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Chapter 2

Factors associated with deliberate self-harm among Irish adolescents

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ABSTRACT

Background. Deliberate self-harm (DSH) is a major public health problem, with young people most at risk. Lifetime prevalence of DSH in Irish adolescents is between 8% and 12%, and it is three times more prevalent among girls than boys. The aim of the study was to identify the psychological, lifestyle and life event factors associated with self-harm in Irish adolescents.

Method. A cross-sectional study was conducted, with 3,881 adolescents in 39 schools completing an anonymous questionnaire as part of the Child and Adolescent Self-harm in Europe (CASE) study. There was an equal gender balance and 53.1% of students were 16 years old. Information was obtained on history of self-harm life events, and demographic, psychological and lifestyle factors.

Results. Based on multi-variate analyses, important factors associated with DSH among both genders were drug use and knowing a friend who had engaged in self-harm. Among girls, poor self-esteem, forced sexual activity, self-harm of a family member, fights with parents and problems with friendships also remained in the final model. For boys, experiencing bullying, problems with schoolwork, impulsivity, and anxiety remained.

Conclusions. Distinct profiles of boys and girls who engage in self-harm were identified. Associations between DSH and some lifestyle and life event factors suggest that mental health factors are not the sole indicators of risk of self-harm. The importance of school-related risk factors underline the need to develop gender-specific initiatives in schools to reduce the prevalence of self-harm.

Factors associated with deliberate self-harm among Irish adolescents

INTRODUCTION

Deliberate self-harm (DSH) is recognised worldwide as a major public health problem, with a severe impact on the individual, their family, and the health services (World Health Organisation, 1999). In Ireland, the highest rates of hospital-treated DSH are among 15–19 year-old girls (639 per 100,000) and 20–24 year-old men (433 per 100,000) (National Suicide Research Foundation, 2009). Young Irish men are also over-represented among those who die by suicide, with peak rates among those aged 20-24, unlike most European countries where suicide rates increase with age (National Suicide Research Foundation, 2009). Deliberate self-harm includes a range of behaviours associated with different levels of medical severity and varying levels of suicidal intent.

Population-based studies reveal prevalence of DSH to be much higher than indicated by hospital presentations. The school-based CASE study (Child and Adolescent Self-harm in Europe), on which this study is based, reported that 9.1% of Irish adolescents surveyed had harmed themselves at some point, of whom 45.9% reported repeated episodes (Morey *et al.*, 2008). This was a higher prevalence than previously reported by smaller scale school-based studies (Lynch *et al.*, 2006, O'Sullivan and Fitzgerald, 1998). Self-harm was much more common among girls than boys. Self cutting and overdose were the most common DSH methods (Morey *et al.*, 2008).

International comparisons of the prevalence of DSH have been aided by the development of rigorous methodologies including clear definitions of DSH, such as that used by seven international centres involved in the CASE study, including the present study based on the data of the Irish CASE centre. Lifetime prevalence of DSH in adolescents ranges from 5.7% (the Netherlands) to 17% (Australia) among girls and 2.4% (The Netherlands) to 6.5% (Belgium) among boys (Madge *et al.*, 2008).

Less than one fifth of adolescent self-harm comes to the attention of the health services, with approximately one third seeking help from their social circle only, and around half not seeking help at all (Ystgaard *et al.*, 2009). However, a history of self-harm is a major risk factor for repeated self-harm and subsequent suicide (Gunnell *et al.*, 2008, Tidemalm *et al.*, 2008). A retrospective study of young people who died by suicide found that almost half had a known history of DSH (Hawton *et al.*, 1999). Suicide is the leading cause of death in men aged 15-34 years in Ireland, and suicide rates among young people aged 15-19 in Ireland are the third highest in the European Union (Eurostat, 2009). Enhanced knowledge of the factors associated with self-harm is essential in developing appropriate education, prevention and screening programmes, which have been identified as important components of suicide prevention policies (Evans *et al.*, 2004, Garland and Zigler, 1993, Scott *et al.*, 2009). A growing number of population-based studies has examined various factors potentially associated with self-harm among young people (Evans *et al.*, 2004). Our school-based study aimed to examine a broad range of factors potentially associated with DSH in boys and girls from psychological, lifestyle and life event domains, using the novel and rigorous CASE methodology.

METHOD

Design and participants

The study was conducted using a cross-sectional design. Data were gathered in schools in counties Cork and Kerry in Ireland in late 2003 and early 2004. Power calculations indicated that a minimum of 3,000 students was required to return a 95% confidence interval of 9.0-11.0% for a postulated prevalence of DSH of 10%. A list of all schools within Cork and Kerry was obtained and each school was categorised by region as well as by type of school: co-educational, all boys or all girls. Using a random selection, 54 schools were invited to take part and 39 schools participated in the survey.

Principals and teaching staff were informed about the study procedure in advance. An information sheet and opt-out form was sent to parents. Students were also given the

opportunity to opt out on the day of the survey. Ethical approval for the study was granted by the Clinical Research Ethics Committee of the Cork Teaching Hospitals. The questionnaire was administered with a member of the research team present and completed by students in a class setting. After participants had completed the survey there was a general discussion about the help and support available for young people in their local communities and each participant received a resource kit. Students who wished to ask further questions could approach the facilitators after the session.

Measures

The survey in Ireland was part of the CASE study (Madge *et al.*, 2008). A standardized, internationally validated, anonymous questionnaire was designed by CASE collaborators and used for data collection by each of the seven centres involved in the study (six centres in Europe and one in Australia). The questionnaire comprised a wide range of variables, including demographics, lifestyle factors and questions about deliberate self-harm and self-harm thoughts. The questionnaire also included three validated psychological scales. Depressive symptoms and anxiety were measured using the Hospital Anxiety and Depression Scale (HADS), which has been validated for use with an adolescent population (White *et al.*, 1999). Cronbach's alphas for our sample were 0.71 and 0.79 for the depression and anxiety sub-scales respectively. Impulsivity was measured using six items from the Plutchik impulsivity scale (Plutchik *et al.*, 1989). This scale assesses impulsivity that is independent of aggressive behaviour and has shown good internal consistency and concurrent validity in adolescents (Grosz *et al.*, 1994, Plutchik and Van Praag, 1989). Self esteem was measured using an eight item version of the self concept scale (Robson, 1989). Strong convergent and discriminant validation of the scale has been reported (Addeo *et al.*, 1994). Cronbach's alphas for our sample were 0.71 for the impulsivity scale and 0.91 for the self esteem scale. The selection of variables included in the questionnaire was based on empirical findings of smaller-scale studies conducted previously which showed potential associations between DSH and various factors, as well as the theoretical literature concerning the self-harm process.

A distinctive aspect of this study was that participants who reported self-harm were asked to describe, in their own words, the method(s) they had used to harm themselves. This description was later coded according to a standardised definition of deliberate self-harm: "An act with non-fatal outcome in which an individual deliberately did one or more of the following: initiated behaviour (for example, self cutting, jumping from a height), which they intended to cause self-harm; ingested a substance in excess of the prescribed or generally recognisable therapeutic dose; ingested a recreational or illicit drug that was an act that the person regarded as self-harm; or ingested a non-ingestible substance or object" (Madge *et al.*, 2008). Episodes of deliberate self-harm were classified as a 'yes', 'no' or 'no information given' by three independent raters using the standardised definition above (Cohen's Kappa = 0.77). When participants reported that they had harmed themselves in the past but did not describe the act, they were classified "no information given" and were not included as a DSH case. The definition used allowed for a wide range of motives and levels of suicidal intent. Self-harm thoughts were defined as having thoughts of harming oneself without acting on them on that occasion.

Most questions relating to history of various negative life events were answered by "yes" or "no", and included the timing of the event (more than a year ago or within the past year). Additional questions relating to alcohol consumption included number of drinks consumed in a typical week and number of times drunk. For the purposes of this analysis, respondents were classified into four categories based on alcohol consumption and drunkenness pattern. Heavy drinking was defined as four or more episodes of drunkenness in the past year (Rossow *et al.*, 2007), and heavy drinkers were compared with all other patterns of alcohol consumption (abstainers, light and moderate drinkers). Smoking behaviour was categorised to include all current smokers in one category while non-smokers and ex-smokers formed the second category. Use of illegal drugs was assessed by questions relating to five different categories of illegal drug. Respondents with and without illegal drug use in the past year were included in

two separate categories. Information obtained on living arrangements was re-coded into either living with both parents or any other family structure for the purpose of this analysis.

Sample

Of the 54 schools invited to participate, 39 schools took part in the study. Of the 4,583 students invited to complete the questionnaire, 3,881 participated in the survey (85% response rate). Eighty surveys were then disregarded as these did not fit the age criteria of 15, 16 or 17 years, were not filled in seriously, or gender was missing. Surveys were judged to have not been completed seriously if responses were inconsistent or if they included statements indicating that the questionnaire was not taken seriously. Fifty two percent of the participants were girls and the majority (53.1%) of students were 16 years old.

Statistical analyses

Proportions of boys and girls reporting self-harm and self-harm thoughts were compared by calculating 95% confidence intervals assuming a t-approximation. Chi square tests were performed to investigate the associations between deliberate self-harm and potential associated factors. Because there was clear evidence that associations were modified by gender (i.e. interaction) all analyses were carried out separately for boys and girls. For each potential associated factor, we computed crude age-adjusted odds ratios for lifetime DSH. A multi-variate logistic regression model was constructed. The method used was backward with the usage of likelihood ratios. The probability for stepwise removal was set at 0.01. A low threshold for removal was set due to the large sample size giving adequate power and the fact that a wide range of variables were included with many statistically significant crude associations. All categorical variables entered in this model were dichotomous. To check the consistency of the model a forward approach with a probability of stepwise entry of 0.005 was also used. The data were analysed using the statistical software package SPSS 16.0.2 (SPSS Inc., Chicago, Il, USA).

RESULTS

Prevalence of DSH

More detailed findings on the prevalence of self-harm in our population have been reported elsewhere (Morey *et al.*, 2008). Marked gender differences were evident in prevalence of DSH, with more than three girls for every one boy reporting a lifetime history of DSH, DSH in the previous year and self-harm thoughts (Table 1).

Table 1 Prevalence of self-harm and self-harm thoughts (adapted from Morey *et al*., 2008)

	No of respondents	All	Girls		Boys		p-value
		no (%)	no (%)	99% C.I.	no (%)	99% C.I.	
Lifetime history of self-harm	3620	332 (9.2%)	253 (14.0%)	13.3%-14.7%	79 (4.4%)	4.0%-4.8%	<0.0005
Self-harm in past year	3654	207 (5.7%)	163 (8.9%)	8.3%-9.5%	44 (2.4%)	2.1%-2.7%	<0.0005
Self-harm thoughts in past year	3387	589 (21.6%)	393 (29.8%)	28.7%-30.9%	196 (13.2%)	12.5%-13.9%	<0.0005

Uni-variate analyses: association between lifetime history of DSH and risk factors

Lifetime history of DSH was associated with a range of mental health, psychological, lifestyle and life event factors (Table 2). All four psychological scales/subscales were strongly associated with DSH for both genders. Odds ratios for anxiety, self-esteem and impulsivity and DSH were higher for boys than for girls, with higher odds ratio for increased levels of depressive symptoms among girls than among boys.

Among girls, the factor most strongly associated with self-harm was serious physical abuse (OR: 12.03, 95% CI: 7.53-19.21). Among boys, knowing a friend who engaged in DSH was the factor most strongly associated with DSH (OR: 10.90, CI: 6.78-17.54). Both boys and girls who knew of a family member who engaged in DSH were more likely to report DSH themselves. For both genders, all negative life events examined were associated with DSH at the 0.005 level, with the exception of death of a family member among both girls and boys and death of someone else close among girls. Odds ratios for problems with a boyfriend or girlfriend were higher among boys (OR: 5.31, CI: 3.34-8.42) than among girls (OR: 2.82, CI: 2.12-3.74), as were worries about sexual orientation. Having experienced bullying at school was also more strongly associated with self-harm among boys than girls.

Potential associations between DSH and several lifestyle factors were examined. Those adolescents who had used illegal drugs in the past year reported more DSH than those with no drug use. The association between drug use and DSH was the strongest of all factors examined for both genders. Smoking and heavy drinking (defined by at least four episodes of drunkenness in the past year) were also significantly associated with DSH.

Table 2 Factors associated with lifetime history of self-harm

	Girls only			Boys only		
	Age-adjusted Odds ratio	**95% confidence interval**	**p-value**	**Age-adjusted Odds ratio**	**95% confidence interval**	**p-value**
Depression**	1.27	1.22-1.32	*	1.25	1.18-1.32	*
Self-esteem**	0.81	0.78-0.84	*	0.79	0.74-0.83	*
Anxiety**	1.22	1.18-1.27	*	1.31	1.24-1.39	*
Impulsivity**	1.19	1.13-1.24	*	1.31	1.21-1.41	*
Serious physical abuse	12.03	7.53-19.21	*	7.89	3.84-16.23	*
DSH of family member	7.60	5.61-10.29	*	7.22	4.28-12.18	*
Forced sexual activity	6.62	4.53-9.67	*	7.15	3.50-14.60	*
Fights with parents	5.66	4.20-7.63	*	4.56	2.82-7.35	*
DSH of friend	5.45	4.10-7.25	*	10.90	6.77-17.54	*
Drug taking in past year	5.42	4.10-7.18	*	6.46	3.78-11.05	*
Worries about sexual orientation	5.01	3.46-7.25	*	7.08	4.10-12.23	*
Trouble with the police	4.44	3.17-6.22	*	4.84	3.06-7.67	*
Problems with schoolwork	4.38	3.18-6.03	*	5.24	3.12-8.80	*
Other distressing event	3.83	2.89-5.06	*	3.11	1.87-5.17	*
Smoking	3.80	2.88-5.02	*	3.20	2.01-5.09	*
Fights with friends	3.64	2.71-4.91	*	3.88	2.43-6.18	*
Difficulty making/keeping friends	3.06	2.32-4.04	*	4.29	2.68-6.87	*
Arguments between parents	3.42	2.60-4.50	*	3.16	2.00-5.00	*
Boy/girlfriend problems	2.82	2.12-3.74	*	5.31	3.34-8.42	*
Heavy drinking	2.72	2.06-3.59	*	2.57	1.41-3.60	0.001
Bullied at school	2.61	1.97-3.46	*	4.07	2.57-6.44	*
Friend/family member suicide	2.24	1.62-3.10	*	3.79	2.21-6.48	*
Self/family member serious illness	2.16	1.64-2.83	*	2.14	1.36-3.37	0.001
Parents separated/divorced	2.03	1.43-2.88	*	3.10	1.80-5.33	*
Serious illness of close friend	2.00	1.51-2.65	*	2.00	1.26-3.17	0.003
Not living with both parents	1.71	1.23-2.37	0.001	2.81	1.70-4.64	*
Death of family member	1.33	0.86-2.04	0.198	2.15	1.11-4.17	0.024
Death of someone else close	1.13	0.84-1.53	0.414	2.52	1.46-4.34	0.001

*p<0.0005
** Odds Ratio for one point increase in score

Multi-variate analyses: association between lifetime history of DSH and risk factors

Based on multi-variate analysis, six factors remained associated with DSH among boys and seven factors among girls (Table 3). The only common factors which remained in the final model among both boys and girls were knowing a friend who had engaged in DSH and drug use in the past year. Of the four psychological scales/subscales included in the analysis, only self esteem remained in the final model for girls. For boys, both anxiety and impulsivity remained. For boys, two school-related factors were in the model: problems with keeping up with schoolwork and having experienced bullying at school. For girls, there were two factors in the domain of relationships: problems in making or keeping friends and serious fights with parents. Having been forced to engage in sexual activity against their will remained for girls only, as did knowledge of a family member who had engaged in DSH.

In terms of broad domains of risk factors, psychological and school-related factors featured strongly in the final model for boys, while interpersonal and relationship factors had greater importance for girls. The knowledge of self-harm by friends as well as drug use were common to both sexes.

Table 3 Multi-variate logistic regression for lifetime history of DSH

	Girls				Boys			
	Age-Adjusted OR	**95% CI**	**β**	**p-value**	**Age-adjusted OR**	**95% CI**	**β**	**p-value**
Anxiety					1.18	1.09-1.28	0.165	*
Impulsivity					1.17	1.05-1.30	0.154	0.004
Self esteem	0.88	0.83-0.92	-0.132	*				
DSH of friend	3.05	2.05-4.55	0.682	*	3.7	1.94-7.05	1.308	*
Any drugs in past year	3.92	2.63-5.86	1.367	*	3.1	1.61-5.97	1.131	0.001
DSH of family member	4.32	2.81-6.64	1.463	*				
Forced sexual activity	4.41	2.60-7.49	1.484	*				
Difficulty making/keeping	1.98	1.30-3.00	0.682	0.001				
Fights with parents	2.04	1.34-3.10	0.711	0.001				
Problems with schoolwork					2.54	1.26-5.09	0.930	0.009
Bullied at school					2.83	1.50-5.36	1.040	0.001

*$p<0.0005$

DISCUSSION

This school-based study sought to identify the factors associated with DSH among Irish adolescents. In our large representative sample we found that the factors strongly associated with the reporting of a lifetime history of DSH differed by gender, with each set of factors suggesting a profile of at-risk youth. The specific female profile is one involving low self-esteem, relationship problems (difficulties with parents and friends) and forced sexual activity. The male profile involves anxiety and impulsivity and school problems (bullying and schoolwork difficulties). Additionally, the factors shared by girls and boys relate to drug taking and knowing others who engage in DSH.

Our finding that knowledge of self-harm by a friend was strongly associated with DSH for both genders lends support to previous studies pointing to the contagion of suicidal behaviour (Borowsky *et al.*, 2001, Marusic *et al.*, 2004). The strong association we found between DSH and knowledge of DSH in a friend was also reported by other CASE study centres in Australia (De Leo and Heller, 2004) and the UK (Hawton *et al.*, 2002). The clustering of suicidal behaviour has been found to be a particularly distinctive feature among adolescents only (Gould *et al.*, 1994). Therefore, the school setting may be appropriate for interventions to limit possible "copycat" effects of self-harming behaviour. However, due to the cross-sectional design, investigation of pathways to self-harm was not possible.

Drug use in the past year was associated with DSH for both genders. It is worth noting that the majority of adolescents in this sample reported drug use, making this a relatively commonplace event among those who had not harmed themselves as well as those who had. However, unlike heavy drinking and smoking, use of illegal drugs remained in the multi-variate analysis for both genders. It may be that motives for drug taking and for DSH are similar. The mostly commonly reported motive for self-harm in this group of young people was *"to get relief from a terrible state of mind"* (Morey *et al*, 2008). Self-medication for psychological distress has also been reported to be a central motive in adolescent drug use (Sattar *et al.*, 2007). Therefore, it may be

that young people experiencing distress attempt to relieve these negative feelings through drug use and, in some cases, self-harm.

Consistent associations between depression and suicidal behaviour in adolescents have been reported elsewhere (Evans *et al.*, 2005). Although significantly associated with DSH in our uni-variate analyses, depressive symptoms did not remain in the multi-variate analysis for either gender. This echoes the findings of Harrington *et al* (2006), who reported that the independent contribution of major depression to risk of self-harm among adolescents was not significant (Harrington *et al.*, 2006). The fact that uni-variate analysis revealed strong associations between depressive symptoms and DSH in our sample while multi-variate analysis did not suggests that collinearity between psychological measures may be an issue. Hawton *et al* (2002) reported that, for the English CASE centre, psychological factors were more strongly associated with DSH among girls than boys and that depression, anxiety, impulsivity and self-esteem all remained in the final model for girls. In contrast, we found that mental health/ psychological factors were more important for boys, with the exception of depression. Anxiety and impulsivity remained in the final model for boys, indicating a profile of young male self-harm in Ireland which is distinct in its psychological correlates. The finding that self esteem remained in the final model for girls is in keeping with other studies (Beautrais *et al.*, 1999).

Adolescents who had self-harmed had significantly higher levels of anxiety, depression and impulsivity and lower self-esteem than those who had not, supporting the view that adolescent self-harmers of both sexes form a sub-group with more severe psychopathology (Voros *et al.*, 2005). However, our findings that certain life events, exposure to DSH in others, and drug use have stronger associations with DSH than some mental health factors offer alternative indicators for the identification of at-risk youth.

This study was carried out using a cross-sectional design, which makes it difficult to draw conclusions on causal or temporal relations between risk factors and DSH. The study examined

self-harm episodes reported to have happened at any time in the past, and therefore reported self-harm did not necessarily occur after the various associated factors and events, making it difficult to draw conclusions on causality. The psychological scales and lifestyle items measured current state and lifestyle at one time point only, which may have been up to several years after any reported DSH. Controlled longitudinal studies are recommended in order to examine the direction of the effect and specificity of the risk factors associated with DSH. This study does not examine the severity of self-harming behaviour. Further research should focus on the subgroup of adolescents who report repeated DSH, as these may constitute a group at high risk of further self-harm and suicide. A continuum of severity could be postulated which ranges from no self-harm thoughts or behaviour, through self-harm thoughts only, single episode DSH and repeated DSH. A prospective study has reported that the factors associated with a first act of DSH in adolescence differ from those associated with a repeat act (O'Connor *et al.*, 2009a), underlining the importance of examining different stages of the self-harm process. This study focused on identifying factors associated with risk of self-harm in adolescents. There may also be positive configurations of lifestyle and psychological factors which confer resilience to suicidal behaviour, and which should be the focus of further research due to their relevance to promotion of positive mental health among adolescents.

Despite these methodological limitations, the strengths of our study include the use of multi-variate analysis to describe a range of factors associated with DSH for each gender. The wide range of risk factors identified by the survey supports a life-course model of the aetiology of deliberate self-harm, in which risk of developing suicidal behaviour depends on accumulation of psychological and social factors and a broad variety of negative life events across the lifespan from childhood into adolescence (Fergusson et al., 2000). The associations we have identified between lifetime history of certain life events and DSH may reflect the importance of childhood experiences as well as more age-specific stressors associated with adolescence.

Research examining whether national trends and cross-national differences in prevalence of DSH are mirrored in suicide rates has revealed contradictory findings (O'Connor *et al.*, 2009b, Portzky *et al.*, 2008). However, it is worth noting that a remarkable characteristic of Irish suicide rates in recent years is the sharp increase in suicide among young men since the 1990s (Department of Public Health, 2001). Prospective studies of those treated for DSH have found strong links between DSH and subsequent suicide (Hawton *et al.*, 1993, Tidemalm *et al.*, 2008). The relatively low prevalence of DSH among boys, combined with the high rates of suicide in males in this age group, may indicate that the sub-group of boys who report DSH is a particularly high risk group. It is also a possibility that some boys were reluctant to disclose details of their self-harm, resulting in artificially low prevalence (Keeley, 2008). The profile of the male adolescent self-harmer described here as involved in drug use, with high levels of impulsivity and anxiety and with peers who have also self-harmed bears a close resemblance to the profile of young men who die by suicide (Walinder and Rutzt, 2001). Interestingly, such a profile does not mirror that reported by the English CASE centre, which found anxiety and impulsivity to be most associated with DSH among girls (Hawton *et al.*, 2002).

As well as striking similarities in terms of the importance of factors such as knowledge of DSH in others and drug use, there are some important differences between our findings and those of the English and Scottish CASE studies, nearest geographically to Ireland. Forced sexual activity was associated with DSH among girls in our multi-variate analysis but this was not the case in the English or Scottish studies. This association warrants further examination in terms of prevalence and correlates among the Irish sample. Among boys, the strength of the association between two school-related factors; school bullying and, in particular, problems with schoolwork, was unique among CASE centres. Problems with schoolwork were the most frequently reported of all negative life events for both genders among our sample (Sullivan *et al.*, 2004). The associations between DSH and schoolwork problems and school bullying may reflect the particular social and educational pressures of second-level education in Ireland.

Given the fact that DSH is common among adolescents, schools have an important role to play in its prevention. Our findings also underline the importance of school based risk factors among boys, bringing the focus onto the school as central in preventing self-harm and suicide in boys. This in keeping with the recommendations of the Irish *"Reach Out"* strategy for suicide prevention (Health Service Executive, 2005). Primary prevention strategies should aim to modify factors associated with self-harm through promotion of positive mental health among all students, and through equipping students with the skills to positively manage stress and interpersonal conflict (Sullivan *et al.*, 2004). Our findings also point to the importance of anti-bullying initiatives and drugs education. Secondary prevention strategies could be aimed at individuals who have been identified as at risk of suicidal behaviour. School-based screening has been found to identify suicidal and emotionally troubled adolescents who had not been identified as at-risk by school staff (Scott *et al.*, 2009). Early support and help for young people who have harmed themselves are crucial to prevent further episodes, as environmental influences on suicidal behaviour have been shown to be most pronounced early in the suicidal process, but less so following repeated episodes (Neeleman *et al.*, 2004). School welfare staff are ideally placed to provide this support, and specific training in managing self-harm has been found to increase their confidence and skills (Robinson *et al.*, 2008). The school environment is also a critical arena in which the stigma surrounding mental health problems must be tackled (Health Service Executive, 2005). Knowledge of the gender- and country-specific profile of young people who engage in self-harm can inform prevention strategies and aid identification of those at risk.

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