Journal of Policy and Practice in Intellectual Disabilities

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ORIGINAL ARTICLE OPEN ACCESS

Ageing Across Continents: Insights Into the Physical Health of Older Adults With Intellectual Disability From Ireland and Australia

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Received: 5 May 2025 | **Revised:** 31 August 2025 | **Accepted:** 4 November 2025

Funding: The Irish Longitudinal Study on Ageing and Intellectual Disability was funded by the Health Research Board and the Department of Health, in Dublin Ireland (IDS-TILDA-2015, IDS-TILDA-2018-1). The Keeping My Place in the Community study was funded by the Australian Research Council under its Linkage Partnership scheme (LP # 130100168).

ABSTRACT

Chronic conditions and multimorbidity are prevalent in older people with intellectual disability. International comparisons of disease prevalence may reflect the heterogeneity of healthcare policy internationally and the distinct social histories of different countries. This study sought to determine if differences in patterns of disease prevalence in Ireland and Australia could elucidate effective and deficient aspects of policy and practice in each country. Data from existing and independent national studies in Ireland and Australia were matched on demography and diagnoses. The prevalences of 9 chronic conditions and multimorbidity across and within both jurisdictions were compared. *p* values were corrected for multiple hypothesis testing. Thyroid disorder, epilepsy and hypertension were more prevalent in Ireland. Arthritis was more prevalent in Australia. In Australia, arthritis, asthma, and thyroid disorder were more common in females. In Ireland, diabetes prevalence was more prevalent in females (11.9 times more likely than in males). The Irish population was 2.7 times more likely to be multimorbid compared to their Australian counterparts. In both countries, females were 2.6 times more likely to be multimorbid than males. The findings of this study offer unique insights into identifying and tracking multimorbidity and serve as a foundation for developing strategies to improve healthcare outcomes for this population. Differences such as increased prevalence rates of hypertension, epilepsy, and thyroid conditions were observed in the Irish cohort. Differences in multimorbidity trends and sex-stratified disease burden, emphasize the need for further investigation into the environmental, diagnostic, and systemic factors that influence outcomes. These findings highlight the differences in disease prevalence and multimorbidity between Ireland and Australia. There is a critical need for improved data harmonization and targeted interventions to address inequalities particularly sex-stratified diseases which disproportionately affect women with intellectual disability.

1 | Introduction

Chronic health conditions are leading causes of disability worldwide and significantly impact the quality of life of those affected (Murray 2022; Murray and GBD Collaborators 2024). Among older adults with intellectual disability, the prevalence and effects of chronic conditions may be more pronounced due to the added complexities posed by cognitive and physical impairments (Hussain et al. 2020). Adults with intellectual disability are at heightened risk for the early onset of chronic health conditions, for example, dementia in individuals with Down syndrome, and osteoporosis more generally (Burke et al. 2024;

McCarron et al. 2022). Complexities like severe or profound levels of intellectual disability, syndrome-specific risks, and communication challenges, contribute to increased healthcare needs occurring at younger ages (McMahon and Hatton 2021). In the Intellectual Disability Supplement to The Irish Longitudinal Study on Ageing (IDS-TILDA) study, multimorbidity, that is, the presence of two or more chronic health conditions, had a prevalence of 72%, highlighting the significant health burden faced by this population (McCarron et al. 2013). Chronic health conditions not only impact physical wellbeing but also diminish independence, limiting participation in daily activities and affecting overall quality of life (Lin et al. 2020). While there is existing research on chronic health conditions among people with intellectual disability internationally, there is a notable gap in comparative studies between countries. Such comparisons could offer critical insights into several areas, including differences in healthcare accessibility, early diagnoses, and the effectiveness of treatment strategies across various healthcare systems. Additionally, cross-country research could illuminate how policy frameworks, care models, and social support structures shape long-term health outcomes. By identifying both common challenges and unique best practices, comparisons between countries could contribute to the development of more equitable and effective healthcare approaches, ultimately improving the quality of life for individuals with intellectual disability worldwide (McConkey et al. 2020; World Health Organisation 2022). This paper proposes to address this gap by comparing chronic health conditions among older adults with intellectual disability in Australia and Ireland.

Australia and Ireland have distinct healthcare systems, policies, and service delivery models for people with intellectual disability. The healthcare systems in Australia and Ireland are led by Medicare and the Health Service Executive (HSE), respectively. Approaches to healthcare delivery differ across jurisdictions, which may influence the diagnosis, treatment, and management of chronic health conditions in individuals with intellectual disabilities. Coupled with this, Australia underwent significant deinstitutionalization during the 1980s and 1990s, which saw large-scale residential institutions move to community-based and group home settings (Bostock et al. 2004). In contrast, deinstitutionalization in Ireland is a much more recent phenomenon, commencing in 2010 (Health Service Executive 2011). These changes reflect different policy timelines and social contexts, which ultimately contribute further to the differences across jurisdictions and their approaches to healthcare management. By comparing these two countries, we can identify best practices and areas for improvement, contributing to more effective and equitable healthcare strategies. It may also enable us to understand how national contexts shape the health and wellbeing of this vulnerable population, providing evidence-based recommendations for improving care across both countries. Additionally, while Australia has made significant strides in intellectual disability research, Ireland hosts the world's largest longitudinal study on ageing and intellectual disability, IDS-TILDA. This study offers an unparalleled dataset tracking the health, social, and economic circumstances of people with intellectual disability as they age. This dataset provides a robust foundation for comparative work on chronic health conditions, allowing us to gain deeper insights into their long-term impacts on individuals with intellectual disabilities.

The collaborative nature of this research also offers the potential for capacity building and knowledge exchange between Australia and Ireland. This paper brings together researchers from Australia and Ireland, offering a unique opportunity to share expertise, harmonize methodologies, and highlight the specific needs of people with intellectual disability managing chronic health conditions. Through this collaborative effort, we aim to contribute valuable insights that can inform future research and, through publication, begin to influence policymakers and clinicians. This work will serve as a foundation for developing strategies that improve healthcare outcomes for this population. This research is not only timely and demonstrates further benefits and value in the use of public funding, but is also essential to fill existing knowledge gaps in this area. By comparing Australia and Ireland, we can leverage the strengths and insights of both healthcare systems and contribute to the development of more effective, tailored interventions that improve the quality of life for this population.

2 | Methods

2.1 | Datasets

This study directly compares data arising from two different national studies of health, ageing and intellectual disability, namely, the IDS-TILDA study and the *Keeping my place in the community* project, originating from Ireland and Australia, respectively. In particular, the IDS-TILDA data were collected in wave 3 of the study in 2017. The study protocols have been described previously (McCarron et al. 2017). Briefly, the Australian study comprises a cross-sectional survey of health and wellbeing of people conducted during 2016–2017. The respondents were interviewed face-to-face by specially trained research assistants. The final analysis sample comprised 391 participants. Further details are provided in previous publications (Hussain et al. 2020; Hussain et al. 2021). As the two survey tools were developed independently, a process of sample and data matching was first required to ensure the validity of comparisons.

2.2 | Sample Matching Process

Two key demographic aspects of the *Keeping my place in the community* sample dictated the overall sample-matching process. Firstly, the Australian project recruited participants aged 60 and older, whereas IDS-TILDA included people aged 40 and older. Secondly, the Australian project specifically required all participants to provide individual informed consent. Similarly, the Irish study also required informed consent. Therefore, for this comparative study, only those who self-consented, that is, those with mild/moderate levels of intellectual disability, were included. The IDS-TILDA sample was originally randomly selected from the National Intellectual Disability Database (now known as the National Ability Supports System). This database has a higher prevalence of females registered. Additionally, a greater number of females responded to and participated in the IDS-TILDA study (McCarron et al. 2013; McCarron et al. 2022). These two factors determined the comparable subsample from IDS-TILDA, that is, those individuals over 60 years old and with a mild or moderate level of intellectual disability. The Australian

sample focused on individuals living in the community, which included individuals residing either independently or with family, or in group home settings. Australia went through a process of de-institutionalization in the 1980s and 90s, and therefore this sample did not involve any people with intellectual disabilities residing in large-scale residential institutions. The final samples comprised 107 and 391 individuals from the Irish and Australian studies, respectively.

2.3 | Data Matching Process & Multimorbidity

Similarly, a process of comparison between the two surveys was undertaken to identify specific variables concerning physical health diagnoses that were common to both projects. This also included consideration of general demographic information that was common to both surveys, such as age, gender, and housing type. Nine physical health diagnoses were common to both surveys, that is, arthritis, asthma, cerebral palsy, dementia, diabetes, Parkinson's disease, thyroid disorder, epilepsy, and hypertension. Additionally, multimorbidity was computed with respect to these nine diagnostic labels, that is, an individual was determined to be multimorbid where they had at least two conditions.

2.4 | Statistical Analyses

Statistical analyses were carried out using R 4.2.1 (R Core Team 2021). Disease prevalences were compared across Ireland and Australia using Fisher's Exact Test via the *fisher. test*() function. Odds Ratios indicate an over- or under-representation of each disease with respect to Ireland. Similarly, disease prevalences were stratified by sex and compared separately using the *fisher. test*() function for both countries. Odds Ratios indicate an over- or under-representation of each disease with respect to females. As multiple hypotheses were simultaneously tested, p values were adjusted for multiple comparisons using the Benjamini-Hochberg method to compute False Discovery Rates via the *p.adjust*() function in R. Results significant at an FDR (False Discovery Rate) of both 5% and 10% are indicated. Multivariate modelling of multimorbidity was carried out using logistic regression via the *glm()* function in R, where multimorbidity was modelled as a function of age, sex, and residence. To account for the effect of country, a dummy variable indicating whether an individual was Irish or Australian was constructed and used as a covariate in the model.

3 | Results

3.1 | Sample Characteristics

The populations sampled in both studies are similar with respect to age but differ with respect to sex and living arrangements (Table 1). The minimum age of 60 was determined by the study design. The Irish sample comprised more females than males (35.5% vs. 64.5%) whereas the Australian study had the opposite composition (37.3% vs. 62.7%, respectively). In Australia, most participants lived independently (53.5%), whereas a minority of participants lived independently (9.3%) in Ireland. Most starkly, most participants in Ireland in this subsample of the population continued to live in residential settings (51.4%). Residential living was not a feature in the Australian sample. The Irish study explicitly recorded the prevalence of Down Syndrome (7.5%). Anecdotally, people with Down Syndrome participated in the Australian study; however, the prevalence was not recorded as part of the study design.

3.2 | Comparisons of Chronic Disease Prevalence in Ireland & Australia

The prevalence patterns of the nine chronic conditions differed across both countries (Table 2). Dementia, thyroid disorder, epilepsy and hypertension were significantly more prevalent in the Irish population at an FDR of 5%. Conversely, arthritis was significantly more prevalent in Australia. When the threshold for statistical significance was relaxed to consider an FDR of 10%, asthma was more prevalent in Australia and cerebral palsy more prevalent in Ireland. The prevalences of diabetes across both countries were not statistically different. As the prevalence of Down Syndrome in the Australian study was unknown, comparisons of dementia, thyroid disorder and epilepsy were recomputed after removing individuals with Down Syndrome from the Irish sample, to ascertain if these individuals were driving the statistical differences across both countries. In this comparison, dementia was no longer overrepresented in the Irish population (OR = 2.25, [95% CI: 0.58–7.69]; $p = 0.17$), whereas the prevalences of thyroid disorder (OR = 3.89, [95% CI: 1.99–7.56]; $p = 3.49 \times 10^{-5}$) and epilepsy (OR = 9.99, [95% CI: 5.30–19.30]; $p = 2.37 \times 10^{-14}$) remained statistically more prevalent in Ireland. The prevalences of Parkinson's Disease were too small for meaningful comparison.

3.3 | Comparisons of Chronic Disease Prevalence in Ireland & Australia Stratified by Sex

When stratified by sex, the prevalence patterns of chronic conditions differed within each country (Table 3). In Australia, arthritis, asthma, and thyroid disorder were more common in females compared to males, where differences are significant at an FDR of 5%. Apart from diabetes, when stratified by sex, no single condition was more or less prevalent in the Irish population. This is likely due to the diminished power to detect statistical differences given the smaller sample sizes in the Irish population. In Ireland, females aged 60 or older with a mild or moderate level of intellectual disability were 11.9 times more likely to report diabetes than their male counterparts. There was no difference in diabetes prevalence across the sexes in Australia.

3.4 | Multimorbidity in Ireland and Australia

Considering multimorbidity, the median number of conditions reported in the Irish sample was 2 [range, 0–4], whereas in the Australian sample, the median was 1 condition [range, 0–4]. Overall, Ireland had a greater burden of total morbidity compared to the Australian sample, where Irish individuals aged 60 and older with a mild or moderate level of intellectual

TABLE 1 | Demographic characteristics of the Irish and Australian study participants.

		Ireland		Australia	
Sample size		107		391	
Median age [range]		67 [60–86]		64 [60–87]	
	Male	67.5 [60–85]		64 [60–87]	
	Female	67 [60–86]		64 [60–85]	
		%	*n*	%	*n*
Sex	Male	35.5	38	62.7	245
	Female	64.5	69	37.3	146
Residence type	Independent	9.3	10	53.5	209
	Community group home	39.3	42	46.5	182
	Residential	51.4	55	0	0
Level of intellectual disability	Mild	34.6	37	100	391
	Moderate	65.4	70		
Down syndrome		7.5	8	—*	

*The Australian study did not collect data on the prevalence of Down Syndrome.

TABLE 2 | Prevalences of nine conditions and multimorbidity in Ireland and Australia.

	Ireland		Australia		Fisher's exact test	
Condition	**%**	***N***	**%**	***N***	**Odds ratio [95% CI]**	***p***
Arthritis	**27.10**	**29**	**40.41**	**158**	**0.55 [0.33–0.90]**	**0.01**
Asthma	8.41	9	16.11	63	0.48 [0.20–1.01]	0.05*
Cerebral palsy	7.48	8	3.07	12	2.55 [0.88–6.99]	0.05*
Dementia	**9.34**	**10**	**2.30**	**9**	**4.36 [1.54–12.49]**	$\mathbf{2.29\times10^{-3}}$
Diabetes	16.82	18	25.58	100	0.59 [0.32–1.05]	0.07
Parkinson's disease	0.93	1	0.26	1	—	—
Thyroid Disorder	**25.23**	**27**	**6.65**	**26**	**4.72 [2.50–8.92]**	$\mathbf{4.36\times10^{-7}}$
Epilepsy	**35.51**	**38**	**5.37**	**21**	**9.64 [5.17–18.42]**	$\mathbf{1.71\times10^{-14}}$
Hypertension	**30.84**	**33**	**8.70**	**34**	**4.66 [2.62–8.31]**	$\mathbf{6.52\times10^{-8}}$
Multimorbidity	**55.14**	**59**	**31.20**	**122**	**2.70 [1.71–4.30]**	$\mathbf{8.25\times10^{-6}}$

Note: Values in bold denote significance at FDR of 5%.
*denotes significance at FDR of 10%.

disability were 2.7 times more likely to be multimorbid than their Australian counterparts (Table 2). When stratified by sex in both countries, females were approx. 2.6 times more likely to be multimorbid than their male peers in both Ireland and Australia (Table 3). Furthermore, a multivariate logistic regression model to account for the concurrent associations of age, sex, residence, and country with multimorbidity status was investigated (Table 4). Consistent with the bivariate analysis, females remain more likely to experience multimorbidity than males in the combined Irish and Australian populations. Interestingly, when controlling for age, sex and residence, the Australian population remains less likely than the Irish population to experience multimorbidity, indicating that the factors which contribute to lower rates of multimorbidity in Australia are distinct from the demographic categories considered in this analysis.

4 | Discussion

This study compared the prevalence of chronic health conditions among older adults with an intellectual disability in Ireland and Australia. Given that the burden of chronic illness significantly contributes to mortality, this research addresses an important issue in terms of understanding the development and trajectory of illness and disease in ageing adults with an intellectual disability across distinct populations. The findings of this study

TABLE 3 | Prevalence of conditions and multimorbidity stratified by sex in Ireland and Australia.

	Ireland				Australia			
Condition	**Female (%)**	**Male (%)**	**OR [95% CI]**	***p***	**Female (%)**	**Male (%)**	**OR [95% CI]**	***p***
Arthritis	33.33	15.79	2.64 [0.91–8.86]	0.07	**49.32**	**35.10**	**1.80 [1.16–2.79]**	**7.63×10^{-3}**
Asthma	10.14	5.26	2.02 [0.36–20.95]	0.49	**24.66**	**11.02**	**2.64 [1.47–4.77]**	**5.79×10^{-4}**
Cerebral palsy	10.14	2.63	4.14 [0.50–193.1]	0.25	4.79	2.04	2.41 [0.65–9.83]	0.14
Dementia	10.14	7.89	1.31 [0.28–8.37]	1	2.74	2.04	1.35 [0.26–6.39]	0.73
Diabetes	**24.63**	**2.63**	**11.90 [1.72–517.7]**	**2.71×10^{-3}**	26.71	24.90	1.10 [0.67–1.80]	0.72
Parkinson's disease	0	2.63	—	—	0.68	0	—	—
Thyroid disorder	30.43	15.79	2.32 [0.79–7.81]	0.11	**13.69**	**2.45**	**6.29 [2.36–19.64]**	**2.86×10^{-5}**
Epilepsy	36.23	34.21	1.09 [0.44–2.76]	0.99	6.16	4.90	1.28 [0.46–3.39]	0.65
Hypertension	36.23	21.05	2.12 [0.79–6.19]	0.13	11.64	6.94	1.77 [0.82–2.82]	0.13
Multimorbidity	**63.76**	**39.47**	**2.67 [1.12–6.63]**	**0.02**	**44.52**	**23.27**	**2.64 [1.66–4.21]**	**1.64×10^{-5}**

Note: Values in bold denote significance at FDR of 5%.

TABLE 4 | Multivariate modelling of multimorbidity in both Ireland and Australia.

		Odds ratio	**95% CI**	***p***
Age		0.22	0.01–3.43	0.28
Sex	Male	Reference		
	Female	**2.75**	**1.86–4.08**	**4.46×10^{-7}**
Residence		0.81	0.56–1.16	0.25
Location	Ireland	Reference		
	Australia	**0.40**	**0.23–0.72**	**1.95×10^{-3}**

Note: The model comprises 498 participants ($n_{\text{Ireland}} = 107$, $n_{\text{australia}} = 391$), 181 of which were multimorbid ($n_{\text{Ireland}} = 59$, $n_{\text{australia}} = 122$). Values in bold denote nominal significance ($p < 0.05$).

offer unique insights into identifying and tracking multimorbidity and serve as a foundation for developing strategies to improve healthcare outcomes for this population.

Firstly, it is important to highlight that sample size, composition, age, and living arrangements differ, reflecting demographic, environmental, and service provision perspectives in each country and the approach taken to reconcile this. Furthermore, given the smaller sample sizes of the Irish population and the further reductions in sample size per hypothesis test when stratified by sex, the sex-specific differences reported may not reflect true sex-specific differences in prevalence owing to insufficient power to detect small effect sizes. This is particularly the case for diseases with a low prevalence in this dataset. Consideration must also be given to the fact that while both countries have engaged in deinstitutionalization, the timelines for these changes differ by a number of decades and may indicate community health management approaches that are likely more established in Australia than Ireland. Nevertheless, our study revealed distinct differences in terms of disease prevalence, multimorbidity, and sex-stratified disease prevalence. Although not nominally significant but only at the relaxed threshold of 10% FDR, the marked difference in asthma prevalence between Australia and Ireland (16.11% and 8.41%) is notable. While there is a complex interplay between allergies, pollution effects, environmental factors, sex hormones, genetics, and other factors associated with the development of asthma (Miller and Lawrence 2018), there is no universally accepted definition or combination of tests that confirm asthma, making epidemiological estimates of asthma complex and

difficult (Song et al. 2022). Notwithstanding this and consistent with international evidence, in adulthood asthma prevalence is more common and severe in women at a population level post puberty (Zein and Erzurum 2015) and more prevalent in people with an intellectual disability, with estimates suggesting the prevalence is increasing (Mastebroek et al. 2024). Interestingly, it has been reported that approximately 11% of all Australians suffer from asthma, which is higher than the global prevalence of 4% (Welfare 2024). Given the significant variation in differences between these two studies and within the Australian population more broadly, from a policy and practice perspective, it is important to determine whether the differences reflect differences in the quality or effectiveness of asthma diagnosis or whether other population, environmental or biological factors are at play.

Similarly, differences in the prevalence of neurological and endocrine disorders require careful interpretation, given the nonrecording of Down syndrome in the Australian sample. When people with Down syndrome were excluded from the analysis the differences in dementia prevalence were no longer significant. However, differences in the prevalences of thyroid disorders and epilepsy remained significantly more prevalent in the Irish population. These findings suggest that other factors not related to the presence of Down syndrome are influencing the higher prevalence rates in Ireland. In principle, the fundamental approaches to diagnosing epilepsy in Australia and Ireland are similar (e.g., clinical examination, medical history, eyewitness accounts, and diagnostic tests such as electroencephalograms (EEGs) and neuroimaging), but care pathways differ due to healthcare delivery models. It is possible that this indicates a potential sampling bias as participants in the Irish sample may have greater health needs. While this may partly explain the higher Irish epilepsy prevalence, it should also be considered that differences in diagnostic approaches and definitions could play a role. Internationally, it is recognized that estimating epilepsy prevalence rates is problematic (Bell et al. 2014), and while our study cannot distinguish between active and lifetime epilepsy prevalence, future research needs to account for this as a matter of priority. It is reasonable to conclude that the high prevalence in the Irish sample may be associated with lifetime prevalence and the long-term use of anti-epileptic drugs, even in the absence of active epilepsy. The off-label usage of antiseizure medication (Branford et al. 2023) compounded by the high rates of polypharmacy and hyper-polypharmacy in the intellectual disability population (McMahon et al. 2020; O'Dwyer et al. 2016) may overestimate the active epilepsy prevalence. This finding has important implications from policy, practice, and research perspectives, given the World Health Organization's Intersectoral Global Action Plan on Epilepsy and Other Neurological Disorders 2022–2031, where precise and updated estimates of the epilepsy burden are vital for formulating policies to improve the care of persons with epilepsy.

Addressing the difference in thyroid prevalence while excluding people with Down syndrome is more complex to explain. However, there is some evidence that the incidence of thyroid diseases has increased over the last couple of decades in the Republic of Ireland, not explained by a change in population heterogeneity (McGrath et al. 2018). Similarly, this may reflect the marked increase in Europe for thyroid cancers (Sexton et al. 2024). While thyroid disorders increase with age, these findings suggest that the detection of thyroid disorders in the Australian sample is much lower than the average thyroid disorder prevalence of 10% in the general Australian population aged over 50 years (Walsh 2016), increasing to 13.6% when including those undiagnosed. It is worth considering this alongside the non-difference in diabetes prevalence as this may reflect subtle differences in disease presentation, with diabetes potentially being more acute due to overt symptoms, whereas thyroid disorders often have nonspecific presentations that may delay diagnosis. This may also explain the differences found in arthritis and hypertension prevalence, reflecting the nuances in diagnosis that are further complicated by living arrangements and other sociodemographic factors unrelated to the disease itself.

In terms of multimorbidity, previous studies have identified high rates of multimorbidity in the ageing and intellectual disability population (Cooper et al. 2015; Kinnear et al. 2018; Liao et al. 2021; McMahon and Hatton 2021). While this may be accounted for in terms of the overreliance on residential care for people with intellectual disability in Ireland versus the community-based living model in Australia, the most pronounced and concerning findings from a policy and practice perspective are the obvious inequities in the sex stratification of disease burden observed in this study. Overall, multimorbidity trends as measured across nine conditions revealed a higher health burden in females compared to males in both samples. In Australia, 44.52% of females reported multimorbidity compared to 23.27% of males, while in Ireland, 63.76% of females reported multimorbidity compared to 39.47% of males. There is an emerging and concerning body of evidence highlighting the inequalities and inequities that women with intellectual disabilities experience across the healthcare spectrum. In a recent International Expert Consultation (Robertson et al. 2021), there was strong consensus that there is greater gender inequality in intellectual disability versus general population mortality rates for women compared to men. This is well documented in Australia (Trollor et al. 2017), Finland (Arvio et al. 2017), and also in broader international findings (O'Leary et al. 2018), indicating that women with intellectual disabilities die earlier than all other groups, including men with intellectual disabilities. This is a juxtaposed phenomenon as, despite ageing women in the general population presenting with higher rates of multimorbidity than their male counterparts (Agborsangaya et al. 2012; MacRae et al. 2023), women without intellectual disability live longer than all other groups (Eurostat 2015). Our findings are consistent across countries and underscore the grave health risks for ageing women with intellectual disabilities. Ultimately, the greater burden of chronic conditions and multimorbidity among women with intellectual disabilities in both countries speaks to the need for gender-specific preventative health management and tailored support for women with intellectual disability to ensure equitable healthcare access and address disparities for this vulnerable population.

This study confirms other findings that ageing populations of people with an intellectual disability have a complex health profile. Interestingly, it also highlights that despite Ireland and Australia both being high-income countries, there is a marked difference in some areas regarding the prevalence of certain

diseases. The difference in living arrangements may affect the detection of certain diseases, but from a policy and practice perspective, it raises important questions about diagnostic practices, healthcare access, and systemic service provision, which may disproportionately impact ageing adults with an intellectual disability. While this study cannot delve into specific policy differences, it does highlight significant inequities, particularly weighted towards ageing women with intellectual disability. This emphasizes the critical need for targeted, evidence-informed, gender-specific population health initiatives, including preventative programmes for this population. Furthermore, questions around diagnostic accuracy and the measurement of disease and disease burden in this population need to be addressed and made consistent from research, policy, and practice perspectives.

This study is not without limitations. It should be noted that prevalence rates are estimates and may not reflect the precise burden of disease and variations in sampling size and composition may introduce biases. It is also important to reiterate that sample size, sample composition, and living arrangements differ between studies; therefore the generalizability of the findings is limited. Additionally, the level of intellectual disability was disaggregated as mild and moderate in the Irish sample, while the Australian sample included only individuals assessed as mild or moderate based on eligibility criteria. Unfortunately, tools and criteria for determining the level of intellectual disability differed between datasets, and detailed disaggregation is not possible for Australia. Consideration must also be given to the different data collection methods, cross-sectional design and the exclusion of Down syndrome data. Particular emphasis must be placed on data harmonization across these studies and the challenge of matching data for true like-for-like comparability. Additionally, as is the case with most of the research in the intellectual disability sphere, the likelihood of diagnostic overshadowing may lead to underdiagnosis, misdiagnosis, or no diagnosis (Mason and Scior 2004).

5 | Conclusion

This study contributes to the growing body of evidence on the health profiles of ageing adults with intellectual disabilities, offering a comparative perspective on chronic disease prevalence and multimorbidity between populations in Ireland and Australia. The study uncovers relevant distinctions in disease patterns that underline the unique challenges faced by people with intellectual disabilities. Significant differences, such as increased prevalence rates of asthma, epilepsy, and thyroid conditions were observed in the Irish cohort. Along with this, inequalities in multimorbidity trends and sex-stratified disease burden, emphasize the need for further investigation into the environmental, diagnostic, and systemic factors that influence outcomes. Of particular concern is the inequity emerging from multimorbidity among women with intellectual disabilities, evident in both Ireland and Australia. These findings correspond to and support similar evidence among international studies reporting higher mortality rates and greater health risks for women with intellectual disabilities compared to their male counterparts, regrettably emphasizing the urgent need for gender-specific policies and practices in the form of health interventions and preventative programs specifically geared toward women with intellectual disabilities as they age.

From a research perspective the study highlights the need for data harmonization and the need for standardizing methodologies to provide a clearer understanding of the health trajectories of this population. Furthermore, this study highlights the differences in healthcare delivery models, living circumstances and clinical diagnosis processes which may account for some of the differences between the two countries. That said, there remains the persistent challenge of diagnostic overshadowing which potentially leads to underdiagnosis or misdiagnosis, which is frequently observed within the intellectual disability community. This study reinforces the need for health services to prioritize population-specific health initiatives with policy makers and healthcare providers encouraged to take the critical steps toward improving health outcomes for people with intellectual disability. There is an urgent need for targeted, evidence-based and inclusive healthcare to address the complex health needs of ageing adults with intellectual disability, especially women.

Ethics Statement

The Irish Longitudinal Study on Ageing and Intellectual Disability obtained ethical approval from both Trinity College Dublin (FHS TCD REF 151208—IDS-TILDA) and individually from each of the participating services. Informed consent was obtained either from individuals or by proxy. The Keeping My Place in the Community study obtained ethical approval from the Human Research Ethics Committees (HEI14-287).

Consent

Informed consent was obtained individually from each participant.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

References

Agborsangaya, C. B., D. Lau, M. Lahtinen, T. Cooke, and J. A. Johnson. 2012. "Multimorbidity Prevalence and Patterns Across Socioeconomic Determinants: A Cross-Sectional Survey." *BMC Public Health* 12, no. 1: 201. https://doi.org/10.1186/1471-2458-12-201.

Arvio, M., T. Salokivi, and N. Bjelogrlic-Laakso. 2017. "Age at Death in Individuals With Intellectual Disabilities." *Journal of Applied Research in Intellectual Disabilities* 30, no. 4: 782–785. https://doi.org/10.1111/jar.12269.

Bell, G. S., A. Neligan, and J. W. Sander. 2014. "An Unknown Quantity—The Worldwide Prevalence of Epilepsy." *Epilepsia* 55, no. 7: 958–962. https://doi.org/10.1111/epi.12605.

Bostock, L., B. Gleeson, A. McPherson, and L. Pang. 2004. "Contested Housing Landscapes? Social Inclusion, Deinstitutionalisation and Housing Policy in Australia." *Australian Journal of Social Issues* 39, no. 1: 41–62. https://doi.org/10.1002/j.1839-4655.2004.tb01162.x.

Branford, D., J. J. Sun, L. Burrows, and R. Shankar. 2023. "Patterns of Antiseizure Medications Prescribing in People With Intellectual Disability and Epilepsy: A Narrative Review and Analysis." *British Journal of Clinical Pharmacology* 89, no. 7: 2028–2038. https://doi.org/10.1111/bcp.15748.

Burke, E. A., R. Carroll, M. O'Dwyer, J. B. Walsh, P. McCallion, and M. McCarron. 2024. "Ageing, Osteoporosis and Intellectual Disability; Risks Differ, and Diagnosis Can Be Missed." *British Journal of Learning Disabilities* 52, no. 3: 562–576. https://doi.org/10.1111/bld.12598.

Cooper, S.-A., G. McLean, B. Guthrie, et al. 2015. "Multiple Physical and Mental Health Comorbidity in Adults With Intellectual Disabilities: Population-Based Cross-Sectional Analysis." *BMC Family Practice* 16, no. 1: 110. https://doi.org/10.1186/s12875-015-0329-3.

Eurostat. 2015. *Healthy Life Years Statistics*. https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Healthy_life_years_statistics.

Health Service Executive. 2011. "Time to Move on From Congregated Settings: A Strategy for Community Inclusion." *Health Service Executive*.

Hussain, R., T. Parmenter, S. Wark, M. Janicki, M. Knox, and N. Hayhoe. 2021. "Mitigating the Impact of the 'Silos' Between the Disability and Aged-Care Sectors in Australia: Development of a Best Practice Framework." *Journal of Applied Research in Intellectual Disabilities* 34, no. 6: 1477–1488. https://doi.org/10.1111/jar.12890.

Hussain, R., S. Wark, M. P. Janicki, T. Parmenter, and M. Knox. 2020. "Multimorbidity in Older People With Intellectual Disability." *Journal of Applied Research in Intellectual Disabilities* 33, no. 6: 1234–1244. https://doi.org/10.1111/jar.12743.

Kinnear, D., J. Morrison, L. Allan, A. Henderson, E. Smiley, and S.-A. Cooper. 2018. "Prevalence of Physical Conditions and Multimorbidity in a Cohort of Adults With Intellectual Disabilities With and Without Down Syndrome: Cross-Sectional Study." *BMJ Open* 8, no. 2: e018292. https://doi.org/10.1136/bmjopen-2017-018292.

Liao, P., C. Vajdic, J. Trollor, and S. Reppermund. 2021. "Prevalence and Incidence of Physical Health Conditions in People With Intellectual Disability – A Systematic Review." *PLoS One* 16, no. 8: e0256294. https://doi.org/10.1371/journal.pone.0256294.

Lin, E., R. Balogh, H. Chung, et al. 2020. "Looking Across Health and Healthcare Outcomes for People With Intellectual and Developmental Disabilities and Psychiatric Disorders: Population-Based Longitudinal Study." *British Journal of Psychiatry* 218, no. 1: 51–57. https://doi.org/10.1192/bjp.2020.202.

MacRae, C., M. McMinn, S. W. Mercer, et al. 2023. "The Impact of Varying the Number and Selection of Conditions on Estimated Multimorbidity Prevalence: A Cross-Sectional Study Using a Large, Primary Care Population Dataset." *PLoS Medicine* 20, no. 4: e1004208. https://doi.org/10.1371/journal.pmed.1004208.

Mason, J., and K. Scior. 2004. "'Diagnostic Overshadowing' Amongst Clinicians Working With People With Intellectual Disabilities in the UK." *Journal of Applied Research in Intellectual Disabilities* 17, no. 2: 85–90. https://doi.org/10.1111/j.1360-2322.2004.00184.x.

Mastebroek, M., N. C. M. Everlo, M. Cuypers, E. W. M. A. Bischoff, and B. W. M. Schalk. 2024. "Asthma and COPD Management of Patients With Intellectual Disabilities in General Practice." *Npj Primary Care Respiratory Medicine* 34, no. 1: 15. https://doi.org/10.1038/s41533-024-00375-w.

McCarron, M., A. P. Allen, N. Mulryan, et al. 2022. "Living and Dying Well With Dementia." In *End of Life and People With Intellectual and Developmental Disability: Contemporary Issues, Challenges, Experiences and Practice*, 179–209. Springer International Publishing. https://doi.org/10.1007/978-3-030-98697-1_7.

McCarron, M., P. McCallion, R. Carroll, et al. 2017. *Health Wellbeing and Social Inclusion: Ageing With an Intellectual Disability in Ireland*. School of Nursing and Midwifery, Trinity College Dublin.

McCarron, M., J. Swinburne, E. Burke, E. McGlinchey, R. Carroll, and P. McCallion. 2013. "Patterns of Multimorbidity in an Older Population of Persons With an Intellectual Disability: Results From the Intellectual Disability Supplement to the Irish Longitudinal Study on Aging (IDS-TILDA)." *Research in Developmental Disabilities* 34, no. 1: 521–527. https://doi.org/10.1016/j.ridd.2012.07.029.

McConkey, R., L. Taggart, L. DuBois, and A. Shellard. 2020. "Creating Inclusive Health Systems for People With Intellectual Disabilities: An International Study." *Journal of Policy and Practice in Intellectual Disabilities* 17, no. 4: 282–290. https://doi.org/10.1111/jppi.12341.

McGrath, N., C. P. Hawkes, C. M. McDonnell, et al. 2018. "Incidence of Congenital Hypothyroidism Over 37 Years in Ireland." *Pediatrics* 142, no. 4: e20181199. https://doi.org/10.1542/peds.2018-1199.

McMahon, M., and C. Hatton. 2021. "A Comparison of the Prevalence of Health Problems Among Adults With and Without Intellectual Disability: A Total Administrative Population Study." *Journal of Applied Research in Intellectual Disabilities* 34, no. 1: 316–325. https://doi.org/10.1111/jar.12785.

McMahon, M., C. Hatton, and D. L. Bowring. 2020. "Polypharmacy and Psychotropic Polypharmacy in Adults With Intellectual Disability: A Cross-Sectional Total Population Study." *Journal of Intellectual Disability Research* 64, no. 11: 834–851. https://doi.org/10.1111/jir.12775.

Miller, R. L., and J. Lawrence. 2018. "Understanding Root Causes of Asthma. Perinatal Environmental Exposures and Epigenetic Regulation." *Annals of the American Thoracic Society* 15, no. Supplement_2: S103–S108. https://doi.org/10.1513/annalsats.201706-514mg.

Murray, C. J. L. 2022. "The Global Burden of Disease Study at 30 Years." *Nature Medicine* 28, no. 10: 2019–2026. https://doi.org/10.1038/s41591-022-01990-1.

Murray, C. J. L., and GBD Collaborators. 2024. "Findings From the Global Burden of Disease Study 2021." *Lancet* 403, no. 10440: 2259–2262. https://doi.org/10.1016/s0140-6736(24)00769-4.

O'Dwyer, M., J. Peklar, P. McCallion, M. McCarron, and M. C. Henman. 2016. "Factors Associated With Polypharmacy and Excessive Polypharmacy in Older People With Intellectual Disability Differ From the General Population: A Cross-Sectional Observational Nationwide Study." *BMJ Open* 6, no. 4: e010505. https://doi.org/10.1136/bmjopen-2015-010505.

O'Leary, L., S. Cooper, and L. Hughes-McCormack. 2018. "Early Death and Causes of Death of People With Intellectual Disabilities: A Systematic Review." *Journal of Applied Research in Intellectual Disabilities* 31, no. 3: 325–342. https://doi.org/10.1111/jar.12417.

R Core Team. 2021. "R Foundation for Statistical Computing." In *R: A Language and Environment for Statistical Computing*. https://www.R-project.org/.

Robertson, J., P. Heslop, E. Lauer, L. Taggart, and C. Hatton. 2021. "Gender and the Premature Deaths of People With Intellectual Disabilities: An International Expert Consultation." *Journal of Policy and Practice in Intellectual Disabilities* 18, no. 2: 89–103. https://doi.org/10.1111/jppi.12360.

Sexton, G. P., T. J. Crotty, S. M. Staunton, et al. 2024. "Thyroid Cancer Epidemiology in Ireland From 1994 to 2019–Rising Diagnoses Without Mortality Benefit." *Surgeon* 23, no. 4: 204–210. https://doi.org/10.1016/j.surge.2024.08.017.

Song, P., D. Adeloye, H. Salim, et al. 2022. "Global, Regional, and National Prevalence of Asthma in 2019: A Systematic Analysis and Modelling Study." *Journal of Global Health* 12: 04052. https://doi.org/10.7189/jogh.12.04052.

Trollor, J., P. Srasuebkul, H. Xu, and S. Howlett. 2017. "Cause of Death and Potentially Avoidable Deaths in Australian Adults With

Intellectual Disability Using Retrospective Linked Data." *BMJ Open* 7, no. 2: e013489. https://doi.org/10.1136/bmjopen-2016-013489.

Walsh, J. P. 2016. "Managing Thyroid Disease in General Practice." *Medical Journal of Australia* 205, no. 4: 179–184. https://doi.org/10.5694/mja16.00545.

Welfare, A. I. H. 2024. *Chronic Respiratory Conditions: Asthma*. https://www.aihw.gov.au/reports/chronic-respiratory-conditions/asthma.

World Health Organisation. 2022. Global Report on Health Equity for Persons With Disabilities. https://www.who.int/publications/i/item/9789240063600.

Zein, J. G., and S. C. Erzurum. 2015. "Asthma Is Different in Women." *Current Allergy and Asthma Reports* 15, no. 6: 28. https://doi.org/10.1007/s11882-015-0528-y.