MULTIMORBIDITY:

Exploring determinants and differences between Francophones and Anglophones in Ontario

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Background

Multimorbidity is the presence of **two or more** chronic health conditions,[1] such as:

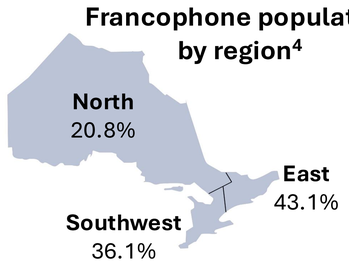
- Arthritis
- High blood pressure
- High cholesterol
- Asthma
- Diabetes
- Dementia
- Cancer
- Mood disorder
- Anxiety

People living with multimorbidity often experience **greater disability** and **lower quality of life.**[2]

Multimorbidity impacts the healthcare system, due to the complexity of the care and treatment.[2]

Ontario has the largest **Francophone** population outside of Quebec of over 650,000 people, 4.6% of the province's population.[3]

Francophone population by region[4]



Francophones in Ontario face challenges with accessing health services and the quality of care[5]

Methods

Objectives: Examine the **prevalence (%)** and **determinants** of multimorbidity between **Francophones** and **Anglophones** in Ontario

Data source: Canadian Community Health Survey (CCHS)

3 cycles of the CCHS combined from **2015-2020**

Sample: All Ontarians aged 12 years and older

Analysis: Descriptive and logistic regression (yes/no) multimorbidity

With bootstrap weights

Unadjusted odds ratios (ORs) shown in results

Results

Most common combinations of chronic conditions among people with multimorbidity

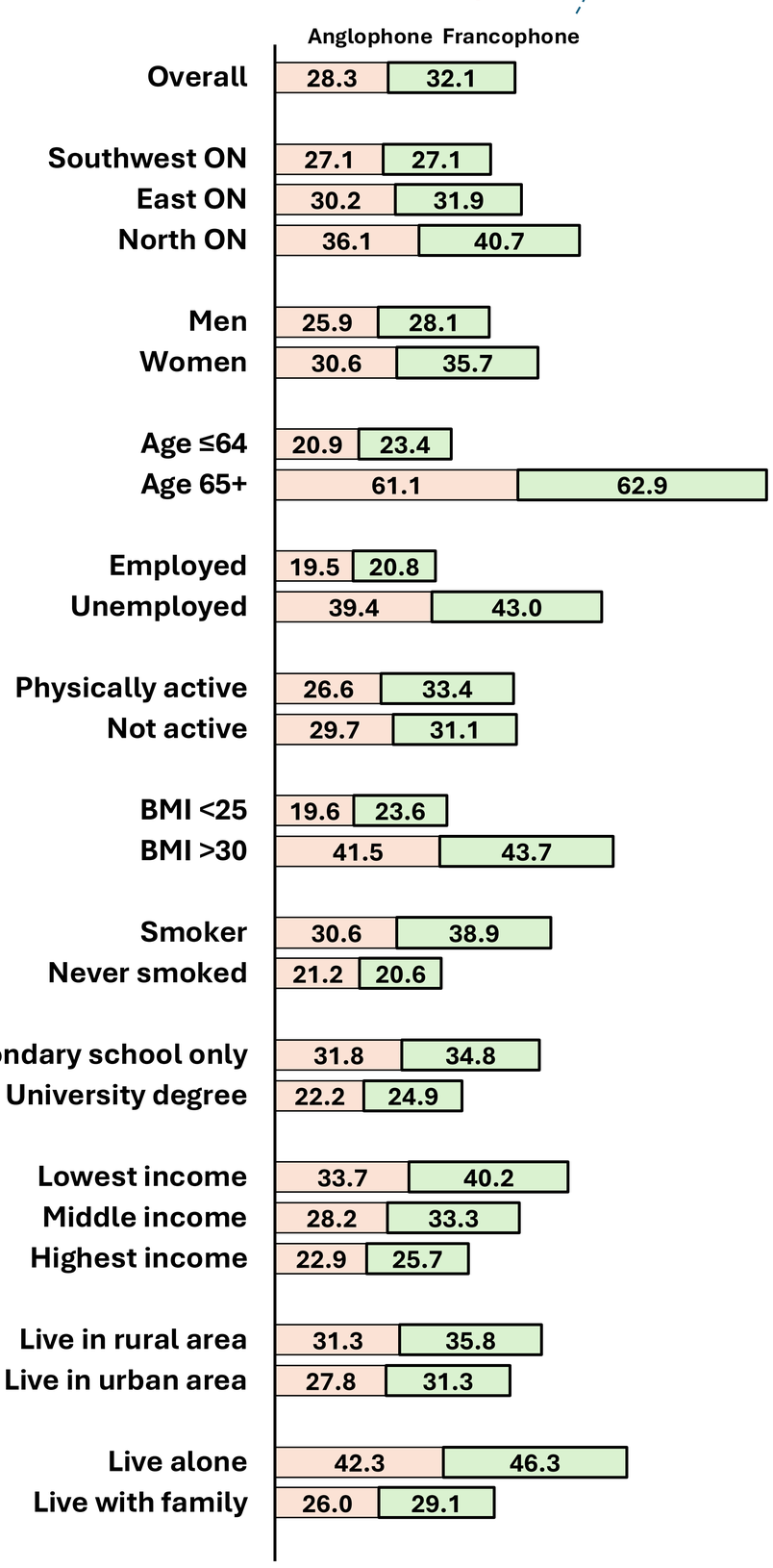
- **13.2%** mood disorder & anxiety
- **10.2%** high blood pressure & high cholesterol
- **10.1%** arthritis & high blood pressure

Overall, the prevalence of multimorbidity was significantly higher in Francophones by 3.8% ($p < .001$).

Examining these sociodemographic and lifestyle determinants point out possible reasons **why Francophones had a higher prevalence of multimorbidity.**

Descriptive

Prevalence of multimorbidity, %



Regression

Determinants of multimorbidity, OR (95% CI)

More/less likely to have multimorbidity

Anglophone	1.00	
Francophone	**1.20** (1.08-1.33)	**more** likely
Southwest ON	1.00	
East ON	**1.16** (1.10 - 1.23)	**more** likely
North ON	**1.54** (1.45 - 1.63)	**more** likely
Men	1.00	
Women	**1.28** (1.22 - 1.35)	**more** likely
Age ≤64	1.00	
Age 65+	**5.92** (5.63 - 6.23)	**more** likely
Employed	1.00	
Unemployed	**2.69** (2.56 - 2.83)	**more** likely
Physically active	1.00	
Not active	**1.15** (1.10 - 1.21)	**more** likely
BMI <25	1.00	
BMI >30	**2.90** (2.73 - 3.07)	**more** likely
Smoker	1.00	
Never smoked	**0.62** (0.58 - 0.65)	**less** likely
Secondary school only	1.00	
University degree	**0.60** (0.56 - 0.65)	**less** likely
Lowest income	1.00	
Middle income	**0.78** (0.72 - 0.84)	**less** likely
Highest income	**0.58** (0.54 - 0.62)	**less** likely
Live in rural area	1.00	
Live in urban area	**0.85** (0.81 - 0.90)	**less** likely
Live alone	1.00	
Live with family	**0.79** (0.75 - 0.83)	**less** likely

Francophones were 1.2 times more likely to have multimorbidity than Anglophones.

People in **North Ontario were 1.54 times more** likely to have multimorbidity than Southwest.

Francophones may present characteristics **associated with multimorbidity** more so than Anglophones.

For example, there were greater proportions of Francophones, aged 65+ and living in North Ontario, compared with Anglophones.

Older age (65+) was the determinant most **strongly associated with multimorbidity**, followed by obesity BMI (>30) and unemployment.

Conclusion

Multimorbidity is overall more common in Francophones than Anglophones in Ontario. Language can be considered as a determinant of multimorbidity.

Our analyses of determinants can help explain differences in prevalences between Francophones and Anglophones.

Our future research will continue to explore determinants and possible interactions.

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