Self-harm in adolescents: self-report survey in schools in Scotland

Rory C O'Connor*

Susan Rasmussen

Suicidal Behaviour Research Group

University of Stirling, Stirling, FK9 4LA

*Correspondence to: Professor R O'Connor ro2@stir.ac.uk

Jeremy Miles

RAND Corporation

1776 Main Street

Santa Monica, CA 90401-3208

Keith Hawton

Centre for Suicide Research

University Department of Psychiatry

Warneford Hospital, Oxford, OX3 7JX

Abstract

Background Given that the suicide rate in Scotland is twice as high as that in England, the central aim is to determine the prevalence of self-harm in adolescents in Scotland and the factors associated with it.

Method 2008 pupils aged 15 and 16 years old completed an anonymous lifestyle and coping survey. Information was obtained on demographic characteristics, lifestyle, life events/problems, social influences, psychological variables and self-harm.

Results 13.8% of the respondents reported an act of self-harm. The majority of those (71%) who had self-harmed did so in the past 12 months and females were approximately 3.4 times more likely to report self-harm than males. In multivariate analyses, smoking, bullying, worries about sexual orientation, self-harm by family and anxiety were associated with self-harm in both sexes. In addition, drug use, physical abuse, serious boy/girlfriend problems, self-harm by friends and low levels of optimism were also associated with female elf-harm.

Conclusions Despite markedly different national suicide rates, the prevalence of self-harm in Scotland is similar to that in England with females at least three times more likely to report self-harm compared to males. The findings suggest a role for emotional literacy programmes in schools and they highlight the importance of promoting positive mental health among adolescents.

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Introduction

In recent years, there has been considerable research interest in determining the prevalence of self-harm (DSH) among adolescents.[1-3] This is not surprising as DSH is a key predictor of completed suicide[4-5] and suicide prevention is a high priority for the UK governments.[6-7]

In an attempt to identify the prevalence of DSH among adolescents, several countries including England developed and completed the Child and Adolescent Self-harm in Europe (CASE) questionnaire. Comparative analyses of the cross-national CASE questionnaires found that five of the countries (England, Ireland, Belgium, Norway and Australia) reported similar DSH rates whereas the Netherlands and Hungary reported relatively low DSH rates.[8] Closer inspection of the English CASE questionnaire showed that the self-reported lifetime prevalence of DSH among 15-16 year olds is 13.2% in England. The CASE questionnaires report both self-reported self-harm and self-harm which meets specific CASE study criteria. To afford direct comparison with the Scotland data presented herein, we have concentrated on the former. Given that the suicide rate in Scotland is the highest in the UK and it is twice as high as that in England,[9-10] the central aim of the present study was to determine, for the first time, the prevalence of adolescent DSH in Scotland. Scotland is of special interest because not only do England and Scotland have markedly different suicide rates, they have distinct suicide rate trends: Scotland's suicide rate has been increasing in recent decades whereas England's has been decreasing, with England last year reporting its lowest suicide rate on record.[9-11] The utility of such a comparative study is further highlighted by a recent study of adolescent DSH in two other neighbouring European countries (the Netherlands and Belgium).[12] Portzky and colleagues, also employing the CASE questionnaire, found that the adolescent DSH

rate in Belgium was markedly higher than that in the Netherlands, consistent with their different suicide rates (i.e., the Belgian suicide rate is much higher than the Dutch rate).[12]   Our second aim was to examine the factors associated with adolescent DSH. For this purpose we modified the CASE questionnaire and included additional psychosocial factors which are known to be important in the aetiology of self-harm and suicidal behaviour.[13-15]

Method

All secondary schools in Glasgow (West of Scotland) and Stirling (Central Scotland) were invited to participate in the study (n=45). In total, 13 schools agreed to participate and this yielded a representative sample in terms of school type for size, status, ethnic minorities, educational attainment and socioeconomic deprivation (proportion of pupils entitled to free school meals). We recruited 28.8% of the target schools to the study (consistent with Hawton *et al*[1] who recruited 23.8%). Data collection was conducted during 2006/2007. All pupils were in Years 4 or 5 and in classes in which at least 90% of the young people were aged 15 to 16 years.

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 University of Stirling Psychology Department ethics committee. Our study adhered to the British Psychological Society's ethical guidelines and the British Educational Research Association's guidelines.[16-17] 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.

Assessment of Participants

A modified version of the Child and Adolescent Self-harm in Europe (CASE)

questionnaire was used. The CASE questionnaire is an anonymous self-report

questionnaire, taking approximately 30 minutes to complete. The original survey was

developed in collaboration with experts in school-based studies and it incorporated

extensive piloting in schools and in an adolescent psychiatric unit.

The questionnaire included items on demographic characteristics (i.e., sex,

age, ethnicity), lifestyle, life events/problems, social influences, psychological

variables and self-harm. Self-harm was recorded if a respondent answered yes to the

following question "have you ever deliberately taken an overdose (e.g. pills or other

medication) or tried to harm yourself in some other way (such as cut yourself)?".

Respondents were also asked to provide a description of the act, its consequences and

to endorse the motive(s) behind the act. For the present purposes, for the main

analyses, we did not use the description to classify the act as self-harm because (i)

excluding those who chose not to write a description might yield an underestimate of

prevalence as some respondents deemed describing the act as too personal and

painful, (ii) the vast majority of descriptions yielded a self-harm classification

according to Hawton and Rodham's[8] classification guidelines and (iii) all but three of

those who answered yes to the self-harm question either provided a description or

endorsed a self-harm motive. However, in the interests of completeness, we report

the frequencies of those whose self-harm episode met the CASE criteria. The CASE

criteria define DSH as 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."p.29 Other questionnaire items included measures of depression and anxiety (hospital anxiety and depression scale[18]), impulsivity (six items from the Plutchick impulsivity scale[19]), self-esteem (an eight item version of the self-concept scale[20]), peer group norms (i.e., the attitudes of peers and friends towards self-harm[21]), trait optimism (the revised life orientation scale[22]), and social perfectionism (defined as the degree of belief that others hold unrealistically high expectations of one's behaviour and that they would only be satisfied with these standards[23]). Full details of all the questions in the questionnaire are available from the corresponding author.

Sample size and Analyses

We chose a sample size of 2000 pupils assuming a prevalence estimate of 12% for young people reporting DSH, based on previous studies in England, Ireland and Australia.[1-2,24] This sample size can detect an effect with 80% power and 5% significance with a 95% confidence interval of 10.7% to 13.5%.[25] Logistic regression analyses and Chi-square tests were used to investigate the association between DSH and associated variables. Crude odds ratios and confidence intervals were obtained from the univariate logistic regression analyses. Adjusted odds ratios were obtained from multivariate logistic regression. Backward selection was used to determine the factors which were most important statistically in distinguishing the presence/absence of a DSH history. We analysed the data using SPSS 14.0.

Results

Of the 13 participating schools, 10 were local authority and 3 were independently

funded schools. In total 2,008 young people participated in the study. This

represented approximately 80% of those eligible to participate. The main reasons for

non-participation were timetable constraints (which meant that not all classes in a

given school year group were able to complete the survey) and absenteeism.

Consistent with the 2001 Census, 92% of the sample were White, 5.3% were Asian,

1.5% Black and 1.2% Other ethnicity. 53% of the sample was female.

[Insert Table 1 about here]

Prevalence of self-harm

Almost 14% (13.8%) of the sample reported a lifetime history of DSH (i.e., presence

of DSH history) and the majority of those had self-harmed in the previous 12 months

(71%, 190/268, 4 participants did not provide a response, see Table 1). 10.4% (6.1%

female, 14.3% male) of the respondents reported lifetime history of self-harm which

met the CASE criteria (data not presented). All proceeding analyses are based on the

former group (i.e., *all* those who reported DSH). Females were 3.4 times more likely

to report DSH than males (odds ratio 3.37, 95% confidence interval 2.50 to 4.54,

p<.001). Half (n=137; 52.9%) had started to think about self-harm less than an hour

before the act, 15.1% (n=39) more than an hour but less than a day before, 12.7%

(n=33) more than a day but less than a week before and 19.3% (n=50) more than a

week beforehand. The main motive for self-harm was to get relief from a terrible

state of mind (74.5%, n=175), followed by wanting to punish oneself (51.9%, n=109).

Four in ten adolescents reported that they wanted to die (37.6%, n=77). Reports of

seriously thinking about taking an overdose or trying to harm oneself but not actually

doing so were more common in females than males (see Table 1; odds ratio 2.59, 95%

confidence interval 1.96 to 3.42 p<.001). Due to missing data, there is some variability in the denominator across the variables.

[Insert Table 2 about here]

Factors associated with self-harm

Given the established sex differences in DSH,[3,26] the subsequent analyses are presented separately for males and females.   For females, living with one parent or one parent and one step parent was associated with increased risk of DSH compared to living with both parents (see Table 2). More females whose parents had divorced reported DSH compared to those who had not divorced. On the whole, increased consumption of alcohol and cigarettes was associated with more DSH in boys and girls, as was the frequency of getting drunk in the previous year. Drug taking was associated with self-harm in girls only. For both sexes, lifetime prevalence of bullying at school, physical abuse, sexual abuse, worries about one's sexual orientation, being in trouble with the police and reporting serious problems with a boy/girlfriend were strongly related to DSH. The sexual and physical abuse questions asked whether the respondent had been abused; they did not record by whom. Social influences on self-harm were also evident: For all pupils, self-harm by family and friends was associated with increased frequencies of DSH as was increased group norms for self-harm. Finally, those who had deliberately self-harmed, irrespective of sex, were more depressed, anxious, impulsive and social perfectionistic as well as reporting lower self-esteem and lower optimism than those who had not self-harmed.

[Insert Table 3 about here]

Multivariate analysis

The multivariate logistic analysis showed that the following factors were independently associated with DSH in females: smoking, drug use, bullying, physical

abuse, worries about sexual orientation, serious boy/girlfriend problems, self-harm by family and friends and anxiety (see Table 3). Optimism was also lower among females who deliberately self-harmed. In males, smoking, bullying, sexual orientation worries, self-harm in the family, group norms and anxiety were associated with DSH.

Discussion

Self-harm is common among adolescents in Scotland, especially among females. Indeed, the prevalence of DSH in Scotland is similar to that reported in England,[1] Ireland,[24] Belgium,[12] Norway,[27] Australia,[2] and the United States[28] but higher than that reported in the Netherlands[12] and Hungary.[29] Despite Scotland having the highest suicide rate in the UK, its adolescent DSH rates do not follow this trend. Indeed, the similarity of adolescent DSH with England is especially noteworthy as the suicide rate in Scotland is twice that in England.[9-11] The absence of a English–Scottish difference is also interesting in the light of the Belgium–the Netherlands comparative study which found that their cross-national DSH rates were consistent with their respective completed suicide rates.[12] Perhaps the sociocultural effects in England and Scotland are diluted somewhat as both countries are part of the UK? Future research should explore these national sociocultural effects more closely.

In addition, it would be of interest to investigate further whether *suicidal* DSH rates differ in Scotland and England. Indeed, it may be that the rates of medically serious DSH (e.g., overdose) closely mirror the completed suicide rates by country whereas non-suicidal DSH rates do not. Alternatively, it may be that some national rates of self-destructive behaviours only begin to differ from late teens onwards when such behaviours become more common. There is also a substantial number of young people (14.4%) who seriously think about self-harm but who do not do so.

We endeavoured to obtain a 'true' picture of the prevalence of DSH (i) by highlighting to respondents that we were an independent research team, (ii) by providing all respondents with an envelope in which to deposit and seal their completed questionnaire and, (iii) by ensuring that the respondents completed the items in the questionnaire in different orders (such counterbalancing precluded pupils 'checking' how their neighbour was responding). Despite endeavouring to include as many young people as possible from the target population in the survey (80% of the target sample took part), we cannot rule out the impact of absenteeism on the prevalence of DSH although it is known that self-harm is more common in those who truant (therefore adjusting for truancy would increase the 'true' prevalence rate for DSH).[30]

Consistent with similar studies in other countries[1,2, 24,] the results highlight the powerful effects of social influences and therefore the need to give careful attention to the management of self-harm in schools and in young people's lives more widely. For both sexes, self-harm by family and friends was strongly associated with self-harm. Although self-harm by friends did not emerge as a significant independent factor in males, this is possibly a statistical artefact, accounted for by the variance shared with the male group norms variable (group norms are defined as the beliefs, attitudes and behaviour of male respondents' friends and peers, in this case which suggest that DSH is desirable and a good thing).

Although we cannot infer causality from a cross-sectional survey, the findings highlight a number of key factors which are independently associated with DSH. Indeed, future research is urgently required to determine the mechanisms which link the social influence effects to DSH. Are these influences indicative of modelling or clustering effects, two phenomena widely reported in the research literature?[31-32]

Indeed, the familial intergenerational transmission of suicide risk is noted elsewhere.[33] Bullying and sexual orientation worries, consistent with work in other countries, also emerged as key correlates of DSH and their management requires urgent consideration for boys and girls.[34-35] Despite being associated with self-harm in both sexes in the univariate analyses, it is worth highlighting that impulsivity did not emerge as a risk factor in the multivariate analysis. This is of particular importance given that more than 50% of the sample (52.7%) reported that they had thought about self-harming less than one hour before doing so. Depression also did not emerge as an independent risk factor. This may be explained, in part, by the inclusion of optimism as post hoc analyses suggest that the latter partially mediates the relationship between depression and DSH. The motives for DSH reported by the young people merit comment. Consistent with the English findings[1], the most common motivation reported by Scottish adolescents was 'to get relief from a terrible state of mind' – highlighting that, for the most part, the common motives underpinning DSH are not predominantly manipulative in nature. Almost 1 in 4 young people reported that they wanted to die. Future interview-based research could usefully explore this motive further to determine whether such young people do, indeed, wish to end their lives.

This is one of the first studies to formally investigate the relationship between trait optimism and DSH. Trait optimism is broadly defined as exhibiting generalised positive expectancies for the future; optimists are characterised as having greater confidence in their ability to attain goals, better at identifying suitable goals and more tenacious with respect to goal pursuit.[13-14] Indeed, school-based interventions aimed at improving optimism ought to be evaluated to determine whether they protect against self-harm among females. In addition, the promotion of mental health, the

development (and evaluation) of emotional literacy programmes and initiatives which focus on responding to bullying, physical abuse, sexual orientation worries and interpersonal problems as well as managing anxiety may offer promise. The findings of this survey could also form the basis for screening programmes to aid teachers in the identification of those at risk.

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Table 1 Prevalence of self-harm (past year and lifetime) and serious thoughts of self-harm in the previous year

	No of respondents	(%) N	Odds ratio	95% CI
Past year prevalence of self-harm				
Males	917	5.1 (47)	1.00	
Females	1050	13.6 (143)	2.94	2.09-4.14
All*	1967	9.7 (190)		
Life-time prevalence of self-harm				
Males	917	6.9 (63)	1.00	
Females	1050	19.9 (209)	3.37	2.50-4.54
All*	1967	13.8 (272)		
Serious thoughts of self-harm in past year without doing so				
Males	913	8.5 (78)	1.00	
Females	1052	19.5 (205)	2.59	1.96-3.42
All*	1965	14.4 (283)		

*43 participants did not answer the self-harm questions and/or indicate sex

Table 2 Association of lifetime prevalence of self-harm with other 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	11	0 (0)	1.00			16	12.5 (2)	1.00		
Asian	71	13.0 (9)	.00	-	ns	33	9.1 (3)	.70	.11-4.67	ns
White	934	20.6 (192)	.00	-	ns	842	6.3 (53)	.47	.10-2.12	ns
Other	11	27.3 (3)	.00	-	ns	10	20.2 (2)	1.75	.21-14.93	ns
Living situation:										
Both parents	696	17.2 (120)	1.00			628	6.7 (42)	1.00		
One parent	217	24.0 (52)	1.51	1.05-2.19	<.05	190	6.3 (12)	.94	.49-1.83	ns
One parent and step parent	102	29.4 (30)	2.00	1.25-3.20	<.01	77	7.8 (6)	1.18	.48-2.87	ns
Other family member	25	20.0 (5)	1.20	.44-3.26	ns	14	14.3 (2)	2.33	.50-10.73	ns
Other	7	14.3 (1)	.80	.10-6.71	ns	5	20.0 (1)	3.49	.38-31.91	ns
Divorced parents*										
No	739	17.6 (130)	1.0			676	6.8 (46)	1.00		
Yes	309	25.6 (79)	1.61	1.17-2.21	<.005	234	6.4 (15)	.94	.51-1.71	ns
Smoking∓										
Never	804	13.1 (105)	1.00			774	4.4 (34)	1.00		
Given up	85	49.4 (42)	6.50	4.06-10.43	<.001	45	15.6 (7)	4.01	1.67-9.63	<.005
<=5	25	36.0 (9)	3.75	1.61-8.69	<.005	19	31.6 (6)	10.05	3.60-28.04	<.001

	N	% (n)	OR	CI	p	N	% (n)	OR	CI	p
6-20	65	35.4 (23)	3.65	2.11-6.31	<.001	29	24.1 (7)	6.93	2.77-17.33	<.001
21-50	48	41.7 (20)	4.76	2.59-8.75	<.001	19	5.3 (1)	1.21	.16-9.33	ns
50	21	47.6 (10)	6.05	2.51-14.60	<.001	27	22.2 (6)	6.22	2.33-16.41	<.001
Alcohol use ♮										
Never	376	12.2 (46)	1.00			368	3.8 (14)	1.00		
1	238	16.8 (40)	1.45	.92-2.29	ns	191	5.8 (11)	1.55	.69-3.47	ns
2-5	229	21.4 (49)	1.95	1.26-3.04	<.005	193	7.8 (15)	2.13	1.01-4.51	<.05
6-10	102	41.2 (42)	5.02	3.04-8.29	<.001	71	5.6 (4)	1.51	.48-4.73	ns
11-20	54	37.0 (20)	4.22	2.24-7.94	<.001	57	24.6 (14)	8.23	3.68-18.43	<.001
>20	37	29.7 (11)	3.04	1.41-6.52	<.005	33	15.2 (5)	4.52	1.52-13.45	<.01
No of times drunk ⚥										
Never	388	11.6 (45)	1.00			405	3.7 (15)	1.00		
Once	129	15.5 (20)	1.40	.79-2.47	ns	113	5.3 (6)	1.46	.55-3.85	ns
2 or 3	167	19.2 (32)	1.81	1.10-2.96	<.05	137	4.4 (6)	1.19	.45-3.13	ns
4-10	149	30.2 (45)	3.30	2.07-5.27	<.001	109	9.2 (10)	2.63	1.15-6.02	<.05
>10	212	31.1 (66)	3.45	2.25-5.27	<.001	147	17.0 (25)	5.33	2.72-10.43	<.001
Any drug use ⚥										
No	836	14.2 (119)	1.00			709	6.3 (45)	1.00		
Yes	214	42.1 (90)	4.37	3.14-6.11	<.001	208	8.7 (18)	1.40	.79-2.47	ns
Bullying in school*										
No	737	13.4 (99)	1.00			718	4.7 (34)	1.00		
Yes	311	35.4 (110)	3.53	2.58-4.83	<.001	195	14.9 (29)	3.52	2.08-5.93	<.001
Physical abuse*										
No	993	17.9 (178)	1.00			883	6.1 (54)	1.00		

	N	% (n)	OR	95% CI	p	N	% (n)	OR	95% CI	p
Yes	52	55.8 (29)	5.77	3.26-10.22	<.001	31	29.0 (9)	6.28	2.76-14.30	<.001
Sexual abuse*										
No	983	18.1 (178)	1.00			891	6.3 (56)	1.00		
Yes	66	47.0 (31)	4.01	2.41-6.67	<.001	21	33.3 (7)	7.46	2.89-19.22	<.001
Sexual orientation worries*										
No	987	17.7 (175)	1.00			870	5.4 (47)	1.00		
Yes	60	55.0 (33)	5.67	3.32-9.68	<.001	43	37.2 (16)	10.38	5.23-20.58	<.001
Trouble with Police*										
No	824	16.6 (137)	1.00			596	4.9 (29)	1.00		
Yes	225	32.0 (72)	2.36	1.69-3.30	<.001	315	10.8 (34)	2.37	1.41-3.96	<.001
Serious boy/girlfriend problems*										
No	787	13.3 (105)	1.00			736	4.9 (36)	1.00		
Yes	261	39.8 (104)	4.30	3.12-5.94	<.001	177	15.3 (27)	3.50	2.06-5.94	<.001
Self-harm by friends*										
No	660	9.7 (64)	1.00			771	4.3 (33)	1.00		
Yes	386	37.3 (144)	5.54	3.98-7.71	<.001	143	21.0 (30)	5.94	3.49-10.11	<.001
Self-harm by family*										
No	891	14.9 (13.3)	1.00			832	4.1 (34)	1.00		
Yes	157	48.4 (76)	5.35	3.72-7.69	<.001	79	36.7 (29)	13.61	7.68-24.12	<.001
Group norms#✗		Mean (SD)								
No history of DSH	841	4.68	1.00			854	4.43	1.00		

	N	Mean (SD)	OR	CI	p	N	Mean (SD)	OR	CI	p
		(1.85)					(1.48)			
History of DSH	209	5.78 (3.43)	1.19	1.11-1.27	<.001	63	6.33 (4.88)	1.27	1.16-1.38	<.001
Depression#		Mean (SD)								
No history of DSH	841	3.42 (2.64)	1.00			854	3.90 (2.94)	1.00		
History of DSH	209	5.23 (3.44)	1.22	1.16-1.28	<.001	63	6.19 (4.17)	1.20	1.13-1.29	<.001
Anxiety#		Mean (SD)								
No history of DSH	841	8.05 (3.79)	1.00			854	7.10 (3.57)	1.00		
History of DSH	209	11.33 (3.92)	1.23	1.18-1.29	<.001	63	10.43 (3.75)	1.25	1.17-1.33	<.001
Impulsivity#		Mean (SD)								
No history of DSH	841	8.15 (2.81)	1.00			854	8.06 (2.94)	1.00		
History of DSH	209	9.48 (3.18)	1.17	1.11-1.23	<.001	63	9.56 (3.13)	1.18	1.08-1.28	<.001
Self-esteem#		Mean (SD)								
No history of DSH	841	15.45 (3.62)	1.00			854	16.23 (3.51)	1.00		
History of DSH	209	12.80 (3.97)	.83	,80-.87	<.001	63	13.08 (4.39)	.81	.76-.86	<..001
Optimism#		Mean (SD)								

No history of DSH	841	19.55 (4.15)	1.00			854	19.84 (3.80)	1.00		
History of DSH	209	17.00 (4.28)	.87	.84-.90	<.001	63	17.63 (4.27)	.86	.81-.92	<.001
Social perfectionism#		Mean (SD)								
No history of DSH	841	25.28 (8.42)	1.00			854	26.80 (8.22)	1.00		
History of DSH	209	20.91 (9.37)	1.06	1.04-1.08	<.001	63	30.41 (7.86)	1.06	1.02-1.09	<.001

*Lifetime prevalence

╤Number of cigarettes smoked in a typical week

♮ Number of alcoholic drinks in typical week

≑Past year prevalence

#Odds ratio for 1 point increase in score. Higher scores indicate higher depression, anxiety, impulsivity, self-esteem, optimism & social perfectionism

╳Higher scores indicate more positive group norms for self-harm

Table 3 Multivariate logistic regression for lifetime prevalence of self-harm

	Females			Males		
	Odds ratio	**95% CI**	**P value**	**Odds ratio**	**95% CI**	**P value**
Smoking∓						
Never	1.00			1.00		
Given up	3.43	1.87-6.29	<.001	1.73	.52-5.72	ns
<=5	2.01	.74-5.47	ns	11.00	2.87-42.18	<.001
6-20	2.06	1.01-4.21	<.05	7.74	2.66-22.51	<.001
21-50	2.36	1.03-5.41	<.05	2.65	.32-21.97	ns
>50	1.56	.43-5.70	ns	3.40	.96-12.02	ns
Drug use*						
No	1.00					
Yes	1.95	1.19-3.18	<.01			
Bullying in school*						
No	1.00			1.00		
Yes	3.09	2.06-4.64	<.001	2.18	1.11-4.28	<.05
Physical abuse*						
No	1.00					
Yes	2.15	1.02-4.53	<.05			
Sexual orientation worries*						
No	1.00			1.00		
Yes	2.57	1.28-5.20	<.01	3.82	1.53-9.50	<.005
Serious boy/girlfriend problems*						
No	1.00					
Yes	2.30	1.53-3.46	<.001			
Self-harm by friends*						
No	1.00					
Yes	2.89	1.94-4.29	<.001			

Self-harm by family*						
No	1.00			1.00		
Yes	2.19	1.38-3.47	<.001	8.85	4.38-17.90	<.001
Group norms# ✂				1.15	1.04-1.28	<.01
Optimism#	.93	.88-.97	<.005			
Anxiety#	1.13	1.06-1.19	<.001	1.17	1.07-1.27	<.001

*Lifetime prevalence

⏚Number of cigarettes smoked in a typical week

⇌Past year prevalence

#Odds ratio for 1 point increase in score. Higher scores indicate higher depression, anxiety, impulsivity, self-esteem, optimism & social perfectionism

✂Higher scores indicate more positive group norms for self-harm