# Longitudinal associations of depressive symptom severity, suicidal ideation, psychopathology, trauma, and substance use in a precariously housed sample

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## Background

- Homeless and precariously housed groups have high rates of depression and suicidality[1,2]
- Reports show that suicidal ideation does not always co-occur with depression[3]
- Few studies have examined risk factors of these conditions in a community-based setting over time

## Methods

### Participants
- Community-based sample from ongoing UBC-SFU Hotel Study[4]
- Participants are 19+ years old
- English-speaking
- Recruitment took place in an impoverished neighborhood in Vancouver, Canada

### Outcome Measures
- **Depressive Symptom Severity:** Beck Depression Inventory (BDI) total scores[5]
- **Suicidal Ideation:** ≥1 on the Maudsley Addiction Profile (MAP) suicidal ideation item
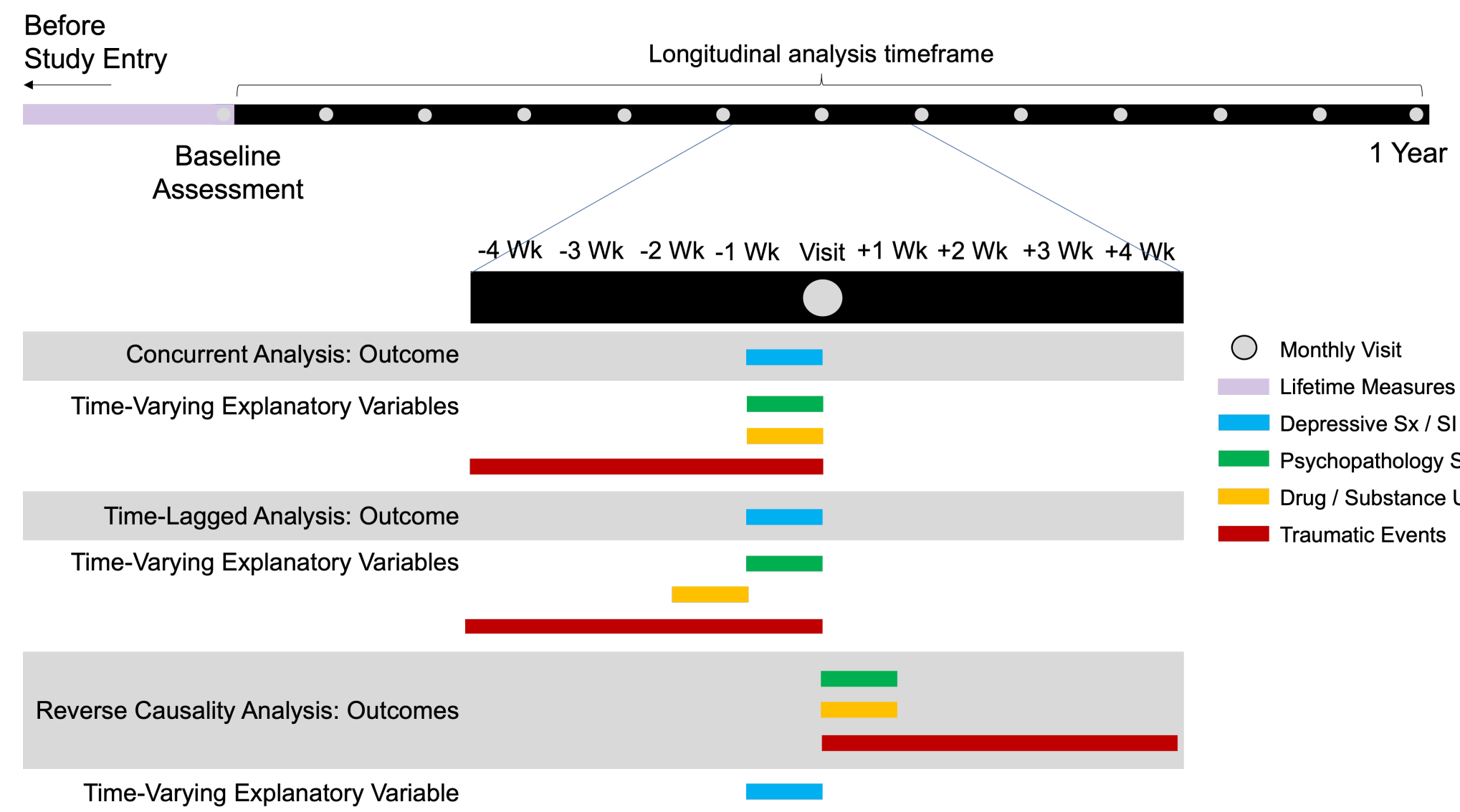
### Predictor Measures
- Diagnoses made by psychiatrists, Trauma History Questionnaire, MAP-anxiety subscore, Positive and Negative Syndrome Scale (PANSS)-5key (+ve) (five items that define psychotic symptoms), Timeline Follow-back for substance use

### Statistical Analyses
- Mixed-effects regression analyses conducted in R

Figure 1. Longitudinal analysis structure



## Main Findings

### 1. Depressive symptoms are associated with lifetime major depression, lifetime trauma, recent trauma, anxiety symptoms, psychotic symptoms, and non-prescribed opioid use.

Figure 2. Effect of lifetime major depression and traumatic experiences on depressive symptom severity



Figure 3. Effect of different psychiatric comorbidities on depressive symptom severity



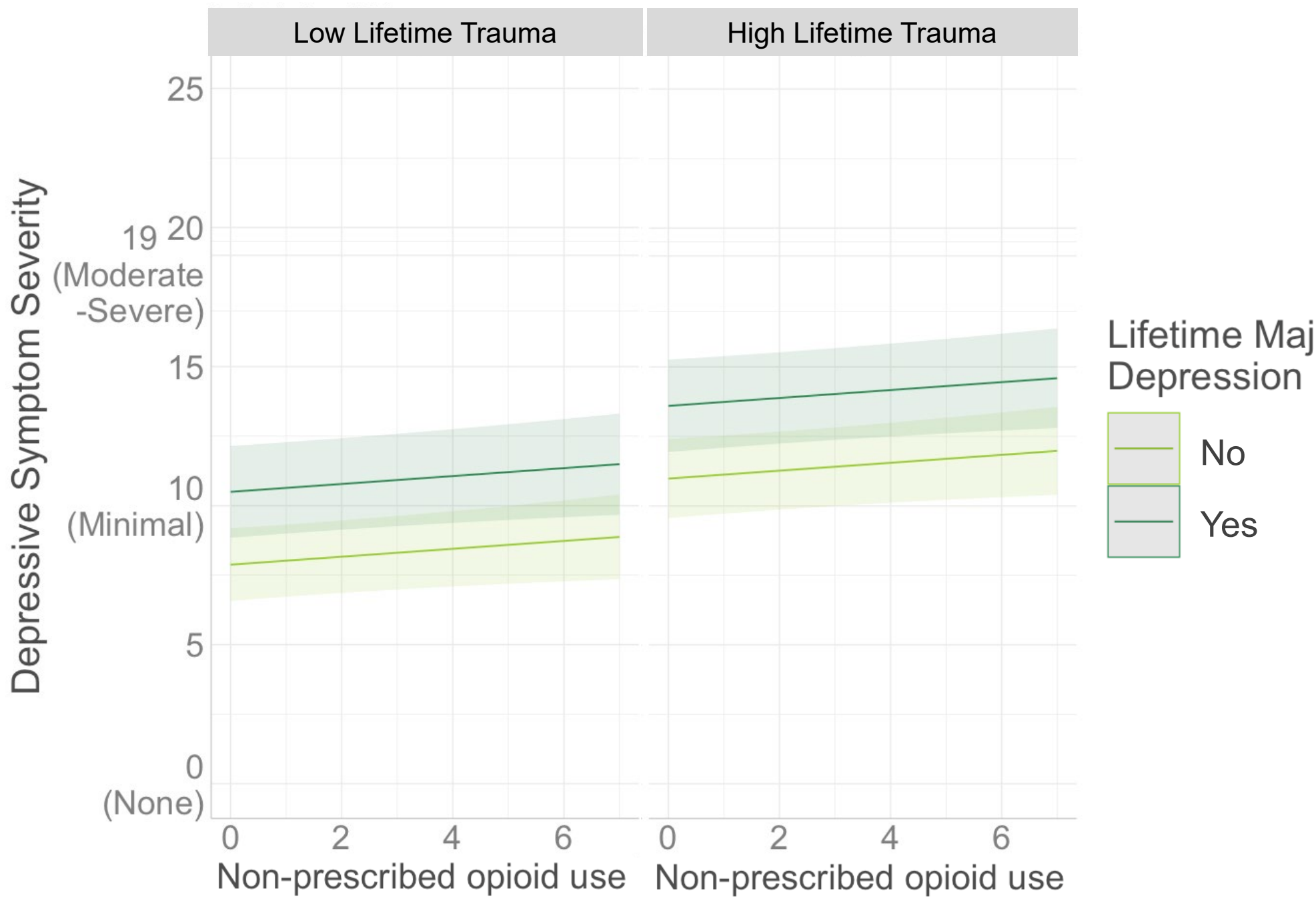Figure 4. Effect of lifetime depression, lifetime trauma, and recent opioid use on depressive symptom severity
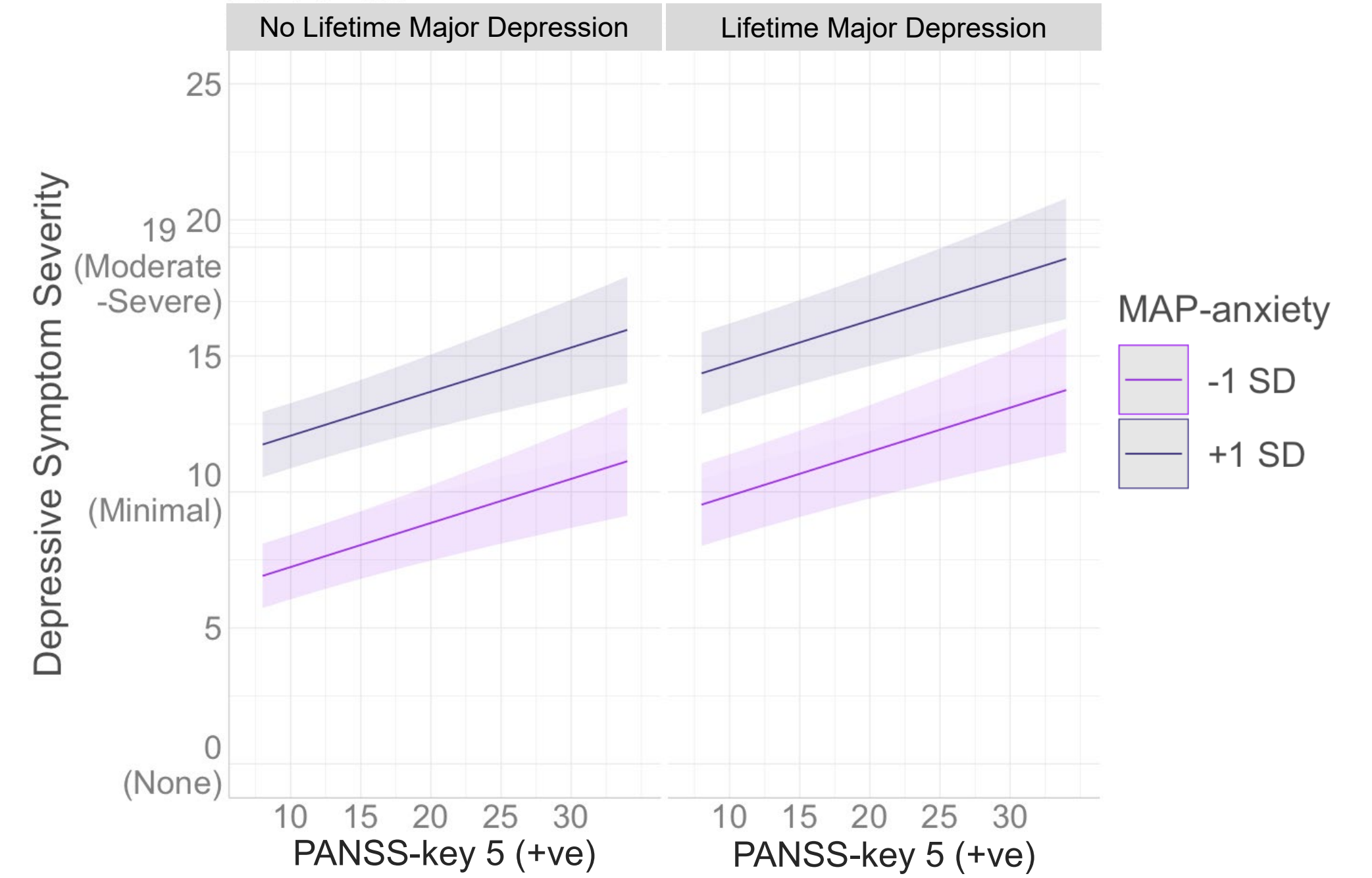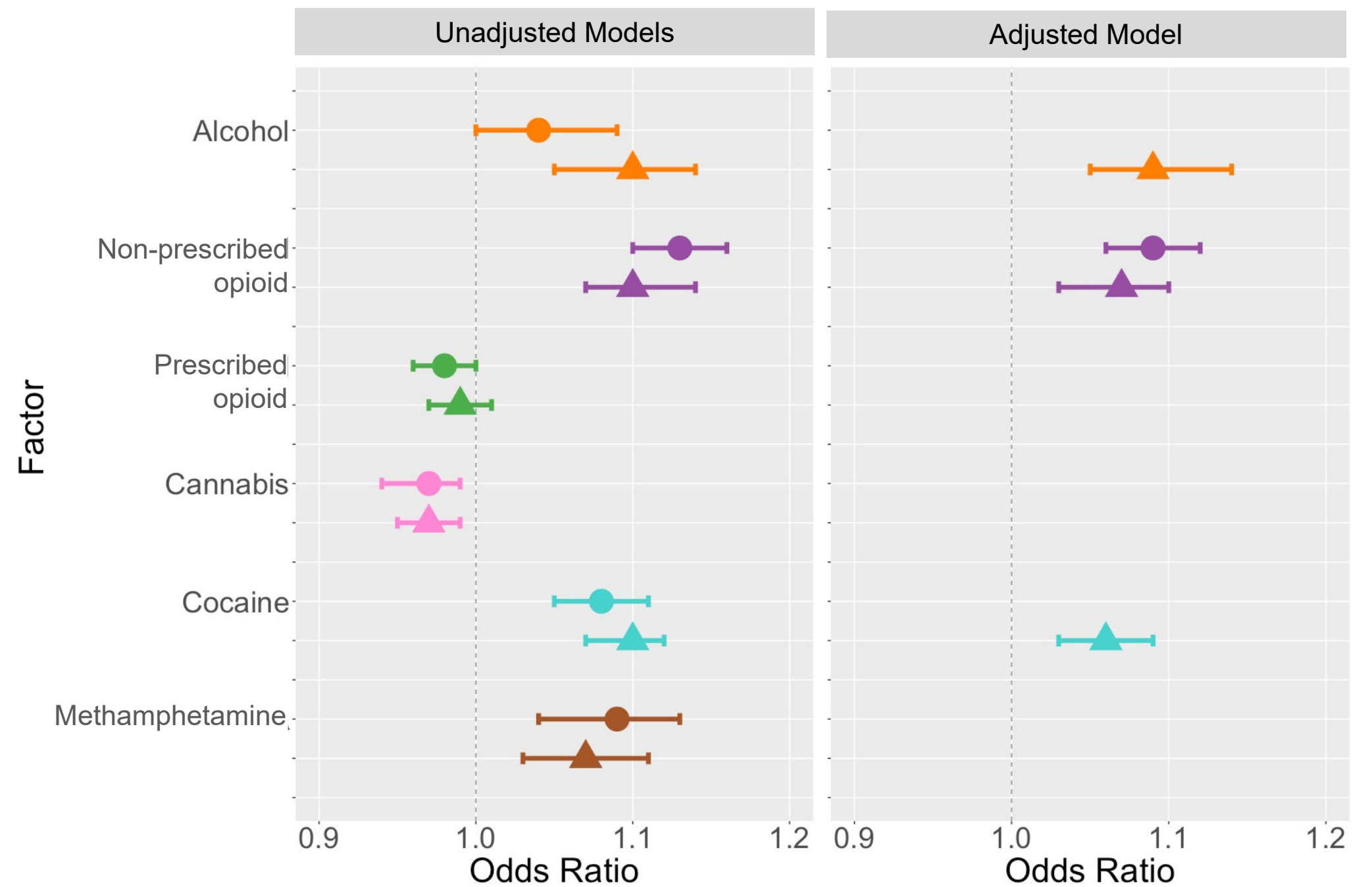


Figure 5. Concurrent (●) and time-lagged (▲) effects of substance use on depressive symptom severity



### 2. Suicidal ideation is associated with a history of psychosis, lifetime trauma, moderate-severe depressive symptoms, and anxiety symptoms.

Figure 6. Effect of lifetime psychotic disorder, anxiety severity, and depressive symptom severity on suicidal ideation
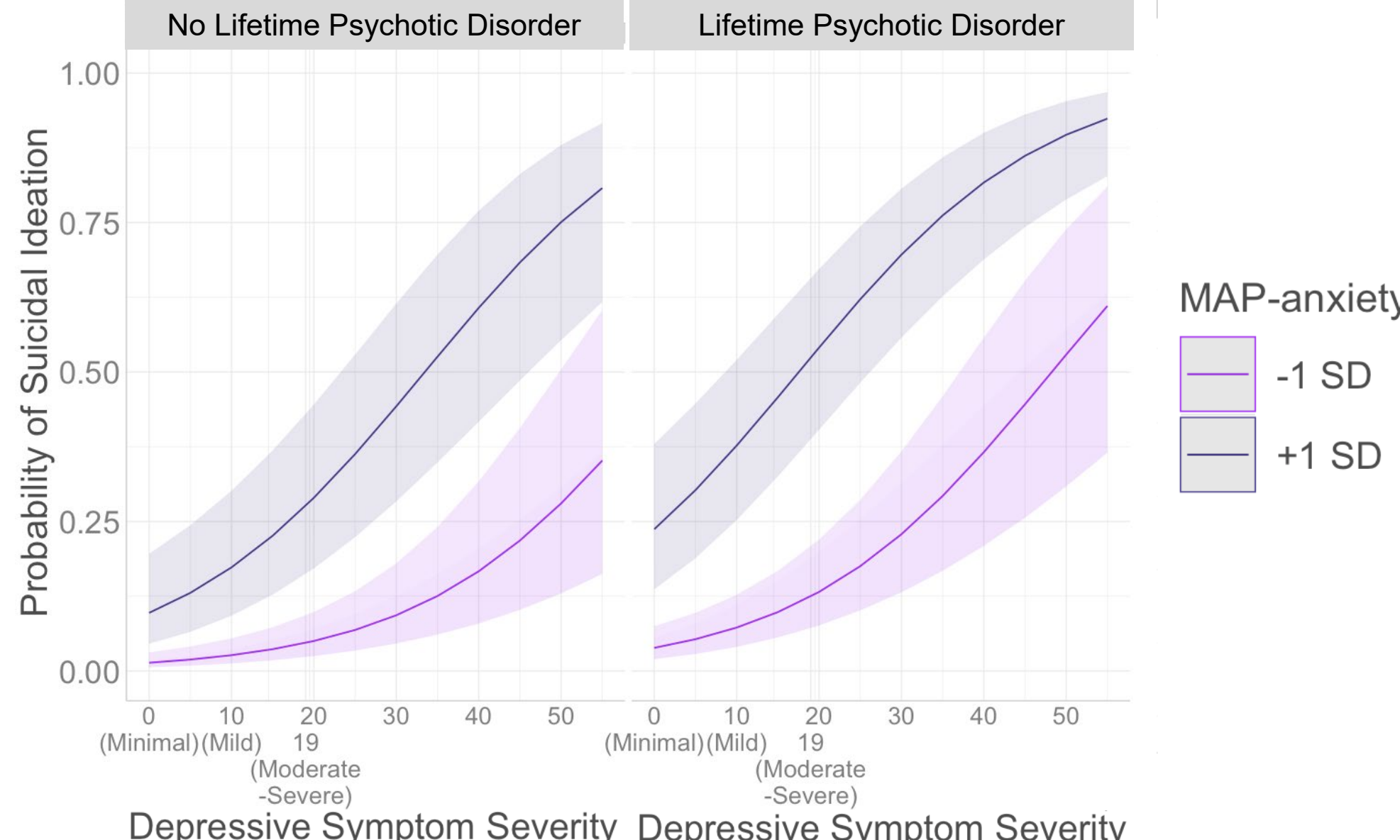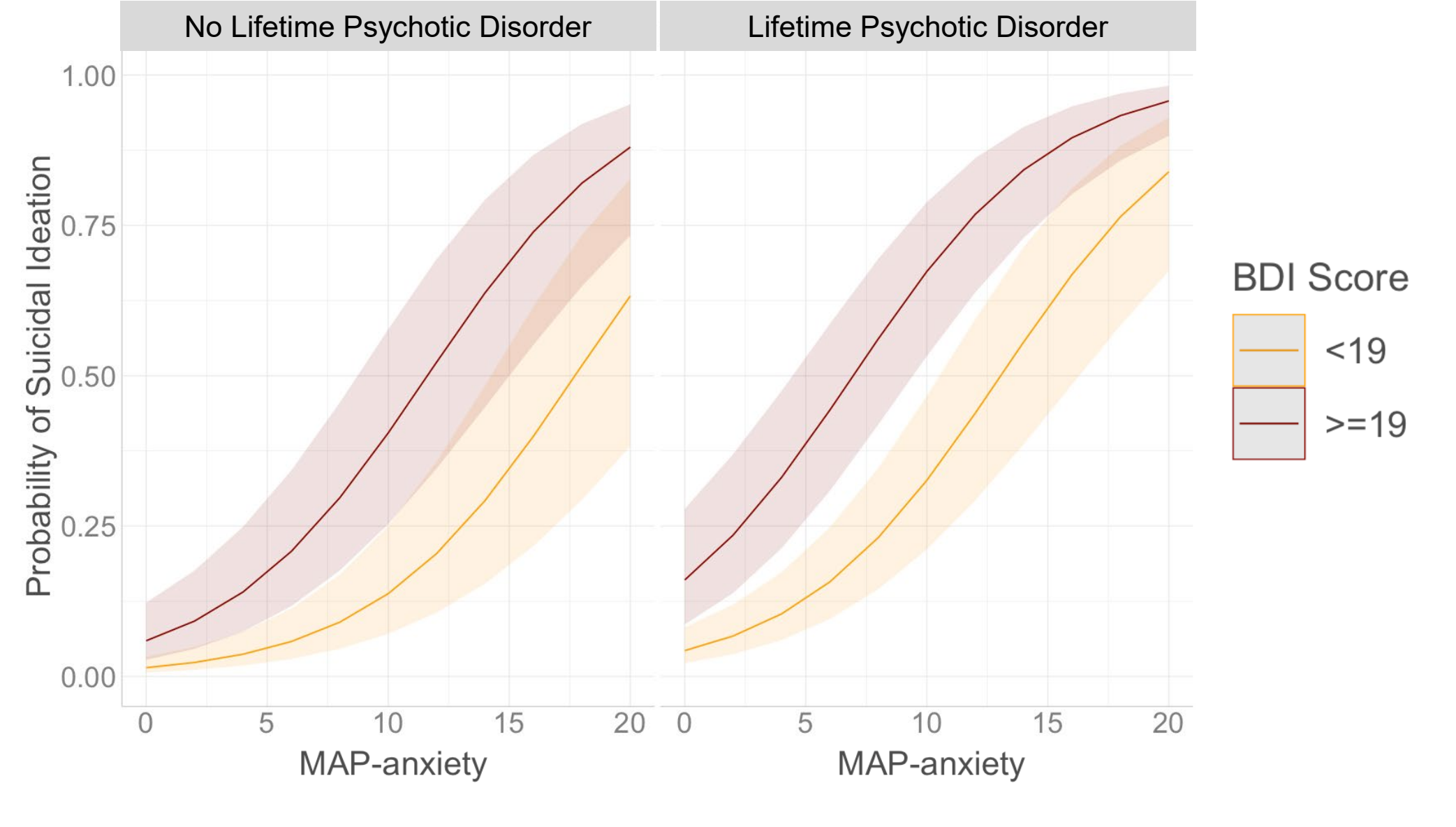


Figure 7. Effect of lifetime psychotic disorder, anxiety symptom severity, and moderate-severe depressive symptoms on suicidal ideation



## Sample Characteristics

| Factor | Participants (N = 393) |
|---|---|
| Age (years) | 42 (33-50) |
| Men (n, %) | 308 (78.4%) |
| Ethnicity (n, %) | |
| White | 241 (61.3%) |
| Indigenous | 106 (26.9%) |
| Other | 46 (11.8.%) |
| Completed high school or equivalent (n, %) | 161 (41.0%) |
| Ever homeless (n=388) (n, %) | 283 (72.9%) |
| Depressive symptom severity | |
| Total BDI Score (continuous measure) | 12 (6-21) |
| Minimal (BDI: 0-9) (n, %) | 157 (40.0%) |
| Mild (BDI: 10-18) (n, %) | 118 (30.0%) |
| Moderate-Severe (BDI: 19+) (n, %) | 118 (30.0%) |
| Any suicidal ideation (n, %) | 109 (27.7%) |
| Psychiatric diagnoses | |
| Lifetime major depressive disorder (n, %) | 120 (30.5%) |
| Major depressive episode (n=382) (n, %) | 71 (18.6%) |
| Lifetime anxiety disorder (n, %) | 135 (34.4%) |
| Lifetime psychotic disorder (n, %) | 236 (60.1%) |
| Lifetime alcohol dependence (n, %) | 187 (47.6%) |
| Lifetime opioid dependence (n, %) | 240 (61.1%) |
| Lifetime cannabis dependence (n, %) | 168 (42.7%) |
| Lifetime cocaine dependence (n, %) | 305 (77.6%) |
| Lifetime methamphetamine dependence (n, %) | 141 (35.9%) |
| Fagerström Test for Nicotine Dependence (median, IQR) | 4 (2-6) |
| Traumatic experiences | |
| Lifetime trauma (n=387) | 8 (5-11) |
| Earliest age of trauma in years (n=372) | 11 (5-15) |

## Supporting Analyses

- No evidence of depressive symptoms predicting monthly trauma, psychotic symptoms, or substance use (i.e. no reverse causality)
- Multiple imputation analysis showed that results were not affected by missing data

## Conclusions

- Depressive symptoms are associated with the presence of multiple comorbidities and social factors
- Non-prescribed opioid, alcohol, and cocaine are the substances have the greatest effect on depressive symptom severity
- Assessing a history of psychosis among those with moderate-severe depressive symptoms may help identify suicidal ideation
- Risk factors of depressive symptom severity and suicidal ideation are additive rather than synergistic or multiplicative

## Acknowledgements

## References

**1)** Gutwinski et al., *PLOS Med* 2021;18(8):e1003750. **2)** Ayano et al., *Psychiatr Q* 2019;90(4):829-42. **3)** Lee et al., *J Evid-Inf Soc Work* 2017;14(4):229-42. **4)** Vila-Rodriguez et al., *Am J Psychiatry* 2013;170(12):1413-22. **5)** Cho et al., *JADR* 2021;6:100229.

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