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Authors	Kavalidou, Katerina;Zortea, Tiago C.;Griffin, Eve;Troya, M. Isabela
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University College Cork, Ireland
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Profile of people attending emergency departments with thoughts of self-harm and suicide: a descriptive study of a nurse-led programme in Ireland

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Abstract: Increasing research has been conducted on individuals presenting with self-harm at emergency departments (EDs). However, less is known about individuals presenting to EDs with only self-harm ideation. We aimed to describe the characteristics of those attending Irish hospitals with self-harm ideation and investigate any differences in comparison to those presenting with suicide ideation. A prospective cohort study was conducted on Irish ED presentations due to suicidal and self-harm ideation. Data were obtained from the service improvement dataset of a dedicated nurse-led National Clinical programme for the assessment of those presenting to Irish emergency departments due to Self-harm and Suicide-related Ideation (NCPSHI).10,602 anonymised presentation data were analysed from January 1, 2018 to December 31, 2019. Descriptive analysis was conducted to compare those with suicidal and self-harm ideation on sociodemographic and care interventions. Being female and aged less than 29 were more prevalent among the self-harm ideation presentations. Compared to the self-harm ideation group, a higher proportion of those with suicidal thoughts received an emergency care plan (63% vs 58%, p=0.002) and General Practitioner letter sent within 24 hours of presentation (75% vs 69%, p=0.045). Little variation was found between hospitals for self-harm ideation in both years. Our study suggests that females and younger populations are more prevalent in hospital presentations due self-harm ideation, while presentations related to suicidal ideation are more often made by males and involving substance use. Attention should be given to the relationship between clinicians' attitudes towards care provision and the content of suicide-related ideation ED disclosure.

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(I) Abstract

Increasing research has been conducted on individuals presenting with self-harm at emergency departments (EDs). However, less is known about individuals presenting to EDs with only self-harm ideation. We aimed to describe the characteristics of those attending Irish hospitals with self-harm ideation and investigate any differences in comparison to those presenting with suicide ideation. A prospective cohort study was conducted on Irish ED presentations due to suicidal and self-harm ideation. Data were obtained from the service improvement dataset of a dedicated nurse-led National Clinical programme for the assessment of those presenting to Irish emergency departments due to Self-harm and Suicide-related Ideation (NCPSHI).10,602 anonymised presentation data were analysed from January 1, 2018 to December 31, 2019. Descriptive analysis was conducted to compare those with suicidal and self-harm ideation on sociodemographic and care interventions. Being female and aged less than 29 were more prevalent among the self-harm ideation presentations. Compared to the self-harm ideation group, a higher proportion of those with suicidal thoughts received an emergency care plan (63% vs 58%, p=0.002) and General Practitioner letter sent within 24 hours of presentation (75% vs 69%, p=0.045). Little variation was found between hospitals for self-harm ideation in both years. Our study suggests that females and younger populations are more prevalent in hospital presentations due self-harm ideation, while presentations related to suicidal ideation are more often made by males and involving substance use. Attention should be given to the relationship between clinicians' attitudes towards care provision and the content of suicide-related ideation ED disclosure.

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Keywords

Emergency Service; Nursing Staff, Hospital; Nursing Administration Research; Suicidal Ideation; Self-harm, Dataset.

(II) Text

Introduction

Suicide prevention is a worldwide priority. Although statistically a rare event, suicide has profound implications on impacted individuals' environment and relationships. Current psychological theories of suicidal behaviour argue that there are different factors involved in individuals' thought and action processes for suicidal behaviour (Klonsky, Saffer and Bryan, 2018). In fact, research suggests that suicidal thinking is one of the most important factors associated with psychiatric hospitalisations, suicide attempts, and deaths by suicide (Beghi and Rosenbaum, 2010) (Griffin et al., 2019), and has been indicated as a neglected topic of investigation and intervention target within policy-related guidelines (Jobes and Joiner, 2019). Recent evidence has identified a large number of individuals presenting to emergency departments (ED) with suicidal ideation and self-harm (Griffin et al., 2019) (Griffin et al., 2020), indicating that the risk of self-harm is highest following the first or second presentation with suicidal ideation. However, these previous studies do not make a distinction between those who present with thoughts of self-harm and those who present with thoughts of suicide (Kavalidou et al., 2020), although perinatal literature indicates the clinical importance of this distinction in preventing subsequent suicides (Pope et al., 2013).

Nurses are often the first point of contact for individuals presenting with self-harm and suicidal ideation and behaviour in a variety of healthcare settings including EDs (Morrissey, Doyle and Higgins, 2018). Furthermore, nurses are often involved in leading the treatment care pathways along other psychiatric staff. This provides a unique opportunity for nursing staff to be involved in the assessment and management of self-harm and suicidal thoughts and behaviour.

This study aims to describe the sociodemographic, clinical and aftercare characteristics of those presenting to Irish hospitals with self-harm thoughts (self-harm ideation) and investigate any potential differences or commonalities to those presenting with thoughts of suicide (suicidal ideation).

Methods

Setting and participants

An observational study on data of suicidal and self-harm ideation presentations to Irish emergency departments were analysed from the National Clinical Programme for Self-harm and Suicide-related Ideation (NCPSHI) for the years 2018-2019. The Irish Health Service Executive (HSE) delivers mental health care through clinical programmes, and the NCPSHI has been implemented in 24 out of the 26 adult hospitals in the country, with 24/7 operational hours (HSE, 2022). The programme aims to provide a standardised response and care pathway for such presentations, by providing a comprehensive biopsychosocial assessment, linking people with appropriate follow-on care, and involving families and support as necessary. To implement this programme the HSE

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Mental Health service funds Clinical Nurse Specialists (CNS) to work within the ED. These CNSs and Non-Consultant Hospital Doctors (NCHD) assess patients who are referred to them, following triage and review by ED staff at the first entry point of presentation.

Within this programme, the NCPSHI clinicians collect anonymised data for service improvement, in terms of the demographics, aftercare information and the clinical characteristics of those presenting with self-harm or suicide-related ideation. The CNSs of all participating hospitals use pre-specified electronic templates, where they import anonymised presentation information from clinical assessments, that are further imported into the NCPSHI database on a monthly basis.

The STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) checklist was used to describe the study design and results (Von Elm et al., 2014).

Ethics statement

This research study was conducted retrospectively from anonymised and de-identifiable presentation data obtained for service improvement purposes and the manuscript does not present individual patient data. Based on the secondary analyses of anonymised information, no ethical approval was needed. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

Outcome measures

NCPSHI presentation data, between the years 2018-2019, were used in this cohort study. Although the NCPSHI collects data on both self-harm behaviour and ideation cases, for the purposes of this study, only ideation cases were utilised. Sociodemographic information analysed comprised of gender, age and ethnic background. The ethnic categories that the NCPSHI includes follow the Central Statistics Office categorisation (CSO, 2016) and information on Irish Travellers, a nomadic minority of Ireland considered to have an increased suicide risk (McKey et al., 2022), is included. Specifically, the ethnic categories included are: White Irish; White, any other; White Irish Traveller; Asian or Asian Irish - Chinese; Black or Black Irish - any other background; Black or Black Irish - African; Other, mixed background; Unknown/Not Specified. As the nature of the programme is to collect non-identifiable anonymised data, the age of each person attending NCPSHI participating EDs for suicidal-related outcomes is recorded in age bands: ~~and,~~ in the current analyses, 10-year bands are presented for those older than 20 years of age, while younger age groups were analysed based on those 14 years of age and younger, and 15 to 19 years of age. Although the NCPSHI records non-binary gender, in addition to male and female, due to the small number of presentations reported as non-binary (<1% of all suicide-related attendances), these cases have been omitted from our current analyses.

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The programme aims to collect information on three mutually exclusive suicide-related outcomes, mainly self-harm, suicidal ideation and self-harm ideation. This information is collected by the NCPSHI clinicians during the biopsychosocial assessment obtained in a dedicated ED room. The direct physical outcome of a deliberate suicidal act, irrespective of its suicidal intention/motive is the self-harm outcome (De Leo et al., 2021) and includes self-cutting, non-accidental drug overdose, overdose poisoning, attempted hanging, attempted drowning, shooting, jumping from height and others. In terms of the ideation presentations, clinicians collect information on suicidal ideation [where someone is thinking about suicide regardless of intensity or plan; (Silverman et al., 2007)] and self-harm ideation (the direct thought of self-harming without any co-occurring thoughts of killing oneself).

In terms of the clinical-related items, information on whether the patient is currently attending any mental health service (Yes/No responses), the type of referral that each patient had, and the involvement of any substance contributing to the suicide-related presentation (alcohol and/or drugs), were further utilised. The type of referrals to the ED are recorded based on whether the referrals were given by health services [adult or child/adolescent mental health services, general practitioners (GP)]; volunteer organisations; police; or when the patient has been self-referred and reached the ED either alone or accompanied by a supportive member (family or friend).

Given the aftercare and intervention aims of the NCPSHI, a number of items on whether a written emergency care plan is given (Yes/No responses), the general practitioners (GP) and next of kin involvement are recorded in the electronic templates and used in this study. In terms of the emergency care plan, a written collaborative emergency safety plan between the patient, supportive other and the mental health clinician is developed, aiming to provide appropriate support for the following 24 hours. Among other information, the care plan includes advice to family members on how to provide a safe environment for the person at risk, whom to contact in an emergency and what the next professional contact should be (HSE, 2022).

With the intervention regarding GPs, a Yes/No response is recorded on whether a letter is sent to the patient's GP within 24 hours from the time of assessment. The next of kin involvement includes the recorded options of: next of kin /friend given emergency care plan and written advice on care/ suicide prevention; next of kin /friend phoned and given advice on care/ suicide prevention; patient requests no next of kin involvement; and, patient states no next of kin / Carer.

Statistical methods

Based on the presentation data of 24 NCPSHI participating hospitals, for the years 2018-2019, chi-square statistics were conducted for the comparison between those with suicidal and self-harm ideation on sociodemographic, clinical and aftercare information. Effect sizes (ES) for the level of association in chi-squares are presented (Phi for binary variables and Cramér's V for nominal variables with more than 2 categories). The geographical rate variation between small and large areas for illness-related surveillance

monitoring, is best displayed through funnel plots (Dover & Schopflocher, 2011; Spiegelhalter, 2005). Therefore in ~~In~~ order to investigate the variation in the rates for all services, and identify the rural and urban services that differ from the national rate, unadjusted funnel plots showing the incidence rate for both suicidal and self-harm ideation per all NCPSHI assessed presentations are used~~employed~~. The numbers for each presentation category for each year (2018, 2019) were used against the total number of NCPSHI presentations for each hospital (inclusive of self-harm presentations), using exact binomial 95% and 99.8% control limits. Given that the availability of data for the study period 2018-19 ranged between 11 to 24 months (average 21), funnel plots are presented based only on hospitals with a full year coverage (10 hospitals with 12 months of data for 2018; 14 hospitals with 12 months of data for 2019). The urban-rural distinction of hospitals in the funnel plots followed previous literature where the five cities of Dublin (and surrounding counties), Cork, Limerick, Galway and Waterford were defined as urban, while other hospitals were classified as rural (Boland et al., 2005). Analyses were conducted with SPSS version 26 (SPSS Inc., Chicago, IL, USA), Stata IC 12, and Microsoft Excel.

Results

Demographics

Between January 2018 and December 2019, 24,537 presentations were recorded in the NCPSHI dataset, of which 10,161 were suicidal ideation (40%) and 1048 were self-harm ideation (4%), The remaining 13,328 (54%) involved an act of self-harm. Based on the ideation-related presentations (n = 11,209) 5% (n = 607) were not assessed, due to either leaving the ED before assessment (n = 491) or being transferred for a mental health assessment offsite (n = 116). As presented in table 1, there were significant gender differences between the two types of ideation patient groups, with a higher proportion of males attending ED for suicidal ideation (58%). There were no significant differences based on ethnicity, with the White Irish ethnic group being the most prevalent group for both. Self-harm ideation was more prevalent among younger age groups (<29 years of age), while the proportion of suicidal ideation presentations increased with age, compared to the self-harm ideation group, for those older than 40 years old.

Clinical characteristics and care interventions received

A higher proportion of those presenting with suicidal thoughts had alcohol or/and drugs contributing to their presentation (45%), compared to those with self-harm thoughts (37%) (Table 1). No significant differences however were found when examining the type of substances used within both types of ideation presentations (Table 1). Subgroup analysis indicated that ED presentations with substance misuse for both suicidal ideation and self-harm ideation were more common for males (Supplementary material). More than one-third (39%) of those with self-harm ideation were attending mental health services at the time of their ED presentation. The referral pattern between the two patient groups was similar, with 66% being self-referred or accompanied by family/supportive other, followed by those attending the ED after a GP referral (22%).

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In the aftercare given by the NCPSHI clinicians, statistically significant differences were found in the emergency care plan provided, with a smaller proportion of those with self-harm ideation receiving one (58% vs 63% of those with suicidal ideation; Table 1). Similarly, a higher proportion of the suicidal ideation group GPs received a letter within 24 hours of attendance when compared to the self-harm ideation group (75% vs 69%). Finally, for the next of kin involvement, some differences ($p = 0.043$) were found between the two ideation groups, with, 24% of those presentations with self-harm thoughts requesting no next of kin involvement compared to 21% in the suicidal ideation patient group.

INSERT TABLE 1

As presented in Figures 1 & 2, there was a high variation in the hospital rates for suicidal ideation in 2018. The majority of hospitals fell outside the 99.8% CI limits (7 out of 10 hospitals), reflecting significant rate variations for suicidal ideation. The national incidence rate of self-harm ideation in 2018 was 43.2 per 1000 presentations and 53.7 in 2019 (Figures 3 & 4); little variation was found between hospitals for the latter ideation presentations in both years. In terms of the rural and urban distinction, more rural hospitals were close to the national rate for self-harm ideation than urban.

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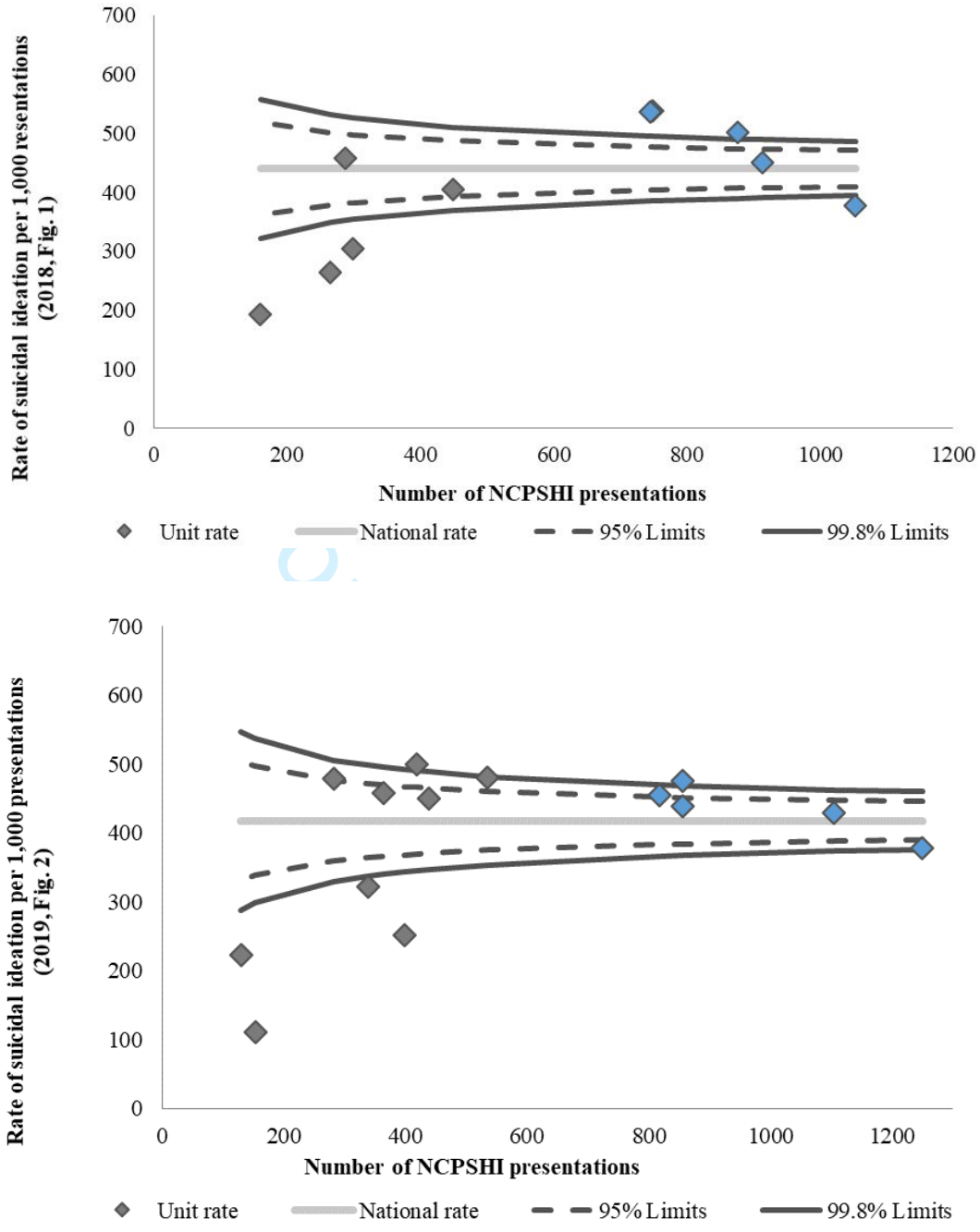
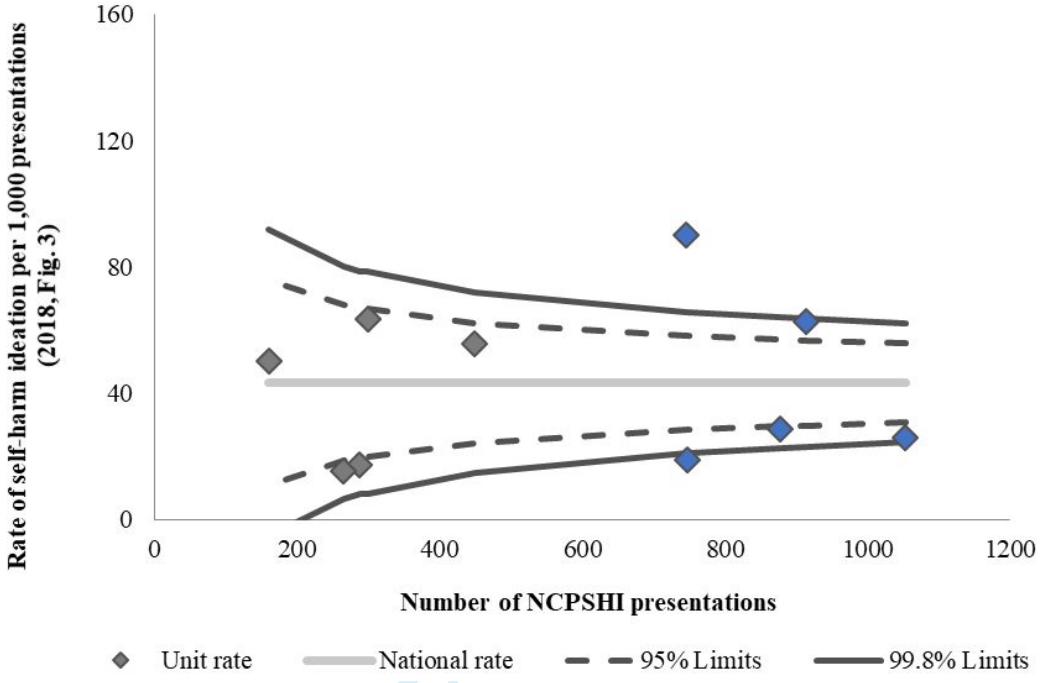


Fig 1-2. Unadjusted ~~F~~funnel plots of the presentation-based rate of suicidal ideation in 2018 and 2019[1]

[1] Grey rhombuses represent rural hospitals and blue rhombuses represent urban.



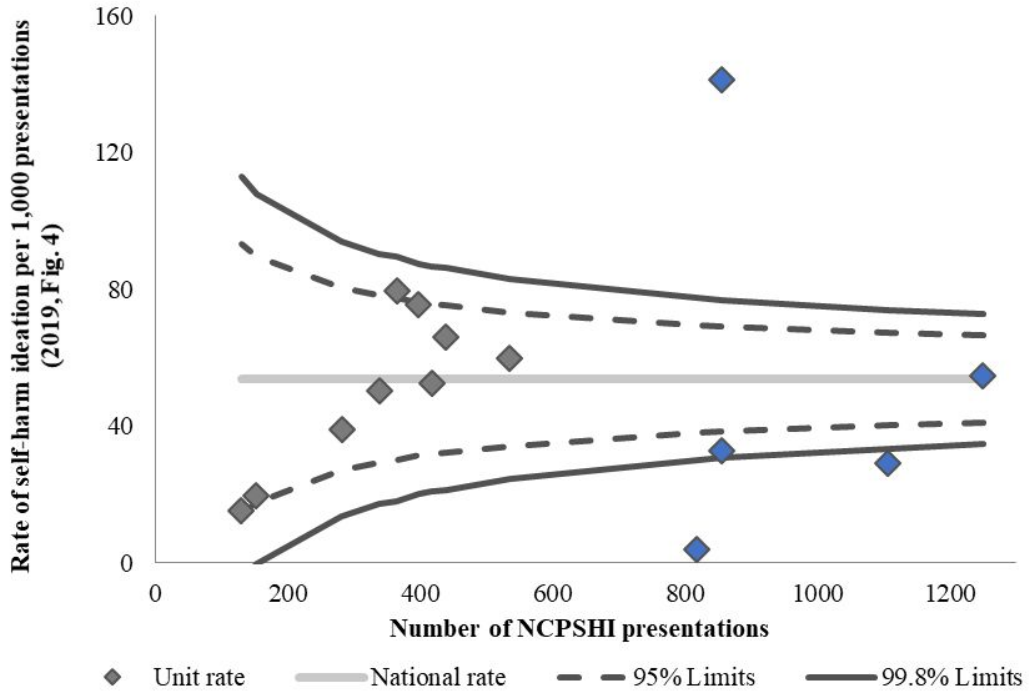


Fig 3-4. Unadjusted ~~F~~funnel plots of the presentation-based rate of self-harm ideation in 2018 and 2019

Discussion

Key results

In this study, we have used presentation data of services participating in a dedicated nurse-led national programme placed at emergency departments for the prevention of suicide in Ireland. Our findings indicated that some demographic and clinical characteristics including ethnicity, type of substance contributing to ED presentation, and source of referral were similar in both groups, regardless of the type of intentionality (suicidal ideation or self-harm ideation). Importantly, however, the data presented here indicate some specific demographic and clinical differences between the groups, mainly based on age, gender and aftercare received.

Interpretation

Our findings suggest that there are various factors distinguishing between presentations involving self-harm and suicidal ideation. Presentations related to suicidal ideation were more often made by males and involving substance use, while self-harm ideation was more common among young people, aged less than 29 years, and females. Although our data focused on presentations of ideation only (not enactment), these results are consistent with previous studies on ED presentations for suicidal ideation and self-harm behaviour in Northern Ireland (Griffin et al., 2020), in which male gender and substance misuse were associated with suicidal ideation, and females and young people were more likely to re-present to EDs with self-harm. However, previous studies have shown inconsistent findings regarding gender differences in ED presentations for suicidal ideation and substance misuse (Cripps et al., 2020) (Gentil et al., 2020) (Poyraz et al., 2022) (Rozova et al., 2021) (Tadros et al., 2020). While it was not possible to explore in this current study, the data may indicate a shift of intentionality (thoughts of suicide vs thoughts of self-harm) according to older age, suggesting that self-harm ideation seems to be the predominant intention in presentations up to 29 years old and suicidal ideation more common in presentations of patients who are 40 and older. These patterns may have important implications for the trajectory of suicidal behaviour and warrant further investigation.

Our findings also indicated that a higher proportion of those ED presentations recording thoughts of suicide received an emergency care plan, and their GPs received a letter within 24 hours of presentation when compared to those who attended EDs for thoughts of self-harm. These findings raise the question of whether the presence of intention or wish to die (suicidal ideation) is associated with clinicians' attitudes towards care provision. An explanation may be that suicidal ideation is perceived by clinicians as having a higher risk of subsequent suicide when compared to self-harm ideation, which may result in a higher proportion of patients with suicidal ideation receiving an emergency care plan and referral letter. Although no causation can be inferred from the data presented here, these findings indicate the need for further investigation of the relationship between clinical decisions and the content of the disclosure. As suicide is a difficult event to predict (Franklin et

al., 2017), and emerging evidence suggests that risk fluctuates over time (Kleiman et al., 2018), it is impossible to know whether one will act on their thoughts based solely on disclosure of intentionality (Quinlivan et al., 2017). Therefore, standard aftercare, including the provision of a full biopsychosocial assessment, should be provided to people who present to EDs, irrespective of whether they disclose thoughts of suicide or self-harm.

To date, there are no studies presenting the differences or similarities of patients with suicidal and self-harm thoughts reaching EDs and to our knowledge, this is the first study presenting these two mutually exclusive patient groups. Postpartum literature, which mainly employs the Edinburgh Postnatal Depression Scale and a distinct item on self-harm thoughts, indicates that these specific thoughts range from 5 to 14% during pregnancy and postpartum periods (Lindahl, Pearson and Colpe, 2005). The interchangeable use of suicidal and self-harm thoughts led Pope and colleagues (2013) into exploring these two mutually exclusive groups and presented that more than twice as many postpartum women reported self-harm thoughts (16.79% vs 6.16%). Given that there is no clear evidence on the prevalence and comparison of these two ideation groups outside perinatal studies, our paper on suicidal ideation reports on higher prevalence in males at a hospital level.

Limitations

The main limitation of the study is the use of presentation and not individual data information; therefore a patient could have presented more than once in this cohort. Furthermore, we were not able to detect whether a person from one ideation group had progressed to the other mutually exclusive ideation category in a subsequent presentation. It should be noted that the findings of this study should not be generalisable for community-level self-harm and suicidal thoughts, as the study focused on those presenting to an ED. For the significant differences found between the ideation groups (chi-square analysis) caution should be held as the effect sizes mainly provided a moderate or weak positive association between the variables explored. Furthermore, it was not possible to investigate the history of suicidal behaviours among those presenting and information on specific sociodemographic characteristics, such as deprivation index and educational level, could not be examined. Lastly, availability of full year data for 2018-2019 was subject to hospital staffing that did not permit on-time data submissions. Therefore, we did not have complete data for all NCPSHI hospitals as mentioned in the methods section, limiting the opportunity for us to investigate further geographical variations.

Generalisability

While suicidal ideation has been referred to as a neglected and critical point of intervention, given the subsequent risk of self-harm (Jobes and Joiner, 2019) (Griffin et al., 2020), the lack of a consistent nomenclature on suicidal and self-harm thoughts has not helped to provide evidence on which type of

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thoughts could progress in further suicidal behaviours and suicide (Kavalidou et al., 2020). Future prospective studies should explore the suicide risk among those with self-harm thoughts without co-occurring suicidal ideation. In addition, future qualitative research could consider issues relating to clinical decision-making on care provision across presentations involving self-harm and suicidal ideation. Furthermore, health care services in both rural and urban areas should focus on providing efficient care at the primary level for those with either suicidal or self-harm thoughts. Considering that the ED environment can be seen as an intervention point for stabilising suicidal crises and initiating proper follow-up care (Newton et al., 2010), further healthcare systems outside Ireland should consider providing dedicated suicide-related programmes at the ED level.

Relevance to Clinical Practice

Our findings are of particular relevance to nursing staff involved in the care of individuals presenting with self-harm and/or suicidal thoughts and behaviour. Given nurses' critical role in the assessment and management of patients presenting with thoughts of self-harm and/or suicide, our findings provide important information for nurses involved in supporting the two different profiles of patients. A particular consideration suggested by the data presented here relates to the need for treating both suicidal and self-harm ideations with the same clinical concern, given their association with suicide itself. Previous research shows that nursing staff often have negative attitudes amongst patients presenting with self-harm (Karman et al., 2015; Rayner et al., 2019), particularly those who present multiple times (Saunders et al., 2012), which reflects also the experiences of the patients themselves (Cully et al., 2020; MacDonald et al., 2020). Nurses also commonly experience being *emotionally worn out* (McGough et al., 2021). Fundamental to the changes in attitudes are further education and continuing professional development support for nursing staff (McGough et al., 2021; Rayner et al., 2019). Findings from our study contribute to the further understanding of the profile of individuals presenting with thoughts of self-harm and suicide, which can aid nurses in their understanding and treatment of such patients.

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(III) References

Beghi, M. and Rosenbaum, J.F., 2010. Risk factors for fatal and nonfatal repetition of suicide attempt: a critical appraisal. *Current opinion in psychiatry*, 23(4), pp.349-355. https://doi.org/10.1097/yco.0b013e32833ad783

Boland, M., Staines, A., Fitzpatrick, P. and Scallan, E., 2005. Urban-rural variation in mortality and hospital admission rates for unintentional injury in Ireland. *Journal of Epidemiology & Community Health,* 59(7), pp.557-557. https://doi.org/10.1136/ip.2004.005371

Cripps, R.L., Hayes, J.F., Pitman, A.L., Osborn, D.P. and Werbeloff, N., 2020. Characteristics and risk of repeat suicidal ideation and self-harm in patients who present to emergency departments with suicidal ideation or self-harm: A prospective cohort study. *Journal of affective disorders*, 273, pp.358-363. https://doi.org/10.1016/j.jad.2020.03.130

CSO. (2016). *Census of Population 2016 – Profile 8 Irish Travellers, Ethnicity and Religion*. [online] Available from: https://www.cso.ie/en/releasesandpublications/ep/p-cp8iter/p8iter/p8e/ [accessed 2 September, 2022]

Cully, G., Leahy, D., Shiely, F., & Arensman, E. (2022). Patients' Experiences of Engagement with Healthcare Services Following a High-Risk Self-Harm Presentation to a Hospital Emergency Department: A Mixed Methods Study. *Archives of suicide research* : official journal of the International Academy for Suicide Research, 26(1), 91–111. https://doi.org/10.1080/13811118.2020.1779153

De Leo, D., Goodfellow, B., Silverman, M., Berman, A., Mann, J., Arensman, E., Hawton, K., Phillips, M.R., Vijayakumar, L., Andriessen, K. and Chavez-Hernandez, A.M., 2021. International study of definitions of English-language terms for suicidal behaviours: a survey exploring preferred terminology. *BMJ open*, 11(2), p.e043409. https://doi.org/10.1136/bmjopen-2020-043409

Dover, D.C., Schopflocher, D.P., 2011. Using funnel plots in public health surveillance. *Popul Health Metrics* 9, 58. https://doi.org/10.1186/1478-7954-9-58

Franklin, J.C., Ribeiro, J.D., Fox, K.R., Bentley, K.H., Kleiman, E.M., Huang, X., Musacchio, K.M., Jaroszewski, A.C., Chang, B.P. and Nock, M.K., 2017. Risk factors for suicidal thoughts and behaviors: A meta-analysis of 50 years of research. *Psychological bulletin*, 143(2), p.187. https://doi.org/10.1037/bul0000084

Gentil, L., Huỳnh, C., Grenier, G. and Fleury, M.J., 2020. Predictors of emergency department visits for suicidal ideation and suicide attempt.

For Peer Review Only

Psychiatry research, 285, p.112805. https://doi.org/10.1016/j.psychres.2020.112805

Griffin, E., Bonner, B., O'Hagan, D., Kavalidou, K. and Corcoran, P., 2019. Hospital-presenting self-harm and ideation: Comparison of incidence, profile and risk of repetition. *General hospital psychiatry*, 61, pp.76-81.https://doi.org/10.1016/j.genhosppsych.2019.10.009

Griffin, E., Kavalidou, K., Bonner, B., O'Hagan, D. and Corcoran, P., 2020. Risk of repetition and subsequent self-harm following presentation to hospital with suicidal ideation: A longitudinal registry study. *EClinicalMedicine,* 23, p.100378. https://doi.org/10.1016/j.eclinm.2020.100378

HSE. (2022). *Updating the National Clinical Programme for the Assessment and Management of Patients presenting to the Emergency Department following Self-Harm*. [online] Available from: https://www.hse.ie/eng/about/who/cspd/ncps/self-harm-suicide-related-ideation/moc/ [accessed 2 September, 2022]

Jobes DA, Joiner TE., 2019. Reflections on Suicidal Ideation. *Crisis,* 40, pp. 227-30. https://doi.org/10.1027/0227-5910/a000615

Kavalidou K, Troya M, Greenley S, Mughal F. 2020 Distinguishing suicidal from self-harm ideation: a scoping review protocol. *OSF*. https://doi.org/10.17605/OSF.IO/Q592Y

Karman, P., Kool, N., Poslawsky, I.E. and van Meijel, B., 2015. Nurses' attitudes towards self-harm: A literature review. Journal of psychiatric and mental health nursing, 22(1), pp.65-75. https://doi.org/10.1111/jpm.12171

Kleiman, E.M., Turner, B.J., Fedor, S., Beale, E.E., Picard, R.W., Huffman, J.C. and Nock, M.K., 2018. Digital phenotyping of suicidal thoughts. *Depression and anxiety*, 35(7), pp.601-608.https://doi.org/10.1002/da.22730

Klonsky, E.D., Saffer, B.Y. and Bryan, C.J., 2018. Ideation-to-action theories of suicide: a conceptual and empirical update. *Current opinion in psychology*, 22, pp.38-43.https://doi.org/10.1016/j.copsyc.2017.07.020

Lindahl, V., Pearson, J.L. and Colpe, L., 2005. Prevalence of suicidality during pregnancy and the postpartum. *Archives of Women's Mental Health*, 8(2), pp.77-87.https://doi.org/10.1007/s00737-005-0080-1

MacDonald, S., Sampson, C., Turley, R., Biddle, L., Ring, N., Begley, R., & Evans, R. (2020). Patients' Experiences of Emergency Hospital Care Following Self-Harm: Systematic Review and Thematic Synthesis of Qualitative Research. *Qualitative health research*, *30*(3), 471–485. https://doi.org/10.1177/1049732319886566

McGough, S., Wynaden, D., Ngune, I., Janerka, C., Hasking, P. and Rees, C., 2021. Mental health nurses' perspectives of people who self-harm.

For Review Only

International journal of mental health nursing, 30(1), pp.62-71. https://doi.org/10.1111/inm.12814

McKey, S., Quirke, B., Fitzpatrick, P., Kelleher, C.C. and Malone, K.M., 2020. A rapid review of Irish Traveller mental health and suicide: A psychosocial and anthropological perspective. *Irish journal of psychological medicine*, pp.1-11. https://doi.org/10.1017/ipm.2020.108

Morrissey, J., Doyle, L. and Higgins, A., 2018. Self-harm: From risk management to relational and recovery-oriented care. *The Journal of Mental Health Training, Education and Practice*. https://doi.org/10.1108/JMHTEP-03-2017-0017

Newton, A.S., Hamm, M.P., Bethell, J., Rhodes, A.E., Bryan, C.J., Tjosvold, L., Ali, S., Logue, E. and Manion, I.G., 2010. Pediatric suicide-related presentations: a systematic review of mental health care in the emergency department. *Annals of emergency medicine,* 56(6), pp.649-659. https://doi.org/10.1016/j.annemergmed.2010.02.026

Pope, C.J., Xie, B., Sharma, V. and Campbell, M.K., 2013. A prospective study of thoughts of self-harm and suicidal ideation during the postpartum period in women with mood disorders. *Archives of women's mental health,* 16(6), pp.483-488. https://doi.org/10.1007/s00737-013-0370-y

Poyraz Fındık OT, Erdoğdu AB, Fadıloğlu E, Rodopman Arman A, 2022. Emergency Department Visits for Non-suicidal Self-harm, Suicidal Ideation, and Suicide Attempts in Children and Adolescents. *Child Psychiatry Hum Dev*. 53(2), pp. 289-99. https://doi.org/10.1007/s10578-021-01125-6

Saunders, K. E., Hawton, K., Fortune, S., & Farrell, S. (2012). Attitudes and knowledge of clinical staff regarding people who self-harm: a systematic review. *Journal of affective disorders*, *139*(3), 205–216. https://doi.org/10.1016/j.jad.2011.08.024

Quinlivan, L., Cooper, J., Meehan, D., Longson, D., Potokar, J., Hulme, T., Marsden, J., Brand, F., Lange, K., Riseborough, E. and Page, L., 2017. Predictive accuracy of risk scales following self-harm: multicentre, prospective cohort study. *The British Journal of Psychiatry*, 210(6), pp.429-436. https://doi.org/10.1192/bjp.bp.116.189993

Rayner, G., Blackburn, J., Edward, K.L., Stephenson, J. and Ousey, K., 2019. Emergency department nurse's attitudes towards patients who self-harm: A meta-analysis. *International Journal of Mental Health Nursing*, 28(1), pp.40-53. https://doi.org/10.1111/inm.12550

Rozova, V., Witt, K., Robinson, J., Li, Y. and Verspoor, K., 2022. Detection of self-harm and suicidal ideation in emergency department triage notes. *Journal of the American Medical Informatics Association*, 29(3), pp.472-480. https://doi.org/10.1093/jamia/ocab261

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Silverman, M.M., Berman, A.L., Sanddal, N.D., O'carroll, P.W. and Joiner Jr, T.E., 2007. Rebuilding the tower of Babel: a revised nomenclature for the study of suicide and suicidal behaviors part 2: suicide-related ideations, communications, and behaviors. *Suicide and Life-Threatening Behavior*, 37(3), pp.264-277. https://psycnet.apa.org/doi/10.1521/suli.2007.37.3.248

Spiegelhalter D. J. (2005). Funnel plots for comparing institutional performance. Statistics in medicine, 24(8), 1185–1202. https://doi.org/10.1002/sim.1970

Tadros, A., Sharon, M., Crum, M., Johnson, R., Quedado, K. and Fang, W., 2020. Coexistence of substance abuse among emergency department patients presenting with suicidal ideation. *BioMed research international*, 2020. https://doi.org/10.1155/2020/7460701

Von Elm, E., Altman, D.G., Egger, M., Pocock, S.J., Gøtzsche, P.C., Vandenbroucke, J.P. and Strobe Initiative, 2014. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: guidelines for reporting observational studies. *International journal of surgery*, 12(12), pp.1495-1499.

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(IV) Tables

	Self-harm ideation n (%) [1]	Suicidal ideation n (%)	Chi-Square	Phi or Cramér's V^2
Gender				
Females	521 (51%)	4063 (42%)	$\chi^2 = 31.042$	.054
Males	488 (49%)	5498 (58%)	df (1)	
			p < .001	
Ethnic groups				
Asian, Black, Mixed	19 (2%)	212 (2%)	$\chi^2 = 5.044$	.022
White non Irish	63 (7%)	463 (5%)	df (3)	
White Irish	844 (89%)	8132 (90%)	p = .169	
White Irish Traveller	22 (2%)	254 (3%)		
Age groups				
<15	46 (5%)	203 (2%)		
15-19	117 (12%)	948 (10%)	$\chi^2 = 48.724$	.068
20-29	343 (34%)	2846 (30%)	df (6)	
30-39	215 (21%)	2106 (22%)	p <.001	
40-49	142 (14%)	1633 (17%)		
50-59	99 (10%)	1116 (12%)		
60+	47 (5%)	712 (7%)		
Substance misuse as a contributing factor			$\chi^2 = 21.741$	-.045
Yes	377 (37%)	4305 (45%)	df (1)	
No	633 (63%)	5264 (55%)	p < .001	

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Type of substance contributing to the ED presentation				
Alcohol and Drugs (used in combination)	102 (27%)	1202 (28%)	χ^2= .522	.011
Alcohol only	187 (50%)	2166 (50%)	df (2)	
Drugs only	88 (23%)	937 (22%)	p = .770	
Currently attending mental health services			χ^2= 15.145	.040
Yes	354 (39%)	2855 (33%)	df (1)	
No	550 (61%)	5863 (67%)	p < .001	
Referred by				
Emergency services	53 (5%)	523 (5%)	χ^2= .365	.006
Mental health services	10 (1%)	99 (1%)	df (4)	
General Practitioner	225 (22%)	2152 (22%)	p = .985	
Other/Voluntary Org	60 (6%)	531 (5%)		
Self/family/supportive friend	660 (66%)	6263 (66%)		
Emergency Care Plan given (ECP)			χ^2= 9.440	-.030
Yes	585 (58%)	6016 (63%)	df (1)	
No	423 (42%)	3539 (37%)	p = .002	
General Practitioner (GP) letter sent within 24 hours			χ^2= 21.457	.045
Yes	690 (69%)	7175 (75%)	df (1)	
No	318 (31%)	2374 (25%)	p < .001	
Next of Kin Involvement (NOK)				
NOK/friend given ECP and written advice on care/ suicide prevention	346 (39%)	3265 (37%)	χ^2= 17.604	.043

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NOK/friend phoned and given advice on care/ suicide prevention	240 (27%)	2911 (33%)	df (3) p = .001
Pt. requests no NOK involvement	218 (24%)	1804 (21%)	
Pt. states no NOK/ Carer	87 (10%)	743 (9%)	

[1]Percentages are based on the omission of missing values; [2] Phi coefficient effect sizes (ES) interpretation: ES: -1.0 to -0.3 = negative association, ES: -0.3 to 0.3 = little or no accusation, ES: > 0.3 = positive association; Cramer's V effect sizes (ES) interpretation: ES ≤ 0.2 = weak, 0.2 < ES ≤ 0.6 = moderate, ES > 0.6 = strong.

Table 1. Demographic, clinical and aftercare characteristics of NCPSHI presentations with suicidal and self-harm ideation

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(V) Figure legends

Figure 1. Funnel plot of the presentation-based rate of suicidal ideation in 2018.

Figure 2. Funnel plot of the presentation-based rate of suicidal ideation in 2019.

Figure 3. Funnel plot of the presentation-based rate of self-harm ideation in 2018.

Figure 4. Funnel plot of the presentation-based rate of self-harm ideation in 2019.

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STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	Page1 (title doc.)
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 2 (title doc.)
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	Page 2 (main manuscript doc.)
Objectives	3	State specific objectives, including any prespecified hypotheses	Page 2 (main manuscript doc.)
Methods			
Study design	4	Present key elements of study design early in the paper	Page 2 (main manuscript doc.)
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Page 2 (main manuscript doc.)
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	Page 2 (main manuscript doc.)
		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case	
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Page 3-4 (main manuscript doc.)
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Page 3-4 (main manuscript doc.)
Bias	9	Describe any efforts to address potential sources of bias	Page 4 (main manuscript doc.: restricting full year data for funnel plot rates)
Study size	10	Explain how the study size was arrived at	Page 4 (main manuscript doc.)

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Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Page 4 (main manuscript doc.)
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	Page 4 (main manuscript doc.)
		(*b*) Describe any methods used to examine subgroups and interactions	
		(*c*) Explain how missing data were addressed	
		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy	
		(*e*) Describe any sensitivity analyses	

Continued on next page

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Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Page 5 (main manuscript doc.)
		(b) Give reasons for non-participation at each stage	
		(c) Consider use of a flow diagram	
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Page 5 (main manuscript doc.)
		(b) Indicate number of participants with missing data for each variable of interest	Page 5 (main manuscript doc.)
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	Page 5 (main manuscript doc.)
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	
		Cross-sectional study—Report numbers of outcome events or summary measures	
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	
		(*b*) Report category boundaries when continuous variables were categorized	
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Page 5-11 (main manuscript doc.)
Discussion			
Key results	18	Summarise key results with reference to study objectives	Page 12 (main manuscript doc.)
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Page 13 (main manuscript doc.)
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Page 12-13 (main manuscript doc.)
Generalisability	21	Discuss the generalisability (external validity) of the study results	Page (main manuscript doc.)
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

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Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

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Supplementary table 1. Substance misuse in suicidal and self-harm ideation presentations for male and females.

	Female	Male	Chi-square
	Suicidal ideation		
Substance misuse			
Yes	1393 (34%)	2909 (53%)	$\chi^2 = 45.26$, df (1), $p < .001$
No	2670 (66%)	2589 (47%)	
	Self-harm ideation		
Substance misuse			
Yes	143 (27%)	234 (48%)	$\chi^2 = 327.47$, df (1), $p < .001$
No	378 (73%)	254 (52%)	

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