Reviewer's report

Title: Physical and mental health comorbidity in adults with intellectual disabilities: population-based cross-sectional analysis

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Reviewer: Heleen Evenhuis

Reviewer's report:

This is a well-written manuscript based on data from a very large general practice population, comparing the scale and character of chronic comorbidity between those with and without intellectual disabilities. Its strength is the large sample, enabling analysis of all age groups over 18 years, and comparisons with persons with a normal intelligence in the same dataset. Main findings are more comorbidity in all age groups with intellectual disabilities, a different distribution of chronic conditions, and no relation with low income neighbourhood. Statistics and conclusions appear adequate. Nevertheless, I have several problems with this study.

Insufficiently innovative

Apart from the lack of a relationship with low income, none of the main findings are new. A comparable study in a large general practice population has been performed by Van Schrojenstein Lantman-de Valk as early as in 2000, whereas several high-quality epidemiologic studies of prevalences and risks of comorbidity, including comparisons with the general population, have been published during recent years, both in 18+ and in 50+ populations with intellectual disabilities (Van Splunder et al, 2006; Meuwese-Jongejeugd et al, 2006; Strydom et al, 2009, 2013; De Winter et al, 2012, 2013, 2014; Zaal-Schuller et al, 2015; Van de Louw et al, 2009; Jansen et al, 2013; Hermans et al, 2012). All groups reported higher prevalences and different distributions. The authors have referred to some of these studies in the introduction, including the two first multimorbidity studies in intellectual disability from the 50+ TILDA (Ireland) and HA-ID (Netherlands) populations. In the second one, comparisons were made with multimorbidity prevalences in different other Dutch 55+ populations, including two general practice-based datasets. The prevalence in the HA-ID group was comparable to that in the Dutch nursing home population. Further, a first attempt of clustering was performed (Hermans et al, 2014).

Underdiagnosis

As the authors recognise, under-reporting and underdiagnosis are the second problem. In the above epidemiologic studies, data collection had been based on active, standardised diagnostic assessments instead of on clinical practice files. Comparisons with the general population were not based on the same dataset, but on studies, performed in the same period and region, using identical or
comparable diagnostic definitions and methods. Because of missing data as a result of non-cooperation or non-understanding, under-reporting was, and will always be, a factor in study populations with intellectual disabilities, but on a different scale than in the current study based on clinical files. One may argue that under-reporting and underdiagnosis will also have been present in the patient group with normal intelligence, but this may be on a different scale.

Under-reporting and under-diagnosis may not affect the message of more and different comorbidity, even adding to it. However, for individual conditions, this may be different. As an example, findings of this study for the cardiovascular risk are misleading and may hamper timely recognition and treatment, specifically in the large group using antipsychotic drugs. Active diagnostic assessments in the HA-ID and other studies have identified significantly increased risks of diabetes and peripheral vascular disease, which had remained unrecognised in 45% and 97-100%, respectively (De Winter et al, 2012, 2013; Zaal-Schuller, 2015).

Selection?

The authors conclude that the included study group is representative of the Scottish population with intellectual disabilities, but which population is that? Those using special services and those with mild intellectual disabilities who happen to have been recognised as such? Could the prevalence of mental conditions, such as schizophrenia, have been influenced by selective recognition of mild intellectual disability in psychiatric patients?

As a conclusion, this study is not innovative, underdiagnosis may not have affected the overall pattern of increased comorbidity but has led to misleading outcomes in cardiovascular risk, and selective inclusion of psychiatric patients with mild intellectual disabilities might have influenced prevalences of mental disease. Therefore, I recommend to not accept this manuscript for publication.

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests