



## Evidence Brief: The association between self-harm and area-level factors

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This Evidence Brief provides information on the association between area-level factors and hospital-treated self-harm in Ireland, using data from the National Self-Harm Registry Ireland (NSHRI) and the Northern Ireland Registry of Self-Harm (NIRSH). Both registries are national self-harm surveillance systems which provide timely data on trends and high risk groups for self-harm in Ireland. Research findings from a number of key Irish studies based on data from these surveillance systems, are summarised here.

### Key Research Findings

- In Ireland, rates of self-harm vary regionally, with the highest rates recorded in urban, densely populated areas. A review of research in this area identifies an association between the incidence of self-harm and other area-level factors such as deprivation and social fragmentation, demonstrating a clear relationship between self-harm and social inequalities (1, 2, 3).
- The relative deprivation of an area has the strongest independent association with rates of self-harm. Compared to the most affluent areas, rates of self-harm can be up to **two to four times higher in the most deprived areas**. The effects of deprivation are more significant for those aged under 40 years and for men.
- In particular, socioeconomic aspects of deprivation (i.e. lack of employment and education) have the strongest association with self-harm. Areas with **high levels of social fragmentation** also show high rates of self-harm – up to four times higher in the most fragmented areas in Northern Ireland.

### Policy recommendations

- Intervention strategies aimed at targeting at-risk groups should be provided in the most deprived areas, where support is needed and individuals are at most risk. Suicide prevention strategies and action plans should consider the impact that deprivation has on local areas.
- Strategies to reduce the incidence of self-harm and suicide require a cross-sectoral approach. Strategies may need to be area-specific and neighbourhood characteristics should be considered.
- Population-based and community interventions may be effective in reducing the incidence of self-harm, in line with multi-level approaches to suicide prevention, such as the European Alliance Against Depression approach (4). Evaluation of community interventions may help improve the current evidence base and inform national policy and suicide prevention strategies.
- While rates of self-harm are highest among women, the association between self-harm and area-level factors is most pronounced among men. Early engagement with and tailored interventions for men are important, to encourage help-seeking behaviour. Measures to reduce unemployment may be effective in reducing the male rate of self-harm.

## Hospital-presenting self-harm in Ireland

Self-harm is the single most important risk factor for death by suicide, with the rates of suicide 100 times more than that of the general population (5). Each year, approximately 9,000 people present to emergency departments in Ireland as a result of self-harm (6). In Northern Ireland, 6,000 present to hospital with self-harm or with thoughts of self-harm or suicide (suicidal ideation) (7).

A comprehensive understanding of the risk factors associated with self-harm is important, in order to reduce the incidence of self-harm in Ireland and to inform appropriate intervention and prevention measures. Risk factors for self-harm are multifaceted, comprising of individual, community and societal factors (8). Across all of these levels, the link between self-harm and inequalities is well established (9). There is a growing body of research which shows that area-level factors are strongly associated with self-harm. In general, rates of self-harm tend to be highest in areas with high levels of deprivation, social fragmentation and in urban areas.

### Area-level factors and rates of self-harm and suicide

At an ecological level, **deprivation** has been shown to be most strongly related with higher rates of self-harm – up to two times higher in the most deprived areas in Ireland and four times higher in Northern Ireland. This association appears to be more pronounced for young people and for men and this association has held across the period 2002-2017 (1, 2, 3). A recent study of self-harm in Northern Ireland identified specific aspects of deprivation associated with self-harm (3). In particular, areas deprived in terms of *employment, crime and disorder, education skills and training and health and disability* had the highest rates of self-harm.

**Social fragmentation** refers to the breakdown of social bonds between the individual and their communities, which can result in instability and fragmentation of social identity. Two Irish studies examining rates of self-harm in 2002-2004 and 2009-2011 found a positive association between rates of self-harm and social fragmentation, a pattern more pronounced among working adults aged 40-64 years (1, 2). This association was weaker in recent years, and did not hold at a multivariate level in a study of self-harm in Northern Ireland for the period 2012-2015 (3). In addition, social fragmentation and self-harm appears to be more pronounced in rural areas. In Dublin for example, where there is a greater concentrations of young professionals with low rates of self-harm that increase social fragmentation factors, there was no observed association found (2).

Consistently, rates of self-harm are highest in **urban areas** in Ireland. Over the past several years, the highest rates of male and female self-harm have been recorded in Cork and Limerick cities, respectively (6). In Northern Ireland, rates of self-harm in Belfast and Derry City were 44% and 59% higher than the rest of the region (3). The high rates of self-harm recorded in urban areas is driven primarily by an association with population density at a small area level, with those in the most rural of areas in Ireland and with the lowest population density three times less likely to self-harm than those in the most populated urban areas (2). However, they may also be in part influenced by proximity to hospital. A 2015 study found that in urban areas, rates of self-harm were elevated in areas within close proximity to hospital (2).

### Conclusion

The findings from these studies have highlighted the clear link between social inequalities and risk of self-harm. This is mirrored in related research, demonstrating the impact of recessionary periods on rates of self-harm and suicide (10). Such factors are also emphasised at an individual-level, with employment, financial and housing factors identified as contributory factors to self-harm (9, 11). Similar patterns in relation to suicide have also been identified (9). Addressing inequalities should be an integral element to suicide prevention.

## National Suicide Research Foundation,

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*The NSHRI and the NIRSH aim to quantify self-harm presentations to acute public hospitals; to identify subgroups with high rates of self-harm presentations; to describe the methods of self-harm employed and to identify areas with the highest rates of self-harm. Since 2006 the NSHRI has had complete coverage of all general hospital and paediatric hospital emergency departments in the Republic of Ireland, while the NIRSH has operated across all 12 hospital emergency departments in Northern Ireland since 2012.*

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