20th May 2022

Recent evidence on self-harm from the Multicentre Study of Self-harm in England

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Overview

Building data and evidence - the work of the Multicentre Study of Self-Harm

The Multicentre Study of Self-Harm was founded nearly 20 years ago to provide ongoing information, evidence and data on important aspects of self-harm. Using reliable and representative data from well-established general hospital self-harm monitoring systems in Oxford, Manchester and Derby, the Multicentre conduct studies on the epidemiology, causes, clinical management, trends and prevention of self-harm. This research greatly contributes to the National Suicide Prevention Strategy, as well as national and local initiatives that reduce self-harm and suicide as far as possible.

Preventing suicide in England: Fifth progress report of the cross-government outcomes strategy to save lives, Page 17

- What is the Multicentre Study?
- Basics of self-harm
- Recent publications:
  - People experiencing homelessness
  - Children and adolescents from ethnic minority groups
  - Suicide following self-harm

The Multicentre Study of Self-harm in England

What is the Multicentre Study?

Running since 2000, a collaboration between 3 high-quality self-harm monitoring projects based in:

UNIVERSITY OF OXFORD
CENTRE FOR SUICIDE RESEARCH

Oxford

MANCHESTER 1824

Manchester

NHS
Derbyshire Healthcare
NHS Foundation Trust

Derby

Funded by DoHSC

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The Multicentre Study of Self-harm in England

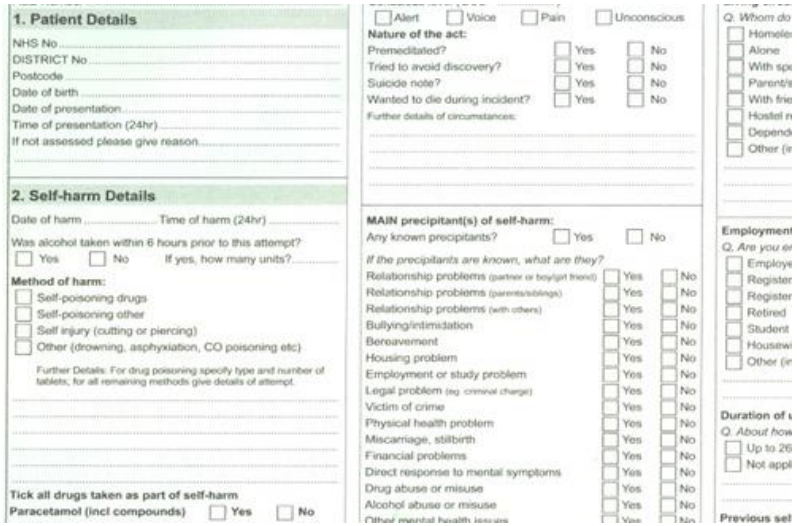
- Methodology
  - Emergency Department records (core data)

    identifiable data, age, gender, time and date of presentation and method of harm.

  - Assessments (further detailed data)

    previous self-harm, previous or current psychiatric care, problems related to self-harm, drug or alcohol use.

- Mortality follow-up via NHS Digital



1. Patient Details

NHS No
DISTRICT No
Postcode
Date of birth
Date of presentation
Time of presentation (24hr)
If not assessed please give reason

2. Self-harm Details

Date of harm ..... Time of harm (24hr) .....
Was alcohol taken within 6 hours prior to this attempt?
☐ Yes ☐ No If yes, how many units?
Method of harm:
☐ Self-poisoning drugs
☐ Self-poisoning other
☐ Self injury (cutting or piercing)
☐ Other (drowning, asphyxiation, CO poisoning etc)
Further Details: For drug poisoning specify type and number of tablets, for all remaining methods give details of attempt.
Tick all drugs taken as part of self-harm
Paracetamol (incl compounds) ☐ Yes ☐ No

☐ Alert ☐ Voice ☐ Pain ☐ Unconscious
Nature of the act:
Premeditated? ☐ Yes ☐ No
Tried to avoid discovery? ☐ Yes ☐ No
Suicide note? ☐ Yes ☐ No
Wanted to die during incident? ☐ Yes ☐ No
Further details of circumstances:

MAIN precipitant(s) of self-harm:
Any known precipitants? ☐ Yes ☐ No
If the precipitants are known, what are they?
Relationship problems (partner or boy/girl friend) ☐ Yes ☐ No
Relationship problems (parents/siblings) ☐ Yes ☐ No
Relationship problems (with others) ☐ Yes ☐ No
Bullying/intimidation ☐ Yes ☐ No
Bereavement ☐ Yes ☐ No
Housing problem ☐ Yes ☐ No
Employment or study problem ☐ Yes ☐ No
Legal problem (eg. criminal charge) ☐ Yes ☐ No
Victim of crime ☐ Yes ☐ No
Physical health problem ☐ Yes ☐ No
Miscarriage, stillbirth ☐ Yes ☐ No
Financial problems ☐ Yes ☐ No
Direct response to mental symptoms ☐ Yes ☐ No
Drug abuse or misuse ☐ Yes ☐ No
Alcohol abuse or misuse ☐ Yes ☐ No

Q. Whom do
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☐ With sp
☐ Parent/s
☐ With frie
☐ Hostel n
☐ Depend
☐ Other (i
Employment
Q. Are you e
☐ Employe
☐ Register
☐ Register
☐ Retired
☐ Student
☐ Housew
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Previous sel

Overview of self-harm

FACTS AND FIGURES

20th May 2022

Overview of self-harm: facts and figures

- Definition: Any self-poisoning or self-injury irrespective of apparent motivation or suicidal intent.
- Over 200,000 hospital presentations for self-harm each year
- Costs estimated to be in excess of £162 million per year to NHS
- Distress and other impacts on the individual, family and friends

Overview of self-harm: facts and figures

HM Government

Preventing suicide in England: Fifth progress report of the cross-government outcomes strategy to save lives

Published 27 March 2021

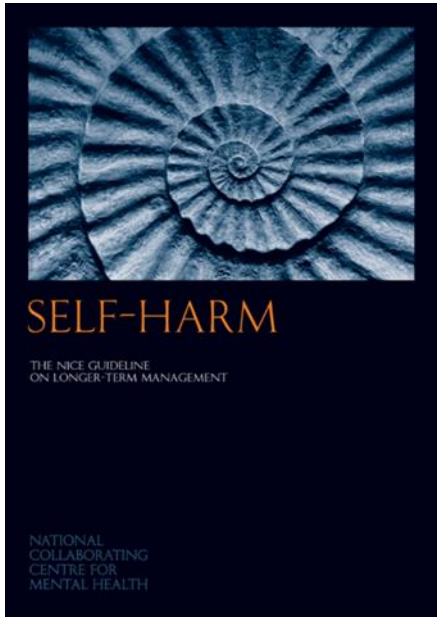
People who self-harm

2.4 Each year, there are an estimated 200,000 hospital attendances for self-harm[1], and evidence suggests that around 50% of people who die by suicide have previously self-harmed.

2.5 This risk of suicide is particularly heightened in the first year after self-harm, especially the first month. It is important to note that the majority of self-harm occurs in the community and does not lead to hospital attendance- skewing the figures set out above. Rates of self-harm in the community have risen since 2000, especially in young people.[2]

- People who attend hospital for self-harm over 50 times more likely to go on to die by suicide compared to people in the general population
- People with a history of self-harm recognized as a key group in Suicide Prevention Strategy for England

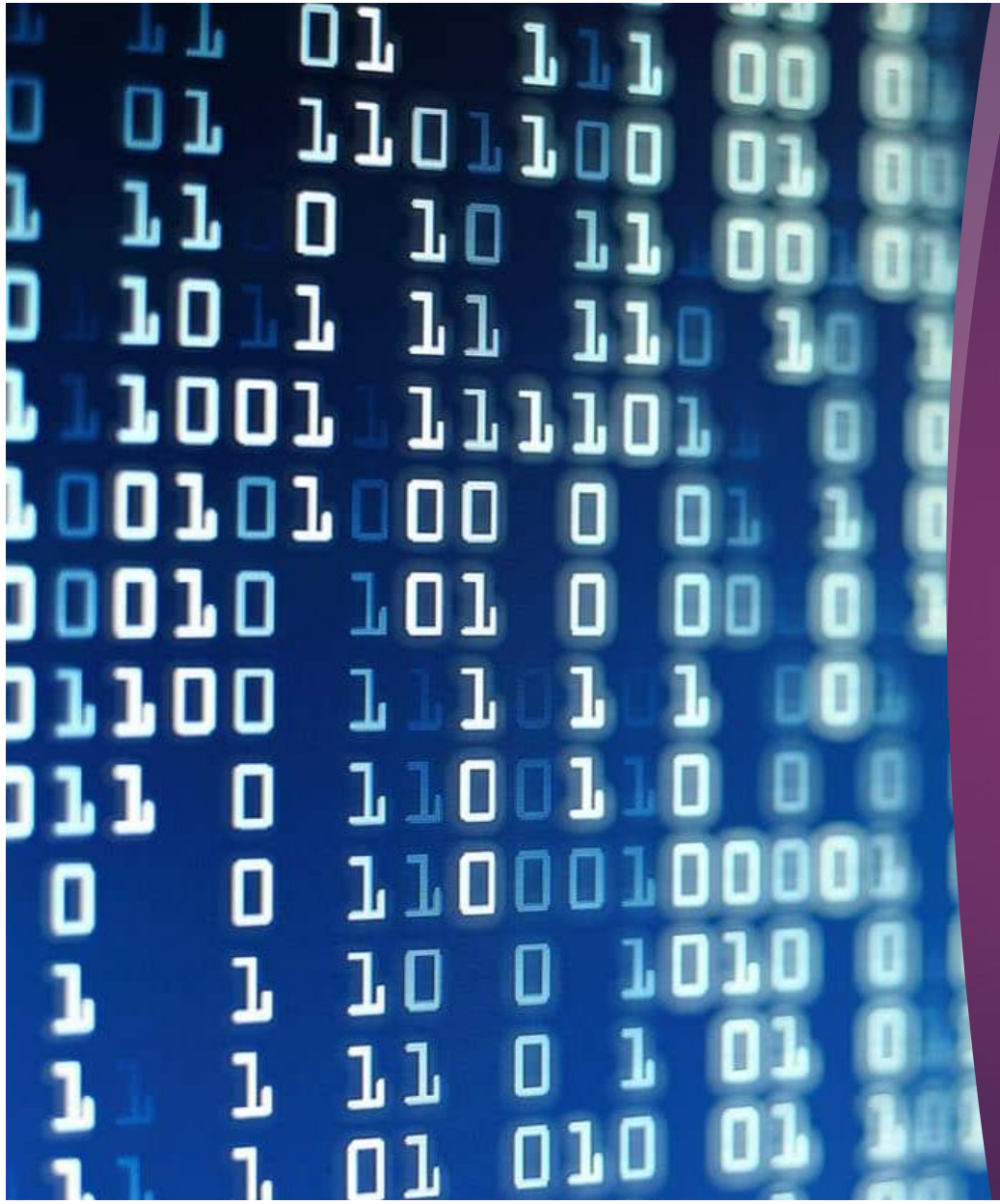
Overview of self-harm: facts and figures



- Psychosocial assessments can help reduce repetition
- NICE Guidelines recommend all people who attend ED for self-harm receive a psychosocial assessment
- Quality of the psychosocial assessment is key to benefit

NICE quality standards for self-harm 2013

1. People are treated with compassion, respect and dignity
2. They receive an initial assessment of physical health, mental state, social circumstances and risk of suicide.
3. They receive a comprehensive psychosocial assessment
4. They receive the monitoring they need to keep them safe
5. They are cared for in a safe physical environment
6. Collaborative risk management plan are in place.
7. They have access to psychological interventions.
8. There is a transition plan when moving between services.



Recent work on self-harm

USING DATA FROM THE MULTICENTRE STUDY OF SELF-HARM IN ENGLAND.

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Self-harm in people experiencing homelessness (2022).

Clements et al, 2022. BJPsych Open doi: 10.1192/bjo.2022.30

- People who are homeless are thought to be at high risk for self-harm and suicide, but evidence is unclear
- Looked at:
  - Characteristics
  - Repetition and mortality.
- Broad definition of homelessness to capture people staying with friends/family

BJPsych Open (2022)
8, e74, 1–8. doi: 10.1192/bjo.2022.30

Self-harm in people experiencing homelessness: investigation of incidence, characteristics and outcomes using data from the Multicentre Study of Self-Harm in England

Caroline Clements, Bushra Farooq, Keith Hawton, Galit Geulayov, Deborah Casey, Keith Waters, Jennifer Ness, Anita Patel, Ellen Townsend, Louis Appleby and Navneet Kapur

Background
People who experience homelessness are thought to be at high risk of suicide, but little is known about self-harm in this population.

Aims
To examine characteristics and outcomes in people experiencing homelessness who presented to hospital following self-harm.

Method
Data were collected via specialist assessments and/or hospital patient records from emergency departments in Manchester, Oxford and Derby, UK. Data were collected from 1 January 2000 to 31 December 2016, with mortality follow-up via data linkage with NHS Digital to 31 December 2019. Trend tests estimated change in self-harm over time; descriptive statistics described characteristics associated with self-harm. Twelve-month repetition and long-term mortality were analysed using Cox proportional hazards models and controlled for age and gender.

Results
There were 4841 self-harm presentations by 3270 people identified as homeless during the study period. Presentations increased after 2010 (IRR = 1.09, 95% CI 1.04–1.14, $P < 0.001$), and contact with psychiatric services. Risk of repetition was higher than in domiciled people (HR = 2.05, 95% CI 1.94–2.17, $P < 0.001$), as were all-cause mortality (HR = 1.45, 95% CI 1.32–1.59, $P < 0.001$) and mortality due to accidental causes (HR = 2.93, 95% CI 2.41–3.57, $P < 0.001$).

Conclusions
People who self-harm and experience homelessness have more complex needs and worse outcomes than those who are domiciled. Emergency department contact presents an opportunity to engage people experiencing homelessness with mental health, drug and alcohol, medical and housing services, as well as other sources of support.

Keywords
Self-harm; homelessness; emergency department; epidemiology; suicide.

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Self-harm in people experiencing homelessness (2022).

Clements et al, 2022. BJPsych Open doi: 10.1192/bjo.2022.30

Table 1 Demographic profile of people experiencing homelessness and people who were domiciled who attended the emergency department following self-harm between 2000 and 2016[a]

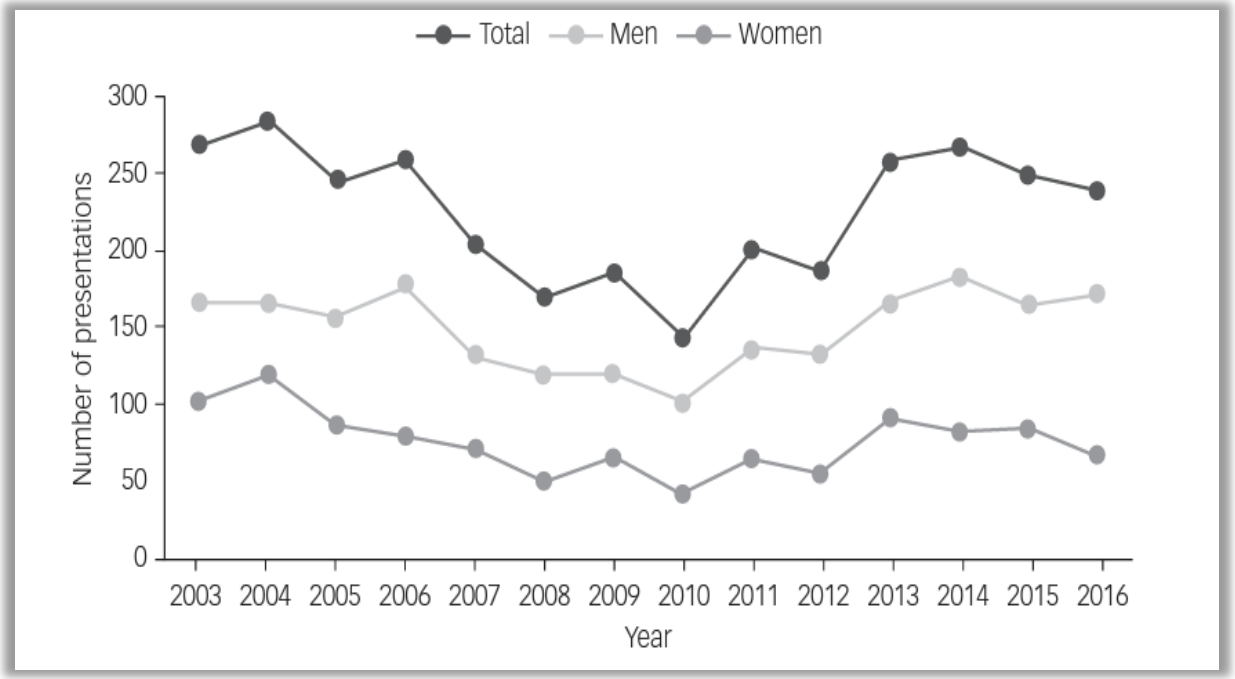
Demographics	Homeless (n = 3273), n (valid %)[b]	Domiciled (n = 54 312), n (valid %)[b]	χ^2 (d.f.), P
Male	2126 (65.0)	23 051 (42.5)	637.6 (1), <0.001
Female	1144 (35.0)	31 238 (57.5)	
Ethnicity			
White	2597 (90.8)	37 999 (87.9)	33.2 (3), <0.001
Black	57 (2.0)	1217 (2.8)	
South Asian	80 (2.8)	2097 (4.9)	
Other[c]	125 (4.4)	1935 (4.5)	
Age group			
16–24 years	1119 (34.4)	20 004 (37.4)	110.2 (3), <0.001
25–34 years	907 (27.9)	12 823 (23.9)	
35–54 years	1114 (34.3)	16 718 (31.2)	
≥55 years	111 (3.4)	4084 (7.6)	
Research site			
Manchester	2194 (67.0)	28 197 (51.9)	326.4 (1), <0.001
Oxford	650 (19.9)	12 563 (23.1)	
Derby	429 (13.1)	13 552 (25.0)	

a. Data are for 2000–2014 in one study site.
b. Only data on individuals with a valid (yes/no) response for the variable being assessed were included in each analysis.

- There were 4841 self-harm presentations by 3270 people identified as homeless (4.5% of full database)
- People who SH and experienced homelessness were more often;
  - Men
  - White
  - Aged under 54 years
  - History of previous self-harm
  - Contact with psychiatric services

Self-harm in people experiencing homelessness (2022).

Clements et al, 2022. BJPsych Open doi: 10.1192/bjo.2022.30



- Presentations increased after 2010 (IRR = 1.09, 95% CI 1.04–1.14, P<0.001)
- Risk of repetition was higher than in domiciled people (HR=2.05, 95% CI 1.94–2.17, P<0.001)
- All-cause mortality was higher (HR = 1.45, 95% CI 1.32–1.59. P<0.001)
- Mortality due to accidental causes was higher (HR=2.93, 95% CI 2.41–3.57, P<0.001).
- No difference in death attributed to suicide

Self-harm in children and young people by ethnic group (2021).

Farooq et al, 2021. Lancet Child and Adolescent Health doi: 10.1016/S2352-4642(21)00239-X

- Studies report an increasing incidence of self-harm in children and adolescents. Is this seen in different ethnic groups?
- Children and adolescents aged 10–19 years
- Investigated:
  - Rates of emergency department presentations for self-harm by ethnicity
  - Demographic and clinical characteristics
  - Repetition

Articles

Self-harm in children and adolescents by ethnic group: an observational cohort study from the Multicentre Study of Self-Harm in England

Bushra Farooq, Caroline Clements, Keith Hawton, Galit Geulayov, Deborah Casey, Keith Waters, Jennifer Ness, Anita Patel, Samantha Kelly, Ellen Townsend, Louis Appleby, Nav Kapur

Lancet Child Adolesc Health 2021; 5: 782–91

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Centre for Mental Health and Safety, School of Health Sciences, Manchester Academic Health Science Centre, The University of Manchester, Manchester, UK (B Farooq MSc, C Clements PhD, Prof L Appleby FRCPsych, Prof N Kapur FRCPsych)

Summary

Background Studies report an increasing incidence of self-harm in children and adolescents, but the extent to which this is seen in different ethnic groups is unclear. We aimed to investigate rates of emergency department presentations for self-harm in children and adolescents by ethnicity, as well as to examine their demographic characteristics, clinical characteristics, and outcomes.

Methods In this observational cohort study, we used data on hospital emergency department presentations for self-harm in children and adolescents aged 10–19 years between 2000 and 2016 from the Multicentre Study of Self-harm in England. This study collects data from five general hospitals in Manchester, Oxford, and Derby in the UK, and defines self-harm as any act of intentional self-injury or self-poisoning, regardless of intent. All children and adolescents aged 10–19 years for whom ethnicity data were available were included. Mortality follow-up was available through linkage with mortality records from the Office for National Statistics. Rates of self-harm over time, demographic and clinical characteristics, and self-harm methods were investigated by ethnic group. Risk of repeat self-harm and mortality following an initial presentation for self-harm was compared by ethnic group using

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Self-harm in children and young people by ethnic group (2021).

Farooq et al, 2021. Lancet Child and Adolescent Health doi: 10.1016/S2352-4642(21)00239-X

- Key results:
  - Rates per 100,000: 574 White, 225 Black, 260 South Asian, and 344 'Other' ethnicity
  - Rates Increased from 2009 in all ethnicities
  - Increases higher in Black (IRR 1·07 [1·03–1·11]), South Asian (1·05 [1·01–1·09]), and 'Other' ethnic groups (1·11 [1·06–1·16])

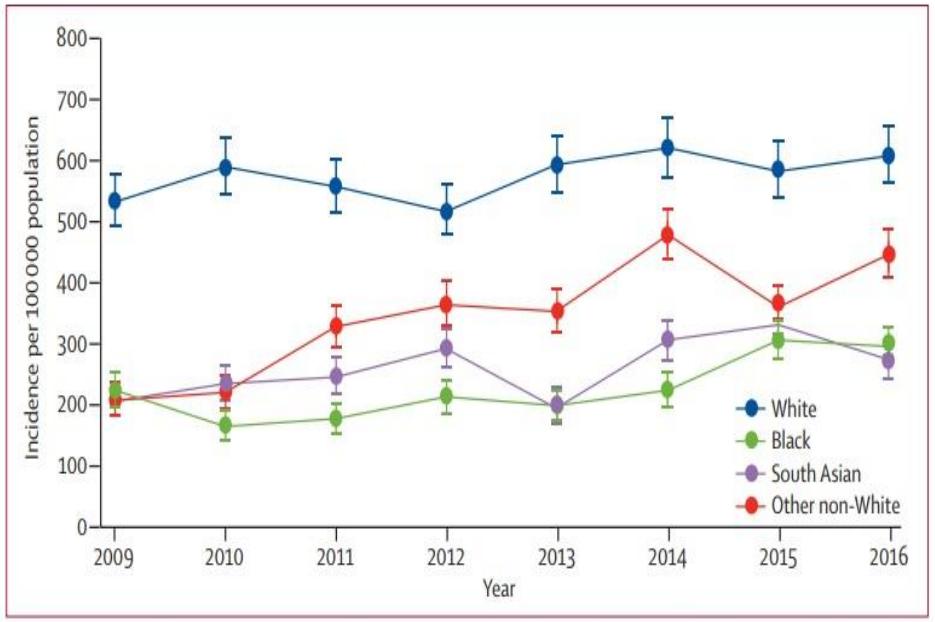


Figure 1: Self-harm per 100 000 population in White, Black, South Asian, and other non-White young people aged 10–19 years, 2000–16

Self-harm in children and young people by ethnic group (2021).

Farooq et al, 2021. Lancet Child and Adolescent Health doi: 10.1016/S2352-4642(21)00239-X

	Repeat self-harm in children and adolescents with complete 12-month follow-up (n=1980), n (valid %)	Crude hazard ratio (95% CI)	p value	Adjusted hazard ratio (95% CI)	p value
White children and adolescents (reference group)	1763 (18·8%); n=9395	..	..	..	..
Black children and adolescents	46 (14·6%); n=315	0·73 (0·54–0·97)	p=0·028	0·64 (0·42–0·97)*	p=0·034
South Asian children and adolescents	78 (13·7%); n=571	0·69 (0·56–0·87)	p=0·0011	0·85 (0·63–1·14)*	p=0·28
Other non-white children and adolescents	93 (14·3%); n=652	0·72 (0·59–0·88)	p=0·0013	0·82 (0·62–1·08)*	p=0·15

Valid %=% of observations for each variable when missing data are excluded from the total. *Restricted to assessed presentations and adjusted for age, sex, level of deprivation, previous self-harm, and method of self-harm.

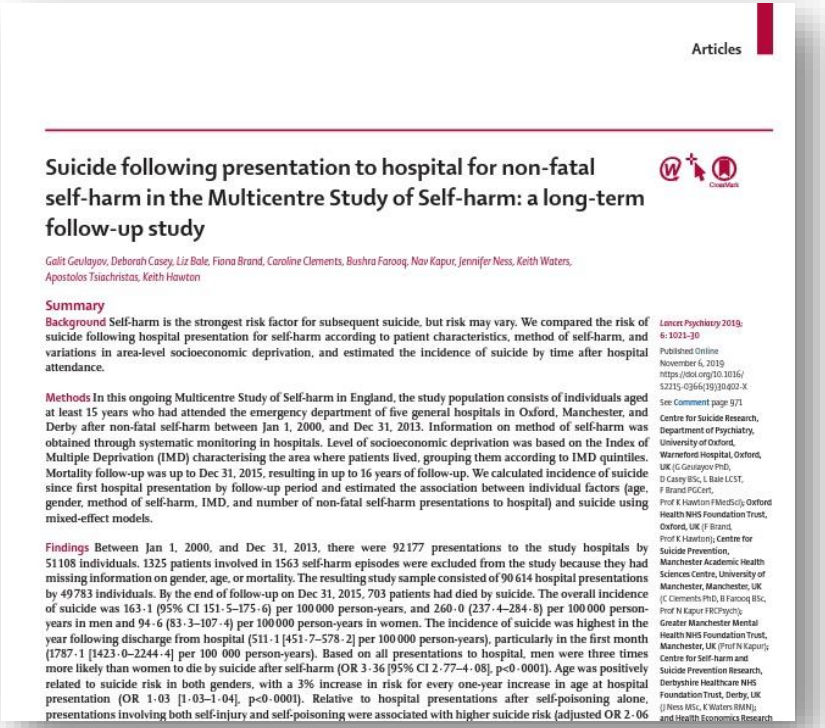
Table 3: 12-month repetition of self-harm and Cox proportional hazards model for risk of repetition by ethnicity

- Young people from a minority ethnic background were more likely to live in areas of high deprivation
- Less likely to receive a specialist psychosocial assessment
- Less likely to repeat self-harm (why?)

Suicide following presentation to hospital for non-fatal self-harm: a long-term follow-up study (2019)

Geulayov et al, 2019. Lancet Psychiatry doi: 10.1016/S2215-0366(19)30402-X

- We looked at risk of suicide following self-harm by:
  - Characteristics
  - Method of harm
  - Area-level socioeconomic deprivation
  - Time after hospital attendance.



Articles

Suicide following presentation to hospital for non-fatal self-harm in the Multicentre Study of Self-harm: a long-term follow-up study

Galit Geulayov, Deborah Casey, Liz Bale, Fiona Brand, Caroline Clements, Bushra Farooq, Nav Kapur, Jennifer Ness, Keith Waters, Apostolos Tsiachristas, Keith Hawton

Summary

Background Self-harm is the strongest risk factor for subsequent suicide, but risk may vary. We compared the risk of suicide following hospital presentation for self-harm according to patient characteristics, method of self-harm, and variations in area-level socioeconomic deprivation, and estimated the incidence of suicide by time after hospital attendance.

Methods In this ongoing Multicentre Study of Self-harm in England, the study population consists of individuals aged at least 15 years who had attended the emergency department of five general hospitals in Oxford, Manchester, and Derby after non-fatal self-harm between Jan 1, 2000, and Dec 31, 2013. Information on method of self-harm was obtained through systematic monitoring in hospitals. Level of socioeconomic deprivation was based on the Index of Multiple Deprivation (IMD) characterising the area where patients lived, grouping them according to IMD quintiles. Mortality follow-up was up to Dec 31, 2015, resulting in up to 16 years of follow-up. We calculated incidence of suicide since first hospital presentation by follow-up period and estimated the association between individual factors (age, gender, method of self-harm, IMD, and number of non-fatal self-harm presentations to hospital) and suicide using mixed-effect models.

Findings Between Jan 1, 2000, and Dec 31, 2013, there were 92 177 presentations to the study hospitals by 51 108 individuals. 1325 patients involved in 1563 self-harm episodes were excluded from the study because they had missing information on gender, age, or mortality. The resulting study sample consisted of 90 614 hospital presentations by 49 783 individuals. By the end of follow-up on Dec 31, 2015, 703 patients had died by suicide. The overall incidence of suicide was 163·1 (95% CI 151·5–175·6) per 100 000 person-years, and 260·0 (237·4–284·8) per 100 000 person-years in men and 94·6 (83·3–107·4) per 100 000 person-years in women. The incidence of suicide was highest in the year following discharge from hospital (511·1 [451·7–578·2] per 100 000 person-years), particularly in the first month (1787·1 [1423·0–2244·4] per 100 000 person-years). Based on all presentations to hospital, men were three times more likely than women to die by suicide after self-harm (OR 3·36 [95% CI 2·77–4·08], p<0·0001). Age was positively related to suicide risk in both genders, with a 3% increase in risk for every one-year increase in age at hospital presentation (OR 1·03 [1·03–1·04], p<0·0001). Relative to hospital presentations after self-poisoning alone, presentations involving both self-injury and self-poisoning were associated with higher suicide risk (adjusted OR 2·06

Lancet Psychiatry 2019; 6: 1021–30

Published Online November 6, 2019 https://doi.org/10.1016/S2215-0366(19)30402-X

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Centre for Suicide Research, Department of Psychiatry, University of Oxford, Warneford Hospital, Oxford, UK (G Geulayov PhD, D Casey BSc, L Bale LCST, F Brand PGCert, Prof K Hawton FMedSci); Oxford Health NHS Foundation Trust, Oxford, UK (F Brand, Prof K Hawton); Centre for Suicide Prevention, Manchester Academic Health Sciences Centre, University of Manchester, Manchester, UK (C Clements PhD, B Farooq BSc, Prof N Kapur FRCPsych); Greater Manchester Mental Health NHS Foundation Trust, Manchester, UK (Prof N Kapur); Centre for Self-harm and Suicide Prevention Research, Derbyshire Healthcare NHS Foundation Trust, Derby, UK (J Ness MSc, K Waters RMN); and Health Economics Research

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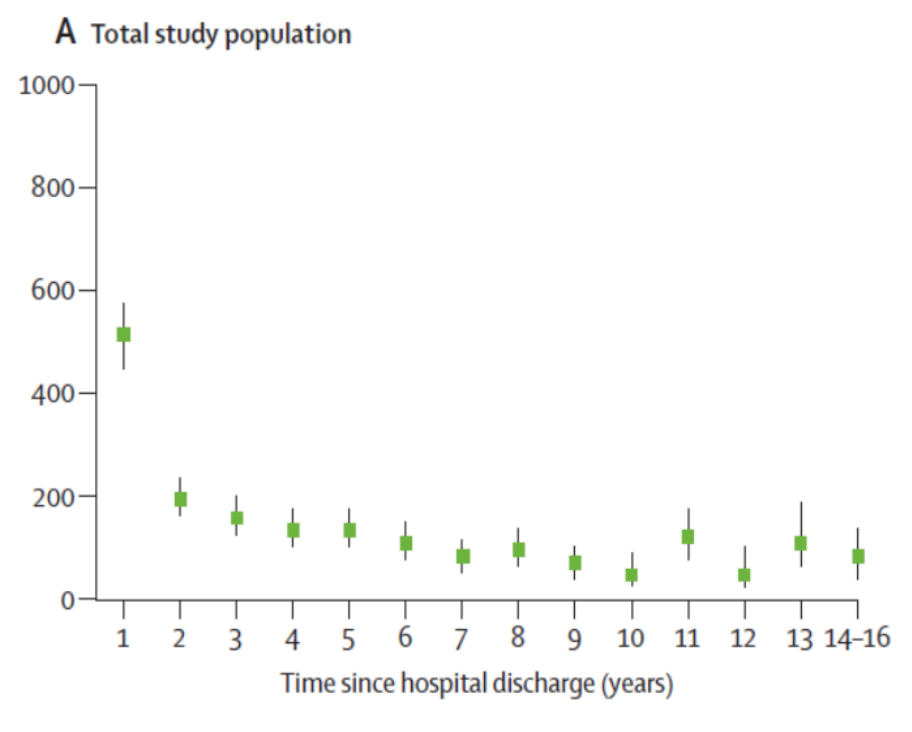
Suicide following presentation to hospital for non-fatal self-harm: a long-term follow-up study (2019)

Geulayov et al, 2019. Lancet Psychiatry doi: 10.1016/S2215-0366(19)30402-X

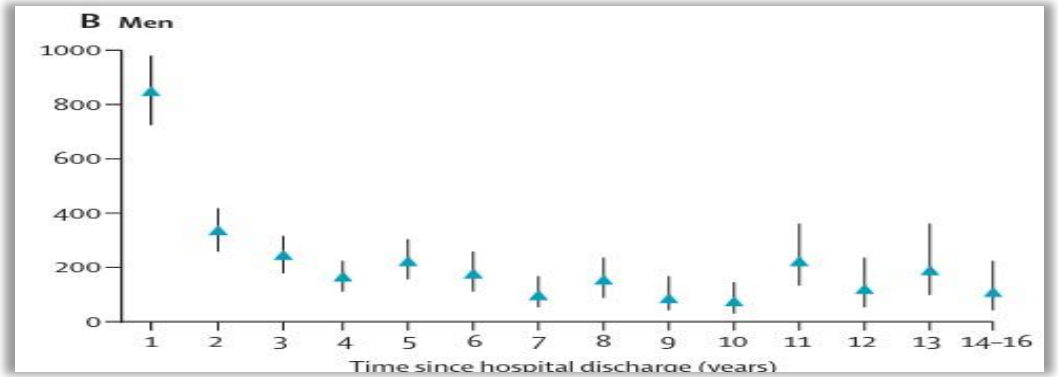


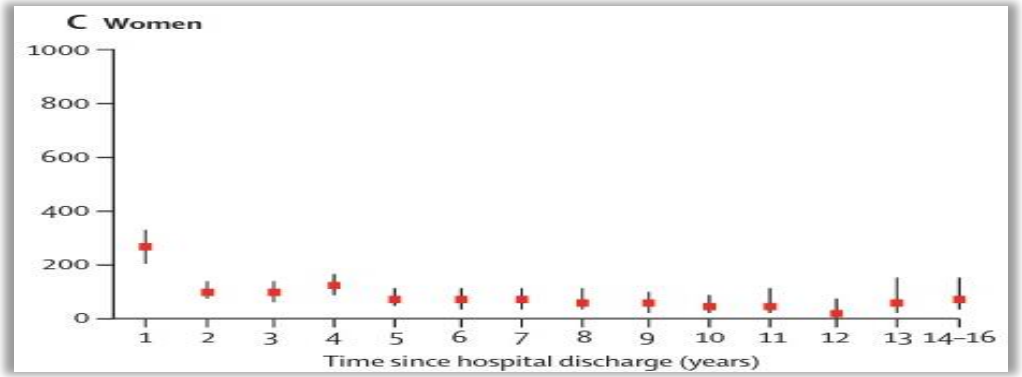
- By the end of follow-up 703 patients died by suicide
- Overall incidence of suicide per 100,000 person-years was 163·1; 260·0 men; 94·6 women.
- Suicide highest in the year following discharge from hospital and particularly in the first month.

Suicide following presentation to hospital for non-fatal self-harm: a long-term follow-up study (2019)

Geulayov et al, 2019. Lancet Psychiatry doi: 10.1016/S2215-0366(19)30402-X

- Men were 3x more likely than women to die by suicide after SH (OR 3·36)
- Age positively related to suicide risk, with a 3% increase in risk for every one-year increase in age at hospital presentation.
- Methods (relative to self-poisoning only):
  - self-injury + self-poisoning associated with higher suicide risk (aOR 2·06)
  - attempted hanging or asphyxiation (aOR 2·70)
  - Self-cutting + self-poisoning (aOR 1·36)





Suicide following presentation to hospital for non-fatal self-harm: a long-term follow-up study (2019)

Geulayov et al, 2019. Lancet Psychiatry doi: 10.1016/S2215-0366(19)30402-X

	IMD score range	Number of presentations; number of suicides	Crude OR (95% CI)	p value	Adjusted OR (95% CI)*	p value
5	≥34·18	38 518 (42·5%); 260	1 (ref)	..	1 (ref)	..
4	21·36–34·17	16 040 (17·7%); 117	1·13 (0·87–1·46)	0·35	1·18 (0·90–1·55)	0·23
3	13·8–21·35	11 673 (12·9%); 93	1·18 (0·90–1·57)	0·24	1·22 (0·90–1·64)	0·20
2	8·5–13·79	8 395 (9·3%); 85	1·56 (1·16–2·09)	0·003	1·64 (1·20–2·25)	0·002
1	≤8·49	10 803 (11·9%); 112	1·65 (1·26–2·16)	<0·0001	1·76 (1·32–2·34)	<0·0001
6	NA	5185 (5·7%); 36	1·03 (0·69–1·53)	0·90	0·92 (0·61–1·40)	0·70

The study cohort is classified into six groups, defined by their IMD score range. Group 1 is considered least deprived, group 5 is considered most deprived, and group 6 has no fixed or valid address. Number of presentations is described as a percentage of the total (n=90 614). IMD=Index of Multiple Deprivation. *Adjusted for gender, age, previous self-harm, and psychiatric treatment.

- Compared to people living in the most deprived areas, people in the least deprived areas were at greater risk of dying by suicide (aOR 1·76)

Thanks for listening!

- Main Multicentre Study website awaiting update, but has older information: psych.ox.ac.uk/research/csr/ahoj
- Manchester Self-Harm Project website with links to all Multicentre Study publications: manchester.ac.uk/mash

- Contact me at:

caroline.v.clements@manchester.ac.uk

- On twitter at:

@DrCClements

@mashproject