

The Impact Of Frailty And Sex On Polypharmacy In Older Adults With And Without Neurodegenerative Disease: A COMPASS-ND Study

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Frailty was associated with increased risk of polypharmacy in females more than males independent of cognitive status.

INTRODUCTION

Frailty is a state of vulnerability to adverse health events and a significant risk factor for dementia. Polypharmacy is defined by taking five or more medications whereas hyperpolypharmacy is ten or more medications. Frailty can be operationalized as the number of health deficits a person lives with. Therefore, there is a bidirectional relationship with frailty and polypharmacy as people living with frailty also more likely to take multiple medications to manage these chronic conditions.

METHODS

COMPASS-ND[1] is a Canadian longitudinal cohort study of neurodegenerative diseases (NDDs). We used a previously validated frailty index with the medication item removed [2]. Descriptive statistics were used to characterize variables by frailty status. Logistic regression was used to examine the relationship between sex, frailty, and diagnosis and hyper- and poly-pharmacy with logistic regression.

RESULTS

Table 1 Demographics by frailty status.

Factor	Frail (FI≥0.25; n=52)	Non-frail (FI<0.25; n=924)	p-value
Female, n(%)	16	455	0.014
Age(y), mean±SD	74.8±8.6	71.7±7.3	0.013
Frailty Index, mean±SD	0.12±0.05	0.29±0.04	<0.001
Polypharmacy	48	603	0.298
Hyper-polypharmacy	31	170	0.178
Cognitively unimpaired, n(%)	1(2)	233(25)	<0.001
Cognitively impaired, n(%)	16(31)	378(41)	
Dementia, n(%)	21(40)	196(21)	
Parkinsons disease, n(%)	13(25)	116(13)	

Polypharmacy

Fig 1 Multivariate logistic regression models of the odds of having polypharmacy or hyperpolypharmacy

Hyperpolypharmacy

Fig 2 Multivariate logistic regression models of the odds of having polypharmacy or hyperpolypharmacy in females

Polypharmacy

Fig 3 Multivariate logistic regression models of the odds of having polypharmacy or hyperpolypharmacy in males

CONCLUSIONS

Frailty was associated with increased risk of hyper- and polypharmacy when frailty was considered continuously, but not with a common categorical cut point (FI≥0.25). Frailty impacted the odds of females living with polypharmacy more than males, but there were no sex differences in hyperpolypharmacy.

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REFERENCES

1. Chertkow H, Borrie M, Whitehead V, Black SE, Feldman HH, Gauthier S, Hogan DB, Masellis M, McGilton K, Rockwood K, Tierney MC, Andrew M, Hsiung GR, Camicioli R, Smith EE, Fogarty J, Lindsay J, Best S, Evans A, Das S, Mohaddes Z, Pilon R, Poirier J, Phillips NA, MacNamara E, Dixon RA, Duchesne S, MacKenzie I, Rylett RJ. The Comprehensive Assessment of Neurodegeneration and Dementia: Canadian Cohort Study. Can J Neurol Sci. 2019 Sep;46(5):499-511. doi: 10.1017/cjn.2019.27. Epub 2019 Jul 16. PMID: 31309917.

2. Burt JR, Godin J, Filion J, Montero-Odasso M, Rockwood K, Andrew MK, Camicioli R. Frailty Prevalence in the COMPASS-ND Study of Neurodegenerative Disorders. Can Geriatr J. 2019 Dec 30;22(4):205-212. doi: 10.5777/cgj.22.392. PMID: 31885761; PMCID: PMC6887140.

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