Trends in Benzodiazepines Receptor Agonists use and associated factors in Belgian older adults: Analysis of the Belgian Health Interview Survey data

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Introduction

Benzodiazepine receptor agonists (BZRA), that include benzodiazepines and z-drugs, are frequently prescribed for insomnia and anxiety in older adults, and used often long-term. Yet, due to an unfavorable benefit-risk ratio, recommendations suggest avoidance or a maximal treatment duration of 4 weeks.

Aim: to **describe trends of BZRA use in older** adults (≥65 years) over a 10-year period **and associated factors** in Belgium.

Conclusion

An **encouraging decline in BZRA** use was observed from 2004 to 2013, **but** it **remained highly prevalent** in Belgian older adults.

Promotion of alternatives to BZRA for sleeping problems remains **essential**. High-risk subgroups such as multiple BZRA users or concomitant users of BZRA and antidepressant should be targeted in deprescribing interventions.

Methods

Study population & data

- Older adults **≥ 65 years**
- Data from the **Belgian Health Interview Survey** data in 2004 (n= 3594), 2008 (n= 2917) and 2013 (n= 2048).
- Sub-sample of 1286 older adults in 2013 data for associated factors analysis.

Outcome

BZRA use defined by ATC codes N05CD, N05CF, or N05BA of medication boxes taken during the last 24h

Data analysis

1. Trends in BZRA use:

- Standardization of prevalence rates according to gender, age and region
- Use of standardized rate differences (RD) and rate ratios to compare years

2. Factors associated with BZRA use **in 2013:**

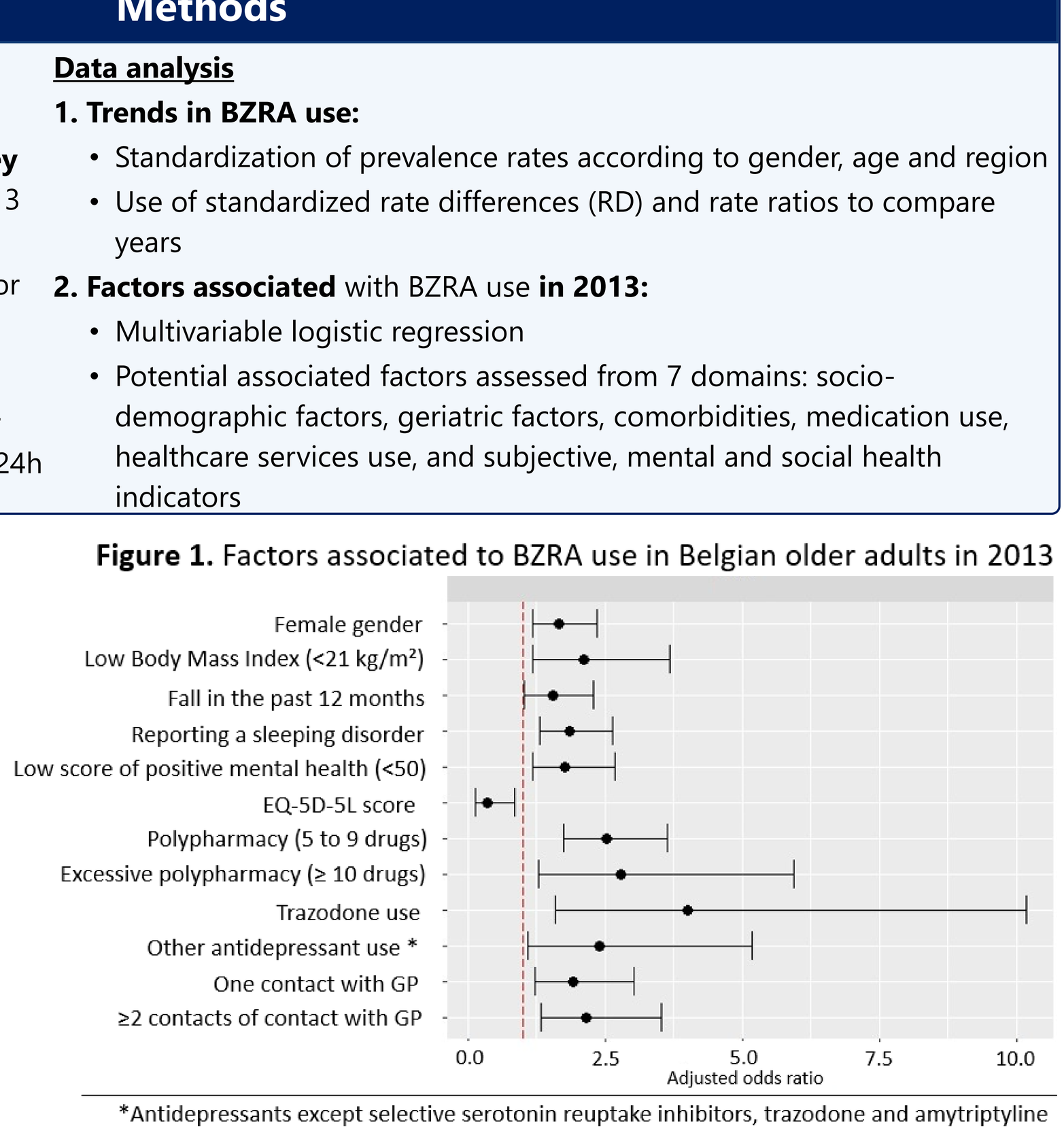
- Multivariable logistic regression
- Potential associated factors assessed from 7 domains: socio-demographic factors, geriatric factors, comorbidities, medication use, healthcare services use, and subjective, mental and social health indicators

Results

BZRA use prevalence in older adults dropped significantly **from 22% to 18%** between 2004 and 2013 (RD: -4,0%, 95%CI: -6,8%; -1,3%). However, this decline did not concerned z-drugs users (RD: -0,2%, 95%CI: -1.1%; 0.7%) nor multiple BZRA users **(Table 1)**.

Factors significantly associated to BZRA use in older adults in 2013 comprised female gender, a low score of positive mental health, reporting a sleeping disorder, polypharmacy and trazodone use **(Figure 1)**.

Figure 1. Factors associated to BZRA use in Belgian older adults in 2013



*Antidepressants except selective serotonin reuptake inhibitors, trazodone and amytriptyline

EQ-5D-5L: EuroQol 5 dimensions, 5 levels; **GP**: general practitioner

Table 1. Trends in benzodiazepines and z-drugs use in older adults (standardized prevalence rates) in 2004, 2008 and 2013

Variable	Standardized prevalence rate (%) (95% CI)			Risk Difference (%) (95%CI) 2013-2004
	Year 2004	Year 2008	Year 2013	
Total BZRA use	22.0 (20.2; 23.9)	19.6 (17.7; 21.6)	18.0 (15.9; 20.2)	-4.0 (-6.8; -1.3)
Number of BZRA taken				
1	19.9 (18.2; 21.7)	17.3 (15.5; 19.2)	16.0 (14.1; 18.1)	-3.8 (-6.5; -1.2)
≥2	2.1 (1.6; 2.8)	2.3 (1.7; 3.0)	1.9 (1.3; 2.8)	-0.2 (-1.1; 0.7)
BZRA use by class				
Benzodiazepine use (N05BA or N05CD)	19.5 (17.8; 21.3)	17.1 (15.4; 19.0)	14.9 (13.1; 17.0)	-4.6 (-7.1; -2.0)
Z-drugs use (N05CF)	3.0 (2.4; 3.8)	3.2 (2.4; 4.1)	3.2 (2.4; 4.2)	0.2 (-1.0; 1.3)
Concomitant use of BZRA & other drugs				
Concomitant antidepressants use	5.7 (4.8; 6.6)	4.9 (4.0; 5.9)	4.8 (3.8; 6.0)	-0.9 (-2.3; 0.5)
Concomitant opioid use	2.0 (1.4; 2.6)	2.5 (1.9; 3.2)	1.5 (1.0; 2.2)	-0.5 (-1.2; 0.3)

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