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Research

Prevalence of deliberate self harm and attempted suicide within contemporary Goth youth subculture: longitudinal cohort study

Robert Young, Helen Sweeting, Patrick West

Abstract

Objective To investigate whether deliberate self harm is associated with contemporary Goth youth subculture.
Design Longitudinal cohort study.
Setting School and community based study of young people living in the Central Clydeside Conurbation, Scotland.
Participants 1258 people aged 19, surveyed in 2002-4 and followed-up since age 11 (1994).
Main outcome measures Lifetime prevalence of self harm and attempted suicide and their association with Goth youth subculture, before and after adjusting for confounders.
Results Identification as belonging to the Goth subculture was strongly associated with lifetime self harm and attempted suicide, with a prevalence of 53% and 47%, respectively among the most highly identified group, and evidence for a dose-response relation. Adjusting for potential confounders did not significantly attenuate this association. Analysis of other youth subcultures showed that this effect was primarily associated with Goth subculture.
Conclusions Identification as belonging to the Goth subculture was the best predictor of self harm and attempted suicide. Although based on small numbers, additional longitudinal analysis suggests both selection and modelling mechanisms are involved, selection mechanisms possibly being more likely.

Introduction

Deliberate self harm is relatively common among young people, with rates of 7%-14% in the United Kingdom.[1 2] Common acts of self harm include cutting, burning, and punching, usually resulting in relatively minor injury; rarer, more serious, acts include self poisoning.

Self harm is understood to be a maladaptive coping strategy intended to relieve negative emotions such as anger, anxiety, frustration, or guilt. It is usually unrelated to an immediate suicide attempt. Knowledge about risk factors is limited, but previous research has implicated peer modelling and depression.[1 2] Self harm is related to later risk of suicide and psychiatric disorder and has a high prevalence among certain subpopulations, notably prisoners and homosexual and bisexual people.[1–3] The media have linked contemporary Goth youth subculture with self harm,[4] but evidence for this is sparse. "Goth" could be described as a subgenre of punk with a dark and sinister aesthetic, with aficionados conspicuous by their range of distinctive clothing and makeup and tastes in music.[4 5] We investigated whether identification with Goth is associated with self harm.

Methods

We collected data on participants at age 19 through the west of Scotland 11-16 study, a longitudinal survey of health and lifestyles.[6 7] Respondents were recruited during their final year (1994) of primary school (age 11, n=2586) and resurveyed at ages 13, 15, and 19 (2002-4, n=1258). As weights to adjust for attrition bias did not alter the results we report unweighted data. For youths aged 15 and 19 we used a computerised version of the diagnostic interview schedule for children (Voice-DISC)[6] to collect data on psychiatric diagnosis, including a question on suicide attempts.

Table 1 Personal characteristics of 1258 youth by identification as belonging to the Goth youth subculture. Values are numbers (percentages) unless stated otherwise

Characteristic	None (n=1165)*	Just a bit (n=37)	Quite a bit (n=41)	Really heavily or I am one (n=15)
Sex:				
Male	580 (50)	26 (70)	24 (59)	10 (67)
Female	585 (50)	11 (30)	17 (42)	5 (33)
Social class:				
Manual	543 (47)	14 (38)	20 (49)	7 (47)
Non-manual	561 (48)	21 (57)	21 (51)	8 (53)
Unclassifiable	61 (5)	2 (5)	0	0
Divorced or separated parents:				
No	963 (83)	34 (92)	31 (76)	13 (87)
Yes	202 (17)	3 (8)	10 (24)	2 (13)
Smoking:				
Non-smoker	832 (72)	22 (60)	28 (68)	8 (53)
Smoker (regular or occasional)	332 (29)	15 (41)	13 (32)	7 (47)
Any drug use:				
No	527 (45)	14 (38)	16 (39)	2 (13)
Yes	638 (55)	23 (62)	25 (61)	13 (87)
Alcohol use:				
Never	83 (7)	3 (8)	2 (5)	0
A few times a year	213 (18)	6 (16)	8 (20)	5 (33)
Once a week	327 (28)	9 (24)	13 (32)	2 (13)
Couple of times a week	475 (42)	17 (46)	16 (39)	6 (40)
Every or most days	67 (6)	2 (5)	2 (5)	2 (13)
Mean (SD) depression†	19.01 (4.1)	19.18 (4.5)	19.88 (4.2)	20.44 (4.4)

Denominators vary by up to seven cases owing to missing data.
*One participant who did not give identification is classed as "none" on basis of music preference.
†Seven cases omitted due owing to missing data.

Additional tables are on bmj.com

Table 2 Associations of deliberate self harm and suicide attempt with current Goth identification and other variables

Variable	Lifetime deliberate self harm by any method (n=1258)*†			Lifetime deliberate self harm by cutting, scratching, or scoring (n=1258)*†			Lifetime suicide attempt (n=1255)†		
	No (%) who self harm	Unadjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)‡	No (%) who self harm	Unadjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)‡	No (%) who self harm	Unadjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)‡
Current identification§:									
None	67/1165 (6)	1.00	1.00	36/1165 (3)	1.00	1.00	63/1162 (5)	1.00	1.00
Just a bit	7/37 (19)	3.82 (1.62 to 9.03)	3.81 (1.47 to 9.88)	3/37 (8)	2.77 (0.81 to 9.43)	3.84 (1.06 to 13.98)	3/37 (8)	1.54 (0.46 to 5.15)	1.44 (0.33 to 6.35)
Quite a bit	7/41 (17)	3.37 (1.44 to 7.89)	3.13 (1.24 to 7.88)	6/41 (15)	5.38 (2.13 to 13.59)	5.55 (1.97 to 15.67)	7/41 (17)	3.59 (1.53 to 8.42)	3.59 (1.40 to 9.23)
Really heavily or I am one	8/15 (53)	18.73 (6.59 to 53.20)	16.35 (5.06 to 52.91)	7/15 (47)	27.44 (9.44 to 79.78)	24.75 (6.91 to 88.66)	7/15 (47)	15.26 (5.36 to 43.43)	16.37 (4.93 to 54.35)
Sex:									
Male	37/640 (6)	1.00	1.00	17/640 (3)	1.00	1.00	25/639 (4)	1.00	1.00
Female	52/618 (8)	1.50 (0.97 to 2.32)	1.42 (0.85 to 2.39)	35/618 (6)	2.20 (1.22 to 3.97)	2.43 (1.19 to 4.94)	55/616 (4)	2.41 (1.48 to 3.92)	2.50 (1.42 to 4.41)
Social class:									
Manual	39/584 (7)	1.00	1.00	20/584 (3)	1.00	1.00	40/582 (7)	1.00	1.00
Non-manual	45/611 (7)	1.20 (0.46 to 3.18)	1.28 (0.78 to 2.08)	30/611 (10)	0.92 (0.21 to 4.05)	1.15 (0.25 to 5.40)	34/610 (6)	0.80 (0.50 to 1.28)	1.18 (0.42 to 3.29)
Unclassifiable	5/63 (8)	1.11 (0.71 to 1.73)	1.10 (0.36 to 3.38)	2/63 (3)	1.46 (0.82 to 2.59)	1.63 (0.85 to 3.10)	6/63 (10)	1.43 (0.58 to 3.51)	0.91 (0.54 to 1.53)
Divorced or separated parents:									
No	64/1041 (6)	1.00	1.00	38/1041 (4)	1.00	1.00	51/1039 (5)	1.00	1.00
Yes	25/217 (12)	1.99 (1.22 to 3.24)	1.74 (1.01 to 3.02)	14/217 (7)	1.82 (0.97 to 3.42)	1.46 (0.70 to 3.06)	29/216 (13)	3.00 (1.86 to 4.86)	2.45 (1.43 to 4.20)
Smoking:									
Non-smoker	38/890 (4)	1.00	1.00	23/890 (3)	1.00	1.00	36/887 (4)	1.00	1.00
Smoker (regular, occasional)	51/367 (14)	3.62 (2.33 to 5.62)	2.45 (1.47 to 4.07)	29/367 (8)	3.23 (1.84 to 5.67)	1.82 (0.95 to 3.51)	44/367 (12)	3.22 (2.04 to 5.09)	1.93 (1.13 to 3.29)
Any drug use:									
No	19/699 (3)	1.00	1.00	7/699 (1)	1.00	1.00	18/698 (3)	1.00	1.00
Yes	70/559 (10)	3.16 (1.88 to 5.32)	2.04 (1.11 to 3.76)	45/559 (6)	5.43 (2.43 to 12.13)	3.71 (1.50 to 9.17)	62/557 (9)	2.92 (1.71 to 5.00)	2.11 (1.12 to 3.98)
Alcohol use:									
Never	5/88 (6)	1.00	1.00	3/88 (3)	1.00	1.00	5/87 (6)	1.00	1.00
Few times a year	19/232 (8)	1.48 (0.54 to 4.10)	1.15 (0.39 to 3.43)	10/232 (4)	1.28 (0.34 to 4.75)	0.79 (0.19 to 3.30)	18/231 (8)	1.39 (0.50 to 3.86)	0.81 (0.27 to 2.44)
Once a week	18/351 (5)	0.90 (0.32 to 2.49)	0.75 (0.25 to 2.22)	9/351 (3)	0.75 (0.20 to 2.81)	0.52 (0.12 to 2.17)	17/350 (9)	0.84 (0.30 to 2.34)	0.55 (0.18 to 1.64)
Couple of times a week	40/514 (8)	1.40 (0.54 to 3.65)	1.11 (0.39 to 3.13)	25/514 (5)	1.45 (0.43 to 4.90)	0.99 (0.26 to 3.81)	33/514 (6)	1.13 (0.43 to 2.97)	0.77 (0.27 to 2.21)
Every or most days	7/73 (10)	1.76 (0.53 to 5.80)	1.05 (0.28 to 4.00)	5/73 (7)	2.08 (0.48 to 9.03)	1.41 (0.28 to 7.14)	7/73 (10)	1.74 (0.53 to 5.73)	1.06 (0.28 to 4.06)
Mean (SD) depression	19.06 (4.1)	1.15 (1.09 to 1.21)	1.13 (1.07 to 1.20)	19.06 (4.1)	1.18 (1.11 to 1.26)	1.16 (1.08 to 1.25)	19.06 (4.1)	1.12 (1.07 to 1.18)	1.08 (1.02 to 1.15)

*Age participants first began to self harm: mean (SD) 15.6 (2.3) years (range 8-19 years).
†20 participants self harmed in past year, two attempted suicide in past month.
‡Seven cases omitted in adjusted model owing to missing data.
§One participant who did not give identification is classed as "none" on basis of music preference.

At age 19, during the Voice-DISC, participants were asked "have you ever in your whole life, tried to kill yourself or make a suicide attempt?" One section of the survey interview asked "have you ever tried to hurt yourself or harm yourself deliberately," the methods used, and age at first act of self harm. Self harm was coded as any method and methods involving cutting, scratching, or scoring. In a separate section participants were also asked at what age and how much they identified (present and past) with a variety of youth subcultures, including Goth, on a five point scale. The two most extreme categories were collapsed and comprise the most highly identified group. We focus on current and lifetime peak (defined as highest current or past) identification.

We used logistic regression, with lifetime self harm and lifetime suicide attempt as outcomes, adjusted for sex, social class of head of household (coded, non-manual, manual, or unclassifiable according to the registrar general's schema of occupational social class),[7 8] lifetime parental separation or divorce, substance use (smoking, any drug, alcohol), and the highest score on a depression scale administered at ages 11, 13, and 15.[9]

Results

Table 1 shows the characteristics of the sample according to level of Goth identification. No differences were found by social class, parental separation, rates of smoking, alcohol use, or previous depression, but males were more likely to identify with Goths (Pearson χ^2 test, 8.582, df = 3, P = 0.035), and rates of drug use were slightly higher among those who were most highly identified (Pearson χ^2 test, 7.318, df = 3, P = 0.062).

Table 3 Association of lifetime deliberate self harm by any method, with current subculture identification before and after adjusting for Goth identification. Values are adjusted odds ratios (95% confidence intervals) unless stated otherwise

Current identification (heavy or I am one)†‡	No (%) who self harm	Model 1 (n=1258)*	Model 2 (n=1258)*	
		According to subcultural identification	According to subcultural identification§	According to Goth identification¶
Goth	8/15 (53)	14.16 (4.42 to 45.39)	—	—
Punk	4/17 (24.5)	4.42 (1.28 to 15.33)	2.08 (0.50 to 8.61)	9.84 (2.77 to 34.97)
Heavy metal	9/48 (19)	3.58 (1.51 to 8.51)	1.90 (0.68 to 5.33)	12.00 (3.55 to 40.56)
Mosher	4/24 (17)	3.49 (1.08 to 11.27)	1.75 (0.45 to 6.83)	13.31 (4.05 to 43.74)
Nu-metal	2/12 (17)	3.04 (0.57 to 16.06)	1.56 (0.25 to 9.78)	14.86 (4.62 to 47.78)
Skater	3/16 (19)	2.79 (0.71 to 10.93)	3.26 (0.83 to 12.80)	13.46 (4.15 to 43.62)
Grunge	3/24 (13)	2.07 (0.57 to 7.56)	1.49 (0.37 to 6.04)	13.81 (4.30 to 44.37)
Retro	10/101 (10)	1.34 (0.64 to 2.81)	1.24 (0.58 to 2.66)	16.03 (4.81 to 53.44)
Indie	4/104 (0.3)	0.49 (0.17 to 1.42)	0.42 (0.14 to 1.26)	14.39 (4.48 to 46.21)
Rave	3/27 (11)	1.39 (0.39 to 4.93)	1.54 (0.43 to 5.49)	14.40 (4.49 to 46.15)
Club	14/127 (11)	1.40 (0.74 to 2.67)	1.47 (0.77 to 2.80)	12.37 (3.79 to 40.38)
Garage	4/16 (25)	4.31 (1.18 to 15.71)	2.90 (0.71 to 11.76)	14.17 (4.42 to 45.43)
Hip-hop	7/97 (17)	1.04 (0.45 to 2.40)	0.96 (0.40 to 2.32)	14.15 (4.41 to 45.41)
Pop	11/159 (7)	0.88 (0.44 to 1.78)	0.91 (0.45 to 1.83)	14.59 (4.55 to 46.75)
Other	5/33 (15)	1.69 (0.59 to 4.85)	1.89 (0.66 to 5.43)	20.92 (5.93 to 73.85)

*Adjusted for sex, social class, divorced or separated parents, smoking, ever use of drugs, alcohol use, and depression.
†Dichotomisation of subcultural identity was implemented solely to simplify and condense results. Analyses carried out using previous four point identity scale produced virtually identical results.
‡Because of extremely low (≤10 cases) frequencies, several youth subcultures were excluded (skinhead, breakers, mods, hippy).
§After adjusting for Goth identification.
¶After adjusting for subcultural identification.

Table 2 shows the results for lifetime rates of self harm (any method); self harm from cutting, scratching or scoring; and attempted suicide (rates for overall sample: 7.1%, 4.1%, and 6.4%). Lifetime self harm (any method) and lifetime suicide attempt were highly correlated ($r=0.59$).

Current Goth identification was strongly associated with lifetime prevalence of self harm and attempted suicide, with a prevalence of 53% for self harm (any method); 47% for self harm involving cutting, scratching, or scoring; and 47% for lifetime suicide attempt among the most highly identified, and evidence suggesting a dose-response relation. Predictors of self harm and suicide attempt were being female, having divorced or separated parents, smoking and any drug (not alcohol) use, and prior depression. Adjusting for these factors did not attenuate the Goth identification effect, which remained the single strongest predictor of either self harm or suicide attempt (table 2). Lifetime identification produced similar results (see table A on bmj.com).

Of 25 participants with a high identification (at some point in their lifetime) with the Goth subculture, 12 had harmed themselves; five before identification as Goth, two after, and four at about the same time (one participant had poor recall).

To determine how specific this identification effect was to Goth, as opposed to a general effect attributable to any other subculture, we carried out a series of additional analyses substituting Goth identification with 14 other common youth subcultures (table 3). Model 1 shows the association (odds) between each of the subcultures (dichotomised as "heavy" or "I am one," compared with "none," "just," or "quite a bit") and lifetime self harm, after adjusting for confounders. Although some other subcultures were also associated with self harm (Punk, odds ratio 4.42, 95% confidence interval 1.28 to 15.33; Mosher, 3.49, 1.08 to 11.27), the association was strongest for Goth (14.16, 4.42 to 45.39). Goth identification remained the only subculture which significantly predicted self harm after adjusting for other subcultures (model 2, table 3). Results were similar for self harm involving cutting, scratching, or scoring and for lifetime suicide attempt (see tables B and C on bmj.com).

What is already known on this topic

Deliberate self harm is common among young people

It has a high prevalence in certain subpopulations and may be associated with depression, attempted suicide, and various psychiatric diagnoses later in life

What this study adds

The prevalence of both lifetime deliberate self harm and attempted suicide is high within Goth youth subculture

The causal mechanism remains unclear

Discussion

Identification by youth aged 19 as belonging to the Goth subculture was the best predictor of self harm and suicide attempt. This effect was not attenuated by adjusting for identification with any other youth subculture. Self harm could be a normative component of Goth subculture including emulation of subcultural icons or peers who self harm (modelling mechanisms). Alternatively, it could be explained by selection, with young people with a particular propensity to self harm being attracted to the subculture.

Although our study is based on small numbers, our data suggest that both processes are involved, with selection mechanisms possibly being more likely. Replication in alternative locations is needed to determine if this is widespread or localised, and a persistent or transient phenomenon.

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MRC Social and Public Health Sciences Unit, University of Glasgow, Glasgow G12 8RZ
Robert Young *research associate*
Helen Sweeting *research scientist*
Patrick West *senior research scientist*
Correspondence to: R Young robert@msoc.mrc.gla.ac.uk