ABSTRACT: Adolescent self-harm is recognised as a serious public health problem however there is little reliable comparative data on its prevalence or characteristics or on the extent of help-seeking for self-harm. The aims of this study were to determine the prevalence and associated factors of adolescent self-harm in an urban region in Ireland and to investigate help-seeking behaviours for self-harm. This was a cross-sectional study of 856 school-going adolescents employing an anonymous self-report questionnaire. A lifetime history of self-harm was reported by 12.1% of adolescents. Factors independently associated with self-harm included exposure to self-harm of a friend/family member. Professional help-seeking was uncommon prior to (9%) and after (12%) self-harm. Furthermore, only 6.9% of adolescents presented to hospital as a result of their last self-harm act. These findings indicate that self-harm is common in adolescents however seeking professional help is not a common phenomenon and those who present to hospital represent the ‘tip of the iceberg’ of adolescent self-harm. Identifying the prevalence of self-harm and associated factors in addition to help-seeking behaviours in young people is important to determine the preventative programmes to target ‘at-risk’ groups. Mental health nurses have an important and increasing role to play in such school-based initiatives.

KEY WORDS
Adolescence, community study, help-seeking, self-harm, self-harm prevalence.
INTRODUCTION

Self-harm amongst young people is common, and is a significant public health issue due to the immediate and potential longer-term physical harm it causes as well as its association with psychological distress. While self-harm can be a short-lived reaction to a period of distress without long-term implications (Moran et al. 2012), it can also indicate the development of mental health problems, including attempted and completed suicide, in later life (Hawton et al. 2012). Among young people, self-harm is one of the primary reasons for presentation to hospital (Hawton et al. 2012). In Ireland, the only country with a national registry of self-harm (Perry et al. 2012) it has been identified that while presentations to hospital peak in adolescent females aged 15-19 years (Griffin et al. 2014), these presentations represent only the ‘tip of the iceberg’ of adolescent self-harm. The majority of adolescents who self-harm do not present to hospital (Madge et al. 2008) and thus never become included in the self-harm registry. Given that current mechanisms for identifying the prevalence of adolescent self-harm capture only those who present to hospital, community studies are critical to gain insight into the often hidden act of self-harm. However methodological heterogeneity of these studies frequently makes cross country comparisons difficult.

While a significant number of community studies have sought to determine prevalence rates of adolescent self-harm, results vary considerably. Findings from international studies suggest vastly different rates ranging from 3.3% in Japan (Watanabe et al. 2012a) to 65.9% in Sweden (Lundh et al. 2007). In Ireland, reported prevalence rates of adolescent self-harm range from 1.5% (Lynch et al. 2006) to 9.1% (Morey et al. 2008). Such differences in prevalence rates can be attributed to a number of reasons including
inconsistencies in how ‘self-harm’ is defined, considerable methodological differences in how data are collected, and significant variation in the age of adolescents studied. It is critical that studies employ the same methodology and strict criteria for classification of self-harm to enable meaningful national and international comparisons.

These inconsistencies were addressed by the development of a large scale international study of adolescent self-harm (CASE-child and adolescent self-harm in Europe) located in six European Countries (Norway, The Netherlands, England, Ireland, Belgium, Hungary) and Australia. The CASE study used a largely standardised methodology and strict definition to provide reliable, comparative data on the extent and characteristics of self-harm (Madge et al. 2008). This methodology was subsequently used in adolescent populations in Scotland (O’Connor et al. 2009a) and Northern Ireland (O’Connor et al. 2014).

Pooled findings from the original CASE study identified a lifetime prevalence rate of self-harm of 13.5% for females and 4.3% for males (Madge et al. 2008). Factors strongly associated with self-harm in the pooled sample included the self-harm or suicide of others, physical and sexual abuse and concerns about sexual orientation (Madge et al. 2011). Findings relating to help-seeking indicated that almost half (48.4%) of the participants did not seek help following the last episode of self-harm and professional help-seeking was uncommon with health services contacted by only 18.5% of adolescents, 12.2% of whom presented to hospital (Ystgaard et al. 2009). Internationally, geographic variation in self-harm prevalence rates and help-seeking patterns have been identified, thus highlighting the importance of obtaining data from multiple regions to provide more representative information on self-harm in adolescents (Hawton et al. 2012; Fadum et al. 2013). The Irish
site of the CASE study was a predominately rural one and recognising regional variation in self-harm with higher rates in urban areas (McMahon et al. 2014), the present study aimed to report on the prevalence of self-harm and associated factors in an urban school-based sample using the same methodology employed in the CASE studies. In this way, the results of this study can be compared to others which have used the same methods both nationally and internationally and augment the existing knowledge base with regard to self-harm in adolescents.

MATERIALS AND METHODS

The aims of this study were: (1) to identify the prevalence of adolescent self-harm in an urban region in Ireland; (2) to investigate the factors associated with self-harm and (3) to determine the extent and nature of help-seeking for self-harm.

Participants

A total of 856 adolescents aged 15-17 years participated in a cross-sectional survey undertaken in 11 schools in Dublin in the Republic of Ireland. In order to ensure a representative range of schools in the study, schools were divided into three groups based on the location of the school in a particular electoral division and the deprivation index (low, medium, high) assigned to that division. Schools were then randomly selected for participation from each group. An invitation to take part in the survey was extended to 47 schools and 11 participated in total across the three deprivation indices. Of these 11 participating schools, 6 were mixed gender; one was an all-boys school while the remaining 4 were all-girl schools. Active parental consent was required for this study which differentiates it from the CASE studies where opt-out parental consent was utilised. Active parental consent was a requirement of the Human Research Ethics Committee of the Faculty of Health Sciences, University
College Dublin, which granted ethical approval for the study. An information sheet and consent form was sent to all parents and students were only included in the study if a signed parental consent form was received. An information sheet was also distributed to all students in advance of data collection and student assent was required prior to participation. The participation rate in schools ranged from 54% to 85%. An average participation rate of 73% was achieved for this study which is high for a study which required active parental consent (Esbensen et al. 2008). An actual sample size of 856 students was obtained, of which 51.2% were male while 48.8% were female. The age range of participants was 15-17 years and the majority (50.2%) were 16 years.

Procedure

On the day of data collection, the study was again explained to students, they were reminded that data were anonymous and confidential and they were given a further opportunity to opt-out. Only those students who had parental consent and who had themselves assented to the study were in the room at the time of data collection. The room was set up in an exam type format to further protect confidentiality and the questionnaires were distributed by the researcher. The survey took approximately 30 minutes to complete and the remaining class time was spent on a general discussion of mental health issues for young people and answering any questions students’ had. At the end of the session students received an information pack containing a resource booklet of information on the topics covered in the questionnaire, in addition to contact information for relevant and youth appropriate support services.
**Measures**

The ‘Lifestyle and Coping’ questionnaire, a 96-item questionnaire designed and utilised by clinicians and researchers who collaborated on the CASE study (Madge *et al.* 2008) was the instrument used in this study. Permission to use this questionnaire was granted by the coordinator of the CASE study. The Lifestyle and Coping questionnaire included a range of variables covering demographic characteristics (e.g. age, gender, living situation), lifestyle factors (e.g. exercise, smoking, alcohol/drug use) and negative life events (e.g. death of someone close, problems with family or friends, concerns about sexual orientation). The Lifestyle and Coping questionnaire also contained validated scales to measure four psychological constructs. Symptoms of depression and anxiety were elicited using the Hospital Anxiety and Depression Scale (HADS) which was designed to measure depression and anxiety in the non-psychiatric population (Zigmond & Snaith 1983). Cronbach’s alpha for this sample was 0.80 and 0.75 for anxiety and depression respectively. Impulsivity among adolescents was determined using a shortened version (six items) of the Plutchik Impulsivity Scale (Plutchik *et al.* 1989). The reliability coefficient for this scale was 0.58 which is quite low however this is not uncommon in short scales of less than 10 items and in those measuring psychological constructs. Low internal consistency for this shortened scale has been found in similar populations in other studies (O’Connor *et al.* 2009b). The last scale in the questionnaire was a shortened version (eight-item) of the Self-Concept scale (Robson, 1989) which was used to measure adolescents’ level of self-esteem and in this study has a Cronbach’s alpha of 0.81 suggesting good internal consistency.

The Lifestyle and Coping questionnaire employed strict criteria to assess self-harm to ensure comparability of findings across different sites. Participants were first asked if
they had ever self-harmed. Those who indicated they had self-harmed were asked to describe their last act of self-harm. Descriptions were coded according to the standardised definition adapted by all CASE studies (see Madge et al. 2008), which viewed self-harm as an intentional act with a non-fatal outcome. This broad definition of self-harm encompassed a range of motives and varying degrees of suicidal intent, recognising that suicidal intent is dimensional and fluid (Harriss et al. 2005). A coding manual developed by the CASE team was used to help accurately code self-harm. Reports of self-harm were coded as ‘yes’, ‘no’ or ‘no information given’. Those in the ‘no’ category comprised those who reported self-harm, but whose description did not match the coding criteria (e.g. if self-harm was clearly non-intentional). If a participant reported self-harm, but did not describe the act they were categorised as ‘no information given’ and were excluded from further analyses. Categorisation of self-harm by two independent raters was highly consistent (Cohen’s Kappa = 0.86). Using this definition and the associated coding criteria helped to ensure that each act categorised as self-harm was intentional self-harm.

Participants were asked if they sought help before and after their last episode of self-harm and if they did not seek help they were further asked to explain in an open-ended question why this was the case.

*Statistical Analyses*

Prevalence rates of self-harm were calculated with 95% Confidence Intervals (CIs). The proportion of males and females reporting self-harm was compared by calculating 95% CIs and reporting associated odds ratios. Pearson’s chi-square tests for independence were run to explore associations between groups. The association between self-harm and psychosocial and sociodemographic factors were evaluated by calculating crude odds ratios (ORs) and
their 95% confidence intervals (CIs) through univariate logistic regression analyses. In addition to computing this for the combined sample, this analysis was also carried out separately for males and females as there is evidence that gender differences exist in the factors associated with self-harm.

A multivariate logistic regression model using the ‘enter’ method was constructed to assess the predictive impact of a number of independent variables on the likelihood that participants would report self-harm. Multivariate analysis was undertaken on the combined sample only, as there were an insufficient number of males meeting the self-harm criteria to determine if there were any major differences in those variables independently associated with self-harm in females and males. To ensure stability of the regression model, the general rule of 10 cases per predictor variable included was adopted (Peduzzi et al. 1996), therefore allowing entry of 10 independent variables. Entry into the multivariate analysis was determined by the results of univariate analyses as the 10 most significant variables from the combined univariate regression were included in the multivariate model.

RESULTS

Prevalence of self-harm

A lifetime history of self-harm (previous episode at any time in the past) was reported by 129 (15%) participants. Following an examination of the descriptions of self-harm and application of the coding protocol this number was reduced to 103 (12.1%, 95% CI: 9.9% - 14.3%). Of these, 53.4% (n=55) had harmed themselves once while the remaining 46.6% (n=48) had done so more than once. In this study, 18.1% (n=75, 95% CI 14.4-21.8) of females reported a lifetime history of self-harm compared to 6.4% (n=28, 95% CI 4.1%-
8.8%) of males which was a statistically significant gender difference ($\chi^2 = 27.00 1 df, \rho < .001, OR 3.20, 95% CI 2.03-5.06$). Most incidents of self-harm occurred during the past year (63.2%). The majority of those who self-harmed were 16 years of age (55.3%), while 20.4% were 15 years and 24.3% were 17 years.

**Methods of self-harm**

Cutting was the most frequently reported method of self-harm (63.1%). This was followed by overdose (29.1%). A minority self-harmed using other methods including hanging, strangulation and self-battery (7.8%). There was no significant difference in the method of self-harm between males and females. Examples of adolescents’ descriptions of their acts of self-harm are provided below to illustrate the nature of these acts.

Cutting:

“In the last year I have cut my left forearm 7 times, left bicep once, chest 4 times with a switchblade, all in my room because of serious social problems”.

Self-Poisoning:

“Anti-depressants. Took about 30 Tablets but didn’t die, no-one knows”.

Self-battery:

“In the last year I have cut my left forearm 7 times, left bicep once, chest 4 times with a switchblade, all in my room because of serious social problems”.

These descriptions demonstrate the type of self-harm behaviours utilised by young people which range from superficial cutting of the skin through to potentially serious overdoses.

**Factors associated with self-harm**

A number of psychological factors and negative life events were found to be associated with self-harm. All four psychological constructs were associated with self-harm for the
total sample (Table 1). The factors most strongly associated with self-harm were the self-harm/attempted suicide of a friend or family member, having fights with parents and being worried about sexual orientation. For males, having a friend who self-harmed was the strongest factor associated with own self-harm and this was followed closely by having a family member who self-harmed. These factors were also strongly significant for females, although as can be seen in Table 1, to a lesser extent than males. The strongest associated factors for females were fights with parents, followed by having worries about their sexual orientation. These were also strongly associated with self-harm for males. It is evident that while there are some differences between males and females in terms of the factors associated with self-harm and the strengths of these associations, there is also a large degree of homogeneity with self-harm/attempted suicide of a friend/family member, worries about sexual orientation, and fights with parents retaining a strong association with self-harm for both genders.

Based on univariate analyses, the 10 most significant factors associated with self-harm in the total sample were included in a multiple logistic regression analysis following which 7 variables remained independently associated with self-harm (Table 2). The factor that featured most strongly in the model was the self-harm/attempted suicide of a friend. Other factors that made a significant contribution to the overall model were fights with parents, the self-harm/attempted suicide of a family member, worries about sexual orientation, problems keeping and making friends, being bullied at school and having problems with a girl/boyfriend.
Help-seeking for self-harm

Participants who reported a history of self-harm were asked if they sought help prior to harming themselves from a predetermined list of people or sources. Almost half of those who self-harmed (49.5%, n=51) did not look for help prior to the incident. Of those who did seek help by far the most common source was a friend (42%), followed by a family member (13%). Professional help was sought by only 9% of participants before engaging in self-harm. Overall, females (58.1%, n=43) were more likely to seek help than males (34.6%, n=9), and were more likely to see help from a friend (48.6% v 23.1%, $\chi^2 = 5.11$, 1 df, $\rho = .024$).

Those who did not seek help prior to self-harming (n=51) were asked to explain the reason for this in their own words. Responses were received from 38 adolescents (74.5%) and the most common response provided was that they did not need any help. Most did not elaborate on this statement however for some it was clear that they did not see their problems as serious and therefore did not require any help:

“I did not think it was serious enough for any help to be needed.”

A number of participants reported that they did not want any help. The responses were different from those who said they did not need help. Included here was a desire to die:

“I didn't want help, I just wanted to die.”

Some adolescents felt that no-one could understand why they engaged in self-harm:
“Tried to tell a friend once, they didn’t understand. No one did. I’ve always been one to listen so it was hard to tell someone something like that, was afraid they’d judge me”.

Seeking help after an incident of self-harm was also not a common occurrence as the majority of adolescents (73%, n=73) did not seek help for the problems that led to self-harm. Of those who sought help, again the most common source was a friend (39%, n=36), followed by a family member (21%, n=19) and psychologist/psychiatrist (8%, n=7). Only a small minority of young people presented to hospital as a result of their last attempt to harm themselves (6.9%, n=7) or any previous attempt to harm themselves (11.8%, n=12).

Those adolescents who did not seek help after they had self-harmed were asked to explain why they did not try to get any help. Of the 73 participants who did not seek help after self-harm, 49 (67%) provided a reason. The most common reason identified for not seeking help was the perception that they did not need it. This was identified by almost one-third of those who gave a response. For some this seemed to be about realising that they could get through it on their own without help from others:

“I thought I would get through it on my own”

Others identified how after self-harming they came to the realisation that self-harm wasn’t helping the situation they were in and instead found other ways of coping with their problems:

“I’m over it now. I saw that wasn’t the way out, so I stopped and started sticking up for myself.”
Others still identified that after the incident of self-harm they felt better and therefore did not feel the need to seek help or indeed to self-harm again:

“*I didn't feel the need. Frustration spent, I believe I am stronger than that.*”

Approximately one-fifth of participants identified that they did not want anyone to know about their self-harm which influenced their decision not to seek help after the incident. While some simply stated that they ‘did not want anyone to know’, others elaborated on why they wished to keep their self-harm hidden from family and friends:

“*I didn’t want anyone to know. I just got on with life and didn't want to be drawing attention to myself.*”

Other factors which influenced the decision not to seek help included the perception that no-one could help and a reluctance to ‘waste other people’s time’. Interestingly, only one participant identified not seeking help after self-harm as they did not know who to go to.

**DISCUSSION**

In this study, one in eight adolescents reported a previous episode of self-harm which met the study criteria. Females were over 3 times more likely to engage in self-harm, a finding broadly in line with other CASE studies (Madge *et al.* 2008). This lifetime prevalence of 12.1% is the highest achieved across those individual studies which published prevalence rates based on the CASE coding criteria (Portzky *et al.* 2008; Morey *et al.* 2008; O’Connor *et al.* 2009a; O’Connor *et al.* 2014). While CASE studies from the UK (Hawton *et al.* 2002) and Australia (De Leo & Heller 2002) reported marginally higher lifetime self-harm rates (13.2% and 12.4% respectively), these studies did not utilise the self-harm coding
criteria resulting in all self-harm being included irrespective of whether a description of the act was provided or if the description met the operational definition of self-harm.

The higher reported rate of self-harm in this study compared to other CASE studies is of particular note given this study used active parental consent as opposed to passive parental consent. Active parental consent tends to favour the participation of individuals from socially advantaged groups who are less likely to have problem behaviours (Unger et al. 2004). However, the high participation rate across all schools in this study suggests that a good degree of representativeness was achieved, and the reported rate of self-harm was not adversely affected by over-representation of more advantaged and less troubled adolescents.

While it is difficult to compare findings to the large number of diverse international studies, it is perhaps more meaningful to examine the prevalence rate found in this study in the context of other Irish studies. The lifetime prevalence rate of adolescent self-harm was higher in this study than other published Irish studies to date and there are a number of possible explanatory reasons for this. Previous studies focused on young adolescents aged 11-13 years (Coughlan et al. 2014), 13-14 years (O’Sullivan & Fitzgerald 1998), 13-15 years (Rowley et al. 2001) and 12-15 years (Lynch et al. 2006). Evidence suggests that self-harming behaviours increase as adolescents get older (Skegg 2005), which could be a contributory explanation as to why the prevalence of self-harm in the present study of older adolescents was higher. Furthermore, the use of an anonymous questionnaire is also likely to be a contributory factor to the higher reporting of self-harm rates in this study (Safer 1997). Previous Irish studies used non-anonymised surveys, interviews, or both.
The difference in prevalence of self-harm rates between this study (12.1%) and the Irish CASE study (9.1%, Morey et al. 2008) is a significant difference ($\chi^2 = 3.879, 1 \, df, \rho = .048$) and is therefore noteworthy. When explaining this difference between studies the issue of self-harm definition, age and anonymity do not arise as apart from passive consent, the same method was utilised. However, the difference in findings could possibly be explained by regional variation. Adolescents in this study were drawn from a mix of urban and suburban backgrounds while the Morey et al. (2008) study also included rural schools. The rate of self-harm in rural settings in Ireland is known to be lower than that in urban settings (McMahon et al. 2014) which could have impacted on the lower prevalence rate in the original CASE study.

Findings from this study that a number of negative life events including being bullied at school, problems with friends, partners and parents, and worries about sexual orientation were independently associated with self-harm, support those from other studies which identify that adolescents who experience these negative events are more likely to self-harm (Hawton et al. 2012). Notably, it appears that being exposed to the self-harm of family or friends increases the risk of self-harm for young people. Exposure to self-harm of a friend had the strongest independent association with self-harm in this study with adolescents almost 3.5 times more likely to engage in self-harm if their friend had. Self-harm of a friend was also a factor associated with self-harm in other CASE studies in the total sample or in either gender (Hawton et al. 2002; De Leo & Heller 2004; Portzky et al. 2008; O’Connor et al. 2009; McMahon et al. 2014; O’Connor et al. 2014).
In an attempt to explain the association between adolescent self-harm and exposure to self-harm in peers, two hypotheses have been proposed; 1) selection effect (adolescents with vulnerability to self-harm are more likely to associate with similar adolescents) and 2) modelling/contagion effect (adolescents engage in self-harm as a result of social learning from peers who also engage in self-harm). Few studies attempt to differentiate selection effects from social contagion effects; however there is evidence to suggest that both mechanisms may be relevant to understanding adolescent self-harm (Rosen & Walsh 1989; Deliberto & Nock 2008; Prinstein et al. 2010; You et al. 2013). Self-harm is associated, although not exclusively, with particular adolescent sub-groups where self-harm is the norm within the group (Heilbron & Prinstein 2008). Two such sub-groups include the ‘Emo’ and ‘Goth’ subgroups where research has identified a strong association between lifetime self-harm and attempted suicide among adolescents within the Goth and Emo youth subcultures (Young et al. 2006; Young et al. 2014). This is an area that warrants further investigation as the issue of youth subculture and self-harm has largely been ignored by the scientific community and has implications for the prevention of self-harm and self-harm contagion in adolescents.

This study identified that professional help-seeking for self-harm is not a common response among adolescents. The majority of young people who self-harm are not in contact with mental health professionals and for most, self-harm remains a hidden act. These findings are supported by other research which similarly highlights adolescents’ reluctance to seek formal help for self-harm (De Leo & Heller 2004; Madge et al. 2008; Fortune et al. 2008; O’Connor et al. 2010; Watanabe et al. 2012b; Michelmore & Hindley 2012; Rowe et al. 2014). The identification of a low level of professional help-seeking in
this study is a cause for concern as assessment of adolescents who self-harm followed by effective intervention is crucial to help reduce the repetition of self-harm (Burns et al. 2005). It is of note that approximately half of the young people in this study who self-harmed had done so more than once and this repetition may have been influenced by the lack of mental health assessment and intervention following the first episode of self-harm (Bergen et al. 2010). The findings of this study further identified that when help was sought by young people, there was a clear preference for informal sources of help, particularly friends. However, there are difficulties associated with having friends as the sole source of support for adolescents who self-harm. It is likely that friends are not adequately prepared for that role and do not have the necessary skills, knowledge or indeed psychological resources to respond appropriately (Rickwood et al. 2005; Freake et al. 2007). This may contribute to an explanation of the high level of self-harm in those young people who were exposed to the self-harm of a friend in this study (Muehlenkamp et al. 2010).

The finding that young people who self-harm are not likely to seek professional help points to the requirement of a two-pronged approach to improve mental health and help-seeking in this cohort. The first approach is to increase understanding and awareness of self-harm in those likely to have contact with young people who self-harm. As previously identified, friends are the primary source of help for those who self-harm yet may be ill-prepared to deal with this. Consequently, there is potential for use of education programmes which equip adolescents with the basic skills to respond to a friend who self-harms. In addition to friends, teachers and other school staff are also a potential source of support for young people and the school remains a key setting for detection of self-harm and early intervention initiatives. However many teachers and school staff lack the
knowledge required to respond appropriately to young people who self-harm, supporting the development of broad reaching training programmes which focus on understanding and responding to self-harm (Berger, et al. 2014). While the development and delivery of these programmes may fall within the remit of any mental health professional, McAndrew and Warne (2014) identify how there is a growing onus on mental health nurses to bring their knowledge and expertise of self-harm to the school setting to educate young people and their teachers about self-harm.

The second approach focuses on the young person who is self-harming. There is a requirement for interventions which both promote psychological well-being and also improve perceptions about the outcomes of help-seeking (Fortune et al. 2008). As young people who self-harm are unlikely to contact health professionals, it is incumbent on mental health professionals to provide an outreach role within the school setting. It is noted that mental health nurses play an increasing role in the provision of mental health promotion initiatives in schools (Onnela et al. 2014) and so may be one mental health professional well-placed to deliver such interventions. Providing education, consultation and support to schools enables mental health nurses to contribute to the mental health and well-being of whole populations of young people and not just those who present to the mental health services (Woodhouse, 2010). This is particularly important in the context that most adolescent self-harm is hidden from the mental health services. Increasing the collaboration between mental health services and schools can help to improve early detection and intervention for self-harm and ultimately ensure better outcomes for young people who self-harm.
LIMITATIONS
Although this study had a number of strengths, there were a number of limitations. Those who were absent from school on the day of data collection did not have an opportunity to complete the survey. This may have impacted on the prevalence of self-harm obtained as it is known that there is an increased prevalence of mental health problems in those who are regularly absent from school (Kearney, 2008). This was a cross-sectional study therefore it was not possible to determine if there was a causal relationship between risk factors and self-harm as self-harm may have preceded the presence of risk factors. Notwithstanding these limitations, the strengths of this study include using rigorous, reliable methodology to establish the prevalence of self-harm and associated factors, and the extent and nature of help-seeking.

CONCLUSION
There is a large degree of consistency between this study and others nationally and internationally which employed the CASE study methodology. Findings from this study indicate that self-harm is relatively common in adolescents and that it appears to be heavily influenced by negative life events and in particular the exposure to self-harm of friends and family. Consequently, there is a requirement for better understanding of the nature of social contagion in adolescent self-harm so that appropriate prevention and intervention initiatives are targeted to those most at risk. The finding that those who self-harm are not likely to seek professional help supports the requirement for more assertive outreach by mental health professionals. If young people do not present to mental health services for
assessment and treatment of self-harm then it is perhaps the case that mental health professionals need to ‘present’ to adolescents. Schools provide an opportunistic setting to reach out to large numbers of young people and so may be the best location for the delivery of such initiatives and mental health nurses have an increasing role to play in this.
References


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<td>&lt;.001</td>
</tr>
<tr>
<td>Self-harm/suicide attempt by friend</td>
<td>6.57</td>
<td>4.23-10.20</td>
<td>&lt;.001</td>
<td>4.24</td>
<td>2.50-7.22</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Difficulty making/keeping friends</td>
<td>3.49</td>
<td>2.28-5.37</td>
<td>&lt;.001</td>
<td>3.19</td>
<td>1.91-5.33</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Bullied at school</td>
<td>4.17</td>
<td>2.08-4.87</td>
<td>&lt;.001</td>
<td>3.72</td>
<td>2.19-6.32</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Parental separation/divorce</td>
<td>2.90</td>
<td>1.87-4.50</td>
<td>&lt;.001</td>
<td>2.26</td>
<td>1.33-3.84</td>
<td>=.002</td>
</tr>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>CI</td>
<td>p</td>
<td>Odds Ratio</td>
<td>CI</td>
<td>p</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------</td>
<td>-------</td>
<td>-------</td>
<td>------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Self-harm/suicide attempt by family</td>
<td>5.88</td>
<td>3.70-9.34</td>
<td>&lt;.001</td>
<td>4.00</td>
<td>2.27-7.02</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Friend/family member suicide</td>
<td>3.59</td>
<td>2.19-5.88</td>
<td>&lt;.001</td>
<td>2.73</td>
<td>1.48-5.01</td>
<td>=.001</td>
</tr>
<tr>
<td>Worries about sexual orientation</td>
<td>4.56</td>
<td>2.77-7.51</td>
<td>&lt;.001</td>
<td>4.68</td>
<td>2.46-8.91</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Serious physical abuse</td>
<td>3.30</td>
<td>1.77-6.13</td>
<td>&lt;.001</td>
<td>3.44</td>
<td>1.58-7.50</td>
<td>=.002</td>
</tr>
<tr>
<td>Forced sexual activity</td>
<td>3.28</td>
<td>1.73-6.25</td>
<td>&lt;.001</td>
<td>3.00</td>
<td>1.47-6.13</td>
<td>=.003</td>
</tr>
</tbody>
</table>

* Odds ratio represent a one-point increase in the score of the scale measuring the psychological characteristic.

** Odds ratio and associated confidence interval inverted.
## Table 2

*Multivariate logistic regression of factors associated with self-harm: combined sample*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Odds ratio</th>
<th>95% CI</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems making/keeping friends</td>
<td>2.05</td>
<td>1.20-3.52</td>
<td>=.009</td>
</tr>
<tr>
<td>Fights with friends</td>
<td>1.36</td>
<td>.789-2.35</td>
<td>=.266</td>
</tr>
<tr>
<td>Problems with girl/boyfriend</td>
<td>1.76</td>
<td>1.05-2.96</td>
<td>=.030</td>
</tr>
<tr>
<td>Bullied at school</td>
<td>1.98</td>
<td>1.15-3.40</td>
<td>=.013</td>
</tr>
<tr>
<td>Fights with parents</td>
<td>2.91</td>
<td>1.64-5.15</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Suicide of a family member or friend</td>
<td>1.58</td>
<td>.867-2.91</td>
<td>=.134</td>
</tr>
<tr>
<td>Self-harm/suicide attempt by friend</td>
<td>3.40</td>
<td>2.06-5.62</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Self-harm/suicide attempt by family</td>
<td>2.67</td>
<td>1.53-4.64</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Worries about sexual orientation</td>
<td>2.31</td>
<td>1.29-4.30</td>
<td>=.008</td>
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<tr>
<td>Physical abuse</td>
<td>1.31</td>
<td>.606-2.83</td>
<td>=.492</td>
</tr>
</tbody>
</table>