Adverse Childhood Experiences and Lifetime Suicide Ideation: A Cross-sectional Study in a Non-psychiatric Hospital Setting


Abstract
We have assessed the effect of adverse childhood experiences on the lifetime prevalence of suicide ideation in a cross-sectional study involving 182 patients aged 18 to 44 years, consecutive attenders at an A&E review clinic. All participants were interviewed by a psychologist using standardised questionnaire instruments addressing participants demographic characteristics, drug use, depressed mood, eight major categories of adverse childhood experiences (including physical, emotional and sexual abuse) and suicide ideation. The response rate was 73%. In multivariate logistic regression analysis, those with a history of two or more categories of childhood adversity relative to those with none were at increased risk of depressed mood (OR = 5.5, 95% CI = 2.3-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). The findings emphasise the need to set suicide prevention within the broader context of societies' obligation to protect children from physical, emotional and sexual abuse.

Introduction
Suicidal behaviour, including deliberate self harm and suicide, is a major public health problem worldwide. Prevention of suicidal behaviour is difficult. In particular prevention of suicide poses a major challenge given the relative rarity of the event. There is evidence that for a significant proportion of people who die by suicide, the event represents the culmination of a lengthy suicidal process. This has been described as a series of pathways whereby information and experience negative events, which in some cases progress to go through self-directed self harm and suicide. While there are some empirical data supporting the suicidal process, numerous studies have found evidence of an association between childhood adversity and later mental health problems including suicidal behaviour. However, the magnitude of the effects and the relative importance of different forms of childhood adversity on suicidal ideation is not well defined, particularly in the Irish context.

The aim of this study was to investigate the association between childhood adversity and suicide ideation. Specifically, we have estimated the effect of eight major categories of adverse childhood experiences (using a standard self report instrument) on the prevalence of lifetime suicide ideation. We have also examined the effect of reported childhood adversity on depressed mood and studied inter-relationships between childhood adversity, substance misuse and both depression and suicide ideation.

Methods
Participants
The study sample was recruited from accident and emergency (A&E) department review clinics at Cork University Hospital in the six-month period from mid-June to mid-December 2002. During this time, 249 individuals met the inclusion criteria of being aged 18-44 years and surviving their or severe or longstanding physical illness or disability, psychological illness, a range of thoughts about death and suicide and history of intentional self-harm, using standard instruments. The participants were asked to complete a questionnaire that addressed demographic characteristics, use of tobacco, alcohol and illicit drugs and risk of both suicide ideation and depressed mood.

Statistical analysis
Differences in the prevalence of adverse childhood experiences, suicidal ideations and behaviours, depressed mood and tobacco, alcohol and illicit drug use were assessed with estimates of p values and 95% confidence intervals using a mid p approach to Fisheps exact test. The chi-square test for trend was used to assess the evidence of a graded relationship between the number of adverse childhood experience (none, one or at least two) and gender, depressed mood, suicide ideation, deliberate self harm and tobacco, alcohol and illicit drug use. Logistic regression with adjustment for potentially confounding variables, as used to assess the relationship between childhood adversity, use of tobacco, alcohol, and illicit drugs and risk of both suicide ideation and depressed mood.

Results
Socio-demographic and behavioural characteristics of the participants are summarised in Table 1. A total of 117 (64.3%) of the sample were male, two-thirds were single, over 40% were living with their parent(s), one-third had a third-level qualification and more than two-thirds of the sample were employed. Non-smokers (44.5%) outnumbered current smokers (27.1%) while one in six were ex-smokers (32.1, 17.6%). Smoking history was similar for men and women. The prevalence of problem drinking in the sample was 22.0%, with substantially higher rates in men than in women (28.2% versus 10.8%). Similarly, illicit drug use was more prevalent in men (23.1% versus 4.6%).

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Table 1: Socio-demographic Characteristics of the Study Sample (N=182)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>117</td>
<td>64.3%</td>
</tr>
<tr>
<td>Female</td>
<td>65</td>
<td>35.7%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24 years</td>
<td>75</td>
<td>41.2%</td>
</tr>
<tr>
<td>25-34 years</td>
<td>63</td>
<td>34.6%</td>
</tr>
<tr>
<td>35-44 years</td>
<td>44</td>
<td>24.2%</td>
</tr>
<tr>
<td>Marital status</td>
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<td></td>
</tr>
<tr>
<td>Single</td>
<td>122</td>
<td>67.0%</td>
</tr>
<tr>
<td>Married</td>
<td>60</td>
<td>33.0%</td>
</tr>
<tr>
<td>Widowed/divorced</td>
<td>7</td>
<td>3.8%</td>
</tr>
<tr>
<td>Living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alone</td>
<td>76</td>
<td>41.8%</td>
</tr>
<tr>
<td>With parent(s)</td>
<td>106</td>
<td>58.2%</td>
</tr>
</tbody>
</table>
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In a cross-sectional study involving a consecutive series of attenders at an A&E review clinic, we found that associations between childhood adversity and both depression and suicidal ideation were independent of substance use. In these fully adjusted analyses, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3).

Discussion

In this cross-sectional study involving a consecutive series of attenders at an A&E review clinic, we found that associations between childhood adversity and both depression and suicidal ideation were independent of substance use. In these fully adjusted analyses, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3). By contrast, the associations observed in age and sex-adjusted analyses between smoking, problem drinking and use of illicit drugs remained at significantly increased risk of depressed mood (OR = 5.5, 95% CI = 2.2-13.3) and suicide ideation (OR = 3.5, 95% CI = 1.5-8.3).
The notion that negative childhood experiences exert critical effects on adult mental health is well established. However, few studies have systematically defined and addressed the scale of childhood adversity and the magnitude of its effects on mental health outcomes. In this study we have used instruments developed for the US Adverse Childhood Experiences (ACE) Study, a retrospective cohort study involving a sample of 17,337 participants that found early childhood adversity (mental, physical and social and early negative life events) to be associated with significantly increased rates of attempted suicide in later life. The findings from the current cross-sectional study are consistent with the data from the ACE Study. The findings suggest that in seeking to understand suicide ideation and associated mental health problems including depression and substance misuse, we need policy initiatives that move beyond immediate proximal causes or precipitants and address fundamental determinants of health and well being, using a life course perspective.

This study has significant methodological limitations that need to be considered in interpreting the findings. Because of the sensitive topics covered, we preferred to administer the questionnaire through face-to-face interviews rather than by telephone or post. As an accessible proxy to the general population, the sample was drawn from A&E department review clinic attenders. This population would be expected to have higher levels of mental health and psychosocial difficulties, therefore the prevalences of childhood adversity and suicide ideation reported here may overestimate those of the general population. However, given the study's internal validity, the findings relating to the association between these phenomena - the primary focus of the paper - are likely to hold. The cross-sectional design does represent a fundamental limitation of the study in this regard. Clearly, participants with current or previous depressed mood or suicide ideation may be more likely to recall and report childhood adversity than participants without mental health problems. For this reason, the magnitude of the effects in our study may have been overestimated. However, it should also be noted that the ACE Study instrument addresses severe and relatively objective sources of childhood adversity such as parental violence, parental separation/divorce and household substance abuse.

In summary, this study adds to the evidence linking childhood adversity with poor mental health in adult life including depression and suicide ideation. The findings emphasise the need to set the challenge of promoting mental health within the broader context of societies' obligation to protect children from physical, emotional and sexual abuse.

References


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