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Motivational Aspects of Deliberate Self-Poisoning in Adolescents

KEITH HAWTON, DEBORAH COLE, JOHN O'GRADY and MADELINE OSBORN

Summary: A systematic study of 50 adolescent self-poisoners aged from 13 to 18 demonstrated considerable discrepancies between the reasons chosen by the subjects to explain the overdoses and those chosen by clinical assessors. Most adolescents indicated that they had been feeling lonely or unwanted, or angry with someone, and had taken the overdose to alleviate or demonstrate this distress. A third said they had wanted to die. In contrast, clinical assessors tended to attribute the overdose to punitive or manipulative reasons and suggested that only seven out of the 50 had wished to die.

The adolescents rarely indicated that they had taken the overdose to get help; this may explain the resistance that may be shown to psychiatric intervention, and casts doubt on the possible effectiveness of preventive agencies. Modification of attitudes to both self-poisoning and early help-seeking may be a more effective means of prevention.

The need for systematic investigation of the problem of deliberate self-poisoning among adolescents has been discussed elsewhere (White, 1974; Walker, 1980; Hawton *et al*, 1982a). In such research it is important to try to develop an understanding of the motivational aspects of the adolescents' behaviour because this is likely to have implications for both treatment and prevention. During a recent investigation of self-poisoning in adolescents (Hawton *et al*, 1982a) part of the study was devoted to such a purpose, utilizing research procedures which had been developed in a previous investigation of adult self-poisoners (Bancroft *et al*, 1979).

Here we report findings concerning the adolescents' feelings that precede self-poisoning, the explanations for the overdoses given by the adolescents, and how these explanations compare with those of clinical staff. In addition, particular attention is devoted to the extent of serious suicidal intent and danger to life in this group of patients. Finally, the implications of the findings for both management and prevention of self-poisoning in adolescents are considered.

Methods

Subjects

The characteristics and classification of a consecutive series of adolescents, aged between 12 and 18, admitted to a general hospital following deliberate self-poisoning, have been described elsewhere (Hawton *et al*, 1982a and b). The sample consisted of 50 subjects: 25 aged 13 to 15 and 25 aged 16 to 18. All but five were girls.

Procedure

Each adolescent was first assessed by a member of the clinical psychiatric service. Immediately after the clinical assessment a member of the research team carried out an initial research interview. During the interview the patients were asked to select from a series of five printed cards those which best described how they had been feeling at the time of taking the overdose. These are shown in Table I. The patients could choose more than one if necessary. They were then asked to select from a series of eight printed cards those which best described their reasons for taking the overdose. These are shown in Table IV. Again the patients could choose as many as necessary. The reasons were selected from a larger list used in a previous investigation (Bancroft *et al*, 1979). To assess the adolescents' judgement of their suicidal intent each was then asked to select one from a series of three cards to indicate whether, at the time of the overdose, the subject had *wanted to die; didn't want to die;* or *didn't mind whether he lived or died.* The patients were asked how long they had been seriously thinking about taking the overdose before actually doing so; if they now regretted the overdose; and whether they would be likely to do the same thing again.

During the course of the interview the Beck Scale of Suicidal Intent was completed by the interviewer (Beck *et al*, 1974b). This is a reliable and valid measure of the degree of suicidal intention associated with a suicide attempt (Beck *et al*, 1974a and b).

For each patient, the member of the psychiatric team who had carried out the routine clinical assess-

ment was asked to select the reasons he or she thought best explained the overdose. The reasons were selected from the same list of eight that was offered to the adolescents. In each case, the clinical assessor also estimated the patient's suicidal intent by choosing one of the three cards concerning the wish to die. The clinical assessors were not aware of any of the choices made by the adolescents during the research interview.

One month after each overdose the same member of the research team who had conducted the initial research interview carried out a follow-up interview. It was possible to interview all 50 adolescents. During this interview the subjects were asked if they regretted the overdose and whether they would do the same thing in future.

For each patient, details of the amount and nature of substances used in the overdose (including alcohol) were presented to three senior physicians who independently rated the likely outcome had the patient received no medical intervention. They could choose between four categories of outcome: *fatal* (certain to die), *critical* (50 per cent or greater chance of survival), *unlikely to die* (less than 50 per cent chance of dying) and *certain survival*. In 29 cases, more than half of the total, all three physicians agreed in their ratings; for the rest, two of the three agreed in each case.

Results

Feelings preceding the overdoses

In describing their feelings at the time of the overdose just over half the adolescents indicated that they had been angry with someone or feeling lonely or unwanted (Table I). Compared with the younger adolescents, those in the older age group more often indicated that they had been feeling worried about the future ($\chi^2 = 4.083$, df = 1, $P < 0.05$).

Premeditation

In most cases the overdose appeared to have been impulsive, in that half of the 50 adolescents reported thinking seriously about the act for less than quarter of an hour, and eight for a period between 15 minutes and an hour. Only four had contemplated taking the overdose for more than 24 hours. The two age groups differed little in this respect.

Dangerousness of the overdoses

The physicians' predictions concerning the untreated consequences of the overdoses suggested that in most cases they were relatively safe. In no case did the physicians think there would definitely have been a fatal outcome. In four cases they predicted a greater than 50 per cent chance of death; three of these four adolescents had consumed large quantities of aspirin, and the fourth a mixture of paracetamol and aspirin. Only one of these four patients said she had wanted to die, and in none of these cases did the clinical assessors think there had been serious suicidal intent. For 17 adolescents (a third of the sample) the physicians thought death was unlikely and in 29 cases, more than half, they predicted certain survival. There was no difference between the two age groups in the predicted untreated consequences of their overdoses.

Subjective and objective aspects of suicidal intent

A third of the adolescents said that they had wanted to die at the time of taking the overdose (Table II). More of the older than the younger group selected 'wish to die' (11 out of 25 versus 6 out of 25) but the difference was not significant ($\chi^2 = 2.0661$, ns). There was disagreement between the adolescents and the clinical assessors in their estimation of suicidal intent (Table II). Only seven patients were considered by the latter to have sought death. Five of these seven said they had wanted to die, and two that they did not mind whether they lived or died. The clinical assessors thought that there was no suicidal intent at all (i.e. the individual did not wish to die) in more than two-thirds

TABLE I

The feelings the adolescents indicated they had at the time of the overdoses (by age group)

	Age group		
Feelings	Under 16 (N = 25)	16–18 (N = 25)	Both (N = 50)
Angry with someone	15 (60%)	12 (48%)	27 (54%)
Lonely or unwanted	13 (52%)	14 (56%)	27 (54%)
Worried about the future	6 (24%)	14 (56%)	20 (40%)
Failed in life	4 (16%)	10 (40%)	14 (28%)
Sorry or ashamed of something	2 (8%)	5 (20%)	7 (14%)

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TABLE II

Comparison of the answers concerning suicidal intent that were selected by the adolescents and the clinical assessors

	Selected by the adolescents (N = 50)	Selected by the clinical assessors (N = 50)	No. of times clinical assessors agreed with the adolescents N (% of adolescents' choices)
Wanted to die	17 (34%)	7 (14%)	5 (29%)
Did not mind whether lived or died	21 (42%)	9 (18%)	6 (29%)
Did not want to die	12 (24%)	34 (68%)	12 (100%)

(Clinical assessors v adolescents: $\chi^2 = 19.488$, df = 2, $P < 0.001$).

of subjects, including all those who themselves selected the 'did not wish to die' card.

The mean Beck Scale of Suicidal Intent score of 8.1 (SD ± 4.8) was similar to that of a representative sample of 41 adult self-poisoners (mean = 9.3, SD ± 6.1; t = 1.020, ns) reported previously (Bancroft *et al*, 1979). The older group of adolescents had only a slightly higher mean Beck Scale score (8.7 ± 5.3) than the younger group (7.6 ± 4.0; t = 1.08, ns). However, the older group did contain three subjects with far higher scores (16, 20 and 21) than any of the younger group of adolescents.

Rarely did the circumstances surrounding the overdose suggest that the act was seriously intended to result in death (Table III). Thus it was unusual to find evidence of the overdose being planned, and the act generally occurred in circumstances which ensured that the adolescent would be discovered and receive medical attention. In most cases someone else was close at hand, often in a nearby room. The adolescents in the two age groups did not differ in any of these features.

TABLE III

Circumstances related to the overdoses

	(N = 50)
1. Evidence of any planning for the overdose	10 (20%)
2. Left a suicide note	6 (12%)
3. Precautions taken to prevent discovery and intervention by other people	3 (6%)
4. Overdose timed so that intervention was very likely	39 (78%)
5. Someone present or nearby (e.g. in the next room)	43 (86%)
6. Notified potential helper after the overdose	43 (86%)

Other reasons for the overdoses

Reasons for the overdose (other than suicidal intent) selected by the adolescents are shown in Table IV, together with those selected by the clinical assessors. The choice of reasons did not differ much between the two age groups. The adolescents selected fewer such reasons per person (mean = 2.5 ± 1.6) than did the assessors (mean = 3.2 ± 1.6; t = 2.14, $P < 0.05$), although, as already noted, the adolescents more often chose 'wish to die'.

As shown in Table IV, the adolescents most often selected reasons for the overdoses (reasons *a*, *b* and *c*) which implied that they were in a distressed state and/or a very stressful situation prior to the act. Reasons *a* and *b* ('get relief' and 'escape') were selected by similar proportions of both patients and clinical assessors, though there was only moderate agreement between the two groups (the clinical assessors agreed with 12 of the 21 adolescents who selected reason *a* and 11 of the 21 who selected reason *b*). The third reason ('show desperation') was more frequently chosen by the clinical assessors than by the adolescents. The clinical assessors agreed with 15 of the 21 adolescents who selected this reason.

The clinical assessors selected the punitive and manipulative reasons *d* and *e* far more frequently than did the adolescents. Where the adolescents selected either of these two reasons the clinical assessors usually agreed with them.

It is noteworthy that few adolescents indicated that the overdose was taken in order to get help from someone, whereas the clinical assessors selected this reason (*h*) significantly more often. In addition, agreement over this reason was poor; the clinical assessors only agreed with four of the nine adolescents who selected it.

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TABLE IV

Comparison between the reasons (other than suicidal intent) selected by the adolescents and by the clinical assessors to explain the overdoses

Reasons	Selected by the adolescents (N = 50)	Selected by the clinical assessors (N = 50)	Comparison of the numbers of clinical assessors' and adolescents' choices
(a) Get relief from a terrible state of mind	21 (42%)	20 (40%)	NS
(b) Escape for a while from an impossible situation	21 (42%)	18 (36%)	NS
(c) Make people understand how desperate you were feeling	21 (42%)	30 (60%)	NS
(d) Make people sorry for the way they have treated you; frighten or get your own back on someone	16 (32%)	28 (56%)	$\chi^2 = 8.103$, $P < 0.01$
(e) Try to influence some particular person or get them to change their mind	13 (26%)	28 (56%)	$\chi^2 = 4.911$, $P < 0.05$
(f) Show how much you loved someone	13 (26%)	8 (16%)	NS
(g) Find out whether someone really loved you or not	12 (24%)	9 (18%)	NS
(h) Seek help from someone	9 (18%)	19 (38%)	$\chi^2 = 4.018$, $P < 0.05$

Attitudes to the overdoses upon recovery

Immediately after recovery from the self-poisoning, 30 (60 per cent) of the adolescents said they regretted having taken the overdose. At the follow-up interview a similar proportion regretted the overdose, but many individuals had altered their answers to this question between the two interviews. Nine had changed from 'regret' to 'no regret' and nine in the opposite direction. Immediately after recovery from the overdose ten (one-fifth) of the adolescents said that they might do the same thing again. (During the following year two of these subjects actually took further overdoses). Eleven were uncertain as to whether they might repeat; in fact four of them did so during the next year. One further subject repeated; she had said at the initial research interview that she would not do the same thing again.

Discussion

This study appears to represent the first systematic investigation of the motivational aspects of deliberate self-poisoning in adolescents. The method employed was developed during similar previous investigations of adults (Birtchnell and Alarcon, 1971; Bancroft *et al*, 1976; Bancroft *et al*, 1979). The use of a list of alternatives to study explanations for overdoses has potential drawbacks, such as the possibility of encouraging patients or clinicians to choose reasons they would not have considered spontaneously (Bancroft *et al*, 1979). However, it has the advantage that it allows systematic investigation, and comparisons can easily be made with other studies in which the same approach is employed.

The group of adolescents was, apart from four missed cases, a consecutive sample of those referred to a general hospital psychiatric service following admission to hospital after self-poisoning. As virtually all such patients are referred to the service the sample can be regarded as representative of adolescent self-poisoners in the Oxford area.

Rarely did the overdose appear to have been serious in the sense of involving high suicidal intent. Thus the majority of adolescents did not claim they had wanted to die, even fewer were regarded by the clinical assessors as having wanted to die, and the circumstances of the acts did not suggest the careful planning and precautions to avoid discovery that are usually found in serious attempts. Similarly, the physicians' opinions of the overdoses suggested that most were relatively safe in terms of risk to life. How-

ever, this should not lead to a complacent attitude to this behaviour in young people. Sufficient cause for concern lies in the fact that the physicians thought four patients might have died had they not received medical attention. The risks involved in self-poisoning in adolescents are emphasised by the fact that only one of these four indicated that she had wanted to die, and none was judged by the clinical assessors to have shown suicidal intent. Impulsivity and lack of knowledge about the dangers of drugs can sometimes result in an unintended fatal outcome.

The most frequent feelings reported at the time of the overdoses were anger and a sense of isolation. These are compatible with the problems most frequently preceding the self-poisoning, namely poor communication with parents and disruption in the relationship with parents or a boy or girlfriend (White, 1974; Walker, 1980; Hawton *et al*, 1982a). The feelings of anger and loneliness were also in keeping with the three reasons chosen most frequently by the adolescents to explain the overdoses, namely to 'get relief', to 'escape' and to 'show desperation'.

Although several adolescents admitted punitive and manipulative reasons for their overdoses, the clinical assessors more often attributed the adolescents' behaviour to such reasons. This difference between patients and clinical staff is also found, though to a more marked extent, in adult self-poisoning patients (Bancroft *et al*, 1979). There are several possible explanations for such a discrepancy between patients and those who assess them. First, many adolescent self-poisoners may recognize that punitive or manipulative reasons are likely to evoke unfavourable attitudes from hospital staff (Ramon *et al*, 1975; Hawton, Marsack and Fagg, 1981). Second, a self-punitive act such as taking an overdose may occur only if externally directed hostility is unrecognized by the patient. Third, the clinical assessors may misinterpret self-poisoning as being hostile or manipulative. Nevertheless, the willingness of a substantial proportion of adolescent self-poisoners to admit to these reasons, combined with the obvious difficulties that they have in their communication and other aspects of their relationships with others, suggest that feelings of anger and rejection must be a prime focus of treatment.

Compared with adult self-poisoners (Bancroft *et al*, 1979; Hawton and Catalan, 1982), fewer of the adolescents reported feeling either sorry or ashamed, or that they had failed in life, at the time of the overdose. Otherwise, there was much similarity in the findings in the two groups. This applied to the amount of pre-meditation, physicians' ratings of dangerousness of the overdoses, the mean score on the Beck Scale of Suicidal Intent, and the proportions of patients who selected each of the answers concerning suicidal intent. In the study of adult self-poisoners, discrepancies between the reasons chosen by the patients to explain the overdoses and those selected by three psychiatrists showed largely the same pattern as those between the adolescents and clinical assessors in this study. Thus there appears to be very much in common between the motivational aspects of adolescent and of adult self-poisoning.

It is important to note that adolescents rarely use self-poisoning as a means of obtaining professional help. Unfortunately, because this is often unrecognized by clinical staff, a patient's apparent diffidence in accepting an initial offer of help may lead to a negative response from the clinician, which further alienates the patient and makes engagement in constructive treatment unlikely. A successful treatment alliance would be more likely if the therapist first acknowledged that the patient did not take the overdose in order to get help, and then went on to explore with the patient how he or she might be assisted to tackle the difficulties that led to the overdose.

There was little evidence to suggest that the motivational aspects of the overdoses of the younger adolescents differed from those of the older age group. The only notable difference was that more of the older group were concerned about the future. This might be explicable in terms of maturity, in that older adolescents had a greater awareness of the ways in which their lives were developing. Younger adolescents may have been more concerned about their immediate circumstances.

What are the implications of these findings in terms of prevention of self-poisoning? It seems unlikely that the trend towards development of specialized agencies to help adolescents will have a major preventive function for adolescents once they have considered taking an overdose. This is because of the impulsive nature of most of the overdoses, and also the fact that help-seeking is apparently not a major concern of adolescents. In addition, the adolescents often appear to be trying to effect an immediate change in stressful circumstances, either by escaping and/or by evoking guilt from, and putting extreme pressure on, those close to them. Therefore, for a young person who contemplates an overdose, the alternative prospect of a confidential discussion with someone from a helping agency may not appear to have the power to produce the sort of response likely to be evoked by the overdose.

The findings suggest that attention to modification of the attitudes of young people both to self-poisoning and to seeking help when problems are *beginning* to occur, rather than after a crisis develops, is likely to be a more effective approach to prevention. Means of

doing this that should be considered include discussion in schools, and, perhaps, education through the media.

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Keith Hawton, D.M., M.R.C.Psych., *Clinical Tutor in Psychiatry, University Department of Psychiatry, Warneford Hospital, Oxford OX3 7JX*

Deborah Cole, B.A., M.Ed., *Assistant Professor, Department of Counselor Education, Suffolk University, Boston MA 02114, USA*

John O'Grady, M.R.C.Psych., *Senior Registrar in Psychiatry, St Nicholas Hospital, Gosforth, Newcastle-upon-Tyne, NE3 3XT*

Madeline Osborn, M.R.C.Psych., *Clinical Lecturer in Psychiatry, University Department of Psychiatry, Warneford Hospital*

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