

Northern Ireland

Lifestyle and Coping Survey

Final Report

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Northern Ireland Lifestyle and Coping Survey

CONTEXT

The Northern Ireland Lifestyle and Coping Survey (NILCS) was commissioned by the Northern Ireland Suicide Strategy Implementation Body. The survey was undertaken by the University of Stirling (led by Professor Rory O'Connor) in partnership with colleagues at University of Oxford (Professor Keith Hawton) and University of Strathclyde (Dr Susan Rasmussen). A clinical psychologist (Dr Mark Conachy) based in Northern Ireland was an advisor on the project. Michelle Scott (University of Stirling) was the research assistant employed on the project.

BACKGROUND

In the UK and Ireland, self-harm in adolescents represents one of the leading causes of admission to hospitals, and consequently it is considered a major public health and social problem (e.g., O'Loughlin & Sherwood, 2005; Hawton et al., 2003). Indeed, past self-harm is one of the best predictors of future self-harm and completed suicide (Hawton et al., 2003, 1988; O'Connor, 2010a). In the present context, self-harm is defined as any act of self-injury irrespective of motivation; therefore, by definition, it includes self-harm with and without suicidal intent. Moreover, hospital-treated self-harm only represents the tip of the iceberg, most adolescents who self-harm do not present to hospital following an episode of self-harm (Hawton, Rodham & Evans, 2006). Irrespective of the motive(s) that underpins the self-harm episode, it is important to recognise that adolescent self-harm signals significant levels of current distress. As a result, young people are often prioritised in national suicide prevention strategies, both in terms of requiring more detailed research but also in terms of developing better intervention and postvention strategies. Indeed, children and young people are identified as a specific action area in Protect Life, the Northern Irish national suicide prevention strategy and action plan (DHSSPS, 2006). Moreover, Protect Life also specifically prioritises self-harm within the strategy. For example, one of Protect Life's objectives is 'to provide support for research and evaluation of relevant suicide and self-harm issues;' and two of

its outcomes are: (i) ‘improved accuracy in suicide and self-harm data collection’ and (ii) ‘a reduction in self-harm’. The improved understanding afforded by the findings of the present survey should contribute to Protect Life’s overarching aims and objectives.

Much research has highlighted the characteristics of those individuals who present to hospital following self-harm (e.g. Cloutier et al., 2010). However, there are relatively few large scale studies of adolescent self-harm in the community (O’Connor et al., 2009). Indeed, as noted above, community studies are of particular value in understanding the issues faced by adolescents as the majority of adolescents who self-harm do not enter a clinical setting (Appleby et al., 1996; Hawton et al., 2006). Until fairly recently, very little research in the UK had investigated adolescent self-harm and psychological well-being within a school setting. Consequently, detailed information was required about prevalence rates as well as the associated risk factors to assist in the identification of adolescents at risk, and to aid in the development of appropriate self-harm reduction and suicide prevention programmes. The present study builds on the work of the Child and Adolescent Self-Harm in Europe (CASE) survey, which is the largest European study of self-harm in adolescents in which the same method of recording self-harm has been employed. Indeed, an overarching objective of the CASE study was to develop a measure of self-harm which would be applied across countries, to establish more accurately the prevalence of adolescent self-harm internationally. The Child and Adolescent Self-Harm in Europe (CASE; Hawton et al., 2002) methodology has already been administered in eight countries (England, Republic of Ireland, Scotland, The Netherlands, Belgium, Norway, Hungary and Australia). The most recent administration was in Scotland (O’Connor, Rasmussen, Miles & Hawton, 2009), using an adapted version of the CASE questionnaire, where we found that adolescents in Scotland and England (Hawton et al., 2002) reported similar rates of self-harm in both countries. In addition, consistent with other European countries, girls were approximately three times more likely to report self-harm than boys.

The CASE studies confirm past research on clinical samples which suggest that the suicide and self-harm risk factors 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, both Hawton et al. (2002) and O’Connor et al. (2009) found evidence to suggest that social influences, such as family and friends’ self-harm, are strongly associated with adolescent self-harm.

Overall, these studies highlight that self-harm is a real problem in adolescents and highlight the need to develop specific intervention/prevention strategies which take into account the complex interaction of psychological and psychosocial variables, whilst also acknowledging that these strategies need to be tailored in the light of any gender differences in these risk factors, and any characteristics which may be specific to a particular country.

AIMS

We aimed to survey 15-16 year olds in post primary schools in Northern Ireland on a range of issues related to lifestyle, well-being and self-harm. It extends previous work with university students in which we predicted well-being from personality, social and group variables, as well as our research on adolescent self-harm in Scotland and England. The overarching aim of the study was to determine the prevalence of self-harm in this population and to examine the extent to which psychological, clinical and psychosocial variables are associated with self-harm cross-sectionally and prospectively (over a period of 6 months). All of the measures have been used previously with young people, albeit not in Northern Ireland, nor has this specific combination of measures been included in one study before. Many of the measures have been previously administered to in excess of 35,000 15-16 year olds throughout Europe (the CASE survey).

The findings of this study will help identify those young people who are more vulnerable to distress when they encounter stressful life events and could form the basis for intervention studies to help those who are particularly vulnerable. More broadly, the aims of this study are consistent with Northern Ireland's *Investing for Health* strategy, the *Healthy Schools Initiative*, and *Protect Life*, the Northern Ireland suicide prevention strategy and action plan.

The specific aims and objectives of the study were to:

- Determine the prevalence of self-harm and thoughts of self-harm in a large representative sample of adolescents across Northern Ireland.

- Identify the psychological, clinical and psychosocial factors associated with self-harm.
- Investigate any potential gender differences both in terms of prevalence, risk factors and reasons for engaging in self-harm.

THE SURVEY

The NILCS was modified from the existing Child and Adolescent Self-harm in Europe Survey (CASE) which has been administered in eight other European countries including England, Scotland and the Republic of Ireland. Consistent with studies in other countries, the project surveyed 15-16 year olds in post primary schools in Northern Ireland on a range of issues related to lifestyle and well-being. The CASE questionnaire was piloted extensively and has since been administered to in excess of 35,000 adolescents across Europe and Australia. The NILCS included questions on the following issues:

- Sociodemographics (age, sex, ethnicity, living arrangements)
- Lifestyle (exercise, smoking, drinking, drugs)
- Stressors/Negative life events (bullying, physical/sexual abuse, concerns about sexual orientation, trouble with the Police)
- Vicarious experience of self-harm (by friends or family)/ exposure to self-harm of others
- Self-reported personal self-harm (in past year/lifetime, influences and motives)
- Reasons for self-harm
- Group norms about self-harm (attitudes and behaviour of friends and peers)
- Social perfectionism (expectations you think people who are important to you have of you)
- Experience of The Troubles
- Depression and anxiety
- Self-esteem

- Impulsivity
- Pessimism

The Sample

The analyses are based on responses from pupils in twenty eight schools across Northern Ireland. We successfully recruited schools from each of the four 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). We also included 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]).

After exclusions, our final sample comprised of 3,596 pupils, 52.3% (n=1882) were boys and 47.6% were girls (n=1711; 3 respondents did not indicate their gender). All respondents were recruited from Years 11 and Years 12ⁱ, the mean age was 15 years (SD=0.69) and the boys and girls did not differ in mean age. All questionnaires were anonymous and confidential. Respondent and parental consent was obtained in advance of the study. All respondents sealed their completed questionnaires in an envelope which was only opened by one of the University of Stirling research team in Scotland.

Procedure

The aim of the study was explained to the Head Teacher or their designate. 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.

We had obtained ethical approval from the Stirling University Psychology Department ethics committee. Our study adhered to the British Psychological Society's ethical guidelines (BPS, 2004) and the British Educational Research Association's guidelines (BERA, 1992). To highlight that the survey was anonymous, all pupils were provided with an envelope into which to insert and seal their completed questionnaires. The sealed envelopes were only opened by members of the research team. Each participant was also given an information sheet to take away with them which included telephone/postal and electronic contacts for useful support organisations. To ensure anonymity but to allow for follow-up, respondents were asked to answer a series of questions at both time points which generated a unique reference code.

Analyses

First, we present the data related to the prevalence of self-harm in the sample followed by univariate and multivariate analyses to investigate which of the survey variables are associated with self-reported self-harm. Then, we present the analyses associated with the six month follow-up. We employed logistic regression, multinomial regression and chi-squares in the analyses.

FINDINGS

Prevalence of self-harm

The measurement of an episode of self-harm is based on the following definition which states that self-harm is an:

“act with a non-fatal outcome in which an individual deliberately did one or more of the following: initiated behaviour (e.g., self-cutting, jumping from a height), which they intended to cause self-harm; ingested a substance in excess of the prescribed or generally recognised therapeutic dose; ingested a recreational or illicit drug that was an act the person regarded as self-harm; ingested a non-ingestible substance or object” (Hawton et al., 2006; p.29)

Self-harm was recorded if a respondent answered yes to the following question:

“Have you ever deliberately taken an overdose (e.g., of pills or other medication) or tried to harm yourself in some other way (such as cut yourself)?”

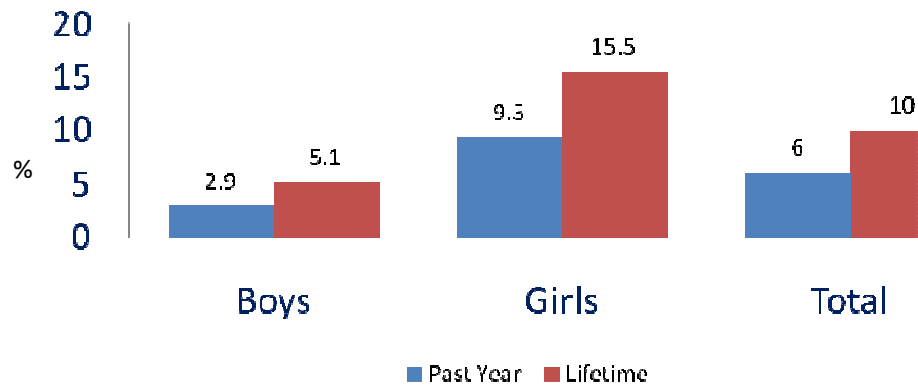


Figure 1. Prevalence (%) of adolescent self-harm in Northern Ireland

As is evident in Figure 1, 10% (n=354¹) of the sample reported that they had engaged in an act of self-harm at least once in their lives. Consistent with studies elsewhere, girls were almost 3.5 (Odds ratio=3.44²) times more likely to report self-harm than boys. The lifetime self-harm rate for girls was 15.5% compared to 5.1% for the boys. Six percent of the sample reported self-harm in the past year, with in excess of 3 times more girls reporting past self-harm than the boys. Fifty nine percent of the respondents reported past year self-harm and almost 40% (39.7%) had self-harmed more than once in the past. Lifetime self-harm was more common in secondary vs grammar schools (11.3% vs 8.5%, respectively; OR=1.37, 95% CI=1.09-1.72, p=.006), and in schools with higher proportion of children eligible for free school meals vs those

¹355 respondents reported self-harm but one of those did not indicate their gender; consequently, they are omitted from the gender analyses.

² Odds ratios (OR) are reported throughout. For the present purposes, they indicate relative risk of self-harm. For example, the Odds ratio relating female gender to self-harm is 3.44 which means that if you are female you are 3.44 times more likely to have reported self-harm than a male.

with lower proportion (11.3% and 9% for more than 17% and less than 17% eligibility of free school meals, respectively; OR=1.30, 95% CI=1.04-1.62, $p=.020$). Life-time self-harm did not vary as a function of whether the young people were attending urban or rural schools (OR=.94, 95% CI=.71-1.23, $p=.643$).

Comparison of NI lifetime prevalence of self-harm with England, Scotland and Republic of Ireland (RoI).

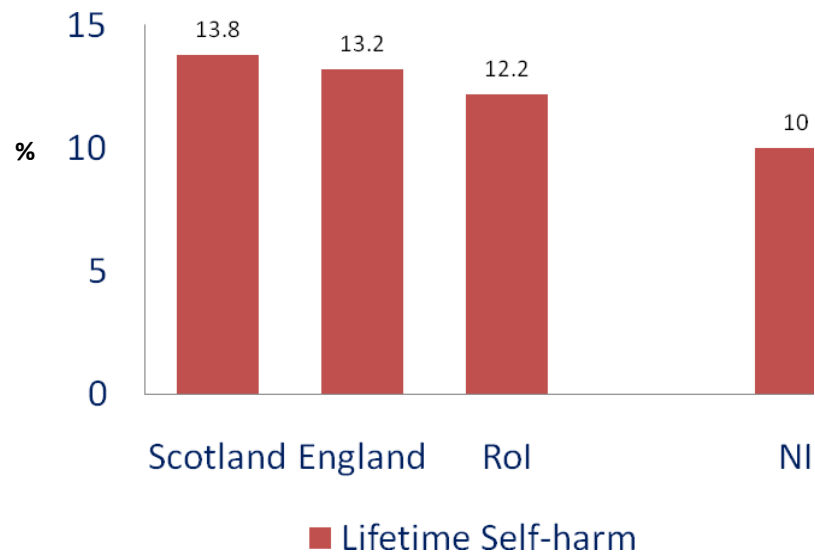


Figure 2. Lifetime prevalence (%) of adolescent self-harm by country (unadjusted)

As summarised in Figure 2, the prevalence of lifetime self-harm is lower in Northern Ireland in comparison to the rates in England (Hawton et al., 2002), Scotland (O'Connor et al., 2009) and the Republic of Ireland (Sullivan et al., 2004). Indeed, the NI rate is statistically lower than that found in the Republic of Ireland ($z=2.99$, $p<.001$).

We also asked all respondents “Have you ever seriously thought about taking an overdose or trying to harm yourself but not actually done so?”

Once again, girls were more likely to report having had self-harm thoughts in the past year and/or at some stage during their lives thus far (lifetime prevalence) (OR=2.60 and 2.79 for past year and lifetime prevalence, respectively).

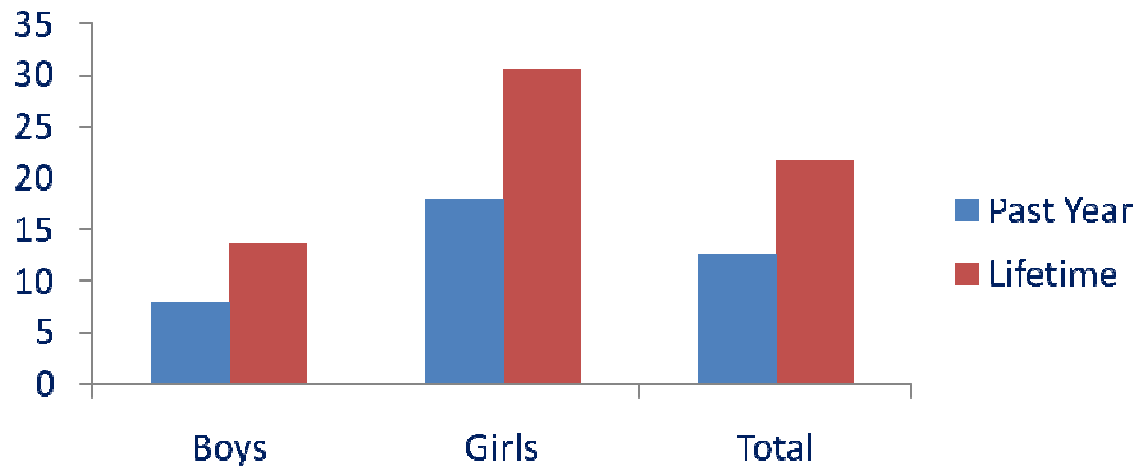


Figure 3. Prevalence (%) of serious thoughts of self-harm without doing so

In total, 22% (21.7%) of the adolescents reported having had self-harm thoughts without acting upon them at some stage in their lives (see Figure 3; Table 1 in appendices).

All respondents who reported self-harm were asked to describe their most recent episode of self-harm (if there was more than one). This yielded details from approximately 60% (61.9%) of the sample. From this information we were able to ascertain that self-cutting was the most common

form of self-harm (63.6% and 57.4% 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 (Figure 4).

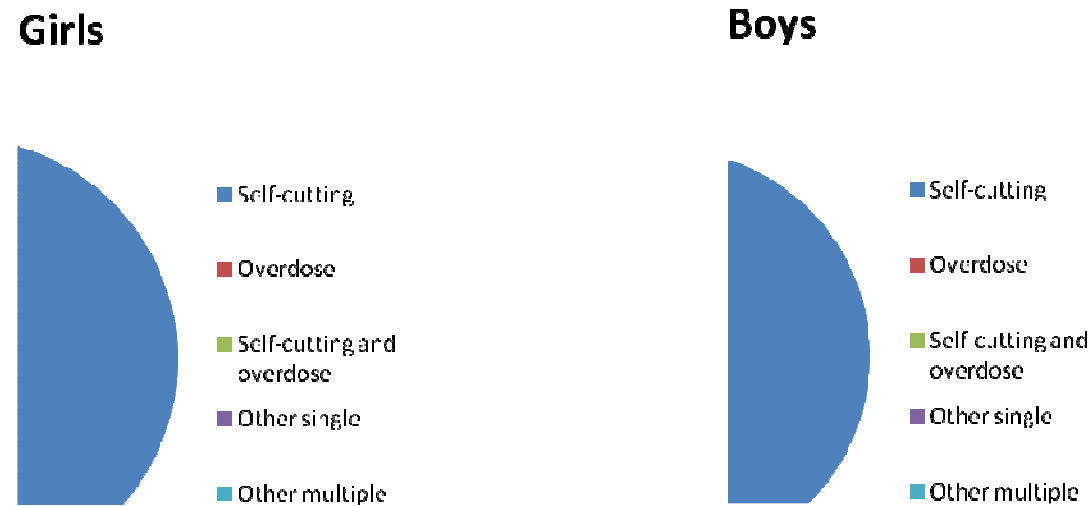


Figure 4. Methods of adolescent self-harm

What influenced your decision to take an overdose or harm yourself in some other way?

We asked respondents to indicate what influenced their decision to engage in self-harm from a list of possible sources (see Figure 5; Table 2 in appendices).

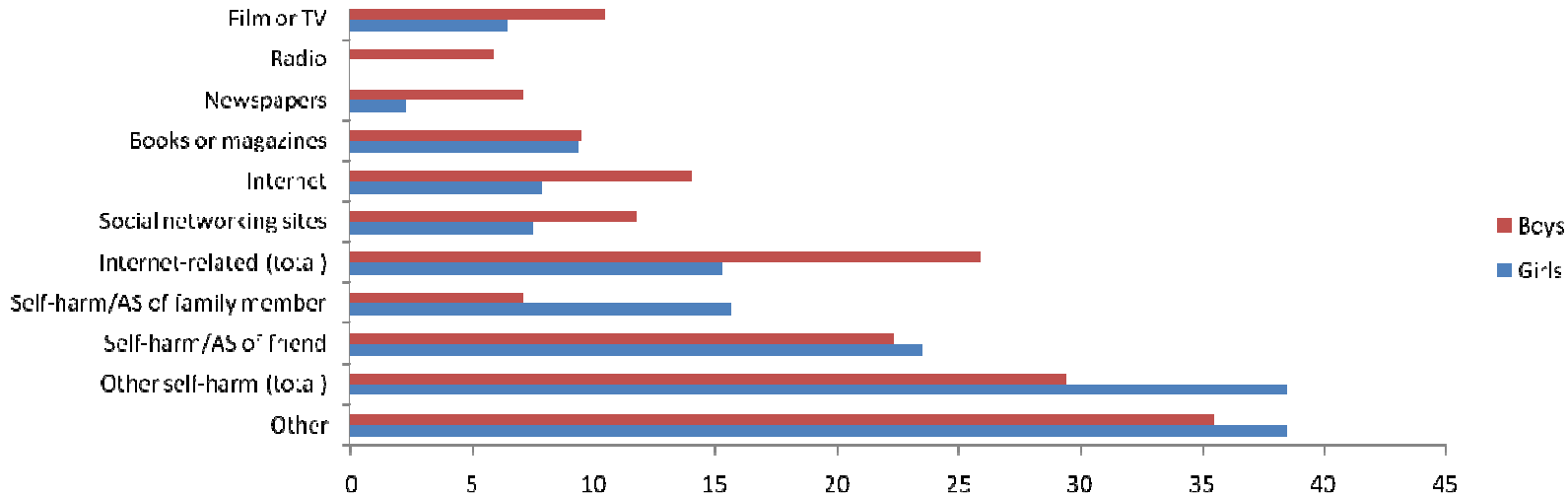


Figure 5. Sources (%) which influenced self-harm

Most of those who had self-harmed indicated at least one influence from the list (between 83.9% and 88.1% answered the influence questions). The influence of others' self-harm was most frequently endorsed by the adolescents (38.5% and 29.4% of the girls and boys, respectively), with the self-harm of a friend reported most commonly. The internet and social networking sites also featured as influences. In total, 15.3% of the girls and 25.9% of the boys endorsed either the internet or social networking sites as factors that influenced their self-harm, with 1 in 10 of the boys endorsing social networking sites. In addition, approximately 10% of both the boys and girls reported film/TV (10.5%) and books/magazines (9.4%), respectively as being influential. In short, social and internet-mediated 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, $p=.001$) whereas girls were more likely than boys to report the influence of family self-harm (Chi (1)=3.94, $p=.047$).

Box 1. Influences on self-harm



The quantitative findings are further supported by quotations given by the young people themselves. Key quotations are summarised in Box 1 above and highlight the influence of all types of media (traditional and new medias) as well as friends. The latter is important as it supports modelling and legitimisation explanations of social influence. In respect of legitimisation, 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 first quotation "By them cutting themselves it made them feel better so I tried it" and the "On TV it showed some relief from stress" illustrates another mechanism still, as it suggests a functional / coping mechanism. The latter also highlights the importance of the careful presentation of self-harm in the media.

Reasons to explain self-harm

The top four reasons for self-harm were the same for both boys and girls (See Figure 6). Three quarters (74.3%) of the girls and 60% of the boys reported that they wanted to get relief from a terrible state of mind. More than half of the girls (56%) and 44% of the boys reported wanting to die as a reason for their 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'. Girls were significantly more likely than boys to endorse 'I wanted to get relief from a terrible state of mind' ($\chi^2(1)=5.80, p=.016$).

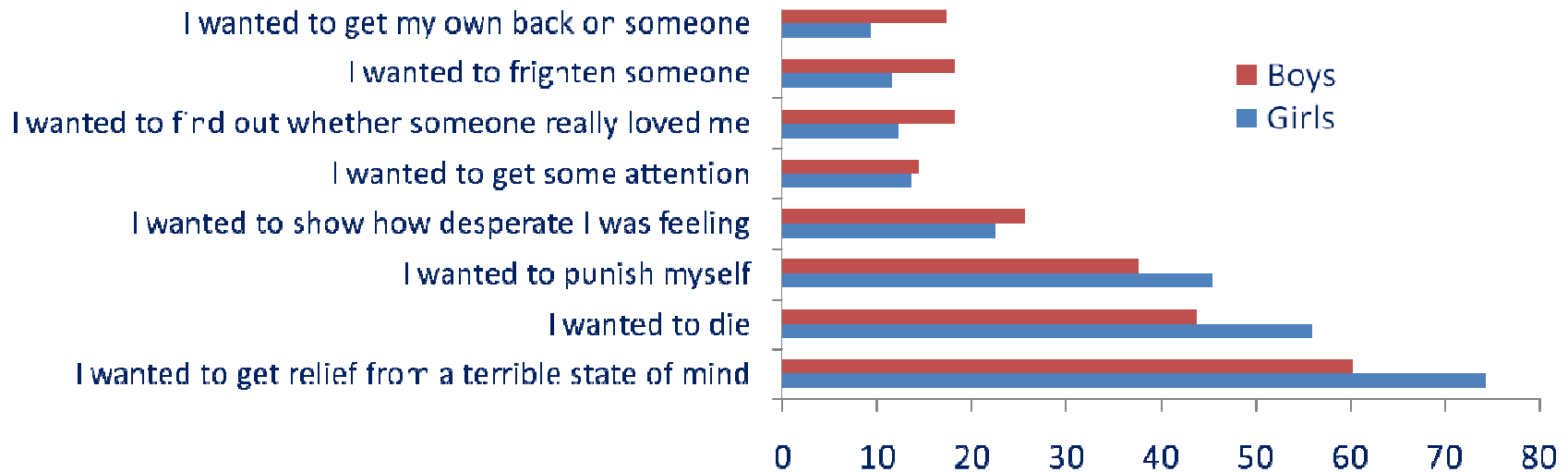


Figure 6. Reasons for self-harm

We also gave the young people an opportunity to elaborate on the reasons why they self-harmed. The quotations included in Box 2 (below) complement the reasons given in Figure 6 and highlight the distress experienced as well as the variety of reasons given. The expression of profound psychological pain is evident in many of the quotations. Indeed, the “to take the pain from my heart to my arm” and the “physical pain rules out the emotional pain” illustrates an oft-reported phenomenon of those who self-harm seeing it as a means of ‘physicalising’ their psychological turmoil.



Box 2. Reasons for self-harm

Suicidal Intent

We also asked those respondents who had self-harmed "have you ever seriously wanted to kill yourself when you have taken an overdose or tried to harm yourself in some way?". Over half, 52% of these respondents said that they had seriously wanted to kill themselves. Boys and girls did not differ in this respect (Chi [df=1]=3.03, p=.093). Self-harm is often an impulsive act for many young people; 40.5% (137/338) said

that they started thinking about doing it less than an hour beforehand, 9.2% (37/338) more than an hour but less than a day, 12.4% (42/338) more than a day but less than a week, 13.9% (47/338) more than a week but less than a month and 24% (81/338) a month or more (see Figure 7).

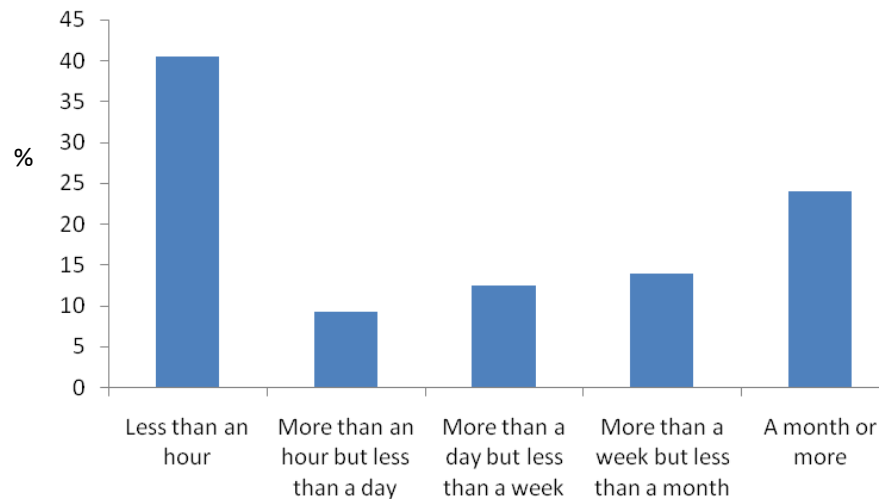


Figure 7. Time between thinking about self-harming and actually doing so

Professional helpseeking in the past year among those who self-harmed in the past year

We asked all of those who had self-harmed in the previous year whether they had problems for which they felt they needed professional help. One third endorsed 'yes, but I did not try to get professional help', 19% said 'I have had, or now have, serious problems, but have never felt the need for professional help' and 23% said 'no, I have had few or no problems'. Less than one quarter (24%) said 'yes, and I did ask for

professional help. In short, the vast majority of young people who self-harmed in the past year did not seek help for any serious personal, emotional, behavioural or mental health problem.

Factors associated with self-harm

In the following sections, we report the univariate associations between individual factors and self-harm history. In addition, we report the association between each factor and (i) self-harm in the past year (i.e., the respondent reported/did not report self-harm in the past year) and (ii) lifetime self-harm (i.e., the respondent reported/did not report self-harm at any stage in their lives). These associations are reported separately for boys and girls. For ease of exposition, the individual factors are presented in groups with the figure included in the main text representing lifetime self-harm. We have included tables* demonstrating the outcomes for past year self-harm and lifetime self-harm in the appendices as described below:

- Demographics (Figure 8; Tables 4 (past year) and 5 (lifetime) in appendices)
- Lifestyle factors (Figure 8; Tables 6 (past year) and 7 (lifetime) in appendices)
- Experience of ‘The Troubles’ (Figure 9; Tables 8 (past year) and 9 (lifetime) in appendices)
- Stressors/Negative life events and exposure to self-harm of others (Figure 10; Tables 10 (past year) and 11 (lifetime) in appendices)
- Mood and psychological factors (Figure 11; Tables 12 (past year) and 13 (lifetime) in appendices)

*Note on interpreting the Tables 4-11 (in appendices). N refers to the number of respondents in each category. % (N) self-harmed refers to the percentage of the respondents in that category (N) who reported self-harm. Odds ratio (and 95% CIs) indicates the strength of association between factor/variable

and self-harm. A p-value less than $p < .05$ is usually taken as being statistically significant. For example, 5.2% of those female respondents who had divorced parents self-harmed compared to 2.4% of those whose parents were not divorced. The odds ratio confirms this, stating that if a girl said her parents were divorced she was twice (actually 2.1 times) as likely to also report self-harm compared to a girl who did not say her parents were divorced.

Demographics

As 96.4% of the sample was white, it is unsurprising that, with one exception, there was no association between ethnicity and self-harm. Conversely, there was considerable evidence of an association between living situation and self-harm history; in general, adolescents living with both parents were significantly less likely to report self-harm than those not living with both parents (Figure 8). Having divorced parents was also consistently associated with self-harm, being associated with a two-fold increase in risk of self-harm (lifetime or past year) in boys and girls

Lifestyle factors

Smoking was associated with past year and lifetime self-harm irrespective of gender. Moderate and heavy drinkers were also statistically more likely to report self-harm compared to abstainers³. Indeed, self-harm was more than five times more likely in females who said they drink heavily compared to those who abstain (Tables 6 and 7). Exercise appears to protect against male self-harm. For example, compared with boys who said they exercised 'often', those who reported almost never exercising were 5.38 times more likely to have self-harmed at some stage in their lives.

Drug use is also strongly associated with self-harm in boys and girls. Lifetime and past year self-harm were more likely to be reported by those who had used drugs in the past year compared to those who had not. Again, the association was strong, with both boys and girls who used drugs being 5 times more likely than non-drug users to report lifetime self-harm.

³ *Note.* Alcohol use was defined as follows: Abstainer (never drinks alcohol), Light drinker (up to 5 drinks/week), Moderate drinker (up to 3 episodes of drunkenness past year and/or more than 5 drinks per week), Heavy drinker (4 or more episodes of drunkenness in the past year)

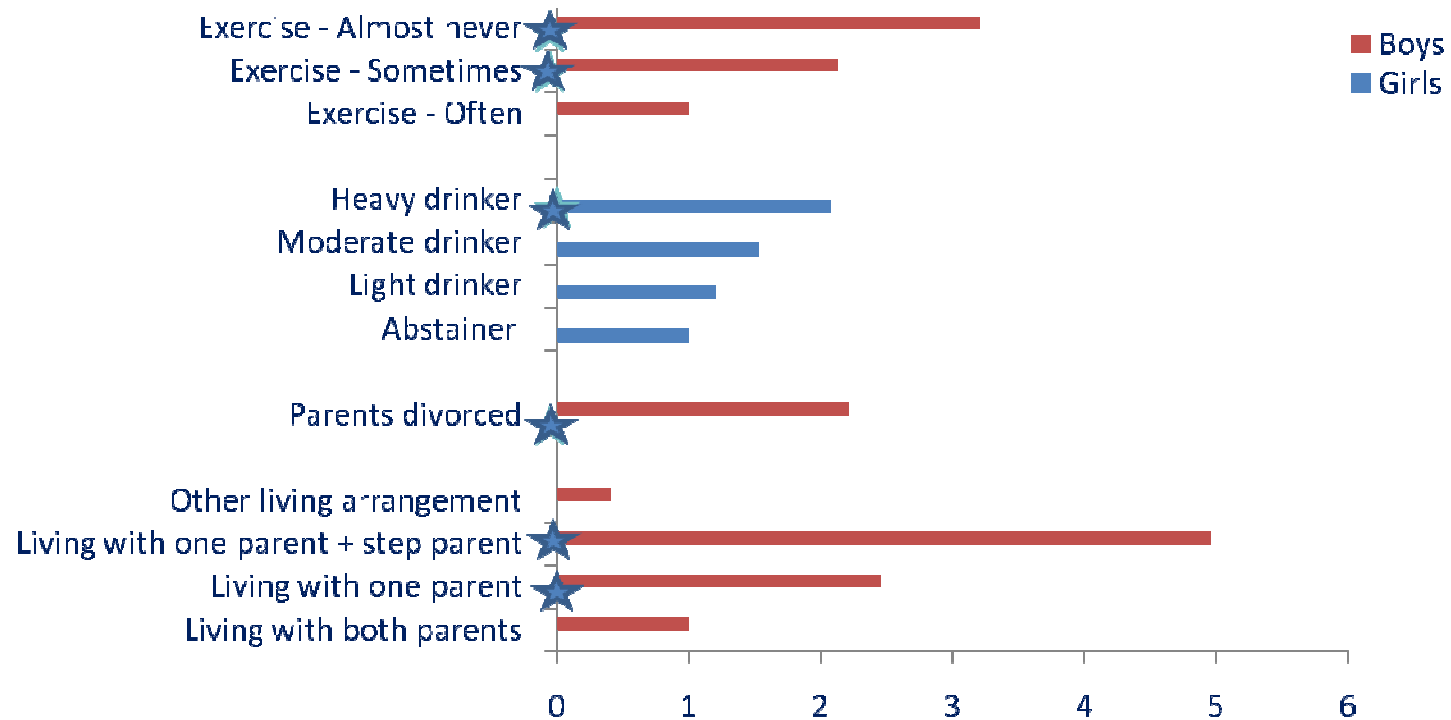


Figure 8. Univariate logistic regressions to identify factors associated with lifetime self-harm: boys and girls separately

Odds ratio

Experience of The Troubles

Six questions were included to assess the respondents' experience of the Troubles. As is evident in Figure 9, the questions recorded different types of experiences with varying severity, ranging from being intimidated to being a victim of any violent incidents and knowing someone who had been injured and/or killed. For girls, their responses to five out of the six questions distinguished those who had self-harmed (in the past year and lifetime) from those who had not. Specifically, if a girl had reported: (i) being caught up in an explosion, or (ii) in a riot, (iii) being a

victim of violence, (v) having family or close friends killed/injured or (vi) knowing anyone (not family/relatives) who had been killed/injured in the violence, she was more likely to also report having self-harmed. Similarly there was also evidence of an association between experience of the Troubles and self-harm in boys, with the association being significant in 5 out of the 6 questions for either past year self-harm and/or lifetime self-harm.

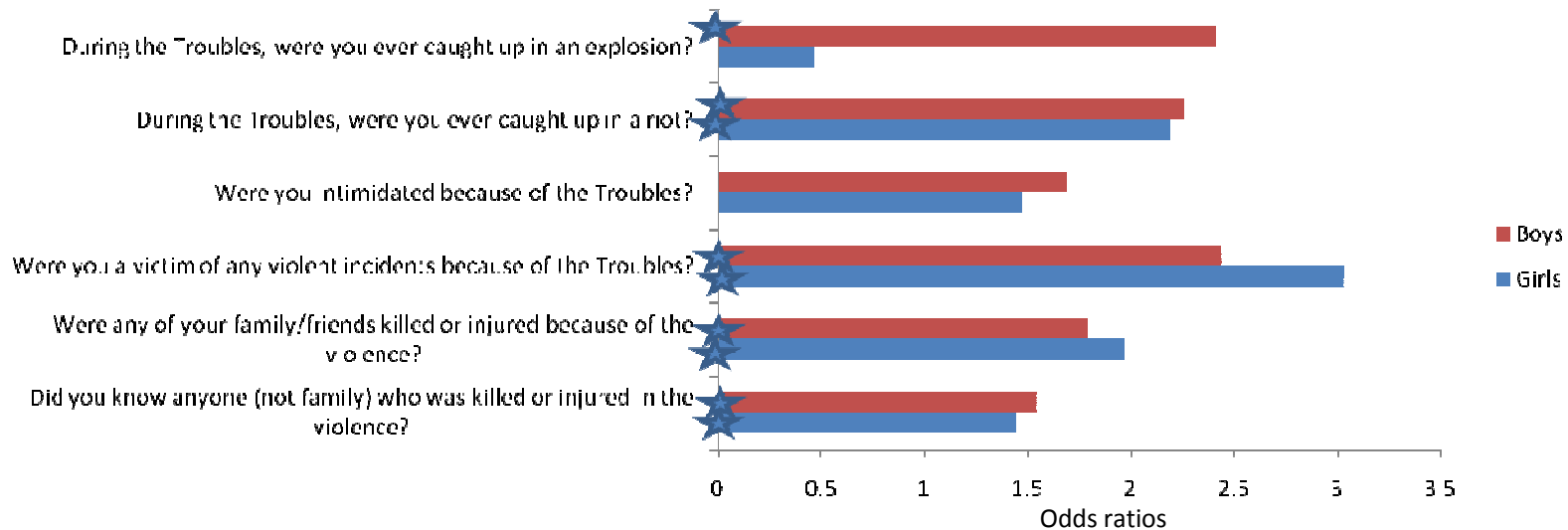


Figure 9. Univariate regressions to investigate the association between The Troubles and life-time self-harm

Stressors/Negative life events and exposure to self-harm of others

Each one of the stressors and negative life events was individually and highly significantly associated with both past year and lifetime self-harm. Indeed, the risk of self-harm was increased by eleven fold (OR=11.72) among girls who said they had been physically abused. Almost 65% of the girls who said they had been physically abused had self-harmed at some stage in their lives compared to less than 15% (13.5%) of those who

had not experienced physical abuse. Sexual abuse was also an important correlate of self-harm in boys and girls; for example, girls who reported sexual abuse in the past year (56/1683=3.3%) were eight times more likely to report self-harm in the past compared to those who had not been abused in the past year. Concern about sexual orientation and bullying in school were also major factors associated with self-harm. Boys who said they had been bullied appear to be at five times greater risk of self-harm, and those who have concern about their sexual orientation are at 10 times greater risk (OR=9.85) compared to those who said they were not concerned. Young people who had been in trouble with the Police were also more likely to report self-harm (Figure 10; Tables 10 and 11 in appendices).

Two of the most powerful factors associated with self-harm were whether a person knew someone who has self-harmed (i.e., friends or family). Therefore, consistent with the earlier findings on self-reported self-harm influences, if one of the respondents' friends had self-harmed, the likelihood that the respondent had also self-harmed increased at least five-fold (OR=4.87 for girls in the past year, 6.04 for lifetime), and the likelihood of self-harm increased to as much as 11-fold if a boy reported that a family member had ever self-harmed (Figure 10; Tables 10 and 11 in appendices).

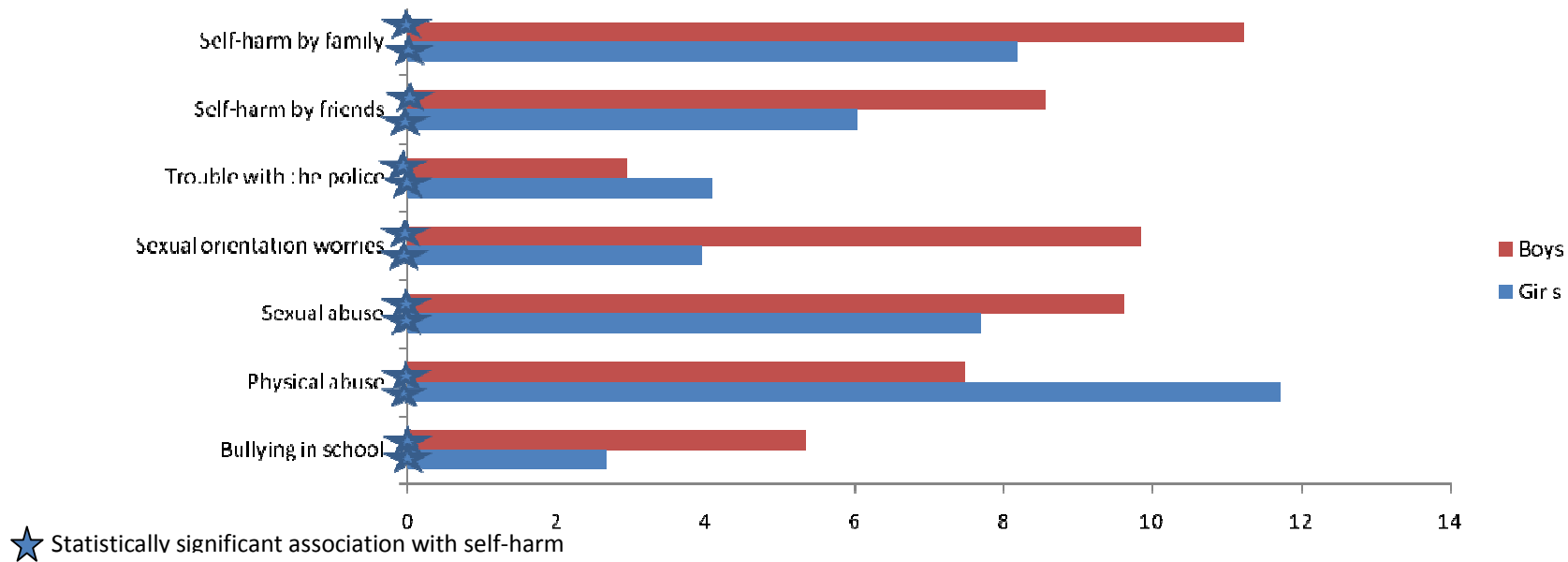


Figure 10. Univariate associations of lifetime self-harm with stressors/negative life events and others' self-harm: Boys and girls separately

Mood and Psychological factors

As is evident in Figure 11 (Tables 12 and 13 in appendices), each of the mood and psychological factors was associated with self-harm (past year/ lifetime). For each factor, we report the mean score for those who have no history of self-harm and compare it to those who had self-harmed. For example, the mean depression score for a girl who had self-harmed in the past year was 5.96 (SD=3.74) compared to 3.42 (SD=2.70) for girls who had not self-harmed.

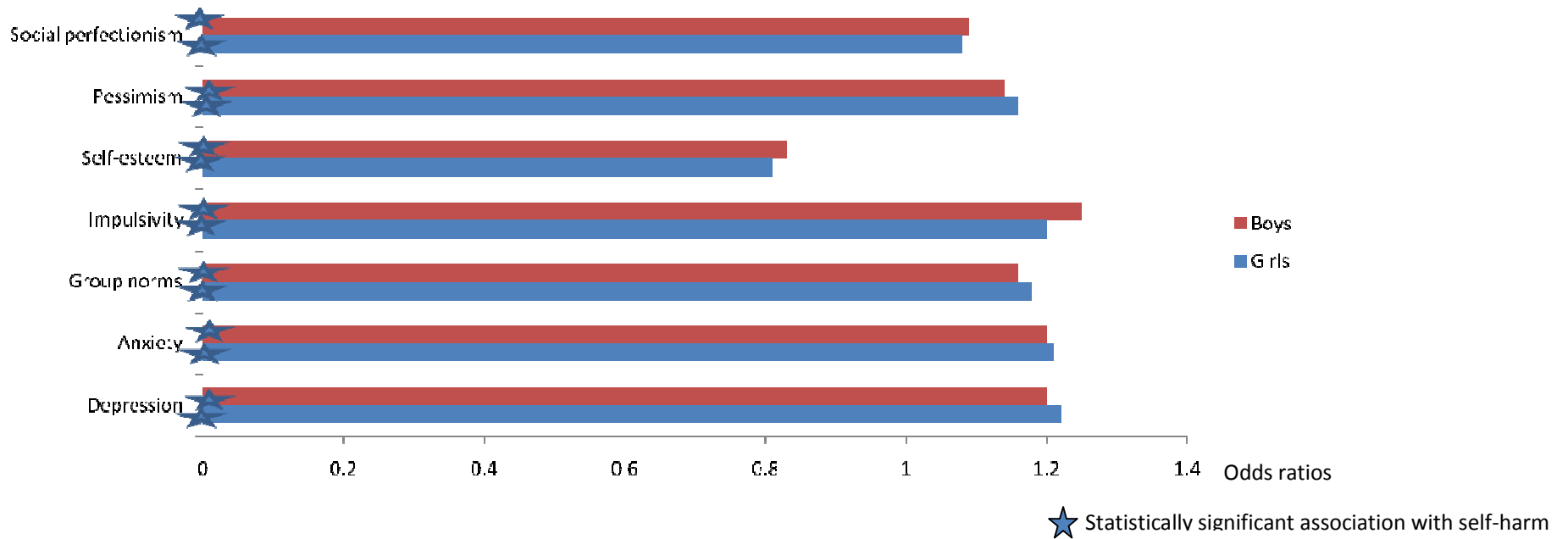


Figure 11. Univariate associations of lifetime self-harm with mood and psychological variables

To summarise, higher levels of depression, anxiety, group norms (i.e., whether your friends/peers self-harm), impulsivity, pessimism and social perfectionism (beliefs that important people in your life have excessively high expectations for you) were each univariately associated with self-harm. Finally, low levels of self-esteem were also associated with self-harm in past year and lifetime.

Multivariate Analyses in Complete Sample

In the previous sections, we reported the extent to which each of the individual factors in the survey was associated with self-harm history. However, from an empirical, pragmatic and policy standpoint, it is important to ascertain which factors are most strongly associated with self-

harm. Consequently, we conducted multivariate logistic regression analyses (using backward selection), one for past year self-harm and another for lifetime self-harm, to determine which factors were statistically most powerful in discriminating between those who had/had not self-harmed.

As we were interested in which factors were mostly strongly associated with self-harm, we first conducted two logistic regression analyses on the sample as a whole including gender as a predictor (Table 14 in appendices).

As expected, in the final multivariate model, female gender was associated with self-harm. In addition, not living with a parent, being a smoker, using drugs in the past year, being sexually abused in the past year, being anxious, impulsive and having lower levels of self esteem were associated with self-harm in the past year (Table 14 in appendices). If a family member had self-harmed in the past year, the likelihood of self-harm increased four-fold (three-fold increase associated with self-harm by friends). Group norms also entered the final model.

In terms of lifetime self-harm, being female, heavy drinking, the relative absence of exercise, past year drug use, history of being bullied, concerns about sexual orientation, anxiety, impulsivity and low levels of self-esteem were each independently associated with lifetime self-harm in the multivariate model (Figure 12; Table 14 in appendices).

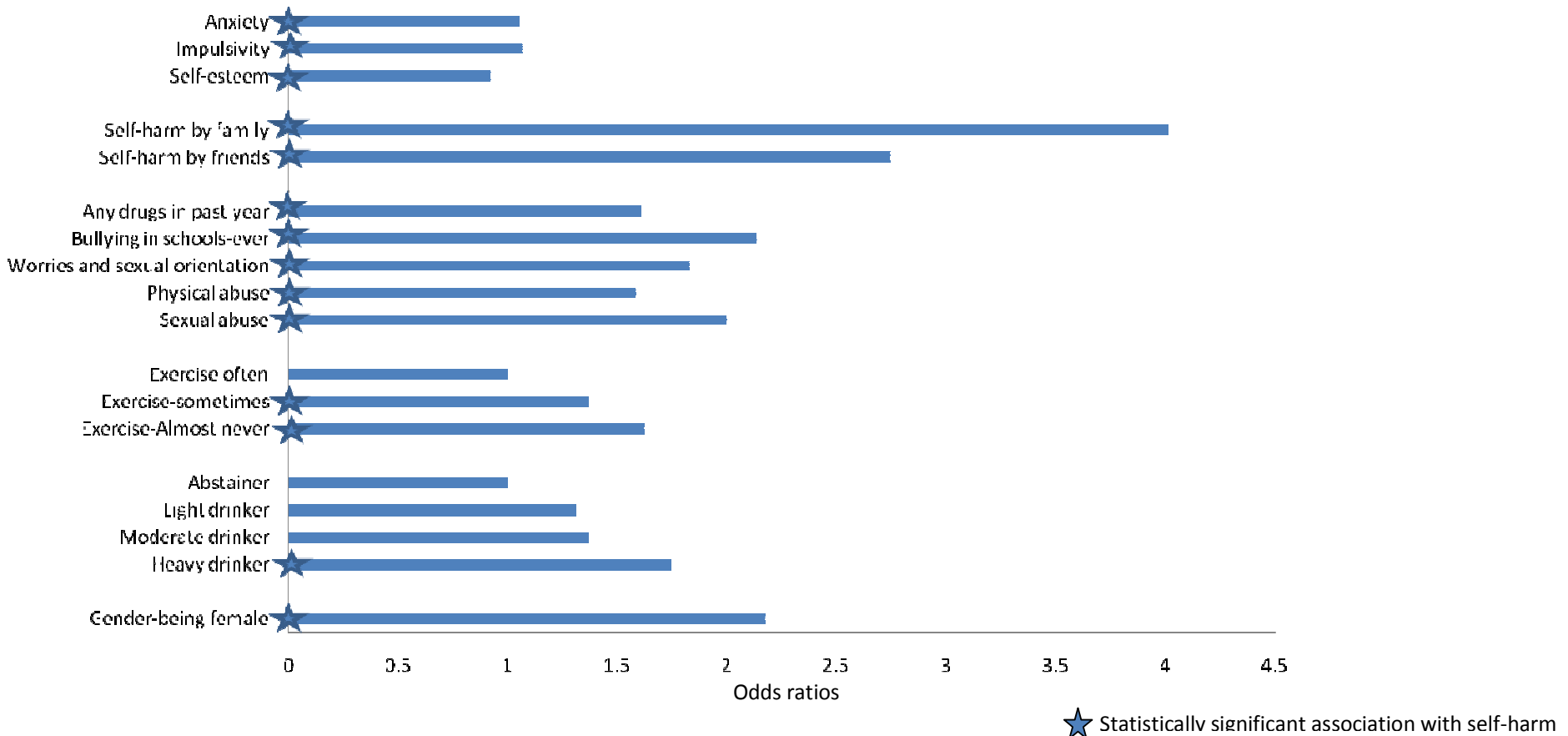


Figure 12. Multivariate logistic regression to identify factors associated with lifetime self-harm

Multivariate Analyses by Gender

In the final sets of analyses for the prevalence data, we divided the sample into boys and girls and similar to the section above, we conducted multivariate logistic regression analyses to determine which factors were associated with past year and lifetime self-harm.

Once again, knowing someone who has self-harmed, either a family member or a friend, was significantly associated with self-harm irrespective of time period or gender. Indeed, if a family member had self-harmed the risk of the respondent reporting lifetime self-harm increased four-fold. Not living with a parent was associated with past year self-harm in girls and living with one parent or one parent and a step parent were associated with lifetime self-harm in boys. There was some evidence that alcohol use and smoking were associated with self-harm, albeit not consistently across time period or gender. Nonetheless, females who reported heavy drinking were twice as likely to report self-harm than those who said they did not drink. The exercise effect which emerged from the full sample analyses (Table 14 in appendices) appears to be driven by the boys; indeed boys who reported almost never engaging in exercise were in excess of three times more likely to engage in self-harm (Tables 15 and 16 in appendices). Drug use was consistently associated with self-harm in girls but only with lifetime self-harm in boys. Sexual and physical abuse was both associated with lifetime self-harm in girls, with sexual abuse being associated with past year self-harm in boys and girls. Bullying emerged as a key factor for lifetime self-harm in boys and girls but not in the past year analyses. Impulsivity was associated with boys' past year and lifetime self-harm as well girls' lifetime self-harm. There was some evidence that mood (depression and anxiety) was associated with self-harm in boys but not girls. Social perfectionism was associated with lifetime self-harm in boys, and group norms were associated with past year self-harm in girls. The risk factors associated with lifetime self-harm are represented in Figures 13 and 14.

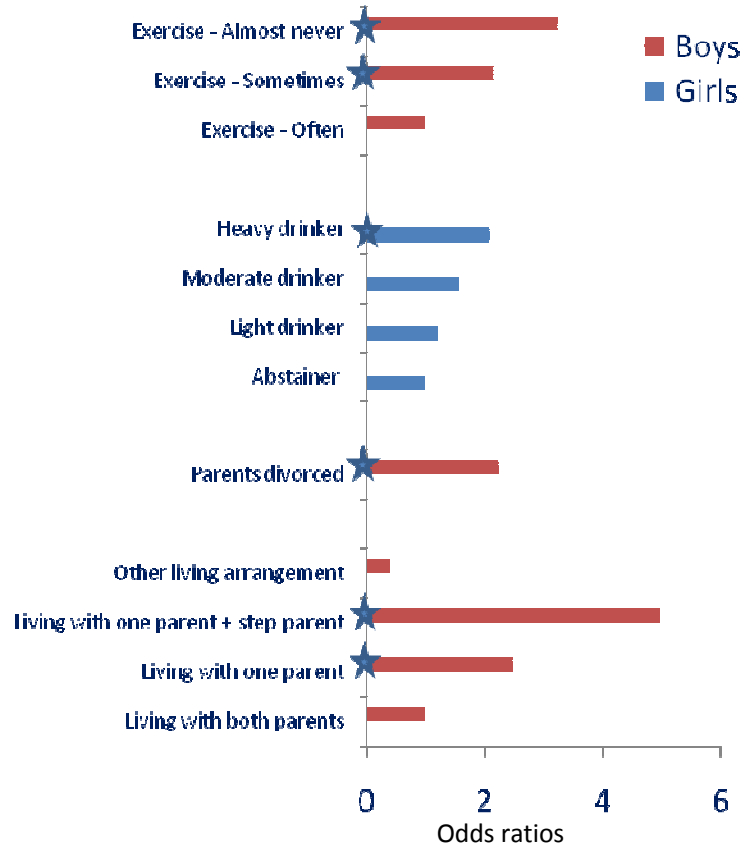


Figure 13. Multivariate logistic regression to identify factors associated with lifetime self-harm: boys and girls separately

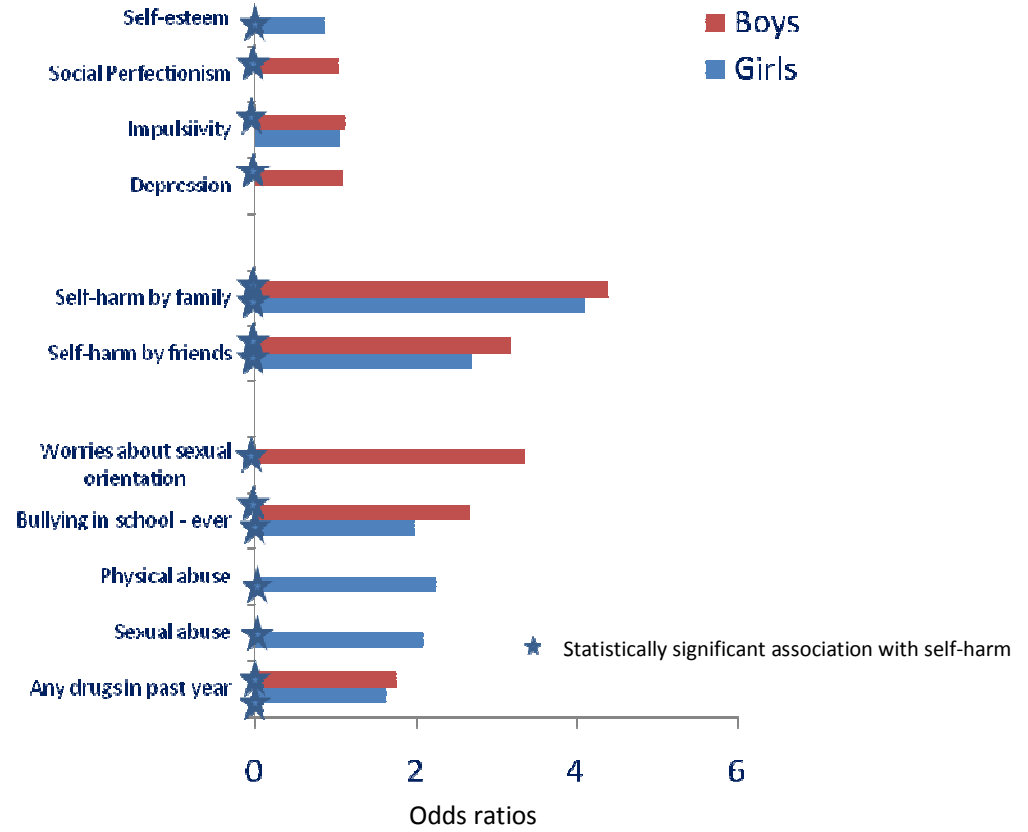


Figure 14. Multivariate logistic regression to identify factors associated with lifetime self-harm: boys and girls separately

FOLLOW-UP FINDINGS

Predicting Self-harm over time: Six month follow-up analyses

As noted in the method section, we invited all schools to participate in the follow-up phase of the study. In total, 16 schools participated in the follow-up which yielded a follow-up sample of 987 respondents from whom we were able to match respondents' baseline and follow-up responses. A comparison of the schools which participated in the follow-up compared to Time 1 revealed that the former were significantly more likely to be from the grammar rather than the secondary school sector compared to those who did not participate in the follow-up. In addition, significantly fewer schools with more than 17% of pupils eligible for free school meals agreed to participate in the follow-up. At follow-up, we asked whether respondents had self-harmed in the past six months (i.e., since the completion of the Time 1 questionnaire). Consequently, we were able to determine how many young people reported self-harm during the study and which risk factors reported by the young people at baseline predicted self-harm at follow-up, as well as being able to compare those young people who had engaged in self-harm with those who had not.

How many young people reported self-harm during the period of the study?

In total, 49 pupils (5%) reported self-harm (13 boys and 36 girls). Twenty five young people reported self-harming for the first time during the course of the study and the remaining 24 had self-harmed previously (i.e., before Time 1). Next, we conducted a series of univariate analyses (the same analyses as we did for the Time 1 sample) to determine which factors predicted self-harm. As the number of respondents who reported self-harm during the study was small, we did not conduct analyses separately by gender. Table A summarises those univariate factors which predicted (i) first time self-harm during the study and (ii) repeat self-harm during the study. Full details can be found in the appendices (Table 17-21).

Table A. Univariate predictors of self-harm during the study

Univariate predictors of 1 st time self-harm	Univariate predictors of repeat self-harm
Divorced parents Smoking status–previous smoker	Female sex Living situation–one parent
Bullying in school	Smoking status–previous smoker Alcohol use–light drinker Drug use Bullying in school Physical abuse Sexual abuse Sexual orientation worries
Trouble with Police Self-harm by friends Self-harm by family Intimidated because of the Troubles Victim of violent incident because of Troubles	Self-harm by friends Self-harm by family
Anxiety	Depression Anxiety Group norms
Impulsivity Self-esteem Pessimism	Impulsivity Self-esteem Pessimism

Next, we were interested in which factors were most important in the prediction of self-harm, so we conducted multivariate multinomial logistic regression analyses to this end. These analyses revealed that only three factors were significant predictors of 1st time self-harm in the

multivariate analyses: high levels of impulsivity (Odds ratio=1.18; 95% CI=1.02-1.36, p=.027), experience of bullying in the past year (Odds ratio=3.86; 95% CI=1.04-13.81, p=.043), and low self-esteem (Odds ratio=.87; 95% CI=.78-.96, p=.007).

The multivariate analyses revealed five significant predictors of repeat self-harm during the study, as summarised in Table B below.

Table B. Multivariate predictors of repeat self-harm

	Odds ratio	95% CI	P value
Living arrangements			
Both parents	1.00		
One parent	15.17	2.75-83.55	.002
One parent and step parent	4.88	.86-27.66	.073
Other	2.82	.39-20.33	.304
Alcohol use			
Abstainer	1.00		
Light drinker	5.74	1.44-22.99	.014
Moderate drinker	1.52	.29-7.89	.621
Heavy drinker	3.22	.85-12.18	.086
Bullying			
No	1.00		
Yes	4.71	1.13-19.65	.033
Self-harm by family			
No	1.00		
Yes	6.20	2.2-17.48	.001
Self-esteem	.82	.72-.92	.001

CONCLUSIONS

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 3 ½ times more likely to engage in self-harm than boys. The majority (59%) of episodes of self-harm were in the past 12 months. Thoughts of self-harm without actually doing so were also common, with a further 22% reporting such thoughts at some stage in their lives. The most common method of self-harm was self-cutting followed by overdose. Young people from secondary schools were more likely to report self-harm compared to those in grammar schools and self-harm was statistically higher in schools where more than 17% of the pupils were eligible for free school meals (a crude index of socio-economic background). Self-harm was reported in equal measure among pupils from rural and urban backgrounds.

The prevalence of lifetime self-harm among Northern Irish adolescents was significantly lower than that reported in the Republic of Ireland, Scotland and England. This lower rate was unexpected given that the rates of hospital-treated self-harm in the Western Health Board Region (Two Year Report of NI Registry of Deliberate Self-Harm, 2010) 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). In terms of prevalence, there are three possible explanations for the self-reported self-harm rate including that self-harm was under-reported in the present study. The first possible explanation for the findings is that the adolescent self-harm rate in Northern Ireland *is indeed* lower than that found elsewhere in the UK and Ireland. It may be that school protects against self-harm in Northern Ireland, more so than elsewhere in UK and Ireland, and when this protection is removed after leaving school that the self-harm rate increases. The second is that as a consequence of The Troubles and the associated sectarianism which has been an endemic part of Northern Irish society in recent decades, young people are cautious about disclosing personally sensitive information, thereby masking the true extent of the problem. The third possibility is that the under-reporting results from a methodological shortcoming of the present study. We believe that the methodological explanation is unlikely as this methodology has been used extensively throughout Europe and this survey has been designed to minimise under-reporting and to

maximise accurate reporting. Indeed, completion of the survey is completely confidential and each anonymous questionnaire is 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.

It is, however, possible that one of the unseen consequences of The Troubles is that 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 significantly lower proportion of young people in Northern Ireland provided such details in comparison to those in England or Scotland, for example. Consequently, we would conclude that there is reasonable circumstantial evidence to suggest that the actual self-harm rate is higher than what we found in the present study.

Irrespective of the prevalence of 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., 2006; O'Connor et al., 2009a,b; Madge et al., 2008; Scoliers et al., 2009). In summary, being female, heavy drinking, the relative absence of exercise, past year drug use, history of being bullied, physical and sexual abuse, concerns about sexual orientation, anxiety, impulsivity, knowing someone who has self-harmed, and low levels of self-esteem were independently associated with lifetime self-harm when all of the factors were considered together. There were important sex differences. Among girls, alcohol use, drug use in the past year, experience of sexual and physical abuse and bullying were each independently associated with self-harm. Knowing others who have self-harmed (family and friends) and low self-esteem also discriminated between those girls who had/had not self-harmed. Family background appears to be important for boys, as self-harm was more common where boys' parents had divorced and when they were living with either one parent or one parent and one step-parent. Relative lack of exercise and drug use in the past year were the only lifestyle factors associated with male self-harm. Concerns about sexual orientation, being the victim of bullying and knowing others who had self-harmed were also self-harm risk factors for boys. Finally, depression, impulsivity, and socially prescribed (social) perfectionism were also higher in boys who self-harmed compared to those who did not. Social perfectionism is said to be high when an

individual has excessive (often unrealistic) expectations of what they perceive significant others have of them. Its relationship with psychological distress, self-harm and suicidal behaviour is well established (O'Connor et al., 2010a,b; O'Connor, 2007), and it points to society's wider influence on psychological well-being in respect of what is defined as characterising success and failure. The six month follow-up analyses reinforced many of the findings from the cross-sectional findings. In particular, family background (living with one parent), bullying, alcohol use, self-harm in the family, and low self-esteem predicted repeat self-harm. Whereas, impulsivity, bullying and low self-esteem predicted first time self-harm. In short, bullying cannot be ignored as it consistently emerged in all of the analyses as a correlate or predictor of self-harm.

Although experience of The Troubles did not emerge as being independently associated with self-harm in the prevalence or follow-up phases of the study, we believe their potential negative effects warrant further attention in boys and girls. In particular, the effect of the direct experience of The Troubles in the recent past needs more detailed exploration as we only asked the adolescents whether they had experienced some aspect of the Troubles, 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.

The reasons reported for self-harm by Northern Irish adolescents are the same as 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, 2010b). 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 will highlight that the motives 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.

It is of particular concern that the vast majority of adolescents who self-harm do not seek professional help even when they recognise that they have personal, social and mental health problems. These empirical data emphasise the importance of implementing the children and young people actions as outlined in Protect Life. Specifically, it is vital that more action is taken in terms of the promotion of a 'culture of help seeking behaviour' among young people. 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. Indeed, a new version of the Hospital Anxiety and Depression Scale, entitled the 'Paediatric Index of Emotional Distress (O'Connor, Carney, House, Ferguson & O'Connor, 2010) has recently been developed specifically for children and adolescents.

In conclusion, at least one in ten adolescents in Northern Ireland have self-harmed at some stage in their lives. There is some suggestion that this figure may be an under-estimate, accounted for by the inherent reluctance of Northern Irish adolescents to disclose personally sensitive information. Self-harm usually results from a complex interaction of factors, some of which are clinical or psychological and others still are social. Similarly, the motives for self-harm are many and varied. However, for most young people, self-harm is a manifestation of psychological distress and sometimes the intention is to end one's life. Most young people who self-harm do not seek help, therefore, it is important that we better understand the barriers to help-seeking to increase the likelihood that those who are vulnerable receive the support and treatment that they require.

RECOMMENDATIONS

1. *All schools should have an ethos which promotes the positive mental health of pupils and staff, and is reflected in all aspects of school activity including the personal development element of the curriculum and the pastoral care system.* Staff in all schools should be made aware of their role in promoting positive mental health, and have an awareness of the factors associated with self-harm and how these might be managed in a school setting.
2. *All schools should have a critical incident response plan.* Schools do need to be prepared for unexpected events which impact across the school community and have roles and responsibilities assigned in advance. This is particularly important given the findings of this study, as other people's self-harm appears to influence personal self-harm, and there is a need to manage this as well as dealing with the distress caused following an incident (which may include a suicide death).
3. *Schools should work in co-operation with families and community based services to support individual pupils experiencing stress.* Formal and informal channels of communication between families, community based support systems and the school should be established. Schools should be equipped to provide information about community based local support services.
4. *A review of the resources and protocols relevant to the promotion and management of mental health among children and young people should be conducted.* Given that self-harm is common among adolescents in NI, a comprehensive review of the available resources and the interface between schools and these services is required.

5. *The findings in this study indicated that more detailed research is required if our understanding of young people at risk of self-harm is to be improved.* The following areas should be prioritised and research should be targeted at:
- girls
 - those who have been affected by The Troubles.
 - help-seeking patterns and factors associated with help-seeking
 - social influences of and on self-harm
6. *Specialist support services should be targeted towards young people of post primary age who live in deprived areas.* Although self-harm affects all schools, as it is more common in secondary schools (compared to grammar schools), resources should be prioritised here. Special consideration should also be given to schools located in more deprived catchment areas (i.e., high free school meal availability).
7. *Schools should promote the benefits of seeking timely help to address difficulties and make information readily accessible.* Young people should be encouraged to seek help and be provided with information about different ways of dealing with personal, social and mental health problems.
8. *Review progress on the Protect Life actions on young people and self-harm.* The Protect Life actions specific to young people should be reviewed to determine whether they have been implemented. The scope of the review should include further action plans, if necessary, to ensure their implementation and include primary, secondary and tertiary strategies.
9. *Develop innovative ways to facilitate young people in the safe disclosure of sensitive information,* where its non-disclosure potentially interferes with help-seeking and well-being.

10. *Promote responsible internet coverage of self-harm.* HPA should work with internet service providers to ensure that responsible self-harm prevention sites are prioritised over those sites which glamourise self-harm.

11. *Ensure provision of responsive and timely hospital and other clinical services* for those adolescents who do seek help.

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APPENDICES

Table	Title
1	Lifetime and past year prevalence of deliberate self-harm and serious thoughts of self-harm
2	Sources which influenced self-harm as a function of gender
3	Reasons to explain why adolescents took an overdose or harmed themselves in some other way
4	Univariate associations of past year self-harm with demographic variables
5	Univariate associations of lifetime self-harm with demographic variables
6	Univariate associations of past year self-harm with lifestyle variables
7	Univariate associations of lifetime self-harm with lifestyle variables
8	Univariate associations of past year self-harm with experience of the Troubles
9	Univariate associations of lifestyle self-harm with experience of the Troubles
10	Univariate associations of past year self-harm with stressors / negative life events and others' self-harm
11	Univariate associations of lifetime self-harm with stressors / negative life events and others' self-harm
12	Univariate associations of past self-harm with mood and psychological variables
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14	Multivariate analyses to predict past year and lifetime self-harm
15	Multivariate logistic regression for prevalence of self-harm in the past year
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17	Univariate associations of past year self-harm with demographic variables
18	Univariate associations of self-harm between T1 and T2 with lifestyle variables
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- 20** Univariate associations of self-harm between T1 and T2 with stressors / negative life events and others' self-harm
- 21** Univariate associations of self-harm between T1 and T2 with mood and psychological variables

Table 1. Lifetime and past year prevalence of deliberate self-harm and serious thoughts of self-harm

	No of respondents	N (%)	Odds ratio	95% CI	P value
<i>Past year prevalence of deliberate self-harm</i>					
Males	1840	54 (2.9)	1.00		
Females	1686	156 (9.3)	3.37	2.46-4.63	.0001
All	3526*	210 (6.0)			
<i>Life-time prevalence of deliberate self-harm</i>					
Males	1837	93 (5.1)	1.00		
Females	1686	261 (15.5)	3.44	2.68-4.40	.0001
All	3523	354 (10.0)			
<i>Past year prevalence of serious thoughts of self-harm in without doing so</i>					
Males	1831	143 (7.8)	1.00		
Females	1681	303 (18.0)	2.60	2.10-3.21	.0001
All	3512	446 (12.7)			
<i>Lifetime prevalence of serious thoughts of self-harm without doing so</i>					
Males	1831	249 (13.6)	1.00		
Females	1681	513 (30.5)	2.79	2.36-3.31	.0001
All	3512	762 (21.7)			

Table 2. Sources which influenced self-harm as a function of gender

Source of influence	Female		Male	
	n/N*	%	n/N*	%
Film or TV	14/214	6.5	9/86	10.5
Radio	0/213	0	5/85	5.9
Newspapers	5/213	2.3	6/85	7.1
Books or magazines	20/214	9.4	8/84	9.5
Internet	17/215	7.9	12/85	14.1
Social networking sites	16/213	7.5	10/85	11.8
**Internet-related (total)	33/215	15.3	22/85	25.9
Self-harm or attempted suicide of family member	34/217	15.7	6/85	7.1
Self-harm or attempted suicide of friend	53/226	23.5	19/85	22.4
**Social influences of other people (total)	87/226	38.5	25/85	29.4
Other	68/177	38.4	27/76	35.5

*n/N = number of yes responses / total number of responses

**These are composite variables which are the sum of the two variables above them in the Table (we employed the larger denominator when calculating percentages).

Table 3. Reasons to explain why adolescents took an overdose or harmed themselves in some other way

Reason for self-harm	Female		Male	
	n/N*	%	n/N*	%
I wanted to get relief from a terrible state of mind	168/226	74.3	50/83	60.2
I wanted to die	122/218	56.0	35/80	43.8
I wanted to punish myself	100/220	45.5	29/77	37.7
I wanted to show how desperate I was feeling	47/209	22.5	20/78	25.6
I wanted to get some attention	28/205	13.7	11/77	14.3
I wanted to find out whether someone really loved me	33/208	12.2	14/77	18.2
I wanted to frighten someone	24/208	11.5	14/77	18.2
I wanted to get my own back on someone	19/205	9.3	13/75	17.3

Table 4. Univariate associations of past year self-harm with demographic variables*

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
Ethnicity:										
Black	8	0 (0)	1.00			18	5.6 (1)	1.00		
Asian	12	0 (0)	-	-	-	24	12.5 (3)	2.43	.23-25.51	.460
White	1643	9.4 (154)	-	-	-	1757	2.7 (47)	.47	.061-3.58	.464
Other	12	16.7 (2)	-	-	-	24	4.2 (1)	.74	.043-12.67	.835
Living situation:										
Both parents	1193	7.6 (91)	1.00			1385	2.3 (32)	1.00		
One parent	317	10.1 (32)	1.36	.89-2.08	.155	301	4.0 (12)	1.76	.89-3.45	.102
One parent and step parent	116	15.5 (18)	2.22	1.29-3.84	.004	107	6.5 (7)	2.96	1.27-6.87	.012
Other	40	32.5 (13)	5.83	2.91-11.69	.0001	29	10.3 (3)	4.88	1.40-16.95	.013
Divorced parents*										
No	1441	2.4 (34)	1.00			1268	7.6 (96)	1.00		
Yes	387	5.2 (20)	2.10	1.49-2.96	.0001	409	14.7 (60)	2.26	1.28-3.96	.005

*Note on interpreting the Tables 4-11. N refers to the number of respondents in each category. % (N) self-harmed refers to the percentage of the respondents in that category (N) who reported self-harm. Odds ratio (and 95% CIs) indicates the strength of association between factor/variable and self-harm. A p-value less than $p < .05$ is usually taken as being statistically significant. For example, 5.2% of those female respondents who had divorced parents self-harmed compared to 2.4% of those whose parents were not divorced. The odds ratio confirms this, stating that if a girl said her parents were divorced she was twice (actually 2.1 times) as likely to also report self-harm compared to a girl who did not say her parents were divorced.

Table 5. Univariate associations of lifetime self-harm with demographic variables

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
Ethnicity:										
Black	8	0 (0)	1.00			18	22.4 (4)	1.00		
Asian	12	0 (0)	-	-	-	24	12.5 (3)	.50	.10-2.58	.408
White	1643	15.6 (256)	-	-	-	1754	4.7 (82)	.17	.06-.53	.002
Other	12	41.7 (5)	-	-	-	24	4.2 (1)	.15	.02-1.50	.107
Living situation:										
Both parents	1192	12.5 (149)	1.00			1384	4.0 (55)	1.00		
One parent	318	21.4 (68)	1.90	1.39-2.62	.0001	301	7.0 (21)	1.81	1.08-3.05	.025
One parent and step parent	116	23.3 (27)	2.12	1.34-3.38	.001	106	13.2 (14)	3.68	1.97-6.86	.0001
Other	40	37.5 (15)	4.20	2.17-8.15	.0001	29	10.3 (3)	2.79	.82-9.49	.101
Divorced parents*										
No	1267	12.6 (160)	1.00			1441	4.2 (60)	1.00		
Yes	410	24.4 (100)	2.23	1.69-2.95	.0001	385	8.6 (33)	2.16	1.39-3.35	.001

Table 6. Univariate associations of past year self-harm with lifestyle variables

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
Smoking										
Never	1300	4.8 (63)	1.00			1549	1.9 (29)	1.00		
Given up	128	18.0 (23)	4.30	2.56-7.22	.0001	99	4.0 (4)	2.21	.76-6.41	.145
<=5	42	19.0 (8)	4.62	2.05-10.39	.0001	24	20.8 (5)	13.79	4.82-39.47	.0001
6-20	87	25.3 (22)	6.65	3.85-11.47	.0001	45	6.7 (3)	3.74	1.10-12.78	.035
21-50	81	32.1 (26)	9.28	5.46-15.78	.0001	53	13.2 (7)	7.98	3.32-19.15	.0001
50+	43	32.6 (14)	9.48	4.77-18.83	.0001	63	9.5 (6)	5.52	2.20-13.82	.0001
Alcohol use										
Abstainer	828	4.2 (35)	1.00			995	1.3 (13)	1.00		
Light drinker	101	5.9 (6)	1.43	.59-3.49	.431	110	1.8 (2)	1.40	.31-6.28	.661
Moderate drinker	362	10.5 (38)	2.66	1.65-4.28	.0001	369	4.1 (15)	3.20	1.51-6.79	.002
Heavy drinker	381	19.7 (75)	5.55	3.64-8.47	.0001	340	7.1 (24)	5.74	2.89-11.40	.0001
Drug use in past year										
No	1485	6.3 (93)	1.00			1570	1.8 (29)	1.00		
Yes	201	31.3 (63)	6.83	4.75-9.84	.0001	270	9.3 (25)	5.42	3.12-9.41	.0001
Exercise										
Often	815	8.1 (66)	1.00			1236	2.2 (27)	1.00		
Sometimes	744	10.1 (75)	1.27	.90-1.80	.174	505	3.6 (18)	1.66	.90-3.03	.103
Almost never	122	11.5 (14)	1.47	.80-2.71	.216	87	10.3 (9)	5.17	2.35-11.37	.0001

Table 7. Univariate associations of lifetime self-harm with lifestyle variables

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
Smoking										
Never	1300	9.5 (124)	1.00			1546	3.6 (55)	1.00		
Given up	128	28.1 (36)	3.71	2.42-5.69	.0001	99	6.1 (6)	1.75	.73-4.17	.207
<=5	42	28.6 (12)	3.79	1.89-7.60	.0001	24	20.8 (5)	7.13	2.57-19.81	.0001
6-20	87	35.6 (31)	5.25	3.26-8.45	.0001	45	15.6 (7)	4.99	2.14-11.68	.0001
21-50	81	44.4 (36)	7.59	4.72-12.21	.0001	53	20.8 (11)	7.10	3.47-14.53	.0001
50+	43	48.8 (21)	9.05	4.84-16.93	.0001	63	14.3 (9)	4.52	2.12-9.62	.0001
Alcohol use										
Abstainer	828	6.8 (56)	1.00			994	2.7 (27)	1.00		
Light drinker	101	12.9 (13)	2.04	1.07-3.87	.030	108	5.6 (6)	2.11	.85-5.22	.108
Moderate drinker	361	18.6 (67)	3.14	2.15-4.59	.0001	369	6.5 (24)	2.49	1.42-4.38	.001
Heavy drinker	382	31.7 (121)	6.39	4.52-9.04	.0001	340	10.6 (36)	4.24	2.53-7.10	.0001
Drug use in past year										
No	1485	11.8 (175)	1.00			1567	3.4 (53)	1.00		
Yes	201	42.8 (86)	5.60	4.06-7.72	.0001	270	14.8 (40)	4.97	3.22-7.66	.0001
Exercise										
Often	814	13.0 (106)	1.00			1234	3.7 (46)	1.00		
Sometimes	745	16.9 (126)	1.36	1.03-1.80	.031	504	6.3 (32)	1.75	1.10-2.78	.018
Almost never	122	23.0 (28)	1.99	1.25-3.18	.004	87	17.2 (15)	5.38	2.87-10.10	.0001

Table 8. Univariate associations of past year self-harm with experience of the Troubles

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
During the Troubles, were you ever caught up in an explosion?										
No	1661	9.3 (154)	1.00			1776	2.7 (48)	1.00		
Yes	25	8.0 (2)	.85	.20-3.64	.828	64	9.4 (6)	3.72	1.53-9.05	.004
During the Troubles, were you ever caught up in a riot?										
No	1545	8.5 (131)	1.00			1677	2.6 (44)	1.00		
Yes	141	17.7 (25)	2.33	1.46-3.71	.0001	163	6.1 (10)	2.43	1.20-4.92	.014
Were you intimidated because of the Troubles?										
No	1551	9.0 (139)	1.00			1673	2.8 (47)	1.00		
Yes	135	12.6 (17)	3.72	1.53-9.05	.004	167	4.2 (7)	1.51	3.67-3.40	.316
Were you a victim of any violent incidents because of the Troubles?										
No	1625	8.7 (141)	1.00			1718	2.7 (47)	1.00		
Yes	61	9.6 (15)	3.43	1.87-6.30	.0001	122	5.7 (7)	2.16	.96-4.90	.064
Were any of your family or close friends killed or injured because of the violence?										
No	1359	7.7 (104)	1.00			1396	2.6 (36)	1.00		
Yes	327	15.9 (52)	2.28	1.60-3.26	.0001	444	4.1 (18)	1.60	.90-2.84	.112
Did you know anyone (not family or relatives) who was killed or injured in the violence?										
No	1214	8.2 (100)	1.00			1227	2.7 (33)	1.00		
Yes	472	11.9 (56)	1.50	1.06-2.12	.022	613	3.4 (21)	1.28	.74-2.24	.379

Table 9. Univariate associations of lifestyle self-harm with experience of the Troubles

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
During the Troubles, were you ever caught up in an explosion?										
No	1661	15.6 (259)	1.00			1773	4.9 (86)	1.00		
Yes	25	8.0 (2)	.471	.11-2.01	.309	64	10.9 (7)	2.41	1.07-5.44	.034
During the Troubles, were you ever caught up in a riot?										
No	1545	14.4 (223)	1.00			1674	4.6 (77)	1.00		
Yes	141	27.0 (28)	2.19	1.47-3.26	.0001	163	9.8 (16)	2.26	1.28-3.97	.005
Were you intimidated because of the Troubles?										
No	1551	15.0 (233)	1.00			1671	4.8 (80)	1.00		
Yes	135	20.7 (28)	1.48	.96-2.30	.080	166	7.8 (13)	1.69	.92-3.11	.091
Were you a victim of any violent incidents because of the Troubles?										
No	1625	14.8 (240)	1.00			1715	4.7 (80)	1.00		
Yes	61	34.4 (21)	3.03	1.76-5.23	.0001	122	10.7 (13)	2.44	1.32-4.52	.005
Were any of your family or close friends killed or injured because of the violence?										
No	1359	13.5 (184)	1.00			1394	4.3 (60)	1.00		
Yes	327	23.5 (77)	1.97	1.46-2.65	.0001	443	7.4 (33)	1.79	1.15-2.78	.009
Did you know anyone (not family or relatives) who was killed or injured in the violence?										
No	1214	14.1 (171)	1.00			1224	4.3 (53)	1.00		
Yes	472	19.1 (90)	1.44	1.09-1.90	.011	613	6.5 (40)	1.54	1.01-2.35	.044

Table 10. Univariate associations of past year self-harm with stressors / negative life events and others' self-harm

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
Bullying in school										
No	1598	8.9 (142)	1.00			1734	2.5 (43)	1.00		
Yes	79	16.5 (13)	2.58	1.85-3.62	.0001	98	11.2 (11)	4.96	2.86-8.61	.0001
Physical abuse										
No	1656	8.7 (144)	1.00			1798	2.6 (46)	1.00		
Yes	26	42.3 (11)	8.88	5.26-14.98	.0001	35	22.9 (8)	6.29	3.03-13.09	.0001
Sexual abuse										
No	1627	8.2 (133)	1.00			1794	2.6 (46)	1.00		
Yes	56	39.3 (22)	8.09	5.21-12.56	.0001	38	21.1 (8)	7.37	3.27-16.60	.0001
Sexual orientation worries										
No	1642	8.8 (144)	1.00			1755	2.5 (44)	1.00		
Yes	42	28.6 (12)	3.72	2.11-6.50	.0001	78	12.8 (10)	5.82	3.06-11.04	.0001
Trouble with Police										
No	1535	7.7 (118)	1.00			1583	2.3 (36)	1.00		
Yes	146	25.3 (37)	4.73	3.33-6.73	.0001	252	7.1 (18)	3.47	2.01-5.98	.0001
Self-harm by friends										
No	1396	6.2 (86)	1.00			1684	1.7 (29)	1.00		
Yes	285	24.2 (69)	4.87	3.44-6.89	.0001	149	16.1 (24)	10.96	6.19-19.39	.0001
Self-harm by family										
No	1547	6.7 (103)	1.00			1760	2.3 (40)	1.00		
Yes	134	39.6 (53)	9.17	6.15-13.68	.0001	72	18.1 (13)	9.48	4.81-18.65	.0001

Note. All variables relate to the past year

Table 11. Univariate associations of lifetime self-harm with stressors / negative life events and others' self-harm

	Females					Males				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	N	% (N) who self-harmed	Odds ratio	95% CI	P values
Bullying in school										
No	1214	11.5 (140)	1.00			1419	2.7 (39)	1.00		
Yes	463	25.9 (120)	2.68	2.04-3.52	.0001	411	13.1 (54)	5.35	3.49-8.21	.0001
Physical abuse										
No	1617	13.5 (218)	1.00			1759	4.3 (75)	1.00		
Yes	65	64.6 (42)	11.72	6.91-19.87	.0001	72	25.0 (18)	7.48	4.19-13.39	.0001
Sexual abuse										
No	1580	13.0 (205)	1.00			1781	4.4 (78)	1.00		
Yes	103	33.4 (55)	7.69	5.08-11.63	.0001	49	30.6 (15)	9.63	5.04-18.42	.0001
Sexual orientation worries										
No	1614	14.4 (233)	1.00			1716	3.6 (62)	1.00		
Yes	70	40.4 (28)	3.95	2.40-6.50	.0001	115	27.0 (31)	9.85	6.07-15.97	.0001
Trouble with Police										
No	1414	11.7 (166)	1.00			1383	3.5 (49)	1.00		
Yes	267	35.2 (94)	4.09	3.03-5.51	.0001	450	9.8 (44)	2.95	1.94-4.50	.0001
Self-harm by friends										
No	1126	7.2 (81)	1.00			1550	2.6 (40)	1.00		
Yes	555	31.9 (177)	6.04	4.53-8.06	.0001	281	18.5 (52)	8.57	5.55-13.24	.0001
Self-harm by family										
No	1343	8.5 (114)	1.00			1661	3.0 (49)	1.00		
Yes	338	43.2 (146)	8.20	6.14-10.94	.0001	169	25.4 (43)	11.23	7.17-17.57	.0001

Note. All variables relate to the lifetime prevalence

Table 12. Univariate associations of past self-harm with mood and psychological variables

	Females					Males				
	Mean	SD	Odds ratio	95% CI	P values	Mean	SD	Odds ratio	95% CI	P values
Depression										
No history of SH	3.42	2.70	1.00			3.83	2.96	1.00		
History of SH	5.96	3.74	1.28	1.21-1.34	.0001	6.63	3.82	1.25	1.16-1.34	.0001
Anxiety										
No history of SH	8.25	3.73	1.00			7.26	3.77	1.00		
History of SH	11.71	4.21	1.25	1.20-1.31	.0001	11.20	4.36	1.27	1.19-1.36	.0001
Group norms										
No history of SH	4.76	1.95	1.00			4.65	2.30	1.00		
History of SH	6.27	3.92	1.19	1.13-1.26	.0001	7.19	6.05	1.16	1.10-1.21	.0001
Impulsivity										
No history of SH	8.78	2.94	1.00			8.55	2.94	1.00		
History of SH	10.55	3.29	1.21	1.15-1.28	.0001	10.78	3.61	1.25	1.15-1.36	.0001
Self-esteem										
No history of SH	15.03	3.80	1.00			15.97	3.85	1.00		
History of SH	10.74	4.13	.76	.72-.79	.0001	12.56	4.76	.82	.77-.87	.0001
Pessimism										
No history of SH	9.43	2.92	1.00			9.38	3.04	1.00		
History of SH	10.84	2.64	1.23	1.13-1.35	.0001	11.31	3.35	1.19	1.12-1.26	.0001
Social Perfectionism										
No history of SH	18.55	6.74	1.00			19.67	6.41	1.00		
History of SH	22.77	6.48	1.10	1.07-1.12	.0001	23.74	7.62	1.11	1.06-1.16	.0001

Table 13. Univariate associations of lifetime self-harm with mood and psychological variables

	Females					Males				
	Mean	SD	Odds ratio	95% CI	P values	Mean	SD	Odds ratio	95% CI	P values
Depression										
No history of SH	3.36	2.71	1.00			3.78	2.95	1.00		
History of SH	5.25	3.41	1.22	1.17-1.27	.0001	6.35	3.66	1.20	1.15-1.25	.0001
Anxiety										
No history of SH	8.13	3.71	1.00			7.21	3.78	1.00		
History of SH	11.06	4.06	1.21	1.17-1.26	.0001	10.24	4.05	1.20	1.14-1.27	.0001
Group norms										
No history of SH	4.73	1.96	1.00			4.60	2.19	1.00		
History of SH	5.85	3.26	1.18	1.12-1.24	.0001	6.94	5.64	1.16	1.11-1.22	.0001
Impulsivity										
No history of SH	8.69	2.90	1.00			8.51	2.92	1.00		
History of SH	10.33	3.31	1.20	1.14-1.25	.0001	10.65	5.64	1.25	1.17-1.33	.0001
Self-esteem										
No history of SH	15.13	3.79	1.00			16.03	3.81	1.00		
History of SH	11.88	4.19	.81	.78-.84	.0001	12.86	4.63	.83	.78-.87	.0001
Pessimism										
No history of SH	9.37	2.92	1.00			9.37	3.04	1.00		
History of SH	10.57	2.72	1.16	1.10-1.21	.001	10.63	3.27	1.14	1.07-1.23	.0001
Social Perfectionism										
No history of SH	18.40	6.74	1.00			19.61	6.41	1.00		
History of SH	21.91	6.52	1.08	1.06-1.10	.0001	23.18	6.85	1.09	1.06-1.13	.0001

Note. The Odds ratios refer to the increase in likelihood of a respondent reporting self-harm for each unit increase in the score on the measure.

Table 14. Multivariate analyses to predict past year and lifetime self-harm

Variable	Self-harm in past year			Lifetime self-harm		
	Odds ratio	95% CI	P value	Odds ratio	95% CI	P value
Gender						
Male	1.00			1.00		
Female	2.28	1.56-3.33	.0001	2.17	1.58-2.97	.0001
Living arrangements						
Both parents	1.00					
One parent	.84	.54-1.30	.441			
One parent and step parent	1.63	.94-2.84	.085			
Other	2.68	1.27-5.69	.010			
Alcohol use						
Abstainer				1.00		
Light drinker				1.31	.72-2.38	.385
Moderate drinker				1.37	.94-2.00	.103
Heavy drinker				1.74	1.18-2.57	.005
Smoking						
Never	1.00					
Given up	1.65	.95-2.86	.075			
Smoker	2.19	1.39-3.44	.001			
Exercise						
Often				1.00		
Sometimes				1.37	1.02-1.85	.036
Almost never				1.62	1.01-2.63	.049
Any drugs in past year						
No	1.00			1.00		
Yes	1.91	1.23-2.99	.004	1.62	1.13-2.33	.009
Bullying school						
No				1.00		1.00
Yes				2.13	1.60-2.85	.0001
Sexual orientation concerns						
No				1.00		
Yes				1.83	1.17-2.87	.009
Physical abuse						

No				1.00		
Yes				1.58	.93-2.70	.091
Sexual abuse						
No	1.00			1.00		
Yes	2.37	1.27-4.41	.007	2.00	1.24-3.24	.004
Self-harm by friends						
No	1.00			1.00		
Yes	2.51	1.73-3.66	.0001	2.74	2.05-3.66	.0001
Self-harm by family						
No	1.00			1.00		
Yes	3.02	1.95-4.67	.0001	4.10	3.06-5.48	.0001
Anxiety	1.09	1.04-1.15	.0001	1.05	1.01-1.10	.018
Impulsivity	1.07	1.01-1.13	.021	1.07	1.02-1.12	.004
Self-esteem	.87	.83-.92	.0001	.92	.88-.96	.0001
Group norms	1.06	1.01-1.11	.028			

Table 15. Multivariate logistic regression for prevalence of self-harm in the past year

Variable	Females			Males		
	Odds ratio	95% CI	P value	Odds ratio	95% CI	P value
Living arrangements						
Both parents	1.00					
One parent	.69	.40-1.17	.166			
One parent and step parent	1.46	.74-2.88	.277			
Other	3.87	1.61-9.30	.003			
Smoking						
Never	1.00			1.00		
Given up	2.34	1.25-4.38	.008	.67	.17-2.61	5.64
Smoker	2.25	1.31-3.88	.003	2.66	1.34-5.27	.005
Exercise						
Often				1.00		
Sometimes				1.81	.91-3.61	.091
Almost never				3.54	1.40-8.92	.007
Any Drugs						
No	1.00					
Yes	2.52	1.48-4.29	.001			
Sexual abuse						
No	1.00			1.00		
Yes	2.56	1.20-5.44	.015	3.45	1.19-9.97	.022
Self-harm by friends						
No	1.00			1.00		
Yes	2.22	1.42-3.47	.0001	4.60	2.32-9.12	.0001
Self-harm by family						
No	1.00			1.00		
Yes	3.54	2.14-5.87	.0001	3.12	1.33-7.29	.009
Impulsivity				1.12	1.01-1.23	.03
Anxiety				1.19	1.10-1.28	.0001
Pessimism				1.13	1.01-1.25	.032
Self-esteem	.81	.76-.85	.0001			
Group norms	1.08	1.01-1.16	.034			

Table 16. Multivariate logistic regression for lifetime prevalence of self-harm

Variable	Females			Males		
	Odds ratio	95% CI	P value	Odds ratio	95% CI	P value
Living arrangements						
Both parents				1.00		
One parent				2.46	1.01-6.01	.048
One parent and step parent				4.96	1.70-14.41	.003
Other				.41	.07-2.30	.313
Divorced						
No				1.00		
Yes				2.21	.93-5.27	.075
Alcohol use						
Abstainer	1.00					
Light drinker	1.20	.58-2.49	.620			
Moderate drinker	1.54	.97-2.43	.066			
Heavy drinker	2.08	1.31-3.28	.002			
Exercise						
Often				1.00		
Sometimes				2.13	1.21-3.73	.009
Almost never				3.21	1.40-7.12	.004
Any Drugs						
No	1.00			1.00		
Yes	1.64	1.06-2.55	.027	1.77	1.00-3.14	.049
Sexual abuse*						
No	1.00	1.21-3.65	.008			
Yes	2.10					
Physical abuse*						
No	1.00					
Yes	2.26	1.09-4.68	.028			
Bullying*						
No	1.00			1.00		
Yes	1.99	1.41-2.82	.0001	2.68	1.60-4.51	.0001

Sexual orientation concerns*						
No				1.00		
Yes				3.36	1.80-6.26	.0001
Self-harm by friends*						
No	1.00			1.00		
Yes	2.71	1.92-3.82	.0001	3.19	1.88-5.43	.0001
Self-harm by family*						
No	1.00			1.00		
Yes	4.12	2.92-5.81	.0001	4.40	2.51-7.71	.0001
Depression				1.11	1.03-1.19	.007
Impulsivity	1.06	1.00-1.12	.059	1.13	1.04-1.23	.005
Social Perfectionism (SPP)				1.04	1.01-1.09	.035
Self-esteem	.88	.84-.92	.0001			

*The time period of the self-harm was matched with the factor. For example, bullying in the past year was entered into the regression in the past year self-harm analysis whereas lifetime history of bullying was entered into the lifetime self-harm analysis.

Table 17. Univariate associations of past year self-harm with demographic variables

	1 st Time Self-Harm vs No Self-Harm Between T1 and T2					Repeat Self-Harm vs No Self-Harm Between T1 and T2				
	N	% who self-harmed	Odds ratio	95% CI	P values	% (N) who self-harmed	Odds ratio	95% CI	P values	
Living situation:										
Both parents	763	2.0	1.00			1.6	1.00			
One parent	139	5.0	3.27	.45-26.39	.266	4.3	12.27	3.13-48.01	.0001	
One parent and step parent	57	3.5	1.20	.14-10.43	.869	5.3	4.20	.95-18.56	.058	
Other	19	5.3	1.73	.15-20.46	.662	15.8	3.47	.63-18.98	.152	
Divorced parents*										
No	801	2.0	1.00			2.0	1.00			
Yes	182	4.9	2.62	1.14-6.04	.023	4.4	2.33	.98-5.54	.055	

Table 18 Univariate associations of self-harm between T1 and T2 with lifestyle variables

	1 st Time Self-Harm vs No Self-Harm Between T1 and T2					Repeat Self-Harm vs No Self-Harm Between T1 and T2				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	% (N) who self-harmed	Odds ratio	95% CI	P values	
Smoking										
Never	844	1.8	1.00			1.7	1.00			
Used to smoke	57	5.3	5.68	2.24-14.40	.0001	1.8	7.82	3.26-18.73	.0001	
Current smoker	83	8.4	1.85	.46-7.48	.391	10.8	7.12	.87-57.97	.067	
Alcohol use										
Abstainer	608	1.5	1.00			.8	1.00			
Light drinker	62	1.6	2.38	.72-7.86	.155	4.8	8.56	2.75-26.65	.0001	
Moderate drinker	183	6.0	2.09	.23-17.13	.514	3.3	1.39	.36-5.45	.634	
Heavy drinker	123	3.3	.54	.17-1.75	.307	6.5	1.99	.67-5.90	.213	
Exercise										
Often	596	2.5	1.00			2.0	1.00			
Sometimes	332	2.4	1.46	.33-6.56	.622	2.7	2.74	.75-10.00	.128	
Almost never	57	3.5	1.51	.31-7.33	.606	5.3	2.02	.53-7.71	.304	
Drug use in past year										
No	897	2.3	1.00			2.0	1.00			
Yes	90	4.4	2.04	.68-6.10	.200	6.7	3.58	1.38-9.26	.009	

Table 19 Univariate associations of self-harm between T1 and T2 with experience of the Troubles

	1 st Time Self-Harm vs No Self-Harm Between T1 and T2					Repeat Self-Harm vs No Self-Harm Between T1 and T2				
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	% (N) who self-harmed	Odds ratio	95% CI	P values	
During the Troubles, were you ever caught up in an explosion?										
No	964	2.5	1.00			2.5	1.00			
Yes	18	5.6	2.26	.29-17.66	.438	0	-	-	-	
During the Troubles, were you ever caught up in a riot?										
No	929	2.4	1.00			2.3	1.00			
Yes	58	5.2	2.32	.67-8.02	.182	5.2	2.43	.70-8.43	.160	
Were you intimidated because of the Troubles?										
No	934	2.2	1.00			2.5	1.00			
Yes	53	7.5	3.53	1.17-10.70	.026	1.9	.80	.11-6.10	.835	
Were you a victim of any violent incidents because of the Troubles?										
No	947	2.2	1.00			2.4	1.00			
Yes	40	10.0	4.91	1.60-15.08	.005	2.5	1.12	.15-8.54	.912	
Were any of your family or close friends killed or injured because of the violence?										
No	816	2.6	1.00			2.5	1.00			
Yes	171	2.3	.80	.35-2.25	.795	2.3	.95	.32-2.82	.928	
Did you know anyone (not family or relatives) who was killed or injured in the violence										
No	717	2.5	1.00			2.5	1.00			
Yes	270	2.6	1.03	.43-2.50	.947	2.2	.88	.35-2.25	.795	

Table 20. Univariate associations of self-harm between T1 and T2 with stressors / negative life events and others' self-harm

	1 st Time Self-Harm vs No Self-Harm Between T1 and T2					Repeat Self-Harm vs No Self-Harm Between T1 and T2			
	N	% (N) who self-harmed	Odds ratio	95% CI	P values	% (N) who self-harmed	Odds ratio	95% CI	P values
Bullying in school past year									
No	938	2.2	1.00			2.1	1.00		
Yes	44	9.1	4.75	1.55-14.55	.006	9.1	4.98	1.62-15.34	.005
Physical abuse									
No	953	2.6				2.2	1.00		
Yes	31	-	-	-	-	9.7	4.63	1.30-16.43	.018
Sexual abuse									
No	948	2.6				1.9	1.00		
Yes	37	-	-	-	-	16.2	9.73	3.61-26.21	.0001
Sexual orientation worries									
No	938	2.3	1.00			2.1	1.00		
Yes	47	6.4	3.06	.88-10.63	.079	8.5	4.48	1.46-13.72	.009
Trouble with Police									
No	840	2.0	1.00			2.1	1.00		
Yes	144	5.6	2.91	1.23-6.89	.015	4.2	2.06	.80-5.30	.132
Self-harm by friends									
No	770	1.9	1.00			1.0	1.00		
Yes	214	4.7	2.65	1.17-5.99	.019	7.5	7.95	3.35-18.85	.0001
Self-harm by family									
No	850	2.1	1.00			1.2	1.00		
Yes	134	5.2	2.83	1.16-6.93	.023	10.4	10.18	4.42-23.47	.0001

Table 21 Univariate associations of self-harm between T1 and T2 with mood and psychological variables

	1 st Time Self-Harm vs No Self-Harm Between T1 and T2					Repeat Self-Harm vs No Self-Harm Between T1 and T2				
	Mean	SD	Odds ratio	95% CI	P values	Mean	SD	Odds ratio	95% CI	P values
Depression										
No SH between T1-T2	3.33	2.76	1.00			3.33	2.76	1.00		
SH between T1-T2	4.36	3.71	1.12	.99-1.26	.066	6.04	3.08	1.26	1.14-1.40	.0001
Anxiety										
No SH between T1-T2	7.43	3.66	1.00			7.43	3.66	1.00		
SH between T1-T2	9.28	4.49	1.13	1.03-1.25	.014	11.46	4.39	1.28	1.16-1.42	.0001
Group norms										
No SH between T1-T2	4.70	2.30	1.00			4.70	2.30	1.00		
SH between T1-T2	5.16	2.63	1.07	.94-1.20	.315	6.46	3.65	1.14	1.05-1.24	.002
Impulsivity										
No SH between T1-T2	8.68	3.00	1.00			8.68	3.00	1.00		
SH between T1-T2	10.72	2.61	1.23	1.09-1.39	.001	10.25	3.78	1.18	1.04-1.34	.012
Self-esteem										
No SH between T1-T2	15.73	3.98	1.00			15.73	3.98	1.00		
SH between T1-T2	12.56	4.57	.84	.76-.92	.0001	10.75	3.39	.77	.70-.84	.0001
Pessimism										
No SH between T1-T2	9.14	2.93	1.00			9.14	2.93	1.00		
SH between T1-T2	9.88	3.62	1.12	1.02-1.23	.016	10.63	2.70	1.25	1.13-1.37	.0001
Social Perfectionism										
No SH between T1-T2	18.77	6.60	1.00			18.77	6.60	1.00		
SH between T1-T2	21.28	7.59	1.06	1.00-1.12	.065	20.25	7.77	.97	.91-1.03	.284

¹One additional school recruited Year 13 pupils but had to be excluded from the final sample to allow direct comparison across other studies.