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Research report

Adolescent self-harm: A school-based study in Northern Ireland

Rory C. O'Connor [a,*], Susan Rasmussen [b], Keith Hawton [c]

[a] Suicidal Behaviour Research Laboratory, Institute of Health and Wellbeing, University of Glasgow, Mental Health & Wellbeing, Academic Centre, Gartnavel Royal Hospital, 1055 Great Western Road, Glasgow G12 0XH, United Kingdom
[b] University of Strathclyde, United Kingdom
[c] University of Oxford, United Kingdom

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ABSTRACT

Background: The prevalence of adolescent self-harm in Northern Ireland (NI) and its associated factors are unknown. Given the established relationship between conflict and mental health, and NI's recent history of conflict, it is important to investigate the factors associated with self-harm in NI. This study aimed to determine the prevalence of self-harm in NI adolescents and the factors associated with it, including exposure to the NI conflict.
Methods: Observational study of 3596 school pupils employing an anonymous self-report survey. Information was obtained on demographic characteristics, lifestyle, life events and problems, exposure to the NI conflict, social and internet influences, and psychological variables.
Results: Self-harm was reported by 10% of respondents. In univariate analyses, exposure to the NI conflict was associated with self-harm alongside established risk factors. In multivariate analyses, bullying and exposure to self-harm were associated with lifetime self-harm in both girls and boys. Alcohol use, drug use, physical and sexual abuse, and self-esteem were also associated with self-harm in girls. In boys, absence of exercise, sexual orientation concerns, anxiety and impulsivity were additional risk factors. The internet/social media and the self-harm of others were also key influences.
Limitations: This is a cross-sectional study.
Conclusions: The rate of self-harm was lower than elsewhere in the UK/Ireland. The study highlights the factors which should be considered in terms of risk assessment. In addition to established risk factors, the findings suggest that more research on the legacy of the NI conflict as well as the influence of new technologies warrant urgent attention.

1. Introduction

In the UK and Ireland, self-harm in adolescents represents one of the leading causes of admission to hospitals, and consequently is a major public health and social problem (e.g., O'Loughlin and Sherwood, 2005; Hawton et al., 2012). Indeed, past self-harm is one of the best predictors of future self-harm and completed suicide (Owens et al., 2002). In the present context, self-harm is defined as any act of self-injury irrespective of degree of suicidal intent or other motivation.[1] Moreover, hospital-treated self-harm only represents the tip of an iceberg; most adolescents who self-harm do not present to hospital following an episode of self-harm (Hawton et al., 2009). Irrespective of the motive(s) that underpins self-harm in adolescents, it is important to recognise that it signals significant distress.

Much research has highlighted the characteristics of those individuals who present to hospital following self-harm (e.g., Cloutier et al., 2010; O'Connor et al., 2012; O'Connor, 2011; Hawton et al., 2012). However, there are relatively few large-scale studies of adolescent self-harm in the community (Hawton et al., 2012). Such studies are of particular value in understanding the issues faced by adolescents (O'Connor et al., 2010, 2012), especially given that most who self-harm do not enter a clinical setting (Appleby et al., 1996; Hawton et al., 2009). They can assist in the identification of adolescents at risk and the development of prevention programmes.

The present study employs similar methodology to that used in the Child and Adolescent Self-Harm in Europe (CASE) Study, which is the largest international study of self-harm in adolescents in which the same method of recording self-harm has been

* Corresponding author. Tel.: +44 141 211 3924.
E-mail address: rory.oconnor@glasgow.ac.uk (R.C. O'Connor).

[1] Although there has been a move, primarily in the USA, to dichotomise self-harm into non-suicidal self-injury and suicide attempts, consistent with the UK's National Institute for Health and Care Excellence (NICE)'s clinical guidance on self-harm, we employ the term self-harm to describe all forms of self-injurious behaviour irrespective of suicidal intent (National Institute for Health and Clinical Excellence, 2011). See Kapur et al. (2013) for discussion of this issue.

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employed. This methodology has already been employed in eight countries (England, Republic of Ireland, Scotland, The Netherlands, Belgium, Norway, Hungary and Australia; Madge et al., 2008). The most recent administration was in Scotland (O'Connor et al., 2009a), using an adapted version of the CASE questionnaire, where similar rates of self-reported self-harm were found in Scotland (13.8%) as had previously been reported in England (13.2%, Hawton et al., 2002). In addition, as in other European countries, girls were approximately three times more likely to report self-harm than boys. Although previous research from the CASE Study has shown a similar rate of adolescent self-harm in the Republic of Ireland (12.2%; Morey et al., 2008) no such study has been conducted in Northern Ireland. Consequently, the first aim of this study was to determine the prevalence of self-reported self-harm in adolescents in Northern Ireland and to compare this with elsewhere in UK and Republic of Ireland.

The CASE studies confirm past research on clinical samples which suggest that risk factors for self-harm fall into two main clusters: (i) environmental or psychosocial factors which can be thought of as external influences and adverse life events, and (ii) psychological factors which include personality and psychological characteristics (de Wilde, 2002). In addition, social influences, such as family and friends' self-harm, are strongly associated with adolescent self-harm (Hawton et al., 2002; O'Connor et al., 2009a, 2009b). It is not clear whether the same risk factors are associated with self-harm in Northern Ireland. Given that Northern Ireland has recently emerged from decades of conflict ("The Troubles", Edwards, 2011) and there is an established relationship between the Northern Ireland conflict and mental health (e.g., Bunting et al., 2013), it is important not to simply extrapolate findings from elsewhere in the UK to Northern Ireland. Consequently, the second aim of the present study was to investigate the relationship between exposure to "The Troubles" as a risk factor for self-harm in addition to the established risk factors.

Finally, although there is some evidence of a link between the internet/social media use and adolescent self-harm, recent reviews highlight the need for more high quality research to better understand this influence (Daine et al., 2013; Messina and Iwasaki, 2011). Therefore, the third aim of the study was to determine the extent to which adolescents who had self-harmed reported that the internet/social media had influenced their self-harm.

2. Method

A total of 3596 school pupils (1711 female, 1882 male, 3 respondents did not indicate their gender) were recruited from 28 secondary schools in Northern Ireland in 2009 as part of the Northern Ireland Lifestyle and Coping Survey. All pupils were in secondary years Year 11 and Year 12 and in classes in which 90% were aged 15–16 years. The mean age was 15 years (SD = 0.69) and this did not differ significantly between the boys and the girls. A random sample of 70 of all the secondary schools in Northern Ireland was invited to participate and 28 schools agreed. Of the 28 participating schools, there was representation from across the Health Boards (Eastern = 7 schools; Northern = 10 schools; Southern = 6 schools; Western = 5 schools), from urban ($n = 21$) and rural ($n = 7$) locations, and from schools with different free meal eligibility rates (12 schools had less than 17% of pupils eligible for free meals and 16 schools had more than 17% of pupils eligible for free meals). There was also representation of schools of all management types (Catholic/Other maintained [$n = 10$], Controlled [$n = 10$], Controlled integrated/grant maintained [$n = 2$] and Voluntary Catholic/Other [$n = 6$]). The sample of adolescents was broadly representative of the target populations in terms of school type, ethnic minorities, educational attainment and socioeconomic deprivation. Consistent with the 2011 Census (98.28% of Northern Ireland population is White), 98.09% of the sample was White.

The total sample of adolescents represented approximately 80% of those eligible to participate. Timetable constraints and absenteeism were the main reasons for non-participation. Ethical approval was obtained from the Psychology Department's ethics committee at the University of Stirling. Parents were informed of the project by letter and asked to notify the school if they did not want their child to participate. Two or three weeks before data collection, the nature of participation was explained in detail to the teachers. On the day of participation, pupils were given the choice of opting out and not participating. Respondents completed a modified version of the Child and Adolescent Self-harm in Europe (CASE) Study questionnaire, which also included questions on the Northern Ireland conflict ("The Troubles") and the influence of the internet/social media. This was an anonymous self-report questionnaire that took approximately 30 min to complete. Completion of the survey was completely confidential and following completion, each anonymous questionnaire was sealed in an envelope by the respondent, only to be opened by the research team.

2.1. Measures

The questionnaire included items on demographic characteristics (gender, age, ethnicity), lifestyle (smoking, alcohol/drug use and exercise), life events and problems, exposure to "The Troubles" (see below), social influences, internet influences, psychological variables and self-harm. Self-harm was recorded if a respondent answered "yes" to the following question: "Have you ever deliberately taken an overdose (e.g. pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?" Respondents were also asked to provide a description of the act, its consequences and to endorse the motive behind the act. For the main analyses we did not use the description to classify the act as self-harm because excluding those who chose not to write a description might yield an underestimate of prevalence, as some respondents deemed describing the act as too personal and painful. In addition, after answering questions about social and internet influences, the young people were asked to describe how they were influenced. These responses tended to be brief and selected quotations are presented verbatim.

Six questions (e.g., "Were you a victim of any violent incidents because of the Troubles?") were used to assess experience of "The Troubles" (Muldoon and Downes, 2007). Other measures recorded mood (depression and anxiety), assessed via the Hospital Anxiety and Depression Scale (HADS; Zigmond and Snaith, 1983), impulsivity (6 items from the Plutchik Impulsivity Scale; Plutchick et al., 1989), self-esteem (8-item version of the Self-Concept Scale; Robson, 1989) and perfectionism (the brief version of the Child and Adolescent Perfectionism Scale, O'Connor et al., 2009; Flett et al., 1997).

2.1.1. Statistical analyses

A series of univariate logistic regression analyses and Chi-square tests was conducted to test the association between self-harm and associated variables and to determine entry into the multivariate analyses. In the univariate logistic regression analyses, to adjust for potential clustering effects, the Huber-White sandwich estimator method using logistic regression within the complex samples procedure in SPSS 19 specifying school as the clustering variable was used. Stata 12.1 was used to conduct the multivariate logistic regression analyses, adjusting standard errors for within school clustering. A forced entry model was run to determine the factors that significantly distinguish those with

and without a history of self-harm. Owing to missing data, there is some variability in the denominators across the variables.

3. Results

3.1. Prevalence of self-harm

Ten per cent of the sample reported a lifetime history of self-harm (see Table 1). The lifetime self-harm rate for girls was 15.5%, compared to 5.1% for the boys. Girls were almost 3.5 (odds ratio=3.44) times more likely to report self-harm than boys. Six percent of the sample reported self-harm in the past year, with in excess of three times more girls reporting past self-harm than the boys. More than one in five (21.7%) reported that they had seriously thought about self-harm without acting on their thoughts at some stage in their lives, again with a nearly three-fold excess in the girls compared with the boys. After taking account of potential clustering by school, lifetime self-harm did not vary significantly as a function of school type (secondary vs. grammar schools or school management type), proportion of children eligible for free school meals, or as a function of whether the young people were attending urban or rural schools.

Table 1
Lifetime and past year prevalence of self-harm and serious thoughts of self-harm, by gender.

	No of respondents	*N* (%)	Odds ratio	95% CI	*P* value
Past year prevalence of self-harm					
Boys	1840	54 (2.9)	1.00		
Girls	1686	156 (9.3)	3.37	2.60–4.38	< **0.0001**
All	3526	210 (6.0)			
Life time prevalence of self-harm					
Boys	1837	93 (5.1)	1.00		
Girls	1686	261 (15.5)	3.44	2.38–4.96	< **0.0001**
All	3523	354 (10.0)			
Past year prevalence of serious thoughts of self-harm in without doing so					
Boys	1831	143 (7.8)	1.00		
Girls	1681	303 (18.0)	2.60	1.90–3.54	< **0.0001**
All	3512	446 (12.7)			
Lifetime prevalence of serious thoughts of self-harm without doing so					
Boys	1831	249 (13.6)	1.00		
Girls	1681	513 (30.5)	2.79	2.12–3.68	< **0.0001**
All	3512	762 (21.7)			

The prevalence of lifetime self-harm was statistically lower in Northern Ireland in comparison to the rates in England (Z-score=4.60, $p<0.0001$), Scotland (Z-score=4.23, $p<0.0001$) and the Republic of Ireland (Z-score=2.94 $p<0.005$) (see Fig. 1). There were similar gender ratios of self-reported self-harm rates in each country.

All respondents who reported self-harm were asked to describe the most recent episode. Nearly two-thirds (62%) of the sample provided this information. Self-cutting was the most common form of self-harm (64% and 57% for boys and girls, respectively). Overdose was reported by more girls (28%) than boys (20%), with another single method reported by 13% of the boys and 5% of the girls. Girls were also more likely to report having had self-harm thoughts in the past year and/or ever.

Wanting to get relief from a terrible state of mind was the mostly frequently reported motive for self-harm, with three quarters (74%, $n=168/226$) of the girls and 60% ($n=50/83$) of the boys reporting it. More than half of the girls (56%, $n=122/218$) and 44% ($n=35/80$) of the boys reported wanting to die as a reason for their self-harm (the 2nd most commonly reported motive). Wanting to punish oneself (46%, $n=100/220$ and 38%, $n=29/77$ for boys and girls, respectively) and to show how desperate the young person was feeling (23%, $n=47/209$ and 26%, $n=20/78$ for boys and girls, respectively) were the third and fourth most commonly cited reasons for self-harm. The least commonly endorsed reasons were the so-called 'manipulative' reasons, for example, less than 1 in 10 girls reported "wanting to get my own back on someone" (9%, $n=19/205$).

Among those who had self-harmed at anytime in the past, 52% also said that they had seriously thought of suicide at least once. Self-harm was often impulsive as 41% (137/338) of those who had self-harmed said that they started thinking about doing it less than an hour beforehand, 9% (37/338) more than an hour but less than a day, 12% (42/338) more than a day but less than a week, 14% (47/338) more than a week but less than a month and 24% (81/338) a month or more.

3.2. Factors associated with self-harm

Given the recognised gender differences in self-harm the subsequent analyses are conducted separately for boys and girls. Among the girls, self-harm was more commonly reported by those: who did not live with both parents, whose parents had divorced, who had some smoking history, were moderate or heavy drinkers, had used drugs in the past year, and almost never did

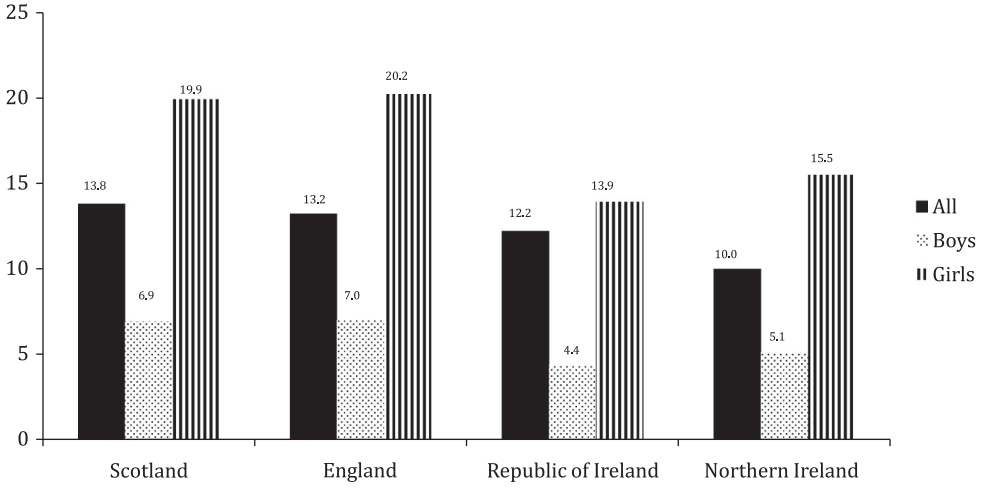

Fig. 1. Prevalence (%) of lifetime adolescent self-harm by country and gender (unadjusted). *Note*. Data for Scotland, England and Republic of Ireland were extracted from O'Connor et al. (2009a), Hawton et al. (2002) and Morey et al. (2008), respectively.

exercise (see Data supplement 1). Lifetime experience of bullying in school, physical and sexual abuse, serious concerns about their sexuality, being in trouble with the police, and having family and friends who had self-harmed in the past were also associated with self-harm in the girls. In addition, anxiety and depression, impulsivity, self-esteem and perfectionism were also related to self-harm in the predicted directions. Exposure to the conflict also distinguished girls with and without a self-harm history. Specifically, being caught up in a riot, being the victim of a violent incident, having a family member or someone they knew killed/injured because of the conflict were also more frequently reported by girls who self-harmed compared to those who had not.

Similar associations between demographic and lifestyle factors and self-harm were also evident among the boys (see Data supplement 1): self-harm was more common among boys who were not living with both parents, whose parents were divorced, who were current smokers, drank alcohol, used drugs in the past year, and did little exercise. Consistent with the girls, those who self-harmed also reported the following more often than those without a self-harm history: bullying, physical and sexual abuse, concerns about their sexual orientation, trouble with the police and knowing others who had self-harmed. All of the mood and personality factors were also associated with self-harm in boys. Exposure to the conflict was also related to self-harm in boys. Being caught up in an explosion or riot, being a victim of a violent incident because of the conflict and having family or friends who were killed or injured were associated with self-harm.

3.3. Multivariate analysis

Consistent with the univariate analyses, potential clustering by school was controlled for in the multivariate analyses. These analyses revealed that the following factors were independently associated with self-harm in girls: alcohol use, drug use in the past year, bullying, physical abuse, sexual abuse, family and friends self-harm and self-esteem (see Table 2). In common with the girls, bullying and exposure to self-harm (friends and family) were associated with self-harm in boys. In addition, lack of exercise, concerns about sexual orientation, anxiety and impulsivity were also independent risk factors for self-harm in boys.

3.4. Influences on self-harm

We asked respondents who had reported self-harm to indicate what influenced their decision to engage in self-harm from a list of possible sources (see Table 3). Most indicated at least one influence from the list (between 84% and 88% answered the influence questions). The influence of others' self-harm was endorsed by 39% and 29% of the girls and boys, respectively, with the self-harm of a friend reported most commonly. Internet and social networking sites also featured. In total, 15% of the girls and 26% of the boys (18% of adolescents overall) endorsed either the internet or social networking sites as factors that influenced their self-harm, with one in ten of the boys endorsing social networking sites. In addition, approximately 10% of both the boys and girls reported film/TV (11%) and books/magazines (9%), respectively as being influential. In short, social and new technology influences were the most common influences endorsed by boys and girls. Although there were a number of trends, only a few gender differences reached the conventional level of significance. Compared to girls, boys were more likely to report that the radio influenced their decision to self-harm (Chi (1)=12.74, $p=0.001$) whereas girls were more likely than boys to report the influence of family self-harm (Chi (1)=3.94, $p=0.047$).

Panel 1 provides quotations from the young people which illustrate how these influences may increase self-harm risk. It highlights the influence of all types of media (traditional and new medias) as well as friends/family. The latter is important as it supports modelling and legitimatisation explanations of social influence. In respect of legitimatisation, the "I thought that if people in my family can do it then why can't I?" quotation points to one potential mechanism which accounts for the strong relationship between familial self-harm and personal self-harm. However, there are many potential mechanisms at play, and the copying others (modelling) quotation "They did it so I copied" emphasises this effect succinctly. The quotations "By them cutting themselves it made them feel better so I tried it" and "On TV it showed some relief from stress" illustrate a further mechanism, as they suggest a functional/coping purpose of the behaviour.

4. Discussion

Adolescent self-harm is a major public health concern in Northern Ireland. One in ten young people reported that they had self-harmed at some stage in their lives with girls being 3½ times more likely to engage in self-harm than boys. The most common method of self-harm was self-cutting, followed by overdose. While the gender difference and methods of self-harm were similar to those found in the Republic of Ireland (Morey et al., 2008) and other parts of the UK (Hawton et al., 2002; O'Connor et al., 2009), the prevalence of lifetime self-harm among adolescents in Northern Ireland was significantly lower than that

Table 2
Multivariate logistic regression for lifetime prevalence of self-harm, by gender.

Variable	Girls			Boys		
	Odds ratio	95% CI	*P* value	Odds ratio	95% CI	*P* value
Frequency of exercise[a]				2.29	1.50–3.51	< 0.0001
Alcohol use[b]	1.28	1.13–1.46	0.0001			
Drug use in the past year	1.83	1.19–2.81	0.006			
Bullying in school ever	2.09	1.59–2.73	0.0001	2.24	1.25–4.01	0.007
Physical abuse ever	2.14	1.12–4.08	0.021			
Sexual abuse ever	2.21	1.15–4.24	0.018			
Concerns about sexual orientation				3.15	1.69–5.87	< 0.0001
Friends self-harm ever	2.88	2.09–3.97	0.0001	3.79	1.79–8.00	< 0.0001
Family self-harm ever	4.22	2.99–5.96	0.0001	3.98	2.11–7.47	< 0.0001
Self-esteem	0.87	0.84–90	0.0001			
Anxiety				1.13	1.06–1.21	< 0.0001
Impulsivity				1.18	1.11–1.27	< 0.0001

[a] From: exercise often to no exercise.
[b] From: abstainer to heavy drinker.

Table 3
Sources of influence on self-harm, by gender.

Source of influence	Girls		Boys		Total	
	n/*N*[b]	%	*n*/*N*[b]	%	*n*/*N*[b]	%
Film or TV	14/214	6.5	9/86	10.5	23/300	7.7
Radio	0/213	0	5/85	5.9	5/298	1.7
Newspapers	5/213	2.3	6/85	7.1	11/298	3.7
Books or magazines	20/214	9.4	8/84	9.5	28/298	9.4
Internet	17/215	7.9	12/85	14.1	29/300	9.7
Social networking sites	16/213	7.5	10/85	11.8	26/298	8.7
[c]New technologies (total)	33/215	15.3	22/85	25.9	55/300	18.3
Self-harm or attempted suicide of family member	34/217	15.7	6/85	7.1	40/302	13.3
Self-harm or attempted suicide of friend	53/226	23.5	19/85	22.4	72/311	23.2
[c]Social influences of other people (total)	87/226	38.5	25/85	29.4	112/311	36.0
Other[a]	68/177	38.4	27/76	35.5	95/253	37.6

[a] In the other category, respondents cited a heterogeneous range of other risk factors, e.g., bullying, depression.
[b] *n*/*N*=number of yes responses/total number of responses.
[c] These composite variables are the sum of the two variables above them in the table.

Panel 1. Young people's descriptions of influences on their self-harm.

reported in the Republic of Ireland, Scotland and England. This lower rate was unexpected given that the rates of hospital-treated self-harm in Northern Ireland are higher than in the Republic of Ireland and England and the suicide rate in Northern Ireland has grown markedly in recent years (Largey et al., 2009; Two Year Report of NI Registry of Deliberate Self-Harm, 2010). The lower rates of self-reported self-harm are also noteworthy as the rates of mental disorder in Northern Ireland are among the highest in Europe, including among young people (Bunting et al., 2012; Pinto-Meza et al., 2013).

In terms of prevalence, there are three possible explanations for the lower rate of self-reported self-harm by adolescents in Northern Ireland. First, the rate may truly be lower than that found elsewhere in the UK and Ireland. It may be that school protects against self-harm in Northern Ireland more than elsewhere in the UK and Ireland, and when this protection is removed after leaving school that the self-harm rate increases. Secondly, as a consequence of "The Troubles" and the associated sectarianism which has been an endemic part of Northern Ireland society in recent decades, young people are cautious about disclosing personally sensitive information (Muldoon, 2004), thereby masking the true extent of the problem. Thirdly, under-reporting may result from methodological shortcomings of the present study. We believe that the last explanation is unlikely as this methodology has been used extensively throughout Europe and the survey was designed to minimise under-reporting and to maximise accurate reporting. Indeed, completion of the survey was completely confidential and each anonymous questionnaire was sealed in an envelope by the respondent, only to be opened by the research team. In short, we are confident that a methodological explanation is unlikely. In future research it may be useful to employ audio computer assisted self-interview methods to enhance self-disclosure of sensitive information (Knowles et al., 2011).

The most likely explanation we believe is that as a consequence of the Northern Ireland conflict respondents in Northern Ireland are, generally, more reluctant to disclose personally sensitive information. Indeed, work by Muldoon and colleagues supports this postulation, as their research suggests that adolescents in Northern Ireland are more cautious in terms of self-disclosure in general (Muldoon, 2004; Muldoon et al., 2007). This is further supported when we inspect the percentage of adolescents who provided written descriptions of their self-harm episode. A lower proportion of young people in Northern Ireland provided such details in comparison to those in England or Scotland.

Irrespective of possible differences in the prevalence of reported self-harm, the risk factors and motives associated with lifetime self-harm are consistent with research conducted elsewhere in Ireland, UK and continental Europe (Hawton et al., 2012; O'Connor et al., 2009a, 2009b; Madge et al., 2008; Scoliers et al., 2009). For boys and girls, knowing others who have self-harmed (family and friends) and a history of bullying discriminated between those who had/had not self-harmed. Family influence is especially important in this regard. Alcohol use, drug use in the past year, physical abuse, sexual abuse and self-esteem also emerged from the multivariate analyses as risk factors for girls' self-harm. Among the boys, exercise, concerns about sexual orientation, anxiety and impulsivity were additional independent risk factors.

To our knowledge, this is one of the most detailed assessments of the extent of the influence of new technologies on adolescent self-harm. Almost 20% of the young people explicitly stated that the internet or social media influenced their decision to engage in self-harm. As social media use (Twitter and Facebook) has grown markedly since we collected the present data, we hypothesise that the influence on self-harm of the internet and social media specifically may have grown further still and will continue to grow in the years to come. This highlights two key challenges. First, we need to better understand the mechanisms by which these new technologies increase risk. The quotations from the young people provide some useful pointers in this regard. Secondly, we need to develop new ways of working with young people which harnesses these technologies to help those who are vulnerable. Taken as a whole, consistent with other research on self-harm contagion (Hawton et al., 2010), these findings also emphasise the powerful influence of other people's self-harm. Given the strength of the relationship and the evidence that social influences predict self-harm prospectively (O'Connor et al., 2009b), urgent work with schools and families is required to neutralise this risk.

Although exposure to "The Troubles" did not emerge as being independently associated with self-reported self-harm in the multivariate analyses, we believe their potential negative effects warrant further attention. This might include more detailed exploration as we only asked the adolescents whether they had experienced some aspect of "The Troubles" (i.e., historical or recent), not when they experienced it. It is reasonable to posit that the impact of more recent violence or intimidation will have a more powerful effect on well-being than knowing someone who was affected by "The Troubles" many years ago. However, the transgenerational legacy of the conflict in Northern Ireland merits further investigation as do the area level risk factors which may account for the fact that "The Troubles" factors were not significant in the final, multivariate model. We also need to explore the mechanisms which may account for the exposure–self-harm relationship as a number of possibilities exist (e.g., increased exposure leads to increased mental health problems). Indeed, the recent increase in suicide in Northern Ireland may be attributable to the loss of social cohesion following the peace process and the hypothesis that as externalised aggression is no longer socially approved it is perhaps internalised (Tomlinson, 2012); this needs further exploration in the context of self-harm. The role of religious beliefs and religious affiliation in the context of the stigma associated with self-harm also requires further exploration. Although we did not ask any questions about religion, analyses of school management type (i.e., Catholic maintained versus controlled/non-denominational) did not yield any differences. However, future research should address this issue more directly to investigate whether there is a relationship between reluctance to disclose self-harm and religious beliefs.

4.1. Limitations

Although the findings are clinically and theoretically important, there are a number of limitations that require comment. Firstly, this is a cross-sectional study, therefore, it is not possible to draw any firm conclusions about the direction of the relationship between factors. Second, all of the measures were self-report. Third, although there were no exclusion criteria, the study missed young people who were not at school on the day of the data collection, therefore this could have led to a bias in the final sample composition. Fourth, although the school response rate is consistent with other similar studies, it may that the non-participation of some schools with high self-harm rates contributed to the lower rate of self-reported self-harm found in this study.

The reasons reported for self-harm by adolescents in Northern Ireland are similar to those reported elsewhere in Europe (Madge et al., 2008). The top four most commonly endorsed reasons for self-harm are expressions of psychological distress or 'cries of pain' motives (Madge et al., 2008; Scoliers et al., 2009; O'Connor et al., 2009a, 2009b These reasons were concerned with (i) wanting to get relief from a terrible state of mind, (ii) wanting to die, (iii) wanting to punish oneself, and (iv) wanting to show how desperate one was feeling. In addition, more than 50% of those who self-harmed said that they had seriously wanted to kill themselves when they had taken an overdose or tried to harm themselves in some other way. The wider dissemination of these motives is important as it further highlights the fact that motives for self-harm are complex and also, that they are, more often than not, an expression of profound distress including, in some cases, suicidal thinking. It is imperative that the general public and professionals alike understand the motives behind self-harm, and do not see it as pejorative behaviour to be dismissed as 'manipulative' per se. In addition, the findings suggest that assessing psychological well-being in terms of the measures of anxiety, depression and self-esteem would be useful, in the school context, in identifying those young people who are particularly vulnerable.

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The funder played no role in the analysis or write-up of the study.

Conflict of interest

None.

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Appendix A. Supplementary materials

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.jad.2014.02.015.

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