the close correlation with specific parental attitudes that he described.

Many of these patients show a lack of self-esteem, and experience considerable anxiety. This is reflected in the higher than normal values scored by the group on the neuroticism scale of the EPI. The background of family turmoil, rejection, inconsistency and separation may cause these patients to expect continuing disaster, so that they are in a state of anxious over-arousal. Coupled with relative absence of training in long-term problem-solving techniques in their lives, this could well produce hasty ill-considered escape activity of which the drug overdose is one example. However, such hypotheses, even if sound, do not explain the ultimate choice of this form of self-harm, which is a recent phenomenon, whilst anxiety and family disruption have always been with us. We must look to more general cultural factors. These include a greater tendency to public acting out in face of frustration, which is a feature of the contemporary scene, the greater use of medication by all sections of the community, and the abuse of drugs by some. Lack of moral sanctions against self-harm as a result of change in public attitudes must also be important. We are still in a phase where an overdose of drugs is seen by the general public as an attempt at suicide, indicative of deep distress, and on the whole deserving of sympathy. There are, however, signs that the power of the act as a means of advocacy is diminishing, and this may eventually result in a decline in such behaviour.

Formal psychiatric nosology is often inappropriate in considering the problems and needs of this group of patients. Many of these youngsters have no clear psychiatric illness, and cannot be compulsorily treated. Porot *et al.* (1968) found no psychiatric disorder in the classic sense in a group of 40 adolescent females who had taken overdoses, and in the present series less than half were considered to display a neurosis. Studies reported from the United States (Balser and Masterton, 1959; Senseman, 1969) found 90 per cent and 33 per cent, respectively of adolescent self-harm cases to be schizophrenic. Study of the protocols suggests that diagnostic criteria and methods of case selection could influence these results, and it is doubtful whether any unselected series in this country would yield such a high count of psychosis.

A number of these young people reject the patient role, having come into medical care merely as a result of the way society organizes its medical services. In these circumstances, it is doubtful whether the psychiatrist has anything of greater relevance to offer these motiveless and unenthusiastic patients than other helping agencies. Where help is acceptable, family therapy designed to increase the emotional rewards offered by key persons to the patients may re-stabilize the situation. Schrut and Michels (1969) found guidance and counselling of more value than profound insight therapy, and the author would agree with this.

A considerable proportion of these patients remain disturbed. Banter *et al.* (1968) followed 176 adolescents admitted with overdoses in the United States, and found that 42 per cent made a subsequent suicide attempt. The morbidity in the present study was not as high as this, 12 per cent of these followed up for one year being involved in a further episode of self-harm. This is in line with the findings of Haldane and Haider (1967) from Fife, where 10 per cent of their group took a subsequent overdose. The initial overdose may usher in a psychiatric disorder of some severity, for although none of our patients was judged psychotic at first interview, three developed borderline or psychotic illnesses during the next twelve months.

The effects of treatment are difficult to judge; 14 of 17 patients who remained in therapy or were discharged seemed better after a year, as did 8 of 13 who were not offered treatment. The latter were not seriously disturbed in the first place, and the former proved self-selecting by being motivated to continue therapy. It is perhaps significant that all three patients available for follow-up who had withdrawn from treatment took further overdoses, and of the 8 patients who were offered treatment and

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

could not be traced after one year, 6 had failed to continue with therapy. Thus withdrawal from treatment may be an ominous sign, and makes success unlikely for prevention programmes based upon recognition of disturbed patients, followed by out-patient therapy. More active persuasion, with increased domiciliary work and support by Social Service Departments would be necessary, of a kind hardly available with present staffing structures. More fundamentally, changes at socio-political level would be needed to reverse the trend towards intra- and extra-punitive acting out against frustrations that can hardly be more severe today than 25 years ago. Greater restraint in the prescribing of antidepressant and tranquilizing drugs would also help.

Summary

Fifty consecutive patients aged 14–19 admitted to a city general hospital following deliberate self-poisoning were studied. The majority were girls from social classes III and IV. Immigrants were over-represented. Group mean scores on the N scale of the EPI were high, and there was a bimodal distribution of scores on Raven's Progressive Matrices. Most patients had suffered family separation or disturbance, and the overdose followed interpersonal crises. Few had formal psychiatric illness. Withdrawal from treatment was common. Over half the patients were improved after one year, but up to one quarter continued disturbed.

Acknowledgement

The author is indebted to Dr. K. W. Cross for statistical advice.

References

Balser, B. H., and Masterton, J. F. (1959). 'Suicide in adolescents.' *American Journal of Psychiatry*, **116**, 400–4.

Banter, J. T., Swaback, D. O., and Todd, D. (1968). 'Adolescent suicidal attempts. A follow-up study of of hospitalized patients.' *Archives of General Psychiatry*, **19**, 523–7.

Belle, F., Thiot, C., and Rivaille, C. (1970). 'Psychological study of 50 suicidal adolescents.' *Revue de Neuropsychiatrie Infantile et d'Hygiene Mentale de l'Enfance*, **18**, 239–48.

Bergstand, C. G., and Otto, U. (1962). 'Suicidal attempts in adolescence and childhood.' *Acta Paediatrica, Stockholm*, **51**, 17–26.

Bruhn, J. G. (1962). 'Broken homes among attempted suicides and psychiatric out-patients: a comparative study.' *Journal of Mental Science*, **108**, 772–9.

Evans, J. G. (1967). 'Deliberate self-poisoning in the Oxford area.' *British Journal of Preventive and Social Medicine*, **21**, 97–107.

Gabrielson, I. W., Klerman, L. V., Currie, J. B., Tyler, N. C., and Jekel, J. F. (1970). 'Suicide attempts in a population pregnant as teenagers.' *American Journal of Public Health and the Nation's Health*, **60**, 2289–301.

Haldane, J. D., and Haider, R. (1967). 'Attempted suicide in children and adolescents.' *British Journal of Clinical Practice*, **21**, 587–91.

Jacobziner, H. (1965). 'Attempted suicides in adolescence.' *Journal of the American Medical Association*, **191**, 7–11.

Leese, S. M. (1969). 'Suicide behaviour in 20 adolescents.' *British Journal of Psychiatry*, **115**, 479–80.

Middleton, G. D., Ashby, D. W., and Clark, F. (1961). 'An analysis of attempted suicide in an urban industrial district.' *Practitioner*, **187**, 776–82.

Moch, M. (1969). 'Étude comparative des tentatives de suicide de l'enfant et de l'adolescent observées dans trois services de pédiatrie et de celles recueillies dans un service de pédopsychiatrie.' *Revue de Neuropsychiatrie Infantile et d'Hygiène Mentale de l'Enfance*, **17**, 513–44.

Morphew, J. A. (1968). 'Religion and attempted suicide.' *International Journal of Social Psychiatry*, **14**, 3, 188–92.

Morrison, G. C., and Collier, J. G. (1969). 'Family treatment approaches to suicidal children and adolescents.' *Journal of the American Academy of Child Psychiatry*, **8**, 140–53.

Porot, M., Coudert, A., and Collett, M. (1968). 'Suicidal behaviour of adolescents.' *Psychiatrie de l'Enfant*, **11**, 317–69.

Sabbath, J. C. (1969). 'The suicidal adolescent, the expendable child.' *Journal of the American Academy of Child Psychiatry*, **8**, 272–85.

Schrut, A. (1964). 'Suicidal adolescents and children.' *Journal of the American Medical Association*, **188**, 1103–7.

—— and Michels, T. (1969). 'Adolescent girls who attempt suicide.' *American Journal of Psychotherapy*, **23**, 243–51.

Senseman, L. A. (1969). 'Attempted suicide in adolescents.' *Rhode Island Medical Journal*, **52**, 449–51.

Stengel, E. (1964). *Suicide and Attempted Suicide*. Harmondsworth, Middlesex: Penguin Books.

—— (1970). 'Attempted suicide.' *British Journal of Psychiatry*, **116**, 237–8.

—— and Cook, N. G. (1958). *Attempted Suicide, its Social Significance and Effects*. London: Institute of Psychiatry.

Teicher, J. D., and Jacobs, J. (1966). 'Adolescents who attempt suicide. Preliminary findings.' *American Journal of Psychiatry*, **122**, 1248–57.

Tuckman, J., and Connon, H. (1962). 'Attempted suicide in adolescents.' *American Journal of Psychiatry*, **119**, 228–32.

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press

WHITE, H. C. (1972). 'Cases of self-harm admitted to Birmingham General Hospital' *British Journal of Social Psychiatry and Community Health*, **6**, 60–73.

WHITLOCK, F. A., and SCHAPIRA, K. (1967). 'Attempted suicide in Newcastle upon Tyne.' *British Journal of Psychiatry*, **113**, 423–34.

A synopsis of this paper was published in the July 1973 *Journal*.

H. C. White, B.Sc., F.R.C.P.E., M.R.C.Psych., *Consultant Psychiatrist, Department of Clinical Psychiatry, The United Birmingham Hospitals; The General Hospital, Steelhouse Lane, Birmingham, 4*

(*Received 10 November 1972*)

https://doi.org/10.1192/bjp.124.1.024 Published online by Cambridge University Press