

INTRODUCTION

- Mood Disorder is defined as “a group of mental illnesses that affects how you feel and think about yourself, other people, and life in general”.
- Leading cause of worldwide disability, affecting approximately 280 million people
- In Canada, 1 in 5 people is known to have a mental illness (Statistics Canada, 2012)
- Multimorbidity is one of the risk factors associated with the risk of depression.

OBJECTIVE

The objective of this study is to examine the relationship between mood disorder and multimorbidity among the population aged ≥ 35 living in Canada using the Canadian Community Health Survey (2017-2018)

MATERIAL & METHODS

- Cross-sectional population-based study.
- Multistage Complex survey analysis – Canadian Community Health Survey (CCHS 2017-2018)

Inclusion and Exclusion Criteria

CCHS 2017-2018 (N=110,000)

INCLUSION CRITERIA

- Ten Provinces and Three territories
- Participants 12 years and over

EXCLUSION CRITERIA

- persons living on reserves and other Aboriginal settlements
- Canadian forces (Full-time members)
- youth ages 12 to 17 living in foster homes
- institutionalized population
- persons living in Quebec health regions (Nunavik and Terres-Cries-de-la-Baie-James).

MATERIAL & METHODS

THIS STUDY (n=79,121)

INCLUSION CRITERIA

- Ten Provinces and three territories
- Participants ≥ 35 years age
- Participants selected for mood disorder assessment

EXCLUSION CRITERIA

- Participants in the age group 12-19
- Participants in the age group 20-34

Statistical Methods

- Weighted logistic regression (with robust variance technique).
- The survey-weighted variable which was computed by Statistics Canada was used in all the analysis
- The strength of association between the mood disorder and multimorbidity was determined using Odds Ratio (ORs) and 95% Confidence Interval (95% CI)
- **Primary outcome of interest:** *Mood disorder* (self-described). It was assessed with the question “Do you have a mood disorder such as depression, bipolar disorder, mania or dysthymia?”. It was measured as a dichotomous variable (yes/no).
- **Primary predictor of interest:** *Multimorbidity* operationalised as an ordinal variable with three categories (no chronic condition, 1 chronic condition and 2+ chronic conditions)
- Other predictors of interest: Sex, age, marital status, educational level, total household income, ethnicity, immigrant status and smoking status.

RESULTS

- Approximately 9% of the Canadian population self-reported mood disorder.
- Among females, the odds of having a mood disorder were 1.78 times that of males.

Table 1 Sociodemographic and lifestyle characteristics of the study population

Variable	Frequency (%)	Missing (%)
Province of Residence		None
Ontario (%)	38.63	
Quebec (%)	23.82	
Prairies (%)	16.87	
British Columbia (%)	13.41	
Atlantic region (%)	7.0	
Territories (%)	0.27	
Sex		None
Male (%)	48.71	
Female (%)	51.29	
Age Group		None
35-49	34.5	
50-59	24.57	
60-69	21.91	
≥ 70	19.02	
Marital Status		0.16
Married/Common-law (%)	71.26	
Widowed/Divorced/Separated (%)	17.1	
Single (%)	11.48	
Education Level		2.07
Less than secondary school graduation (%)	13.01	
Secondary school graduation (%)	21.25	
Post-secondary certificate diploma/university degree (%)	63.67	
Total Household Income		None
No income or less than \$20,000	5.87	
\$20,000 to \$39,999	13.57	
\$40,000 to \$59,999	14.78	
\$60,000 to \$79,999	12.79	
\$80,000 or more	52.99	
Ethnicity		1.96
White	75.68	
Non-white	19.26	
Aboriginal	3.1	
Immigrant Status		1.74
Landed immigrant/non-permanent resident (%)	27.8	
Non-immigrant (Canadian born) (%)	70.46	
Smoking Status		0.45
Current smoker	16.06	
Past smoker	32.37	
Never smoker	51.13	
Multimorbidity		1.19
No Chronic condition	60.32	
1 Chronic condition	25.63	
2 or more Chronic conditions	12.86	

Univariate Analysis

Significant predictors at $p < 0.020$: sex, age, marital status, education level, household income, ethnicity, immigrant status, smoking status and multimorbidity

Multivariate Analysis

Significant predictors at $p < 0.05$: age, sex, household income, smoking status, marital status, ethnicity, immigrant status and multimorbidity

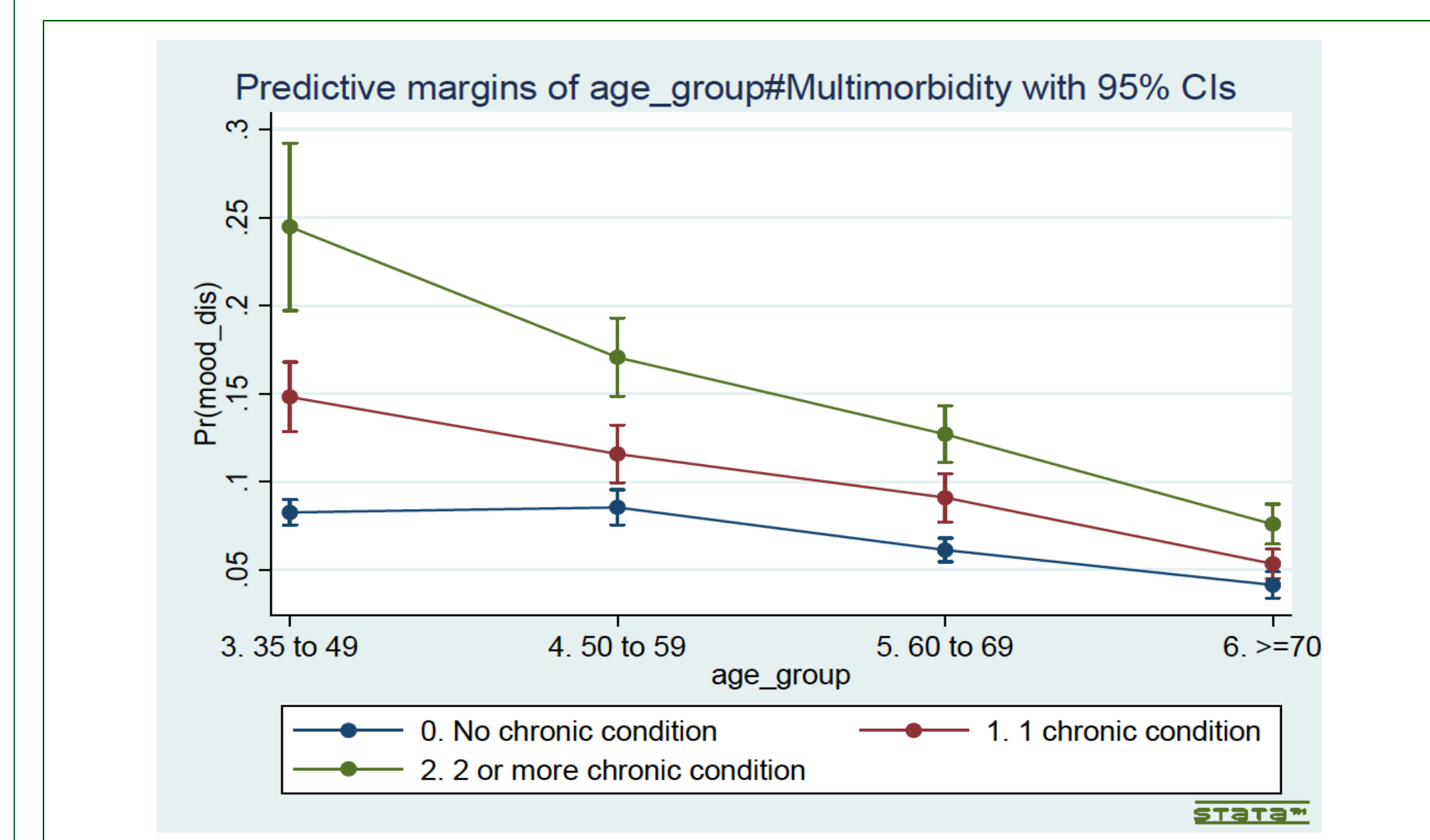


Figure 1. Significant Interaction between age and multimorbidity

DISCUSSION

- Participants aged 35-49 have higher odds of mood disorder if they have multimorbidity (2+ chronic conditions) than those who do not have any chronic condition.
- Females were more likely to have mood disorders compared to males.
- Whites were more likely to report mood disorder compared to non-white.
- Those who are single (OR_{adj} : 1.54, 95% CI: 1.35-1.75, $P < 0.001$), or widowed/divorced/separated (OR_{adj} : 1.32, 95% CI: 1.18-1.47, $P < 0.001$), are likely to report mood disorder compared to those who are married or have a common-law.
- Non-immigrants (OR_{adj} : 1.28, 95% CI: 1.09-1.49, $P = 0.002$), have higher odds of mood disorder compared to landed immigrant/non-permanent resident.
- The odds of mood disorder were lower in never-smokers (OR_{adj} : 0.50, 95% CI: 0.45-0.56, $P < 0.001$) compared to current-smokers.
- The higher the income of the participants, the lower were the odds of mood disorder.

REFERENCES

Canadian Mental Health Association. (n.d.). Mood disorders. <https://cmha.bc.ca/mood-disorders-2/>
 World Health Organisation. (2021, September 13) Depression. <https://www.who.int/news-room/fact-sheets/detail/depression>