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Declarative Title: Adversity-related Injury in Adolescence is Associated with Increased Risk of Suicide, Alcohol and Drug-Related Deaths in the Decade Following Admission

STUDY DESIGN

Design: Retrospective cohort study.

STUDY QUESTION

Setting: NHS hospitals in England.

Patients: 333,009 adolescents admitted following injury between 1 April 1997 and 31 March 2012.

Exposure: Adversity-related injury (defined as self-inflicted, drug related, alcohol related or violent injury) vs accident-related injury.

Outcomes: Risk and causes of death.

Follow-up period: Up to 10 years following initial admission.

Patient follow-up: Ascertained from Hospital Episode Statistics.

MAIN RESULTS:

Relative risk of death from various causes in the 10 years following initial admission was calculated for various subgroups. Results are summarised in table 1 below.

Gender	Subgroup	Adjusted HR (95% CI)	
		Suicide	Drug or alcohol-related death
Female	All adversity-related injury	4.54 (3.25 to 6.36)	4.71 (3.28 to 6.76)
	Self-inflicted injury	5.11 (3.61 to 7.23)	5.14 (3.50 to 7.55)
	Drug- or alcohol-related injury	4.55 (3.23 to 6.39)	4.52 (3.14 to 6.51)
	Violent injury	1.48 (0.73 to 2.98)	2.75 (1.47 to 5.17)
Male	All adversity-related injury	3.15 (2.73 to 3.63)	3.15 (2.73 to 3.63)
	Self-inflicted injury	6.20 (5.27 to 7.30)	5.91 (4.96 to 7.03)
	Drug- or alcohol-related injury	4.51 (3.89 to 5.24)	4.91 (4.24 to 5.73)
	Violent injury	1.43 (1.15 to 1.78)	1.78 (1.44 to 2.19)

Table 1: Relative risk of death by cause in adolescents admitted with adversity-related injury (all vs accident-related injury)

CONCLUSION: Risk of suicide was significantly increased in the 10 years following an adversity-related injury, and risk of drug- and alcohol-related death was similarly raised.

ABSTRACTED FROM: Herbert, A., Gilbert, R., Cottrell, D. and Li, L., 2017. Causes of death up to 10 years after admissions to hospitals for self-inflicted, drug-related or alcohol-related, or violent injury during adolescence: a retrospective, nationwide, cohort study. *The Lancet*

Adolescents admitted to hospital following episodes of self-inflicted, violent, drug-, or alcohol-related injury are well known to be at increased risk of death up to 10 years after presentation¹, however causes of death have not been previously explored in detail. Despite this, there has been a tendency for some treating doctors to be dismissive of these patients as "attention seekers" or "time wasters"².

This study describes the increased risk of suicide in patients who self-harm - which itself is not new or surprising³. The important findings of increased risk of drug- or alcohol-related death warrants further consideration and highlights the importance of discussing substance misuse when assessing young people admitted following episodes of self-harm. Equally, the high rates of suicide are described in patients who present following drug- or alcohol-related injury, suggesting that exploration of potential suicidal ideation may be indicated in this group as well as those who self-harm.

Those admitted following violent injury were reported to be at increased risk of both suicide and of drug- or alcohol-related death; a stark reminder of the effect of adversity on mental health.

The significant risk to future health, and indeed life, in adolescents presenting with adversity-related injury should concern all who are involved in the care of young people and prompt us to search for more effective harm reduction strategies.

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2. Saunders, K.E., Hawton, K., Fortune, S. and Farrell, S., 2012. Attitudes and knowledge of clinical staff regarding people who self-harm: a systematic review. *Journal of affective disorders*, 139(3), pp.205-216.

3. Hawton, K. and Harriss, L., 2007. Deliberate self-harm in young people: characteristics and subsequent mortality in a 20-year cohort of patients presenting to hospital. *The Journal of clinical psychiatry*.