**Prevalence of alcohol related brain damage among homeless hostel dwellers in Glasgow**

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**Background:** Over half of Glasgow’s 4000 homeless people drink hazardously but the prevalence of alcohol-related brain damage (ARBD) has not been described. **Aims and Objectives:** To determine the prevalence of ARBD among homeless hostel dwellers in Glasgow. **Methods:** A representative sample of homeless hostel dwellers was surveyed using validated survey instruments and clinical assessment. **Results:** From a sample of 266 hostel dwellers, 82% had cognitive impairment and 78% were drinking hazardously. The prevalence of ARBD among homeless hostel dwellers was 21%. **Conclusions:** ARBD has a high prevalence among homeless hostel dwellers and treatment is usually effective. There is a need to actively identify and treat this population to help them move out of homelessness.

**Keywords:** alcohol-related brain damage, homeless, Korsakoff’s syndrome, Wernicke’s disease

Alcohol abuse and dependence are major health problems for homeless people. In Glasgow, where there are about 4000 homeless people at any one time, over half of them drink hazardously. It seems probable that the consequent alcohol-related brain damage (ARBD) therefore constitutes major health and social care needs. However, no published European literature indicates the extent of ARBD among homeless people. ARBD is a spectrum of amnesic disorders including Wernicke’s encephalopathy and Korsakoff’s psychosis (International Classification of Diseases Statistical Manual, version 10, code F10.6). This study describes the prevalence of ARBD among hostel residents in Glasgow.

**Participants, methods and results**

Our sample comprised 266 homeless people aged over 34 years from five large male hostels (randomly selected, n = 189), one large female hostel (all eligible residents, n = 21) and a hostel with a rapid turnover used to assess homeless people’s needs (systematic sample of new residents over a 6 month period, n = 56) in Glasgow. Informed written consent was obtained. Participants were screened for cognitive impairment and alcohol dependence. Simple descriptive statistics and confidence intervals (CI) calculated at the 95% level in all cases were produced using SPSS software.

Figure 1 illustrates the screening process. All participants completed the Addenbrooke’s Cognitive Examination (ACE)³, a score of <88 indicating cognitive impairment. Thereafter all participants completed the Fast Alcohol Screening Test (FAST)³ to determine hazardous drinking in the past year (score of ≥3). If the participant reported hazardous drinking in the previous year they then completed the Leeds Dependence Questionnaire (LDQ)⁴ which measures alcohol dependence in the previous week (a score of ≥9 indicates current alcohol dependence). If the participant did not meet criteria for current alcohol dependence, they then completed the LDQ for a period in their lifetime when they considered they had drunk heavily, to establish lifetime alcohol dependence. However, if participants did not meet the threshold for hazardous drinking in the last year measured by FAST, the CAGE Questionnaire⁵ was administered to measure lifetime hazardous drinking. If the participant had a history of hazardous drinking in their lifetime they completed the LDQ. If a participant neither reported hazardous drinking in their lifetime nor in the last year, they were not required to complete the LDQ. A psychiatrist and psychologist clinically assessed respondents who met criteria for lifetime alcohol dependence and cognitive impairment.

The majority of our sample of 266 was male (n = 237/266, 89%) and the mean age was 53 years (CI 51–54 years); 78% (n = 207/266, CI 73–83%) were drinking hazardously and 61% (n = 163/266, CI 55–67%) met criteria for lifetime alcohol dependence; 82% (n = 219/266, CI 77–87%) had cognitive impairment as measured by a score of <88 on ACE. Of 135 (51% of 266) eligible for assessment by a psychiatrist and psychologist, 132 (50% of 266) agreed to be assessed; 76 (58% of 132) were seen by psychiatry and psychology, of whom 43% (n = 35, CI 32–54%) were diagnosed with ARBD. By applying age-specific prevalence rates to the original sample of 266, we estimated the prevalence of ARBD to be 21% (CI 16–26%).

**Comments**

Twenty-one percent of homeless hostel dwellers in Glasgow aged 34 years and older have ARBD. Although only 58% of those referred for clinical assessment were seen, there was no statistically significant difference from those who were not seen with respect to age, sex, alcohol dependence or cognitive impairment. The small proportion of females recruited to this study (n = 29, 11%) is representative of the proportion of females resident in homeless hostels in Glasgow.

Post mortem studies on community samples report prevalence of Wernicke–Korsakoff’s ranging from 0.4% in France to 2.8% in Australia,⁶ rising to 19% among those with a history suggestive of alcohol misuse.⁷ The prevalence of ARBD in long-stay mental hospitals in Scotland⁸ is 9%. The prevalence among the general population in Scotland has not been described, however.

Given that the majority of patients with ARBD will show some recovery with treatment,⁹ a process of screening and diagnosis is required to actively identify them and engage them with clinical and support services. This might potentially benefit a significant number of homeless hostel residents. As with many interventions for ‘hard-to-reach’ populations, evidence is lacking on whether such attempts are likely to be effective. However, with increasing provision of specialist health and social care
for homeless people in Glasgow, the potential to provide a diagnostic and treatment service for homeless patients with ARBD is greater than it has ever been. The effectiveness of these new services will need to be evaluated.

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Key points

- Over half of homeless people drink hazardously, but the extent of alcohol related brain damage is not known.
- We surveyed 266 homeless hostel dwellers and estimated the prevalence of alcohol related brain damage (ARBD) to be 21%. The majority of patients with ARBD will recover with treatment, so a process of screening and treatment could potentially benefit many homeless people and improve their ability to live independently.

References


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