Key Messages

From Self-Harm to Suicide*: Identifying High Risk Groups (ISPDS 2015–17 cohort)

McMahon, E. M., Cully, G., Corcoran, P., Arensman, E., & Griffin, E. (2024). Advancing early detection of suicide? A national study examining socio-demographic factors, antecedent stressors and long-term history of self-harm. Journal of affective disorders, 350, 372–378.

1

Prior self-harm as a risk factor

The majority (78%) of suicide cases had no history of hospital-treated self-harm, making risk detection challenging and highlighting the need for broader prevention strategies.

2

Significant differences between those with and without a self-harm history

particularly in terms of gender, age, marital status, and mental health conditions.

3

Four distinct risk profiles emerged

including a "hidden risk" group of mostly men with few clinical indicators but high life stressors including physical health conditions, relationship breakdown and job stressors, including job loss.

4

Mental health and substance use remain critical risk factors

Almost two-thirds had a mental health condition; substance dependence strongly associated with prior self-harm and suicide risk.

5

Stressors play a critical role

Relationship breakdown, occupational factors, physical health factors and legal issues were prevalent among suicide cases, especially among men without diagnosed mental health conditions.

6

Gender differences in risk factors

Males:
living alone, unemployed, alcohol dependence;

Females:
age 25–44, homemaker, drug dependence.

7

Prevention must go beyond clinical settings

strategies should include workplace interventions, primary care engagement, and community-based supports that normalise help-seeking, especially for men.

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* This study used three years of data from the Irish Probable Suicide Death Study (IPSDS) 2015–2020, derived from an annual census of closed coronial files for the corresponding years. The IPSDS applies the civil standard of proof—suicide on the balance of probabilities—and includes both coroner determined and research determined suicides. Throughout this paper, the term "suicide" refers to both categories.

Key Findings

From Self-Harm to Suicide: Identifying High-Risk Groups (IPSDS 2015–2017 cohort)

This is a summary of the findings presented in McMahon, E. M., Cully, G., Corcoran, P., Arensman, E., & Griffin, E. (2024). Advancing early detection of suicide? A national study examining socio-demographic factors, antecedent stressors and long-term history of self-harm. Journal of affective disorders, 350, 372–378.

Summary

Suicide often occurs in people with no history of hospital-treated self-harm, while those who have presented previously tend to show clearer socio demographic and psychiatric risk factors. This national retrospective study linked data from the Irish Probable Suicide Death Study (IPSDS 2015–2017) and the National Self-Harm Registry Ireland (NSHRI) to examine characteristics of 1,809 individuals who died by suicide and their history of hospital-treated self-harm. Prior self-harm was identified in 22.2% of cases, more common among females and those with a mental health condition and/or a substance dependence history. Latent class analysis revealed four profiles: two groups had a high proportion of individuals with a history of mental health conditions but low levels of prior self-harm, one 'high risk' group with multiple risk factors including prior self-harm and substance use, and a fourth 'hidden risk' group, mostly males, with few clinical indicators but significant life stressors. While self-harm remains a strong predictor of suicide, four out of five cases had no hospital-treated self-harm history. Findings highlight the need for prevention strategies addressing both clinical and psychosocial factors, including workplace interventions and primary care engagement, particularly for men with no prior psychiatric history.

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1. Profile Differences: Prior Self-Harm vs No Prior Self-Harm presentation

- **22.2%** of those who died by suicide had a history of hospital-treated self-harm.
- Those with a prior self-harm hospital presentation were more likely than those with no prior presentation to be
  - female (32.7% vs 20.5%), aged 25–54 years, single, unemployed, have a mental health condition, have a history of drug dependency (39.2% vs 22.4%) and a history of alcohol dependency (30.7% vs 13.4%)
- Method of death also differed
  - Those with a self-harm history were less likely to die by hanging (54.9% vs 62.7%), and more likely to die by drowning (22.9% vs 11.2%) than those without prior self-harm presentation.

2. Stressors before suicide

- Most frequently reported stressors:
  - Mental health symptoms (32.6%)
  - Relationship difficulties (25.8%)
  - Physical illness/pain (16.1%)
- Those with prior self-harm were more likely to have relationship difficulties, to have been experiencing mental health symptoms, and to have a history of abuse.

3. Factors Associated with history of self-harm prior to suicide (Logistic Regression)

- **Males:** Higher odds of self-harm history if living alone or homeless/in an institution, unemployed, with a mental health condition, and/or a history of alcohol dependence.
- **Females:** Higher odds of prior self-harm history if aged 25–44 years, a homemaker, with a mental health condition, and/or a history of drug dependence.

4. Four distinct profiles of suicide cases (Latent class analysis)

- **Group 1** (27.6%): Individuals with poor mental health but low self-harm history, often facing physical illness and employment difficulties. Mostly males.
- **Group 2** (37.1%): Individuals with poor mental health, low self-harm history, single, living alone. Highest proportion of females.
- **Group 3** (21.1%): *HIGH RISK* individuals with multiple risk factors, including prior self-harm, mental health conditions, substance dependency, unemployment and relationship difficulties. Younger age profile.
- **Group 4** (14.3%): *HIDDEN RISK* mostly males, with no clear mental health history or prior self-harm, but high levels of personal stressors and adverse events (relationship breakdown, legal issues, job loss).