

Abstract #688: Prevalence of urinary incontinence and its associated Factors among older adults living in nursing homes in Catalonia (Spain)



Javier Jerez-Roig, Pau Moreno-Martin, Aina Carbó-Cardena, Meritxell Torrents-Solé, Montserrat Solé-Casals, Ariadna Serra-Llandrich, Júlia Casacuberta-Roca, Laura Coll-Planas

Research group on Methodology, Methods, Models and Outcomes of Health and Social Sciences (M₃O). Faculty of Health Sciences and Welfare.Centre for Health and Social Care Research (CESS). University of Vic-Central University of Catalonia (UVic-UCC). Institute for Research andInnovation in Life Sciences and Health in Central Catalonia (IRIS-CC), Vic,Spain.

Hypothesis / aims of study

There are currently around 59,000 individuals living in long term-care institutions in Catalonia (Spain), with approximately 912 registered facilities. However, there is no published comprehensive information on the continence status of these residents. Therefore, the main objective of this study was to **estimate the prevalence of urinary incontinence (UI) and analyze its associated factors** among older adults living in nursing homes (NHs) in Catalonia. As secondary objective, we also aimed at estimating the **prevalence of fecal incontinence (FI) and double (urinary and fecal) incontinence**.

Study design, materials and methods

This is a cross-sectional study conducted in the region of Catalonia. Data collection was carried out from December 2021 to June 2022. Among the 779 NHs registered in Catalonia, **30 were randomly selected** according to size (small <50 residents, medium 50-100 residents, and large >100) and type of governance (public, private, and mixed funding); 25% of residents living in medium and large NHs were randomly selected, while all residents in small NHs were recruited for participation. If a selected resident declined participation, the next resident randomized on the waiting list was included in the sample.



A **multidimensional assessment** was carried out, considering sociodemographic information (gender, age, duration of institutionalization, educational level, and marital status), Covid-related variables, morbidity, medications, symptoms (pain and dyspnea), falls, dysphagia, delirium, constipation, sensory deficits (sight and hearing), basic activities of daily living (modified Barthel Index), instrumental activities of daily living (ability to manage money, phone, and handling medication), cognitive capacity (Global Deterioration Scale), emotional status, loneliness, social network, the meaning of life, impact of Covid on health and quality of life, and frailty assessed with the modified Frail-VIG index (1).

The **Minimum Data Set** was used to assess UI and FI. A pilot study was carried out in one NH to test the feasibility of the procedures and adjust the instruments. Data were collected through proxy respondents (NH staff) by trained researchers.

For the estimation of the prevalence of UI, FI and double incontinence, 95% confidence intervals (CI) were calculated. In bivariate analysis, the chi-square test was applied for categorical variables. Quantitative variables did not follow normal distribution, so the Mann-Whitney test was used. Multivariate analysis was carried out with **logistic regression**. Odds ratio (OR) was used as measure of association.

Results and interpretation

The final sample consisted of **669 residents**, primarily female (75.0%), with an average age of 85.9 (standard deviation-SD=8.8) years and institutionalization duration averaging 36.6 months (SD=77.0). The prevalence of UI, FI and double incontinence was 73.6% (95% CI: 70.1-76.8), 47.5% (95% CI: 43.8-51.3) and 46.7% (95% CI: 42.9-50.5), respectively.

In the multivariate analysis, UI was significantly associated with women (p=0.028), mobility limitations (p<0.001), cognitive impairment (p<0.001), dysphagia (p=0.016), renal disease (p=0.038), access to nature (p<0.001), constipation (p<0.001), ratio shared/total rooms (p=0.024), independently of age.

Table 1. Factors associated with UI among NH residents in Catalonia, Spain (n=669).

	Yes		No		Bivariate analysis		Multivariate analysis	
	n	%	n	%	p value	OR (95% CI) or mean difference	p value	Adjusted OR (95% CI)
Sex								
Men	103	61.7	64	38.3				reference
Women	111	22.1	391	77.9	<0.001	2.19 (1.50-3.19)	0.028	1.93 (1.07-3.46)
Age		86.66		83.68	<0.001	2.97	0.641	1.00 (0.98-1.04)
Dysphagia								
No	413	70.7	171	29.3				reference
Yes	81	95.3	4	4.7	<0.001	8.38 (3.03-23.24)	0.016	3.93 (1.29-11.98)
Renal disease								
No	373	70.6	155	29.4				reference
Yes	121	85.8	20	14.2	<0.001	2.51 (1.51-4.18)	0.038	2.18 (1.04-4.55)
Constipation								
No	266	86.3	139	34.3				reference
Yes	226	86.3	36	13.7	<0.001	3.28 (2.18-4.93)	<0.001	2.92 (1.64-5.21)
Mobility limitations								
No	48	40.3	71	59.7				reference
Yes	442	82.8	92	17.2	<0.001	7.11 (4.56-10.92)	<0.001	5.25 (2.79-9.89)
Access to nature								
No	153	31.4	31	16.8				reference
Yes	334	71.2	135	28.8	0.001	0.50 (0.33-0.77)	<0.001	0.29 (0.14-0.60)
Shared/total rooms	0.71		0.65		<0.001	0.06	0.024	3.19 (1.17-8.72)
Cognition (GDS)								
1-3 levels*	144	55.8	114	44.2				reference
4-7 levels**	350	85.2	61	14.8	<0.001	4.54 (3.15-6.55)	<0.001	3.87 (2.20-6.80)

GDS: Global Deterioration Scale; * no, very mild or mild cognitive decline; ** moderate-very severe cognitive decline.

Interpretation of results:

- UI was associated with the **individual factors ‘women, mobility limitations, cognitive impairment, dysphagia, constipation and renal disease’** as well as **environmental factors ‘access to nature and ratio shared/total rooms’**, independently of age.
- Almost 3 out of 4 NH residents in Catalonia suffer from UI.
- Approximately 1 out of 2 NH residents in Catalonia have FI.
- Approximately 1 out of 2 NH residents in Catalonia suffer from a combination of urinary and fecal losses.

Conclusions

Continence problems are highly common in NH residents in Catalonia, with approximately **74% prevalence of UI and 47-48% prevalence of FI and double incontinence**. UI was associated with **women, mobility limitations, cognitive impairment, dysphagia, constipation, renal disease, access to nature and ratio shared/total rooms**.

References

1. Amblàs-Novellas J, Martori JC, Joan Espauella, Oller R, Molist-Brunet N, Inzitari M and Romero-Ortuno R. Frail-VIG index: a concise frailty evaluation tool for rapid geriatric assessment. BMC Geriatrics (2018), 18:29 DOI: 10.1186/s12877-018-0718-2



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