

# Investigating Changes in Suicidal Ideation across Age Groups and Geographical Regions in Canada during the COVID-19 Pandemic



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## Introduction

- Rates of suicidal ideation (SI; thinking about, planning suicide) have increased since the start of the COVID-19 pandemic (Czeisler et al., 2020), which is alarming given that SI is a robust risk factor for suicide attempts (Dendup et al., 2020).
- Prior to the pandemic, those aged 40 to 59 were at the highest risk for suicide compared to other age groups, and those living in rural areas were at a higher risk than those in urban areas (Navaneelan, 2012; Hirsch & Cukrowicz, 2014).
- As the pandemic has resulted in limited access to social support, in-person mental-health care, and other protective factors against SI, investigating how COVID-19 is impacting SI among already at-risk groups is critical.
- The current study investigates whether self-reported changes in severity of SI since the start of the pandemic differ across age groups and geographical regions in Canada.

## Research Questions

1. How many Canadians have experienced, or currently experience, SI?
2. Are there differences between age groups or geographical regions in current or past SI?
3. Among those with current SI, has severity changed since the start of the pandemic?
4. Do these changes differ by age group or geographical region?

## Methods

### Sample/Procedure:

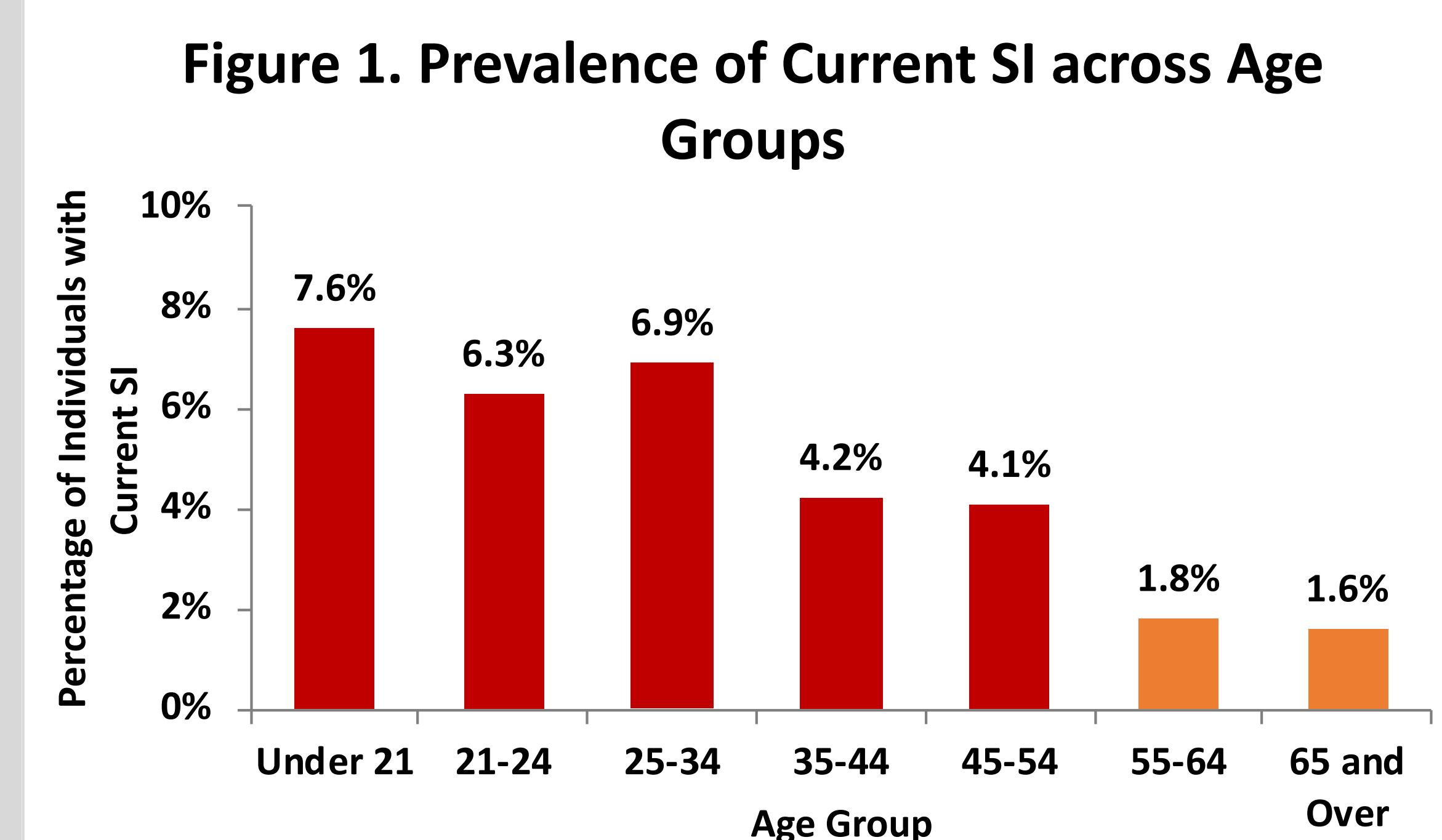
- Participants were Canadian residents, aged 17 or older, who volunteered to complete a 15-20 minute online survey, between August and September, 2020, about the mental health impacts of the COVID-19 pandemic (N = 6,629; 59.6% female; 82% White). Recruitment targets for the sample were balanced by sex, age, and province, consistent with the Canadian census population distribution.
- A single item assessed experiences of SI (*yes, in the past/yes, currently/never/not sure*). Those who endorsed current SI were asked a single item if the thoughts had worsened since the start of the pandemic (*yes/no/not sure*).
- Sample weights were applied to descriptive statistics so that prevalence estimates can be assumed to reflect the Canadian population. Unweighted data was used for all inferential statistics.

### Analyses:

- Descriptive statistics examined Canadians' experiences of SI, as well as severity changes in SI since the start of the pandemic.
- Chi-square analyses examined differences in SI prevalence between 1) age groups (under 21, 21-24, 25-34, 45-54, 55-64, 65 and over), and 2) geographical regions (rural: <5,000 people, suburban: residential area outside city, city: >100,000 people, metropolitan: >1,000,000 people), and differences in severity changes in SI since the start of the pandemic between 3) age groups and 4) geographical regions.

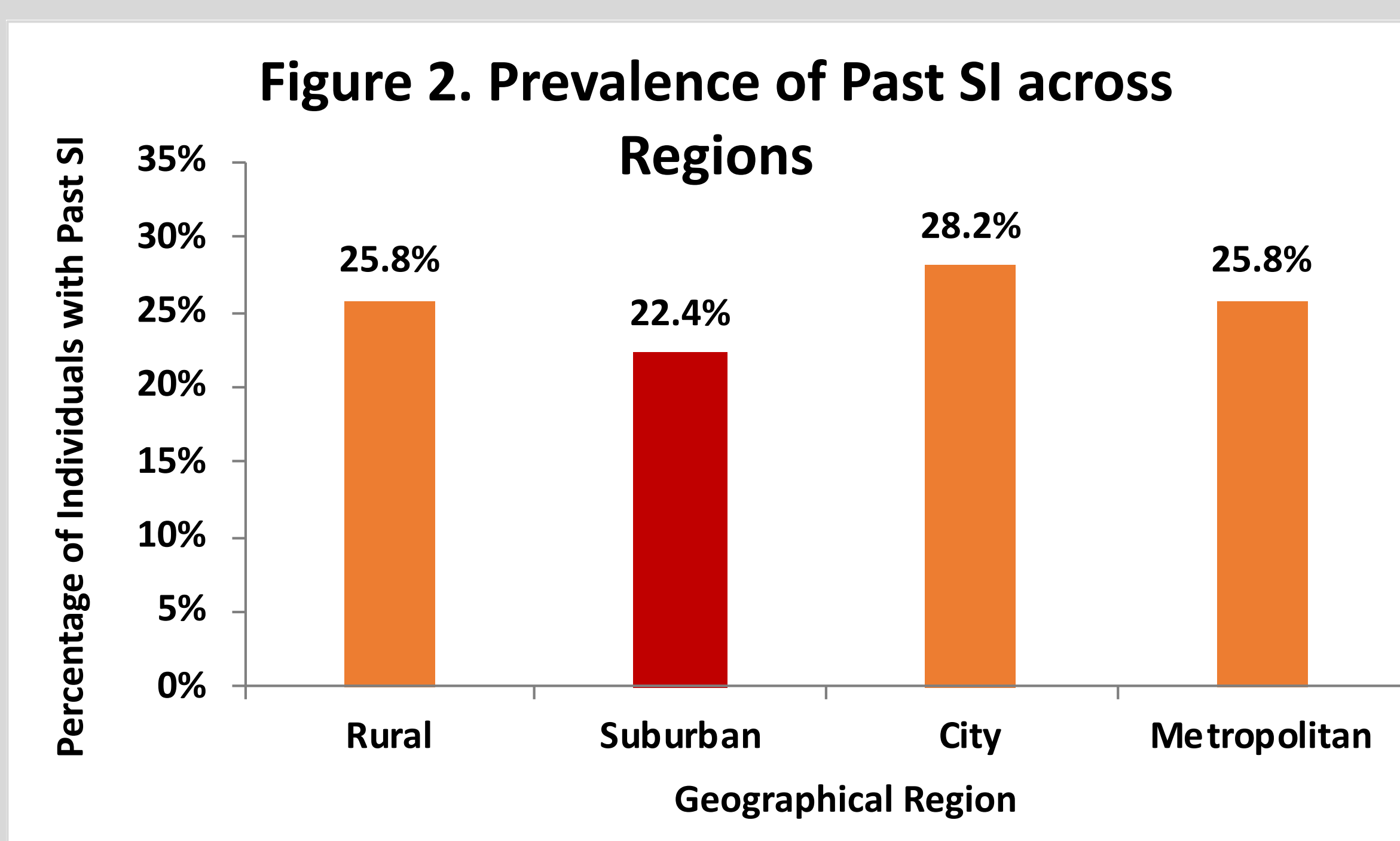
## Results

1. 3.9% of the Canadian population was experiencing active SI at the time of the survey, 25.8% had experienced SI in the past, 67.2% had never experienced SI, and 3.2% were not sure about their experience with SI.
2. The proportion of participants in age groups under 55 who had **current** SI (4.1%-7.6%) was greater than the proportion of those in age groups older than 54 who had current SI (1.6%-1.8%;  $\chi^2(18) = 368.1$ , Cramer's  $V = .137$ ,  $p's < .05$ ). There were no significant differences between age groups on **past** SI. See Figure 1.



Note. Bars of the same color indicate **no** significant differences between groups.

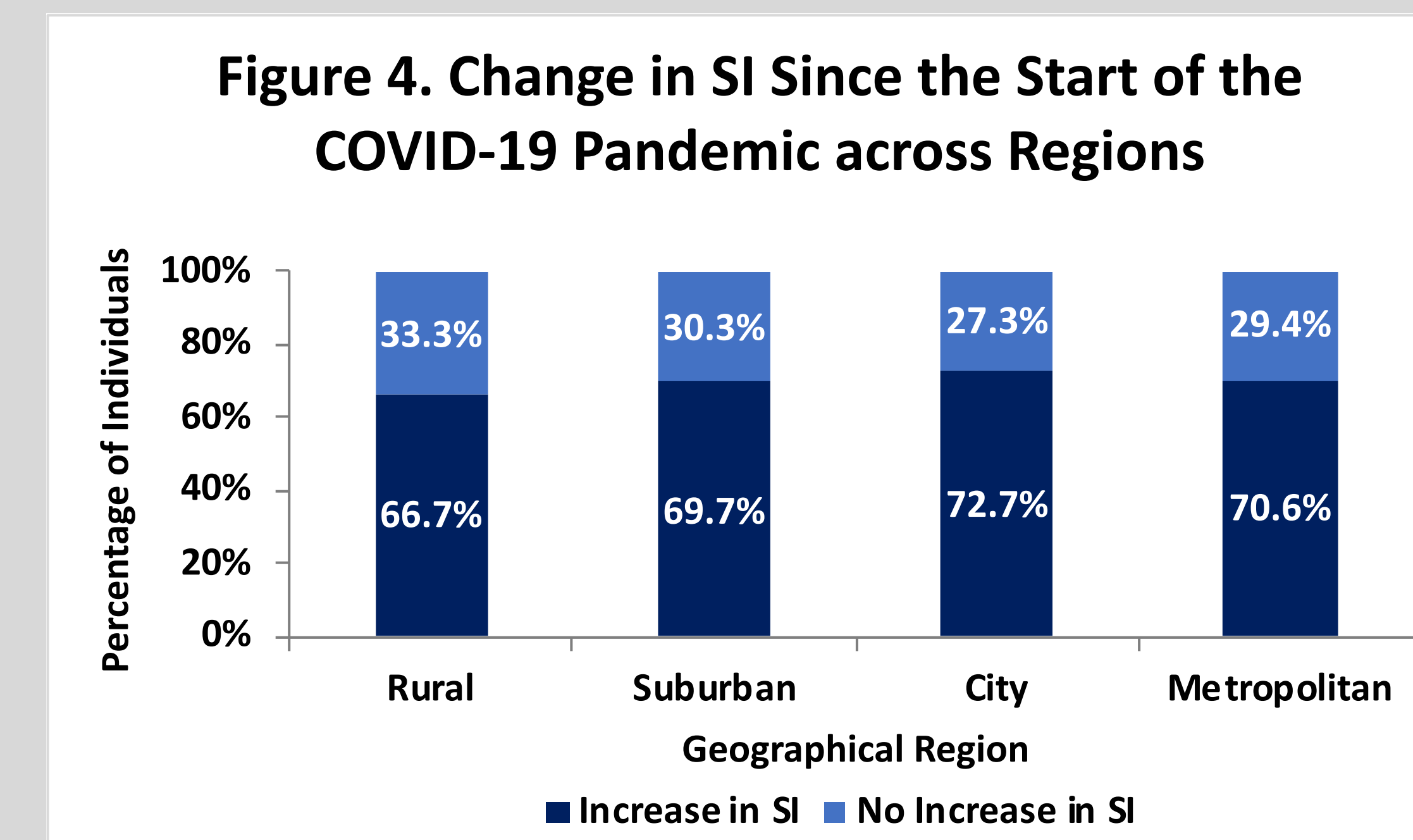
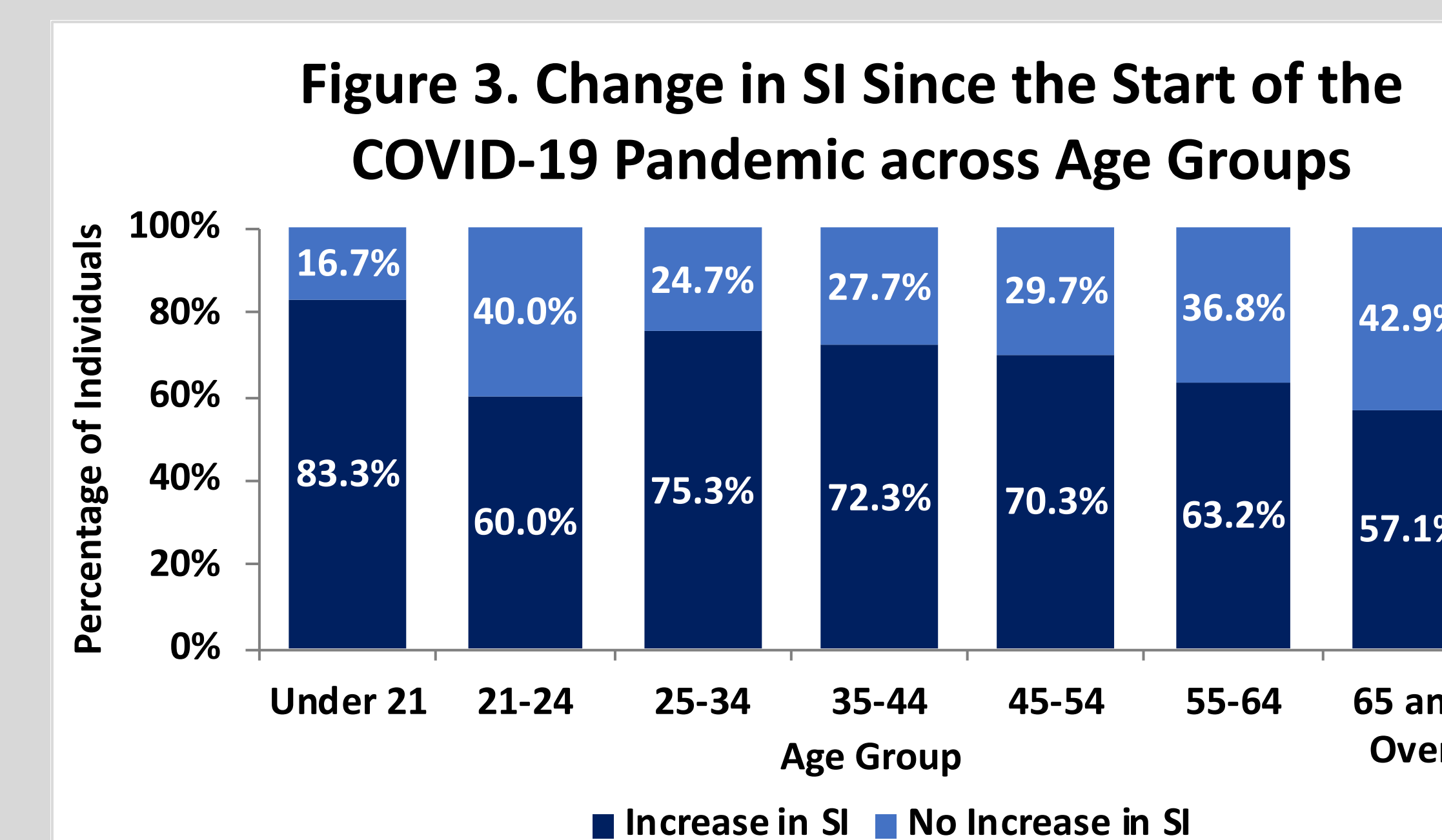
There were no significant differences between geographical regions on **current** SI. The proportion of participants in suburban regions who had **past** SI (22.4%) was less than the proportion of those in rural, city, and metropolitan regions who had past SI (25.8%-28.2%;  $\chi^2(9) = 27.1$ , Cramer's  $V = .037$ ,  $p's < .05$ ). See Figure 2.



Note. Bars of the same color indicate **no** significant differences between groups.

3. Among those with current SI, 62.4% reported that their SI worsened since the start of the pandemic, 26.6% reported their SI did not worsen, and 11% were not sure.
4. There were no significant differences between age groups or between geographical regions on changes in SI severity since the start of the pandemic. See Figures 3 and 4.

## Results



## Discussion

- The results suggest that approximately 4% of Canadians were experiencing current SI at survey completion. In contrast to past research, Canadians aged 54 or *younger* were experiencing proportionately more SI than those in older age groups. Canadians living in suburban areas appear to have had proportionately less SI in the past than those living in other areas.
- Pandemic onset may have diminished the increased risk for SI among older and rural groups, as the entire Canadian population is experiencing similar barriers to protective factors (e.g., social support) against SI, thereby levelling SI risk across groups.
- The majority with current SI reported that their SI worsened since the start of the pandemic, but changes in SI severity since the start of the pandemic did not differ across age or geographical regions.
- Mobilization of mental-health supports to address SI among middle and younger-aged adults, as well as worsening SI across all age and regional groups, is a critical health priority.

## References

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