

# Impact of childhood adversity and mental health on young person suicide: The CHASE Study

Nadine Dougall<sup>1</sup>, Jan Savinc<sup>1</sup>, Margaret Maxwell<sup>2</sup>, Thanos Karatzias<sup>1</sup>, Rory C O'Connor<sup>3</sup>, Brian Williams<sup>1</sup>, Ann John<sup>4</sup>, Helen Cheyne<sup>2</sup>, Claire Fyvie<sup>5</sup>, Jonathan I Bisson<sup>6</sup>, Carina Hibberd<sup>7</sup>, Sue Abbott-Smith<sup>8</sup>, Liz Nolan<sup>9</sup>

1. School of Health & Social Care, Edinburgh Napier University
2. NMAHP Research Unit, University of Stirling
3. Institute of Health & Wellbeing, University of Glasgow
4. Swansea University Medical School, Swansea University
5. The Rivers Centre, NHS Lothian, Edinburgh
6. Cardiff University School of Medicine
7. Faculty of Health Sciences & Sport, University of Stirling
8. Child and Adolescent Mental Health Service, NHS Lothian
9. Aberlour, Scotland's children's charity, Stirling

✉ [n.dougall@napier.ac.uk](mailto:n.dougall@napier.ac.uk)  
 🐦 @nadedougall



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## The problem

Suicide rates have been increasing in recent years after a period of decline since the 1990s, with notable increases in 15-24 age bracket (except for pandemic decrease). Childhood adversity is a known risk factor for later suicide.



**AIM:** We aimed to find out when young people who died by suicide had previously been in hospital for adversity, mental health or self-harm, a time when healthcare practitioners could intervene.

## What did we do?

We analysed lifespan hospital records belonging to **2,477** people who were born on or after 1981 and who later died by suicide.



We compared this group with **24,777** randomly selected people from the general population matched on age, gender and geography at death, and published the study protocol <https://ijpds.org/article/view/1338>

Study design: A retrospective longitudinal case-control study

## Main findings 1

Deaths by suicide (2,477 people)



**76%**  
Men  
Average age 23

**24%**  
Women  
Average age 22

## Main findings 2

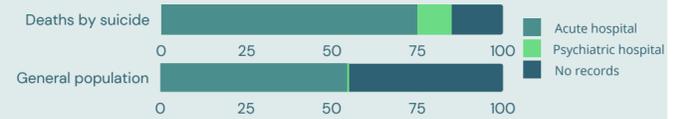
Who had hospital records?



**85%** Deaths by suicide  
85% of young people had 13,534 hospital records

**55%** General population  
55% of young people had 46,403 hospital records

What type of records were the most common in childhood?



## Main findings 3

First recorded episode in hospital for childhood adversity



**8%** of those who died by suicide had a **first** hospital admission for childhood adversity **aged 10-17**, compared with **3%** in the general population.

Of the men who died, most (**81%**) **first** episodes were for **assault** serious enough for general hospital admission.



Of the women who died, two thirds (**68%**) of **first** general hospital admissions had a co-recorded '**adverse social circumstances**'

Note: Study findings only capture some types of adversity

## Main findings 4



**Maternal death**

**3.5% females** and **2.3% males** who died by suicide experienced maternal death, compared with **0.7%** and **1.1%** in the general population.

## Care experience and institutions

**2.5%** people who died by suicide were discharged to care/ foster homes or other settings before age 18, compared with **0.2%** general population. This increased to **8%** after age 18, including discharge to prison, compared with **0.7%** general population.



**Homelessness**

**2%** of young person deaths by suicide had a discharge to 'no fixed abode', compared with **0.1%** of general population

## Main findings 5

First hospital admission for mental health

**22%** Deaths by suicide  
22% had a **first psychiatric diagnosis aged 10-17**.  
 ↳ **35% women 18% men**

**4%** General population  
4% had a **first psychiatric diagnosis aged 10-17**.  
 ↳ **6% women 4% men**

Hospital episodes by age 18

1,599 young men			507 young women		
Deaths by suicide	% diagnosed by age 18	General population	Deaths by suicide	% diagnosed by age 18	General population
9%	Self-harm/ poisonings*	1%	30%	Self-harm/ poisonings*	3%
8%	Alcohol-related	2%	14%	'Other**'	2%
7%	'Other**'	2%	12%	Alcohol-related	2%
4%	Substance use	0.4%	6%	Substance use	0.3%
1%	Mood disorders	0.1%	6%	Mood disorders	0.6%
1%	Anxiety disorders	0.4%	3%	Anxiety disorders	0.8%

**\*9% of men & 30% women who died by suicide were admitted for self-harm or poisoning before age 18, almost 10 x more than general population and mostly general hospital.**

\*\*Other: Adjustment/attention-deficit/ conduct/ developmental /disorders usually diagnosed in infancy/ impulse control disorders/ personality disorders/ schizophrenia and psychotic disorders, etc.

## Main findings 6

Childhood adversity and mental health

Relative order of lifespan admissions to hospital under 18y:  
 Mental health (MH) first, then adverse event: OR=9.2 (95%CI 6.8-12.3)  
 Adverse event (AE) first, then MH admission: OR=7.7 (95%CI 6.3-9.4)  
 Simultaneous hospital admission AE & MH: OR=5.7 (95%CI 4.0-8.0)  
 Mental Health admission(s) only: OR=3.9 (95% CI 3.3-4.5)

**There was STRONG evidence for an association between suicide and admissions in childhood for childhood adversity and/or mental health (in either order first admission).**

Note: Study findings are for those more severe hospital in-patient admissions, and do not capture A&E, outpatients or GP attendances.

## Conclusion

- There was strong evidence that hospital admissions under 18 years with diagnosis related to adversity (maltreatment or violence-related) AND a mental health diagnosis produced the highest odds of later suicide as a young adult.
- More suicide prevention focus should be paid in A&E and general hospital, with interventions focussed on those admitted with childhood adversity if a previous mental health admission has been made, and vice versa.
- More attention should be paid to those attending general hospital with **self-harm poisoning**, even if 'accidental' (particularly girls), and **assault** (boys). This is especially so if recorded as having '**adverse social circumstances**'.

