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Informant-Reported Mobility-Related Observations Associated With Subsequent Dementia in Adults With Intellectual Disability: A Longitudinal Cohort Study

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ABSTRACT

Background: Dementia is more prevalent in individuals with intellectual disability (ID) than in the general population. Identifying signs of dementia is important to access relevant evaluations, treatment and care. The role of mobility in identifying dementia in ID is not well understood. The aims of the study were to describe mobility-related problems in a cohort of adults with ID and to investigate if these problems could be associated with dementia.

Methods: Mobility-related items were selected from clinical carer-rated instruments and participants' dementia statuses were based on assessments at two points in time. Fisher's exact test was used for comparisons between groups with and without suspected dementia. Logistic regression, adjusted for age and level of ID, was used to investigate associations between mobility and subsequent dementia.

Results: At baseline ($N = 85$), the median age was 58 years, 39% were female, and 37% had Trisomy 21. Pain and low physical endurance were present in more than 50% of the participants. Low physical endurance was more prevalent among participants with suspected dementia than in those without suspected dementia ($p = 0.016$). Low physical endurance, adjusted for age and level of ID, was associated with dementia after 6 years (OR 9.349, $p = 0.019$).

Conclusions: Low physical endurance, when combined with other observations, could help carers identify individuals with ID who should be referred for a dementia assessment. However, the results need to be confirmed in larger samples.

1 | Background

Until a few decades ago, the life expectancy of people with intellectual disability (ID) was substantially shorter than in the general population, which could be explained by underdeveloped clinical and prophylactic health practices (Janicki et al. 1999). At present, it is not unusual for people with ID to reach an advanced age (Coppus 2013). Because age is the largest risk factor for dementia, the longer life expectancy entails higher prevalence of dementia (Dintica and Yaffe 2022). Additionally, dementia is more common among people with ID than in the general population, particularly in Trisomy 21, also known as Down syndrome (McCarron et al. 2017). Trisomy 21 causes a very high genetic risk for early-onset dementia of Alzheimer type (Lott and Head 2019). Among adults with other forms of ID, reported dementia prevalence is more heterogeneous and varies according to factors such as study population and diagnostic criteria (Strydom et al. 2007; Takenoshita et al. 2023; Zigman et al. 2004). An increased dementia prevalence

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and earlier onset compared with the general population could be explained by modifiable risk factors (Takenoshita et al. 2023).

Different dementia disorders present with varying clinical features, but the core characteristic is significant cognitive decline that interferes with independence in everyday activities (American Psychiatric Association 2013). The condition is gradually progressive and may affect multiple domains, manifesting as changes relative to an individual's previous level of functioning. It is important to recognise dementia at an early stage of its development since a timely diagnosis enables adequate health care and support for the individual as well as possibilities to plan ahead (Robinson et al. 2015). However, identifying dementia in ID is known to be challenging (Nagdee 2011). Impairments due to the initial disability can overshadow or mask dementia development (Mason and Scior 2004). Moreover, physical and mental comorbidities, which are common among people with ID (Cooper et al. 2015), may further complicate identifying signs of dementia (Nagdee 2011).

Carers or family members of individuals with ID, who have insights into the individual's functioning over time, are often the ones to notice changes and to raise concerns first (Dunning et al. 2025). Apart from decline in cognitive domains such as memory, executive function, language and attention, noncognitive changes are frequently observed (Ågård et al. 2025). Although the literature is inconclusive regarding the temporal sequence of signs, changes in noncognitive domains, including behaviour, psychology, functional abilities and mobility, may occur early in the course of dementia (Dunning et al. 2025).

Mobility is a broad concept that refers to moving by changing body position or location or by transferring from one place to another (World Health Organisation 2001). In the general population, various impairments related to mobility, such as reduced gait speed, balance and hand grip strength, are associated with greater risk of cognitive decline and incident dementia (Veronese et al. 2016; Grande et al. 2020; Wang et al. 2024). Moreover, mobility-related measures follow the trajectory of cognitive decline in dementia (Tolea et al. 2016). For identification of dementia among people with ID, the potential importance of mobility-related markers has been highlighted (Dunning et al. 2025). In people with ID, changes related to mobility such as decreased motor skills and walking ability, balance, movement speed or increased pain and fall frequency, have been reported as part of the results in studies investigating observable signs of dementia. However, research focused on the role of mobility in this context is scarce. It has been suggested that tests of gait and functional mobility could be used in identification of dementia in Trisomy 21 (Barry et al. 2025; Anderson-Mooney et al. 2016; Conceição et al. 2023), but more studies are needed (Washington et al. 2023). For people with ID that is not due to Trisomy 21, research on the relation between mobility and dementia, or the role of mobility to identify dementia, is even more limited.

The aims of the present study are to describe mobility-related problems in a cohort of adults with ID and to investigate if any of these problems could be associated with dementia. The research questions were:

In a cohort of adults with ID,

1. How frequent were mobility-related problems at baseline?
2. Did the prevalence of mobility-related problems differ at baseline, between those who were suspected to have dementia compared with those who were not?
3. To what extent were mobility-related problems, reported at baseline, associated with dementia 6 years later, when adjusting for age and level of ID?

2 | Methods

This is a longitudinal cohort study using data (collected 2012–2019) from the project 'Cognitive changes in intellectual disability and ageing.' The aim of the original project was to improve and further develop assessment methodologies for individuals with intellectual disability and possible dementia, as well as to validate instruments for use in the Swedish context. Below, the original project is described under the heading 'Participants and setting.' The headings 'Outcomes' and 'Statistical analyses' are specific for the current study.

2.1 | Participants and Setting

Participants were recruited through medical records at the Habilitation Services in Uppsala, Sweden. For informed consent, adaptations of the information were made, and trustees were contacted to ensure that participation in the study was voluntary. The inclusion criteria were ID and age ≥ 50 years or ≥ 40 years for individuals with Trisomy 21. Due to difficulties of recruiting, the age for individuals with Trisomy 21 was lowered to ≥ 30 years. Exclusion criteria were as follows: severe mobility impairments (causing inability to participate in the study), cerebral palsy, progressive neurological disorders, somatic conditions with cognitive impact and psychosis. No eligible participants were excluded due to the exclusion criteria.

Information regarding the participants' age, sex and presence of Trisomy 21 was collected from medical records. The participants' premorbid level of ID was set according to Kylén (Kylén 1981) and DSM-5 (American Psychiatric Association 2013). The Autism Spectrum Disorder in Adults Screening Questionnaire (Nylander and Gillberg 2001) was used, where a score ≥ 5 was considered 'probable autism.'

2.1.1 | Data Collection at Baseline

At baseline, proxy-reported instruments and direct tests were carried out in the participants' homes. Carers eligible for proxy-reported instruments (interviews and questionnaires) had known the participant for at least two years.

Interviews with carers, carried out by a neuropsychologist:

- *Dementia Scale for Down Syndrome* (Jozsvai et al. 2018), a screening and diagnostic tool for dementia, originally developed for individuals with Trisomy 21. Psychometric

properties were rated as sufficient in a recent systematic review (Zeilinger et al. 2022).

- *Dementia Questionnaire for People with Learning Disabilities* (Evenhuis 1996), a screening tool for dementia, developed for individuals with ID. Psychometric properties were rated as sufficient in a recent systematic review (Zeilinger et al. 2022).
- *The Adaptive Behaviour Dementia Questionnaire* (Prasher et al. 2004), a screening tool for dementia, originally developed for individuals with Trisomy 21. Psychometric properties were rated as inconsistent in a recent systematic review (Zeilinger et al. 2022).

Questionnaires completed by carers:

- *Early Signs*, a tool developed to detect age-related change (Svenskt Demenscentrum). The tool has not been tested for psychometric properties.
- *Reiss Screen for Maladaptive Behaviour,* a screening instrument for identifying psychiatric symptoms in individuals with ID (Reiss 1988). The instrument has shown moderate to good psychometric robustness (Sturmey et al. 1995).
- *Adaptive Behaviour Assessment System II* (Harrison and Oakland 2003), a comprehensive assessment of adaptive behaviour. The instrument has demonstrated good reliability and validity (Oakland and Harrison 2008).
- *Psychopathology Inventory for Mentally Retarded Adults* (Matson 1988), an instrument for assessing psychopathology in adults with ID. Variable psychometric properties have been reported (Watson et al. 1988).

Direct tests carried out by a neuropsychologist:

- *Leiter-R-Brief* (Roid and Miller 1997), a nonverbal measure of intelligence. The test has demonstrated good reliability and validity, as reported in the manual (Roid and Miller 1997).
- *Picture naming test and verbal memory test*. These tests were developed for the original project and have not undergone psychometric evaluation

Additionally, the participants went through a general health examination at the Habilitation Services by a physician and a nurse to exclude somatic explanations for cognitive decline.

2.1.2 | Data Collection at Follow-Up

At follow-up (median time: 6 years after baseline, range: 5–7 years), the battery of instruments was repeated. Additionally, the *Neuropsychiatric Inventory—Intellectual Disability,* which is an adapted version of the Neuropsychiatric Inventory (Cummings et al. 1994), was carried out by interviewing carers. The tool assesses behavioural disturbances occurring in dementia. Satisfactory psychometric properties have been reported (Lundqvist et al. 2020).

2.1.3 | Evaluations of Dementia Status at Baseline and at Follow-Up

At baseline, evaluations were carried out that resulted in suspicion of dementia, while at follow-up, evaluations resulted in clinically confirmed dementia.

Baseline evaluation: A psychologist or neuropsychologist performed comprehensive evaluations based on each participant's baseline results. These evaluations aimed to identify participants with suspected dementia.

Follow-up evaluation: All results from baseline and follow-up were evaluated by a specialist in neuropsychology and a physician in geriatric psychiatry, separately, based on DSM-5 (American Psychiatric Association 2013). The participants were categorised according to dementia status: 'No dementia,' 'dementia,' and 'possible dementia' for cases the assessors disagreed on.

The battery of instruments used in this study included a small number of items related to mobility; these were however not specifically considered during these evaluations.

2.2 | Outcomes

All items related to mobility in the instruments used at baseline were considered for the analyses. Items with missing values > 50% were not included, as well as one overly similar item used in two instruments (low energy). The mobility-related items used in the analyses are listed in Table 1.

2.3 | Statistical Analyses

Descriptive statistics were presented as medians, interquartile ranges, minimum and maximum values for age as well as counts and frequencies otherwise. All mobility-related items were used as absence or presence of the problem and therefore dichotomised when needed.

Group differences were analysed using Fisher's exact test due to the categorical data, and as the expected frequencies in several of the cells of the contingency tables were < 5. Logistic regression was used to analyse the association of mobility-related items and a subsequent dementia diagnosis. Participants with 'no dementia' and 'dementia' at follow-up were included in the analyses, while participants with uncertain dementia status at follow-up were not included. Regression models were applied to each item, with dementia status (no dementia vs. dementia) as the dependent variable, adjusting for age and level of ID. Multicollinearity was assessed using a nonparametric correlation matrix, where no problematic correlations were found. Statistical analyses were performed using IBM SPSS Statistics (Version 28), with significance defined as $p < 0.05$.

3 | Results

The baseline assessment involved 85 participants. Dementia was suspected in 10 individuals. Follow-up assessments were carried

out 6 years later, which included 60 participants. The total attrition was 25, of which 13 individuals had deceased. At follow-up, 18 individuals fulfilled the criteria for dementia, while 35 individuals did not. For seven individuals, statuses were uncertain and categorised as 'possible dementia' (Figure 1).

At baseline, the median age was 58 years in the total sample (Table 2). The median age in the group of participants with suspected dementia was 6.5 years higher than in the group without suspected dementia. The proportions of women and men were similar across groups (approximately 40% women). In the group

TABLE 1 | Mobility-related items utilised in the analyses, including instruments of origin and explanations of the items.

Interview/questionnaire	Mobility-related item
Dementia Scale for Down Syndrome (Jozsvai et al. 2018)	Sitting—Does not square him/herself in a chair at the table. The person shows less body awareness, does not position the body properly in the chair, may sit near the edge of a chair and may fall off. Slowing—General slowing of movements compared to previous speed, e.g., the speed of walking, getting out of a chair, reaching for objects or using cutlery.
Dementia Questionnaire for People with Learning Disabilities (Evenhuis 1996)	Into or out of bed –Sometimes or never able to get into and out of his/her bed.
Reiss Screen for Maladaptive Behaviour (Reiss 1988)	Low energy—Problems or major problems related to energy such as lethargy or fatigue not attributable to physical illness or lack of motivation. Overactivity—Problems or major problems because of constant movements or restlessness. Nonpurposeful movements—Problems or major problems related to movements such as rocking or other nonpurposeful motor actions.
Early Signs (Svenskt Demenscentrum n.d)	Falls—One or more falls without natural explanation (not because of slippery floor/ground or epileptic seizure, etc.) during the last year. Hand function—Problems (to some or large extent) with hand function or fine motor skills. Walking—Problems (to some or large extent) with walking. Pain—Sometimes or often complains of pain or shows signs of pain. Low physical endurance—Low or very low physical endurance.

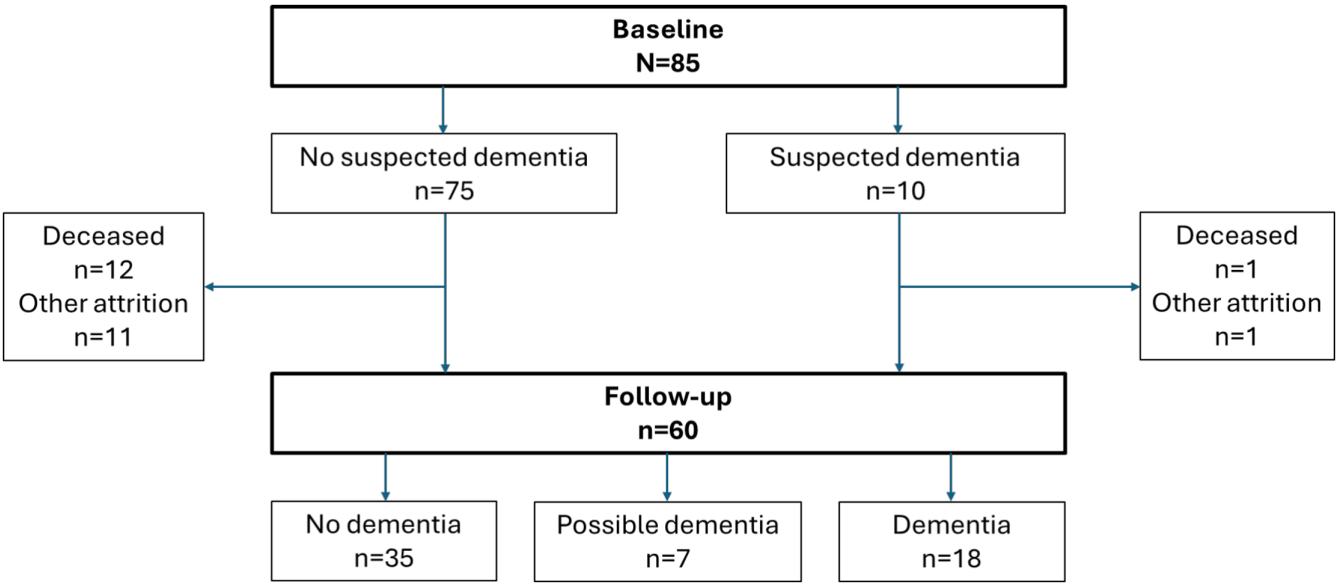

FIGURE 1 | Flow chart of participants at baseline and follow-up.

TABLE 2 | Participants' characteristics at baseline, in the total sample and stratified according to suspected dementia.

Participants' characteristics at baseline		Total sample, $N=85$	No suspected dementia, $n=75$	Suspected dementia, $n=10$
Age in years, median (IQR)		58.0 (21)	52.5 (24)	59.0 (20)
Min–max		30–83	30–83	38–82
Female sex, *n* (%)		33 (38.8)	29 (38.7)	4 (40)
Trisomy 21, *n* (%)		31 (36.5)	26 (34.7)	5 (50)
Level of intellectual disability	Mild, *n* (%)	23 (27.1)	22 (29.3)	1 (10)
	Moderate, *n* (%)	30 (35.3)	23 (30.7)	7 (70)
	Severe, *n* (%)	24 (28.2)	23 (30.7)	1 (10)
	Profound, *n* (%)	8 (9.4)	7 (9.3)	1 (10)
Probable autism, *n* (%)		9 (10.7) (1 missing)	9 (12.2) (1 missing)	0 (0)

Abbreviation: IQR = interquartile range.

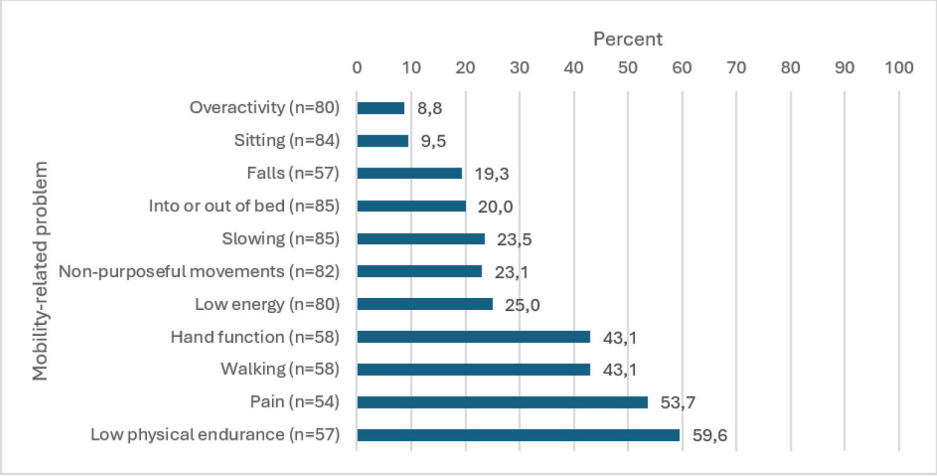

FIGURE 2 | Prevalence (%) of mobility-related problems at baseline in the total sample.

without suspected dementia, the number of participants was similar across levels of ID, while among individuals with suspected dementia, a majority (70%) had a moderate level of ID. There were nine individuals with probable autism in the group without suspected dementia, and none in the group with suspected dementia.

In the total sample, the prevalence of the investigated mobility-related problems ranged between 9% and 60% at baseline (Figure 2). Problems related to pain and low physical endurance were most frequent and reported in more than 50% of cases.

Comparisons of mobility-related problems between the groups with or without suspected dementia at baseline showed that low physical endurance differed between groups ($p=0.016$) (Table 3). A trend toward significance was observed for hand function ($p=0.065$) and walking ($p=0.065$).

Among the 75 individuals without suspected dementia at baseline, 52 participants participated in the follow-up that was carried out 6 years after baseline. Of these, 12 had developed dementia, while 33 had not. Among the 10 individuals who were suspected to have dementia at baseline, eight participants took part in the follow-up, and six of these had developed dementia.

At follow-up, the median age in the total sample was 62.5 years (Table 4). The proportions of individuals with Trisomy 21 were similar in the groups with and without dementia (49% and 50%). A majority (77%) of the individuals in the group without dementia had mild to moderate levels of ID, while in the group with dementia, the majority (72%) had moderate to severe levels of ID. The proportion of probable autism was similar across groups.

Regression models were used to analyse to what extent the mobility-related problems were associated with dementia after 6 years (Table 5). Participants with 'no dementia' and 'dementia' at follow-up—regardless of whether dementia was suspected or not at baseline—were included in the analyses ($n=53$). Associations were found between low physical endurance and

TABLE 3 | Prevalence of mobility-related problems at baseline among individuals with and without suspected dementia, including p-values.

Mobility-related problem	No suspected dementia	Suspected dementia	*p*
Overactivity, *n* (%)	7 of 70 (10.0%)	0 of 10 (0%)	0.587
Sitting, *n* (%)	6 of 74 (8.1%)	2 of 10 (20.0%)	0.241
Falls, *n* (%)	8 of 50 (16.0%)	3 of 7 (42.9%)	0.123
Into or out of bed, *n* (%)	15 of 75 (20.0%)	2 of 10 (20.0%)	1.000
Slowing, *n* (%)	16 of 75 (21.3%)	4 of 10 (40.0%)	0.236
Nonpurposeful movements, *n* (%)	18 of 72 (25.0%)	1 of 10 (10.0%)	0.440
Low energy, *n* (%)	23 of 70 (32.9%)	5 of 10 (50.0%)	0.308
Hand function, *n* (%)	19 of 50 (38.0%)	6 of 8 (75.0%)	0.065
Walking, *n* (%)	19 of 50 (38.0%)	6 of 8 (75.0%)	0.065
Pain, *n* (%)	24 of 46 (52.2%)	5 of 8 (62.5%)	0.711
Low physical endurance, *n* (%)	26 of 49 (53.1%)	8 of 8 (100%)	0.016*

*Significant value.

dementia, with adjustments for age and level of ID (OR 9.349, $p = 0.019$).

To examine whether these findings were driven by either of the two biologically and clinically different groups included, that is, participants with Trisomy 21 and participants with other forms of ID, the data were explored descriptively by subgroup. Among the participants with Trisomy 21 that developed dementia, five of five participants had a low physical endurance at baseline, while the corresponding number among participants with other forms of ID was six of eight. Among participants with Trisomy 21 that did not develop dementia, one of four had a low physical endurance, while among participants with other ID that did not develop dementia, six of 15 participants had a low physical endurance.

To further examine the association between low physical endurance and incident dementia, a sensitivity analysis was conducted among participants without suspected dementia at baseline who completed the follow-up assessment ($n = 26$; seven incident dementia cases). The direction of the association was retained but did not reach statistical significance (OR 3.929, 95% CI 0.499–31.579, $p = 0.198$). The number of events per predictor was 2.3.

4 | Discussion

In this cohort of adults with ID, several of the investigated mobility-related problems were common. Pain and low physical endurance were most frequent and present among more than 50% of the participants. Cross-sectional analyses showed that low physical endurance was more prevalent among individuals with suspected dementia than among those without suspected dementia. In longitudinal analyses, low physical endurance was associated with dementia after 6 years, adjusted for age and level of ID.

TABLE 4 | Participants' characteristics at follow-up in the total sample and across groups according to dementia status.

Participants' characteristics at follow-up		Total sample at follow-up $N = 60$	No dementia $n = 35$	Possible dementia $n = 7$	Dementia $n = 18$
Age in years, median (IQR) Min–max		62.5 (19) 36–86	62.0 (21) 36–81	69.0 (10) 56–80	59.0 (24) 38–86
Female sex, *n* (%)		23 (38.6)	15 (42.9)	4 (57.1)	4 (22.2)
Trisomy 21, *n* (%)		27 (45.0)	17 (48.6)	1 (14.3)	9 (50.0)
Level of intellectual disability	Mild, *n* (%)	17 (28.3)	13 (37.1)	1 (14.3)	3 (16.7)
	Moderate, *n* (%)	21 (35.0)	14 (40.0)	1 (14.3)	6 (33.3)
	Severe, *n* (%)	17 (28.3)	6 (17.1)	4 (57.1)	7 (38.9)
	Profound, *n* (%)	5 (8.3)	2 (5.7)	1 (14.3)	2 (11.1)
Probable autism, *n* (%)		8 (13.6) (1 missing)	5 (14.3)	1 (14.3)	2 (11.8) (1 missing)

Abbreviation: IQR = interquartile range.

TABLE 5 | Associations between mobility-related problems at baseline and dementia at follow-up, adjusted for age and level of intellectual disability.

Mobility-related problem	Number (dementia/no dementia)	B coefficient	Standard error	Odds ratio	95% CI for odds ratios	*p*
Overactivity	18/33	−0.092	1.012	0.912	0.126–6.622	0.927
Sitting *Model produced invalid results*	18/35	—	—	—	—	—
Falls	12/19	0.447	1.583	1.564	0.070–34.835	0.778
Into or out of bed	18/35	1.932	1.248	6.901	0.598–79.641	0.122
Slowing	18/35	0.308	0.848	1.360	0.258–7.171	0.717
Nonpurposeful movements	18/34	−1.593	0.979	0.203	0.030–1.385	0.104
Low energy	18/34	−0.460	0.716	0.631	0.155–2.569	0.521
Hand function	13/19	0.844	0.859	2.325	0.432–12.513	0.326
Walking	13/19	1.207	0.836	3.343	0.649–17.218	0.149
Pain	13/18	−1.039	0.835	0.354	0.069–1.818	0.213
Low physical endurance	13/19	2.235	0.955	9.349	1.440–60.713	0.019*

Abbreviation: CI = confidence interval.
*Significant value.

The measure 'low physical endurance' was based on carers' answers to the question if the individual had a 'low' or 'very low' physical endurance, as opposed to a 'good' physical endurance. The item was selected from *Early Signs*, which is not a dementia specific tool but has a broader use for systematic evaluation of age-related decline (Aldring og Helse 2013). *Early Signs* was developed in a clinical context, and evaluations of psychometric properties are not yet to be found in the scientific literature. The definition of physical endurance is 'the time span between the beginning of physical activity by an individual and the termination because of exhaustion' (National Library of Medicine 2025). In the general population, objective assessments of high cardiorespiratory fitness are associated with lower risk of dementia later in life (Defina et al. 2013). Additionally, cross-sectional analyses have shown that functional endurance, measured by the distance walked as fast as possible in 2 min, is associated with a lower dementia risk (Windham et al. 2022). However, no definition or clarification of physical endurance was provided for the carers who filled out the questionnaire. Thus, what carers interpreted as low physical endurance could have other meanings and not primarily be related to cardiorespiratory function. Sedentary behaviour, which is associated with an increased risk of dementia (Yan et al. 2020), could be a contributing factor. Other reasons behind a perceived low physical endurance could be apathy, loss of interest, depression or deterioration of executive function or attention. Interestingly, these possible reasons for what carers could recognise as low physical endurance are known to be associated with dementia in ID (Silverman et al. 2021; Dekker et al. 2021; Fonseca et al. 2020).

Participants with suspected dementia at baseline were included in the regression analyses, and the observed associations may therefore partly reflect concurrent manifestations of dementia rather than a true prospective association. The sensitivity analysis excluding these participants did not conclusively address this issue, as only seven incident cases were available, resulting in 2.3 events per predictor, limited statistical power and imprecise estimates. Nonetheless, there are reasons to support the inclusion of these participants. First, suspected dementia at baseline was not a confirmed diagnosis, so the status of these participants could not be certain. Second, dementia in adults with ID is typically recognised and diagnosed late in the disease course. As a result, individuals with emerging but unconfirmed dementia are likely to be encountered in clinical practice. Mobility-related problems observed in such individuals may therefore remain relevant as signals warranting further assessment. Establishing whether mobility-related problems have predictive value independent of prevalent cognitive decline would require a larger cohort with well-characterised cognitive status at baseline.

The mobility-related variables examined in this study represent mostly broad carer observations derived from instruments and were not designed as objective measures of motor or neurological impairment. Consequently, the findings should be interpreted as evidence that general observations of declining physical function may help identify individuals who warrant more comprehensive neurological and dementia assessment, rather than as suggestions that these items themselves constitute early motor biomarkers of dementia. The findings of this study should be viewed as hypothesis-generating and supportive of future studies employing objective measures of gait and motor performance.

4.1 | Strengths and Limitations

The evaluations of dementia status at follow-up were thorough, as they were based on extensive material from two points in time and were carried out by two specialists with many years of experience in the field. The evaluations of suspected dementia

carried out at baseline were less well-founded since they only relied on test results from one point in time and lacked independent evaluations. Therefore, at baseline, the terms 'no suspected dementia' and 'suspected dementia,' instead of more definite terms were used and should be considered less certain. However, no general health examinations were performed at follow-up, which could have revealed differential diagnoses. Moreover, since the data collection was carried out during 2012–2019, several of the instruments that were used are considered dated. Dementia assessment tools adapted for people with ID have developed since this data collection commenced, and the use of current tools would most likely have added sensitivity to the dementia assessments.

Because of the risk of circular reasoning, it is important to consider the setting of diagnoses. Evaluations of dementia were partially based on the instruments from which the mobility-related items were selected. However, at the time of these evaluations, the aim was not to explore the role of mobility, and thus the assessors did not have any reason to pay specific attention to these items. They do not correspond to any of the diagnostic criteria for dementia and were therefore not given any separate importance. Moreover, since the items were minor parts of the instruments, and the diagnostic evaluations were based on a considerably larger material, the risk of circular reasoning was judged to be low.

A limitation concerns the relatively small sample size, which entailed that statistical subgroup analyses could not be carried out, such as separate analyses for individuals with Trisomy 21. However, the descriptive analysis did not show any apparent differences between subgroups. Given that functional performance may vary substantially according to the level of ID, analyses stratified by severity level would have been preferred. However, due to the limited number of participants in each stratum, such analyses were not performed. Instead, to control for the potential confounding of this variable, the regression analyses were adjusted for level of ID. Moreover, because *Early Signs* had recently been translated into Swedish at the time of the data collection and had not yet been introduced broadly, the instrument was not carried out with all participants. Another limitation is the lack of information related to known risk factors of dementia, such as hearing, sight and level of physical activity that could have been of interest.

4.2 | Conclusions

Low physical endurance, as recognised by carers in everyday practice, may serve as a clinical prompt for further dementia evaluation among adults with ID. However, the high prevalence and nonspecific nature of this observation limit its value in isolation, highlighting the need to consider it alongside other relevant indicators. This indicates the potential value of routinely collected observational information. These findings should be confirmed in larger future studies.

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Disclosure

No AI tools were used in the generation, analysis or drafting of this work.

Ethics Statement

The research project was conducted in accordance with the World Medical Association Declaration of Helsinki. For informed consent, adaptations of the information were made, and trustees were contacted to ensure that participation in the study was voluntary. Ethics approval for the original project was received by the Regional Ethical Review Board in Uppsala (2011/442). For the current study, the ethics approval was amended and approved by the Swedish Ethical Review Authority (2025-01651-02).

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request. The data are not publicly available due to privacy or ethical restrictions.

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