



Evidence brief: Risk and protective factors associated with suicide and high-risk self-harm – Findings from SSIS-ACE and IMPRESS

This evidence brief provides findings from:

1. **SSIS-ACE** – a HRB funded retrospective case-control study (2014-2016), which originated from the Suicide Support and Information System (SSIS) and aimed to improve the knowledge base on specific psychosocial, psychiatric and work-related risk factors associated with suicidal behaviour in Ireland and to gain insight into specific protective factors that prevent people from engaging in suicide and high risk self-harm. SSIS-ACE has been the first case control study to be conducted in Ireland (Figure 1).
2. **IMPRESS** - is part of the current HRB funded 5-year research programme which commenced in 2015, in particular: *Improving Prediction and Risk Assessment of Suicide and Self-Harm (IMPRESS)*. The objectives of this study are: 1) to examine psychosocial, psychiatric and work related factors associated with repeated self-harm among major repeaters (i.e. those with 5 or more previous self-harm acts) and patients with high risk self-harm; 2) to examine the sensitivity and specificity of risk factors associated with repeated self-harm, and 3) to develop a risk assessment procedure for repeated self-harm and suicide for use in a general hospital setting. The recruitment for the IMPRESS study is ongoing until September 2018.

SSIS-ACE – Key findings

In order to identify specific risk factors associated with suicide, two interlinked case-control studies were conducted, one study comparing suicide cases with general practice patient controls, and one study comparing suicide cases with ED patient controls who presented with an act of high risk self-harm (non-fatal). The case-control study consisted of three arms: suicide cases, highly lethal self-harm patients, and GP practice controls.

Data obtained from Coroner's verdict records

During the period June 2014 and June 2016, 133 consecutive cases of suicide were recorded based on the verdict records of 3 Coroners' services in Cork County and City, the majority (83.3%) being males and the average age for the total sample was 40.8 (SD=16.1). Fifty-four percent of cases were single and nearly one third (29.5%) were unemployed. Twenty-two percent of cases had worked in the construction/production sector and 65.9% died by hanging (*by far the most frequently used method*).

Characteristics of suicide cases compared to control group

Suicide cases (n=33) and controls (n=57) were matched for age and gender across the groups revealing a similar gender and age profile (Figure 2). Twenty percent of suicide cases were married compared to 62.3% of cases in the control group. Suicide cases were more likely to live alone (37.1% compared to 13.2%) and less likely to have a partner/ spouse and children (31.4% compared to 50.9%). Unemployment was higher among suicide cases (11.4% compared to 5.7%).

In comparison with the control group, suicide cases were also significantly more likely to have: a previous history of self-harm (54.5 % compared to 20.8%), history of psychiatric treatment (inpatient and outpatient) (54.5% compared to 12%), higher levels of symptoms of depression (20.5% compared to 12.7%), dysfunctional impulsivity (4.8% compared 2.7%), substance abuse (alcohol abuse 33.3% compared to 18%) (drug abuse 24.2% compared to 11.8%), and problematic coping strategies (15% compared to 8%).

SSIS-ACE and IMPRESS – First outcomes

The IMPRESS study employs an infrastructure that has been established as part of the SSIS-ACE study in the Cork hospitals for developing procedures to approach consecutive patients with high risk self-harm (high lethality self-harm presentations and low lethality self-harm presentations with high level of suicide intent) and those who have engaged in 5 or more previous acts of self-harm (i.e. major repeaters). Each patient that fulfils the inclusion criteria will be invited to take part in a baseline interview shortly after the index self-harm presentation and a follow-up interview six months after the index presentation. The SSIS-ACE study and IMPRESS study have been approved by the Clinical Research Ethics Committee of the Cork University Teaching Hospitals.

1. High risk self-harm group

Analyses involved 52 interviews conducted with patients who met the criteria for the high risk self-harm group from September 2014 to August 2016. Fifty-eight percent of participants were male, with a mean age of 40 years (SD=12.5). More than 50% of participants were single and 39.2% were unemployed. The most predominant method of self-harm was intentional drug overdose/other self-poisoning (51.7%), and 58.7% had a history of one or more self-harm episodes. More than half of participants (53.3%) had a history of alcohol abuse and 33.3% had a history of drug abuse. Over 40% of participants had a history of physical, sexual or emotional abuse and 58% had a family history of mental illness. Most participants (93.3%) had attended their GP in the year prior to their self-harm episode.

2. Major repeater self-harm group

So far, 23 interviews have been conducted with patients who had a history of five or more previous self-harm presentations to the emergency department from August 2016 to June 2017. Sixty-six percent of the participants were female with a mean age of 33 years (SD= 7.39). Most participants were single (69.9%) and unemployed (43.4%). Over 78% of participants had a history of ten or more self-harm episodes and the most predominant self-harm method was overdose (69.9%). Over 80% of participants had a history of physical, sexual or emotional abuse and when participants were asked about their family history, violent behaviour (56.5%), mental illness (60.9%) and suicidal behaviour (58.2%) were predominant issues. More than 95% of participants attended their GP in the year prior to their most recent self-harm episode, 73.9% were previously treated as an inpatient, with Personality Disorder (65.2%) and PTSD (30.4%) being the most prevalent diagnoses.

Key outcomes:

- Psychiatric, psychosocial and work-related factors were significantly more prevalent among suicide cases versus controls.
- The presence of negative coping skills was more significantly associated with suicide than absence of positive coping skills.

- The findings show more similarities than differences between people with high risk self-harm and those who died by suicide.
- There are significant differences between the high risk self-harm group and the major repeater group, which should inform future clinical practice and service provision to meet the needs of these two specific groups.

Recommendations:

- The outcomes underline the need to improve assessment and management of self-harm in order to prevent repeated self-harm / method escalation and suicide.
- The findings support the need to improve the level of care for people with depression and negative personality traits/disorders.
- The most predominant method across both groups was intentional drug overdose, consistent with one of the main goals of *Connecting for Life*, these findings provide further evidence for reducing access to frequently used drugs in intentional overdose.
- The high level of physical, sexual and emotional abuse, PTSD and personality disorders underlines the need for increased capacity of specialised psychotherapeutic interventions.
- High GP attendance rates prior to the self-harm episodes across both groups, indicates the need for further training in screening for suicidal risk for healthcare professionals in primary care settings.
- Most participants in the major repeater group had a history of ten or more self-harm episodes, which would suggest the need for specific treatment plans for this group to manage long-term engagement with services.

Link with *Connecting for Life* Goals:

- Goal 4: To enhance accessibility, consistency and care pathways of services for people vulnerable to suicidal behaviour.
- Goal 5: To ensure safe and high quality services for people vulnerable to suicide.
- Goal 7: To improve surveillance, evaluation and high quality research relating to suicidal behaviour.

Figure 1 Participants included in the SSIS-ACE study

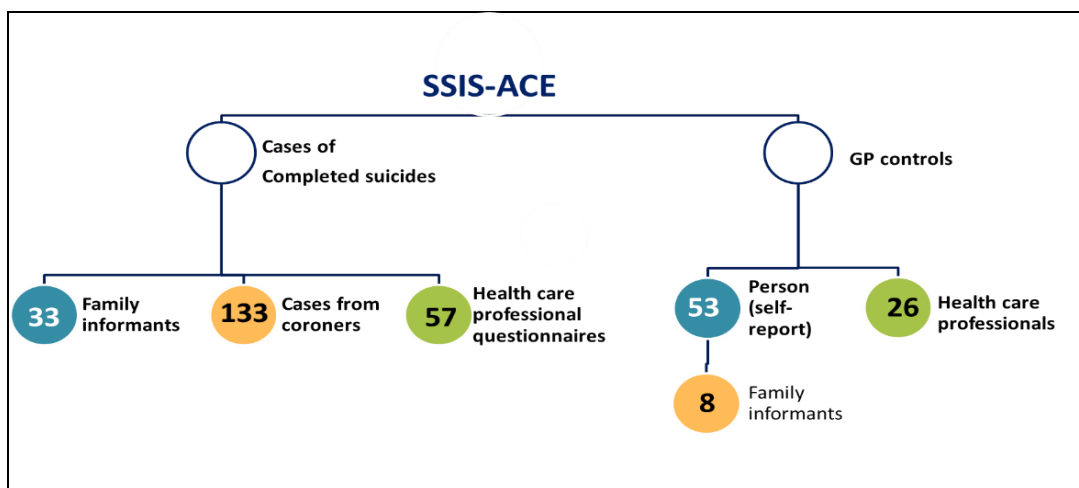
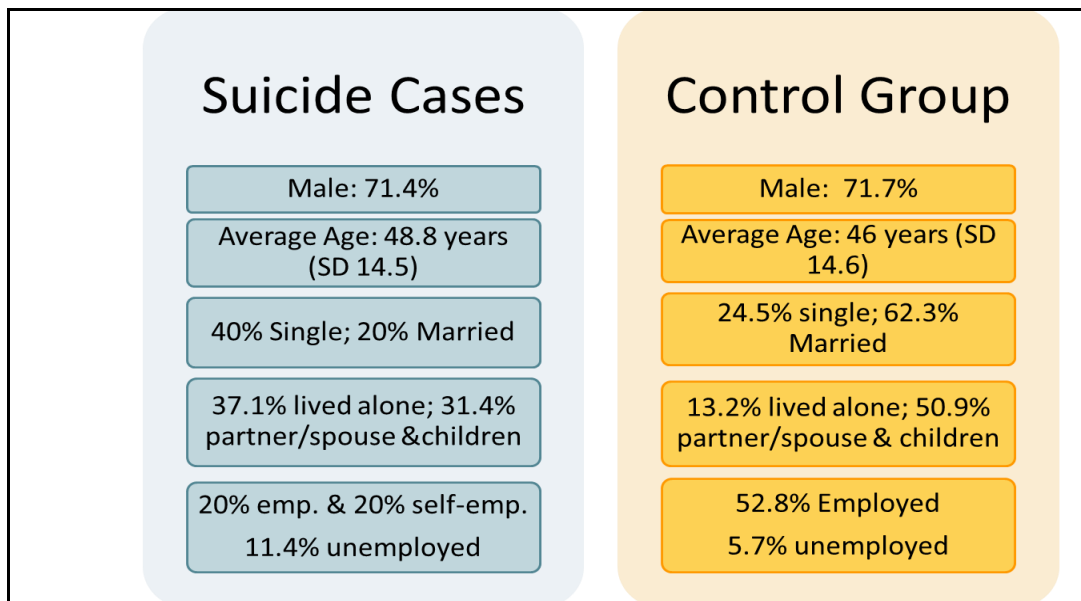


Figure 2 Characteristics of suicide cases versus the control group



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