Area and Alcohol-Related Mortality Risk

Key Findings:

- in the 5 year period from 2001-2006, there were 578 alcohol-related deaths to study members aged 25-74;

- alcohol-related mortality was higher for males, socio-economically disadvantaged individuals and those with poor self-reported health;

- the risk of death from alcohol-related illness was highest in the 45-54 age group for both males and females;

- married men recorded lower mortality risk than other men, while single women recorded lower risks than married women;

- excess risk for those in deprived areas disappeared after adjustment for individual characteristics; reduced risks for those in rural areas remained.

BACKGROUND TO THE RESEARCH

Research has shown that alcohol-related mortality risk is associated with a number of individual and household characteristics but there has been increasing interest on the potential effects of area of residence on health. The aims of this study are to (1) examine if there are differences in alcohol-related mortality risk between deprived and non-deprived areas and urban and rural areas and; (2) determine whether differences are due to the characteristics of individuals living in theses areas or to specific area effects.

METHODOLOGY

A five year record linkage study was conducted using the Northern Ireland Mortality Study (NIMS) to link alcohol-related deaths from 2001-2006 to those aged 25-74, enumerated at the 2001 Census, and not living in communal establishments. Alcohol-related mortality was defined as deaths registered with the ICD-10[1] codes F10, G31.2, G62.1, I42.6, K29.2, K70, K73, K74 (excl K74.3-74.5), K86.0, X45, X65 and Y15.

Study members were analysed in relation to individual and household characteristics (age, sex, marital status, socio-economic status, household composition and health status as an indicator of morbidity). Two indicators relating to residence at Super Output Area government administrative level were included: deprivation (proportions in receipt of means-tested benefits); and urban/ intermediate/rural settlement classifications.

Distributions of individual and area characteristics were derived and logistic regression and Cox proportional hazards modelling used to assess the individual/household characteristics associated with alcohol-related mortality and the impact of area effects.

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

POLICY IMPLICATIONS

- alcohol-related mortality is higher in more deprived areas, however this is due to individual characteristics rather than some independent effect of area deprivation *per se* - appropriate policy responses should target at-risk individuals rather than area-based initiatives alone;

- mortality risks where significantly higher for those in urban areas compared with rural and other area-based characteristics linked to the built and social environment could be important - government initiatives should include assessment of such factors that may be associated with excess consumption (e.g. supply of cheap alcohol).

Table: Factors associated with Alcohol-Related Mortality Risk (Fully Adjusted Cox Proportional Hazards Ratios & 95% Confidence Intervals)

Age	Male	Female
25-44	1.00	1.00
45-54	2.46 (1.89, 3.20)	2.29 (1.57, 3.34)
55-64	1.85 (1.36, 2.52)	1.64 (1.06, 2.53)
65-74	1.17 (0.78, 1.76)	1.01 (0.60, 1.71)
Marital Status		
Married	1.00	1.00
Single	1.81 (1.34, 2.45)	0.61 (0.36, 1.02)
Sep/Div/Widowed	3.00 (2.22, 4.06)	1.10 (0.75, 1.62)
Household Composition		
Multi-person	1.00	1.00
Single-person	0.97 (0.74, 1.27)	1.32 (0.88, 2.00)
Car Access		
Two or more	1.00	1.00
One	1.47 (1.06, 2.03)	2.13 (1.36, 3.32)
None	4.48 (3.08, 6.52)	4.05 (2.37, 6.93)
Settlement Band		
Urban	1.00	1.00
Rural	0.62 (0.46, 0.83)	0.37 (0.24, 0.57)

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.