Capture recapture estimation of the prevalence of mild intellectual disability and substance use disorder

Joanneke E.L. VanDerNagel, Marion Kiewik, Marloes G. Postel, Marike van Dijk, Robert Didden, Jan K. Buitelaar, Cor A.J. de Jong
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Highlights

• Patients with substance use disorder (SUD) and MID are found in a variety of settings.

• Single source studies do not provide reliable prevalence rates for SUD and MID.

• Capture recapture methods combine samples to obtain more reliable prevalence data.

• Capture recapture methods can also be used with incomplete or selected samples.

Abstract

Persons with mild to borderline intellectual disability (MID) have been identified as a group at risk for substance use disorder (SUD). However, prevalence estimates of co-occurring SUD and MID rely largely on single source studies performed in selected samples. To obtain more reliable population estimates of SUD and MID, this study combines data from an Intellectual Disability Facility (IDF), and an Addiction Treatment Centre (ATC) in a semi-rural area in the Netherlands. Capture–recapture analysis was used to estimate the hidden population (i.e., the population not identified in the original samples). Further analyses were performed for age and gender stratified data. Staff members reported on 88 patients with SUD and MID in the IDF (4.0% of the IDF sample) and 114 in the ATC (5.2% of the ATC sample), with 12 patients in both groups. Only strata for males over 30 years provided reliable population estimates. Based on 97 patients in these strata, the hidden population was estimated at 215. Hence the estimated total population of males over 30 years old with MID and SUD was 312 (95% CI 143–481), approximately 0.16% (0.05–0.25%) of the total population of this age and gender group. This illustrates that while patients with co-occurring SUD and MID often receive professional help from only one service provider, single source data underestimate its prevalence, and thus underestimate treatment and service needs. Therefore, population prevalence estimations of co-occurring SUD and MID should be based on combined multiple source data.