

## BACKGROUND

- ❖ Due to the COVID-19 pandemic, confinement measures were put in place to limit the spread of the virus (Gouvernement du Quebec, 2020).
- ❖ Loneliness levels higher during the pandemic ( $M=43.8 \pm 13.5$ ) than before ( $M=38.4 \pm 13.5$ ;  $d=0.48$ ) (Groarke et al., 2020; Morahan-Martin & Schumacher, 2003).
- ❖ Individuals reporting more sleep problems such as a decrease in sleep efficiency, worse sleep quality, and poorer sleep hygiene (Li et al., 2020).
- ❖ Loneliness linked to reduced sleep quality (Cacioppo & Hawkley, 2009).

## Objective

The aim of this study is to investigate whether loneliness at the beginning of the lockdown predicts sleep quality during the COVID-19 confinement.

## METHODOLOGY

### Participants

- ❖ 296 individuals who previously participated in SIRL lab study and agreed to be contacted for future research.
- ❖ 80% female.
- ❖  $M_{age} = 46.53$  years ( $SD = 8.9$ ).
- ❖ 19% were caregivers of an elderly or person with chronic condition.
- ❖ 19% have a chronic mental or physical health condition.
- ❖ Attrition rate: 25.5%.

## REFERENCES

- Buysse, D. J., Reynolds, C. F., Monk, T. H., Berman, S. R., & Kupfer, D. J. (1989). The Pittsburgh sleep quality index: A new instrument for psychiatric practice and research. *Psychiatry Research*, 28(2), 193–213. [https://doi.org/10.1016/0165-1781\(89\)90047-4](https://doi.org/10.1016/0165-1781(89)90047-4)
- Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, 13(10), 447–454. <https://doi.org/10.1016/j.tics.2009.06.005>
- Groarke, J. M., Berry, E., Graham-Wisener, L., McKenna-Plumley, P. E., McGlinchey, E., & Armour, C. (2020). Loneliness in the UK during the COVID-19 pandemic: Cross-sectional results from the COVID-19 Psychological Wellbeing Study. *PLOS ONE*, 15(9), e0239698. <https://doi.org/10.1371/journal.pone.0239698>
- Hughes, M. E., Waite, L. J., Hawkley, L. C., & Cacioppo, J. T. (2004). *A Short Scale for Measuring Loneliness in Large Surveys: Results From Two Population-Based Studies—Mary*
- Li, Y., Qin, Q., Sun, Q., Sanford, L. D., Vgontzas, A. N., & Tang, X. (2020). Insomnia and psychological reactions during the COVID-19 outbreak in China. *Journal of Clinical Sleep Medicine*, 16(8), 1417–1418. <https://doi.org/10.5664/jcsm.8524>
- Morahan-Martin, J., & Schumacher, P. (2003). Loneliness and social uses of the Internet. *Computers in Human Behavior*, 19(6), 659–671. [https://doi.org/10.1016/S0747-5632\(03\)00040-2](https://doi.org/10.1016/S0747-5632(03)00040-2)

## METHODS (Con't)

### Measures

#### ❖ Loneliness Scale

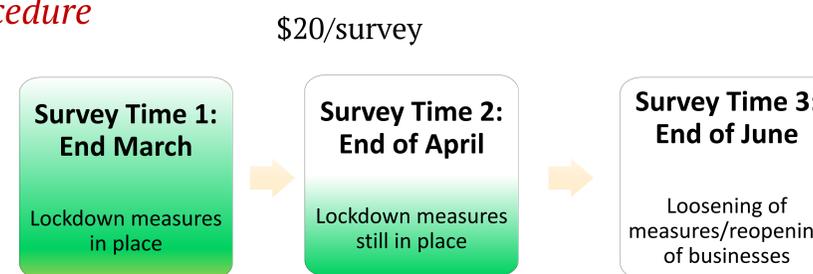
Three questions from the R-UCLA-3 “How often do you feel that you lack companionship;” “How often do you feel left out;” “How often do you feel isolated by others?” (Hughes et al., 2004).

#### ❖ Adjusted Pittsburg Sleep Quality Index (PSQI)

Assessed sleep quality, sleep duration, sleep latency, habitual sleep efficiency, sleep disturbance, use of sleep medications, and daytime dysfunction **in the past week.**

- Total score ranging from 0-21; higher total score = worse sleep quality; clinical cut-off = 6 (Buysse et al., 1989).

### Procedure



## RESULTS

- ❖ There was a significant positive association between loneliness at Time 1 and sleep quality at T1,  $r_s = .306$ ,  $p < .001$ ,  $N = 268$ .
- ❖ There was a significant positive association between loneliness at Time 1 and sleep quality at T2,  $r_s = .249$ ,  $p < .001$ ,  $N = 218$ .
- ❖ There was a significant positive association between loneliness at Time 1 and sleep quality at T3,  $r_s = .271$ ,  $p < .001$ ,  $N = 198$ .
- ❖ Loneliness explained a significant proportion of variance in sleep quality scores,  $R^2 = .14$ ,  $F(4,261) = 10.89$ ,  $p < .001$ .

Figure 1. Linear change in PSQI scores over time

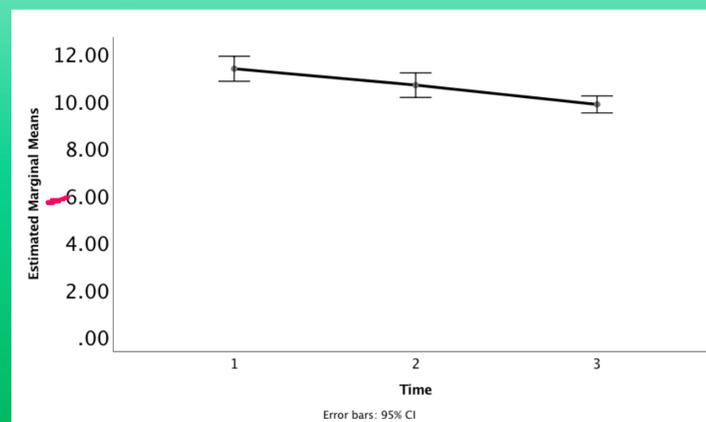


Figure 2. Quadratic change in Loneliness scores over time

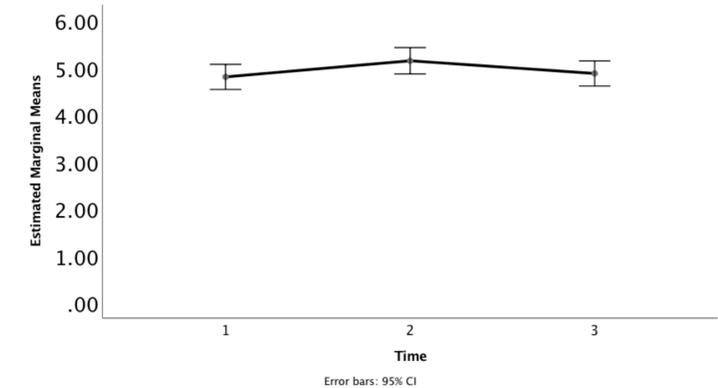
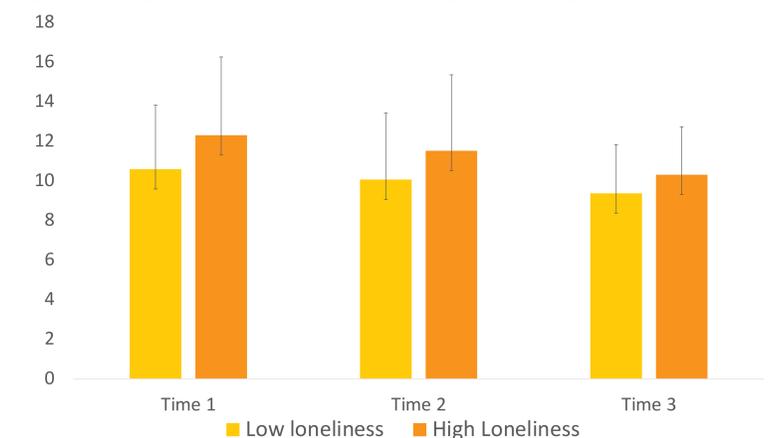


Figure 3. Change in PSQI scores across low vs. high loneliness groups over time



## DISCUSSION

### Conclusions and Implications

- ❖ First week of confinement, loneliness explained a significant proportion of variance in sleep quality scores.
  - Sleep quality increased by .3 standard deviations for each standard deviation unit increase in loneliness at Time 1.
- ❖ Loneliness did not predict change in sleep quality over time.
  - Increased loneliness associated with poorer sleep quality early in the pandemic.
- ❖ The results suggest that increasing social connectedness during periods of confinement may improve sleep quality.

### Limitations

- ❖ Convenience sample, results not generalizable to entire population.
- ❖ Self-report measures for the sleep quality associated with recall bias and sleep-state misperception.