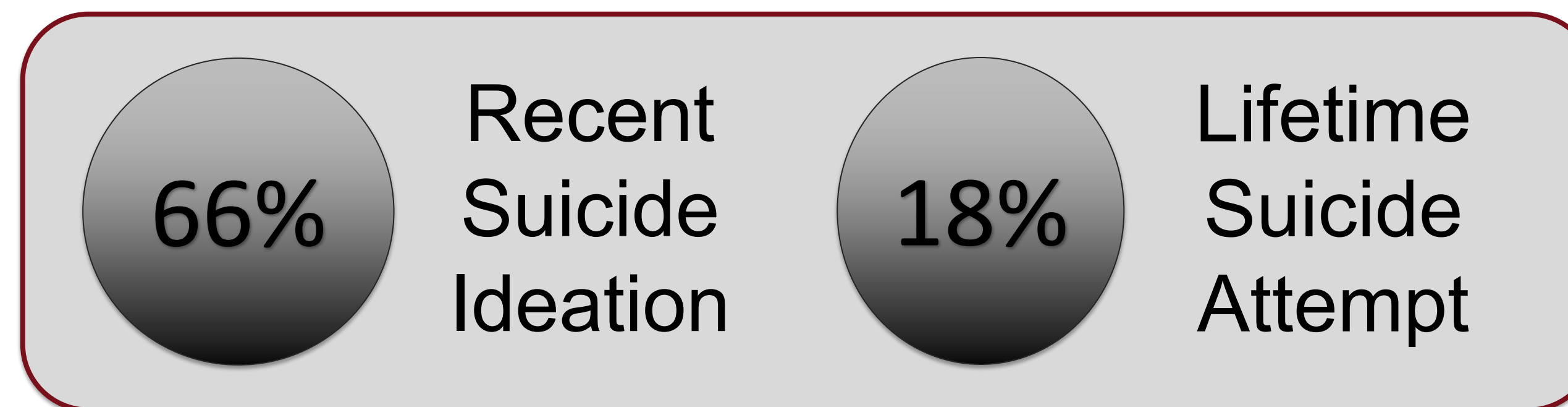
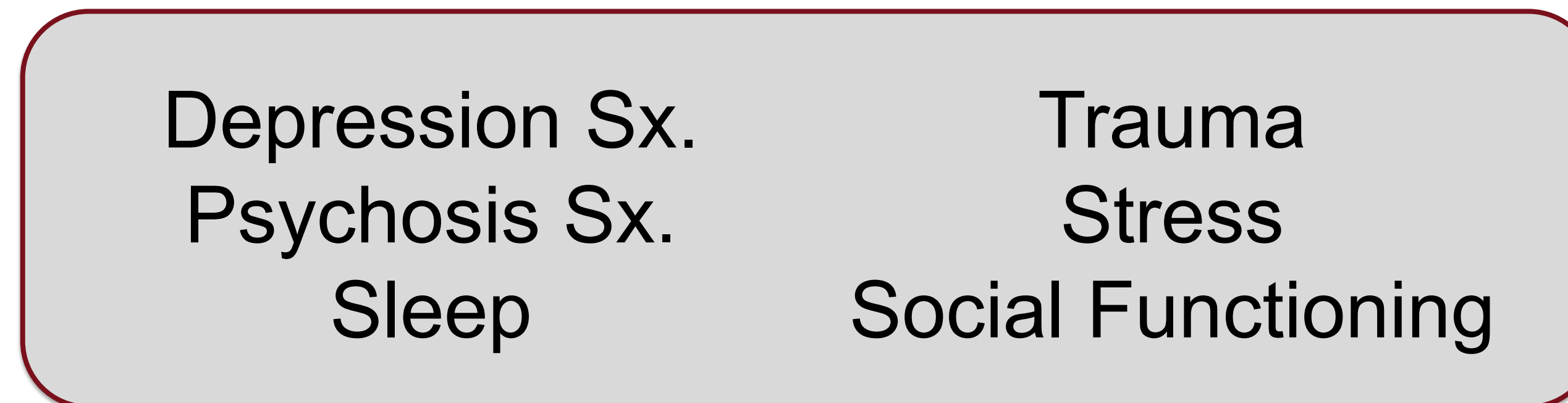


Introduction

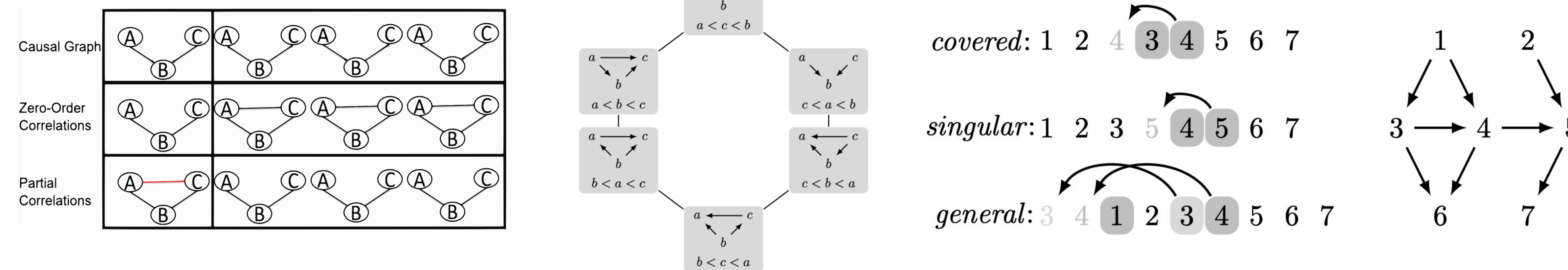
The Clinical High Risk Period is Associated with Increased Suicidality



We Know Correlates of Suicidality Among these Individuals

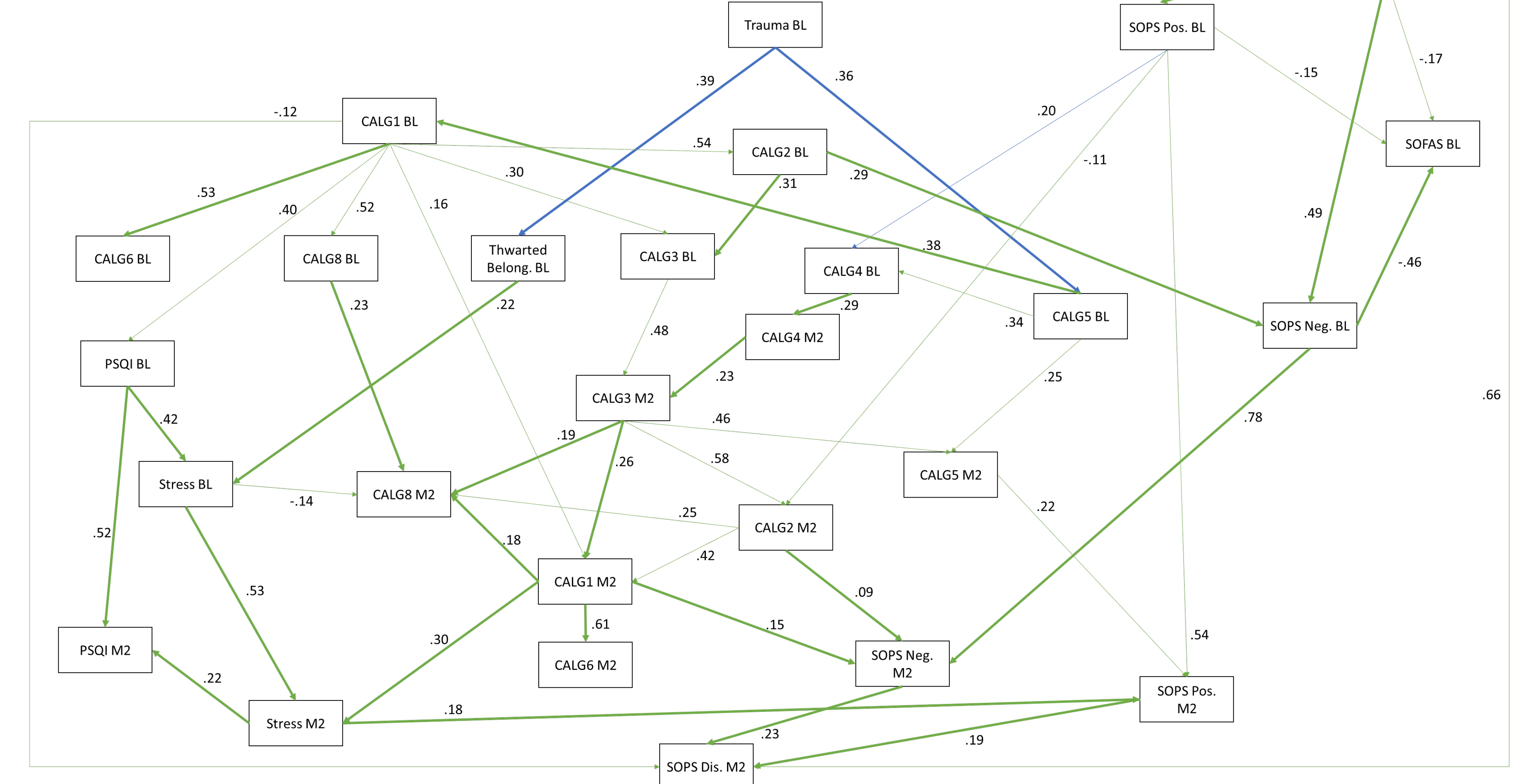
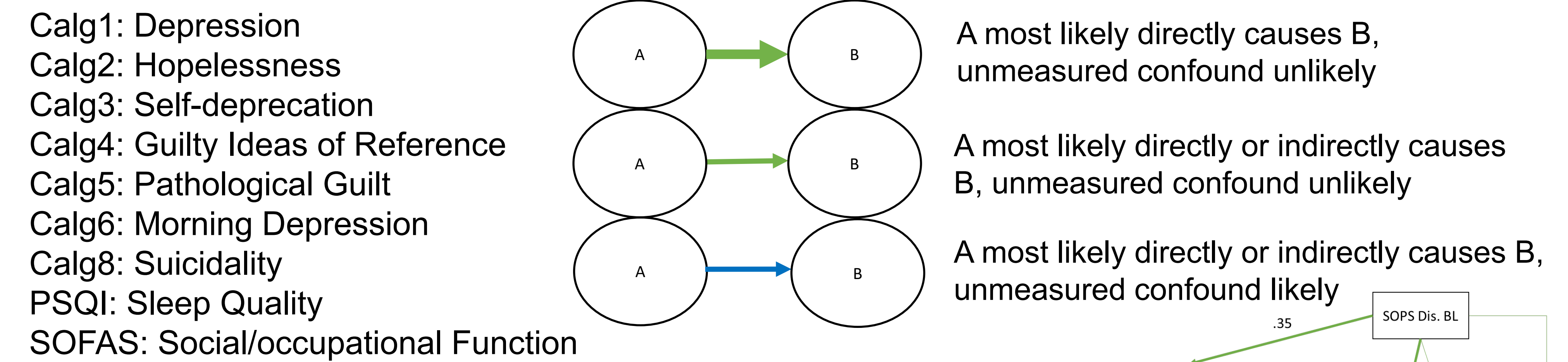


From this, we can Learn Empirically-Plausible Causal Pathways



Left: Observational Data Contain Clues about Causation. For example, partial correlation patterns can differentiate between unshielded colliders (left cell) and all other potential acyclic graphs with three nodes. **Middle:** Example search space adjacent graphs differ by one adjacency traversal. **Right:** GRASP avoids local maxima while searching this space by performing three different types of tucks, thereby allowing multiple simultaneous traversals.

Results



Method

Participants: 266 NAPLS-3 participants. Met COPS criteria. Sample was enriched for high psychosis risk.

Measures: Demographics, psychosis & depression symptoms, sleep quality, trauma history, social functioning and perceptions.

- **Baseline + 2 mo. assessments only** (algorithm requires no missing data).
- **Outliers winsorized**
- **Mean suicidality was 0.86**, suggesting occasional thoughts of suicide and/or frequent thoughts of being better off dead.

Algorithm, Parameters, and Benchmarking:

- **GRASP was selected**, default parameters were used, 1000 bootstrapped resamples to evaluate stability
- **Uncertainty Resolution:** via LiNGAM
- **Prior Knowledge:** Temporal priority only
- **Simulation Study:** GRASP will have 75% precision, 73% recall for causal adjacency
- **Effect Size Estimation:** By fitting SEM based on final graph to the data.
- **Intervention on Suicidality:** Targets identified via IDA

Discussion

Causal Ancestors of Suicidality: Depression symptoms (ex: hopelessness, depressed mood, self-deprecation), attenuated positive and disorganized psychosis symptoms, childhood trauma

Mere Correlates: Attenuated negative symptoms (via hopelessness)

Intervention Targets: *Baseline* depressed mood (total effect: 0.45), hopelessness (0.39), self-deprecation (0.39). *2mo* depressed mood (total effect: 0.46), morning depression (0.33), sleep quality (0.30)

Connection to Theory and Past Work: Joiner's IPTS implicates Thwarted Belongingness, which was *not* a cause of greater suicidality. Suggests that mediation of trauma-suicide relation by depression is causal, mainly due to pathological guilt.

Limitations: CDSS suicide item places ideation and action on one spectrum, but causes differ. Unknown impact of right-skew/zero-inflation on GRASP. Single item measures mean limited (co-)variance, Type II error risk. Low mean suicidality.

Lab Website QR Code:

