

Area Factors and Suicide in Northern Ireland

Key Findings:

- in the 5 year period from 2001-2006, 566 deaths to study members were classified as due to suicide/undetermined intent;
- 75.1% of these deaths were to males and 75.3% were to people aged less than 55 at the time of the Census 2001;
- those who were currently married/cohabiting showed the lowest risks of suicide compared to all other marital status categories;
- among the economic activity categories, those who were permanently ill had the highest suicide risks;
- there was a strong and graded relationship between individual and household deprivation and risk of suicide;
- poorer self-reported health status was strongly associated with higher suicide risk.

BACKGROUND TO THE RESEARCH

Suicide rates can vary significantly between areas and this research was undertaken to determine if this is due to differences in population (composition) or area (context) characteristics. The research aim was therefore to examine if area factors are independently related to suicide risk after adjustment for individual and family characteristics.

METHODOLOGY

A five year record linkage study was conducted using the Northern Ireland Mortality Study (NIMS) to link deaths from 2001-2006 to all 16 to 74 year olds enumerated at the 2001 Census, not living in communal establishments (1,116,748 individuals). Definite suicides and deaths of undetermined intent were combined to define the category of suicides used in analysis - ICD-10¹ codes X60-X84, Y10-Y34 & Y87.0.

Study members were analysed in relation to individual and household characteristics (including marital status, household size, socio-economic status, economic activity and self-reported health status). Area characteristics of residence (based on Super Output Area government administrative level) were derived from indicators relating to material deprivation, population density and social fragmentation. The latter being a measure of isolation constructed using the following census variables: % in private rented accommodation; % unmarried; % aged less than 65 living alone; and % population turnover in the year prior to census.

Cox proportional hazards modelling and likelihood ratio statistics were used to analyse the individual and household factors associated with increased suicide risk and to determine whether area factors contributed to risk independently.

POLICY IMPLICATIONS

- this research confirms the known associations between suicide and indicators of isolation and socio-economic disadvantage at household and individual level;
- single-person households are a developing social trend and so should be considered for inclusion in future risk assessments;
- those who are permanently ill have an increased suicide risk; this needs to be considered within a climate of high levels of unemployment where those who might register as unemployed chose to register instead as economically inactive owing to chronic ill-health;
- in relation to mental health and the risk of suicide, health promoting and protection measures that are targeted at area-level factors are unlikely to have a material impact on suicide rates.

Table: Individual and Household Factors associated with Suicide Risk (Fully Adjusted Cox Proportional Hazards Ratios)

	HR (95% Confidence Intervals)
Gender	
Male	1.00 (Reference)
Female	0.30 (0.24-0.37)
Marital Status	
Married/Cohabiting	1.00 (Reference)
Single	1.41 (1.10-1.80)
Separated/Divorced	1.67 (1.22-2.26)
Widowed	1.07 (0.59-1.95)
Person Deprivation	
Least Deprived	1.00 (Reference)
Most Deprived	1.92 (1.08-3.39)
Economic activity	
Employed	1.00 (Reference)
Unemployed	1.28 (0.89-1.84)
Homemaker	1.65 (1.12-2.41)
Permanently Sick	2.44 (1.81-3.29)

1.00 = reference category, <1.00 = decreased risk, >1 = increased risk

NORTHERN IRELAND MORTALITY STUDY (NIMS)

The NIMS, a sister study to the Northern Ireland Longitudinal Study (NILS), is a record linkage study which links 2001 Census returns to subsequently registered mortality data. Both studies allow exploration of health and socio-demographic characteristics to provide an insight into the status of the NI population. They can be used in analyses of, for example, social inequity, population trends, mortality studies and the impact of new public health policies and the planning of services. The data will interest a variety of researchers and policy-makers UK-wide.

The NILS Research Support Unit provides information, advice and support for potential academic and government research users of the NILS and NIMS databases. For further information please go to our website at www.nils-rsu.census.ac.uk.

This research brief is based on O'Reilly D, Rosato M, Connolly S & Cardwell C (2008). *Area factors and suicide: 5-year follow-up of the Northern Ireland population*. British Journ. of Psych. 192, 106-111 For further information please go to [NILS RSU Publications](#).

¹ ICD-10 International Statistical Classification of Diseases and Related Health Problems: Version 10