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Repetition of deliberate self-harm by adolescents: the role of psychological factors

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The aim of this study was to examine the relationship between psychological variables and repetition of deliberate self-harm by adolescents ($n=45$) aged 13–18 years who had been admitted to a general hospital having taken overdoses. Standardized measures of depression, hopelessness, suicidal intent, impulsivity, trait and state anger, self-esteem and problem-solving (both self-report and observer-rated) were administered to the adolescents while still in the general hospital. Repetition was assessed on the basis of previous overdoses ($n=14$) and repetition of self-harm (self-poisoning and self-injury) during the subsequent year ($n=9$).

Adolescents with a history of a previous overdose and/or who repeated self-harm during the following year ($n=18$) differed from non-repeaters in having higher scores for depression, hopelessness and trait anger, and lower scores for self-esteem, self-rated problem-solving and effectiveness of problem-solving rated on the basis of the Means End Problem Solving test, all measured at the initial assessment. These differences largely disappeared when level of depression was controlled for. Similarly, differences found between repeaters and non-repeaters in the year following the index overdoses for problem-solving were much reduced when account was taken of differences in depression scores.

Depression is a key factor associated with risk of repetition of adolescent self-harm (and hence of suicide risk). In the management of adolescents who have harmed themselves, careful assessment of depression and appropriate management of those who are depressed is essential.

Introduction

Repetition of deliberate self-harm (self-poisoning or self-injury) in adolescents is common. Approximately 20–30% of those referred to general hospitals will have engaged in previous acts of self-harm (Hawton, 1986, p. 124; Hawton and Fagg, 1992), which in many cases will not have come to the attention of health care agencies (Kienhorst *et al.*, 1990; Hawton *et al.*, 1996). Between 10% and 15% will carry out a further act within the following year (Hawton *et al.*, 1982*a*; Hawton and Fagg, 1992), and there is an important subgroup of individuals who will repeatedly self-harm. Repetition of this behaviour is important for several reasons. First, it indicates persistent or recurrent psychosocial problems. Second, it places considerable demands on clinical services. Third, and most importantly, it is associated with a considerable risk of completed suicide. The extent of overall suicide risk in adolescents who self-harm has varied in different studies, with 4·3% having been reported by Otto (1972) in a 10–15 year follow-up study of a sample of Swedish adolescents who had either

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taken overdoses or deliberately injured themselves and 0·24% in a mean follow-up period of 2·8 years in adolescents who had all taken overdoses (Goldacre and Hawton, 1985). These figures, while being markedly discrepant probably because of the different settings and duration of follow-up, are both several times the expected risk of suicide in adolescents in general.

Some of the factors that have been linked to increased risk of repetition of deliberate self-harm in adolescents are socio-demographic such as male gender, coming from a large family and not living with parents, or general clinical phenomena such as previous deliberate self-harm, alcohol/drug abuse, chronic problems plus behaviour disturbance and "depressive tendencies" (Stanley and Barter, 1970; Headlam *et al.*, 1979; Choquet *et al.*, 1980; Hawton *et al.*, 1982*b*; Goldacre and Hawton, 1985). From the therapeutic standpoint it would be extremely valuable if one could identify more specific psychological characteristics associated with increased risk of repetition which might be susceptible to treatment interventions. In this study of adolescents who took overdoses, we have investigated in-depth a range of psychological factors which might be predicted to increase risk of repetition in order to determine which are the most important. The choice of these was related in part to the factors which have been reported as being of aetiological significance in adolescent deliberate self-harm or relevant in the assessment of seriousness and/or repetition of deliberate self-harm by adolescents. These include depression (Carlson and Cantwell, 1982; Taylor and Stansfield, 1984), hopelessness (Kazdin *et al.*, 1983; Brent, 1987), premeditation (Brown *et al.*, 1991), impulsivity (Kashden *et al.*, 1993), problem duration (Hawton *et al.*, 1982*b*), and problem-solving (Rotherham-Borus *et al.*, 1990). We also included a measure of state and trait anger because of the purported general importance of anger in deliberate self-harm (Plutchik and van Praag, 1986).

The main hypothesis was that deficits in problem-solving would distinguish repeaters from non-repeaters. We also expected that differences between repeaters and non-repeaters would be found with regard to some of the other psychological measures, especially impulsivity and self-esteem.

Method

Subjects

The subjects were recruited from consecutive patients aged 12–18 years residing in Oxford District who were admitted to the general hospital in Oxford because of self-poisoning (not self-injury) on the days the research interviewer was available (5–7 days per week). Approximately 90% of adolescents presenting to the hospital following self-poisoning are admitted to a hospital bed. Consent for interview was obtained from all the adolescents, and from parents for adolescents below the age of 16 years. The study had the approval of the local ethics committee. The research interview, which was conducted by S.K., was separate from any clinical interview. Each adolescent was interviewed within 24 h of admission. No adolescents refused to be interviewed.

The following treatment recommendations were made by the clinical assessors for the adolescents following their overdoses: 14 outpatient counselling from the general hospital psychiatry service, 11 psychiatry outpatient appointments (adult or adolescent service), 10 to return to the care of their general practitioner (family doctor), six to social services, three to miscellaneous other agencies and one to adolescent psychiatric unit inpatient care.