

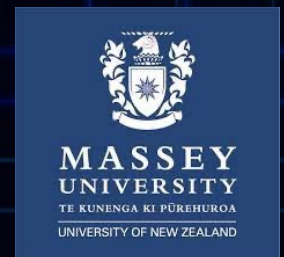
Examining Causal Relationships Between Pornography Use and Mental Health: An EMA Approach

Nathan Henry

Mangor Pedersen

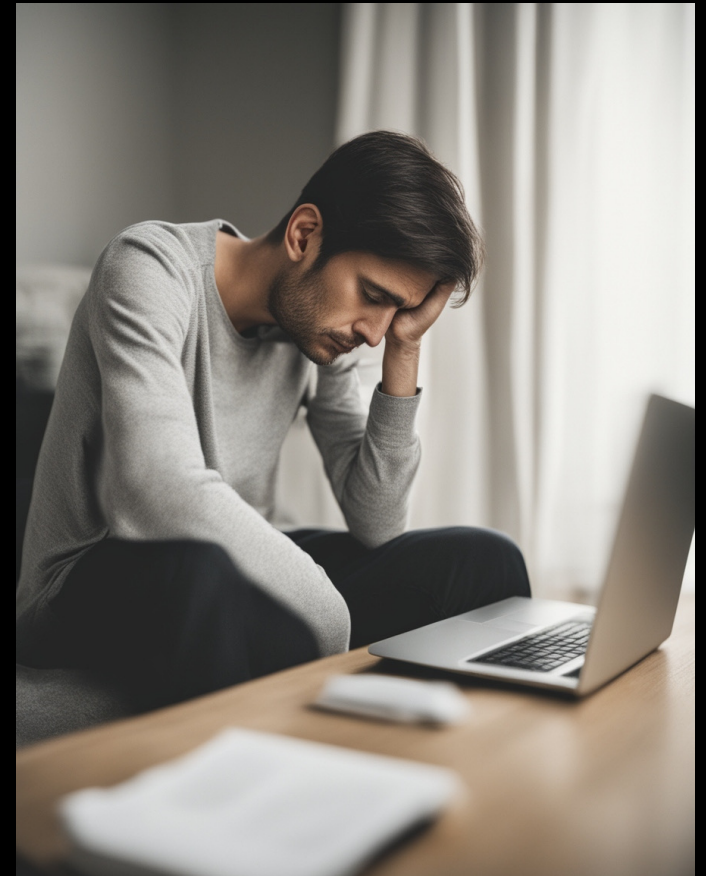
Matt Williams

Liesje Donkin

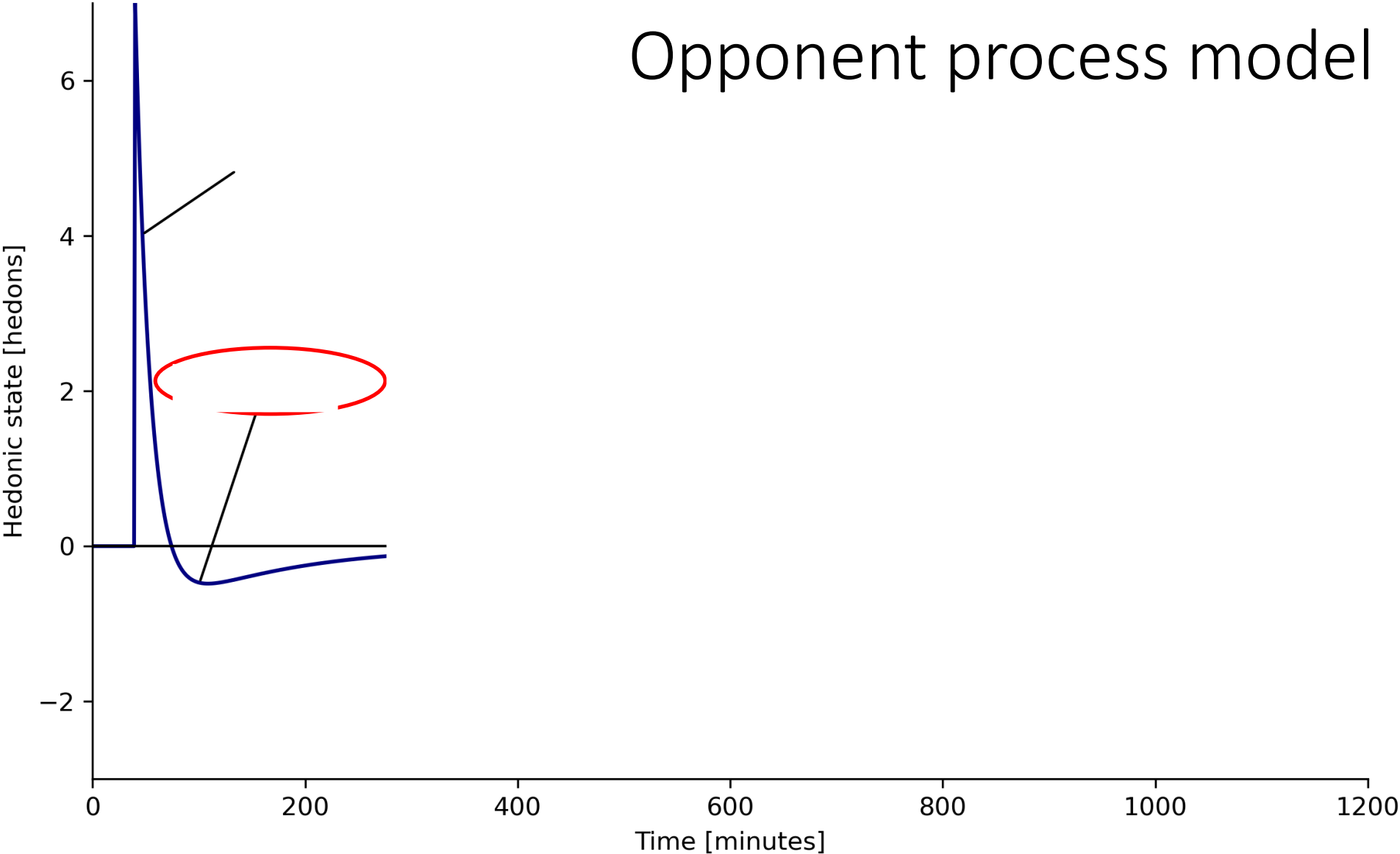


Does excessive pornography use cause depression?

- Controversial - very polarized debate
- What is the direction of causality?
 - Porn use → depression?
 - Depression → porn use?
 - OR...bidirectional?
- Only correlational data so far



Opponent process model



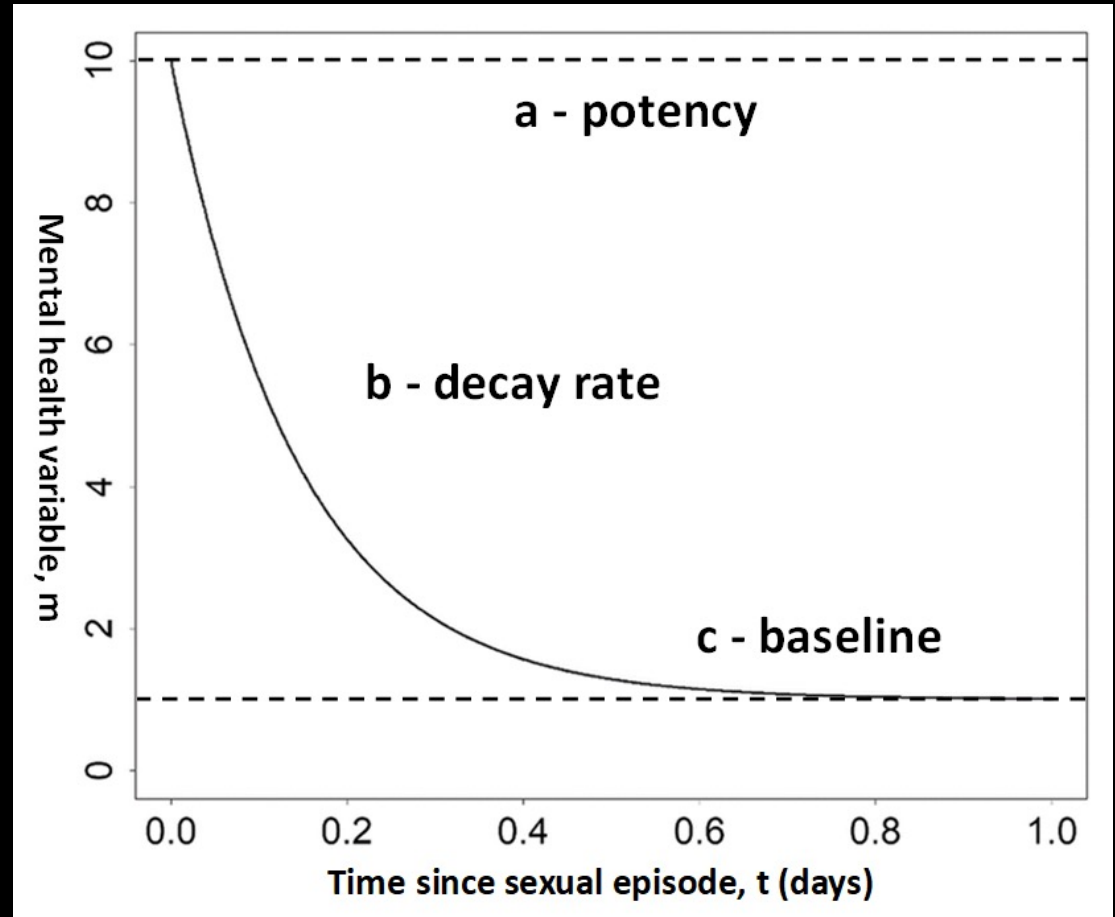
Methods

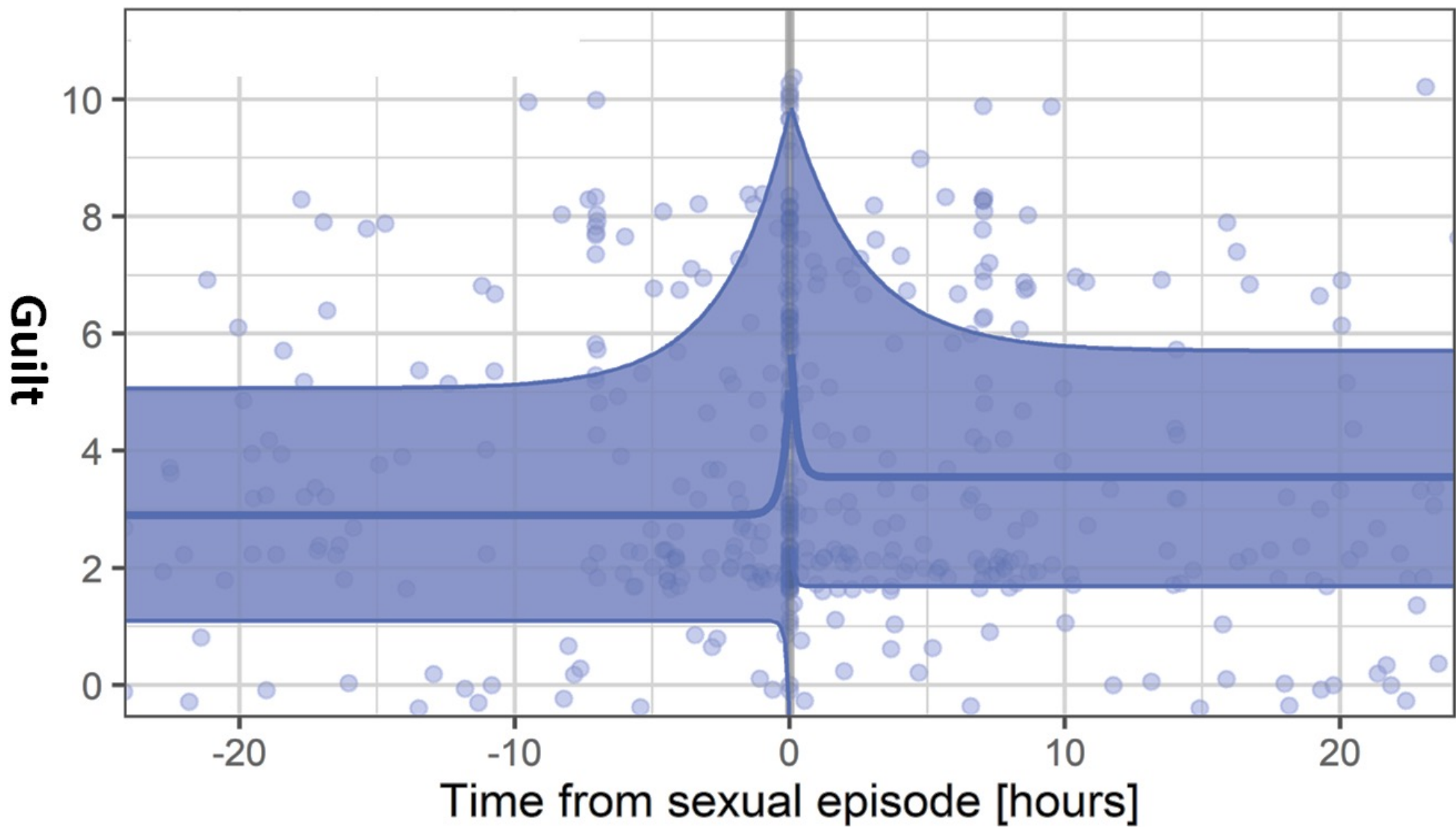
- Ecological Momentary Assessment (EMA)
- 5 short surveys per day for 4 weeks
- Also surveys following porn use
- Used *brms* package in R to fit Bayesian hierarchical mixed-effects models

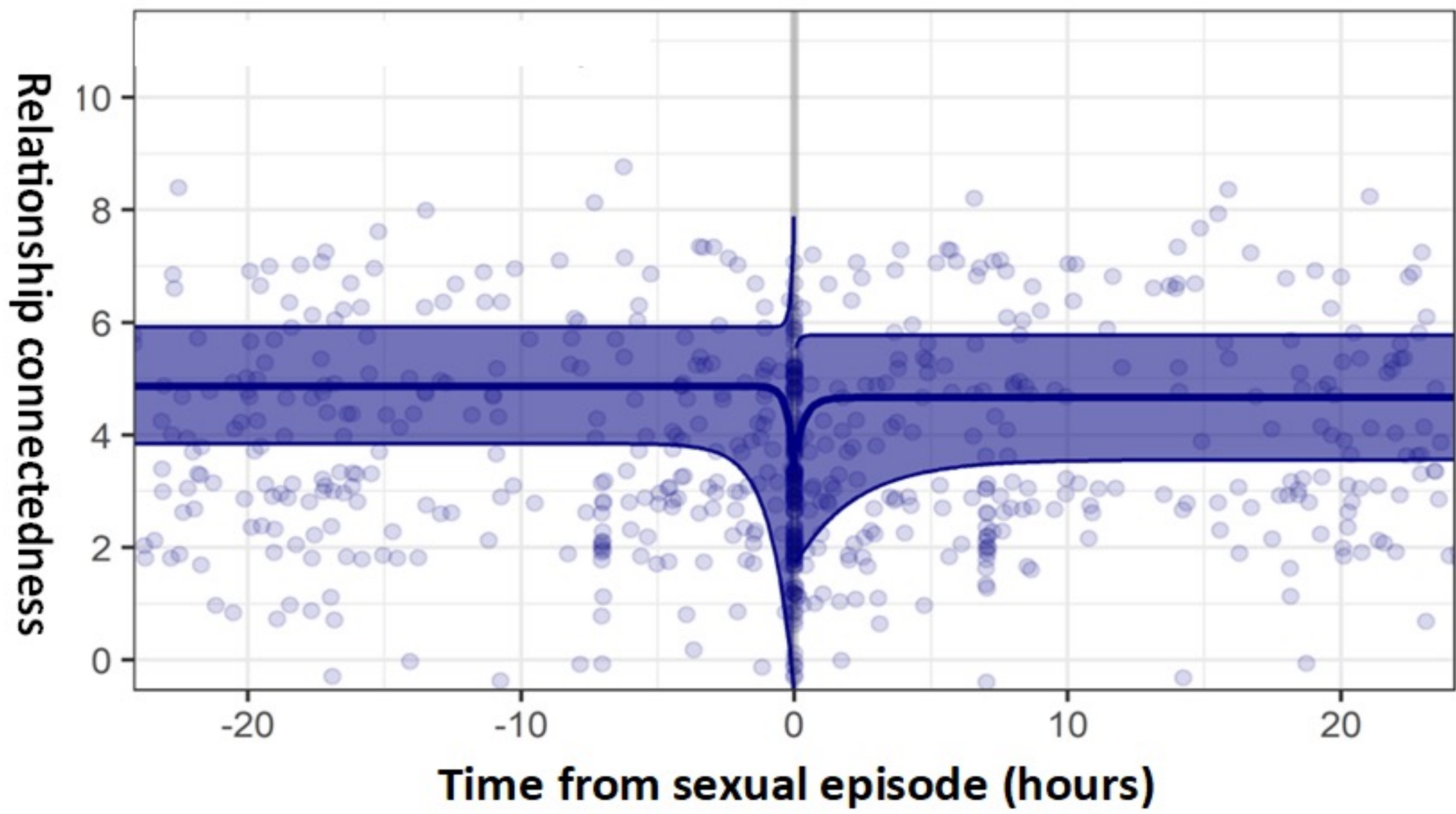


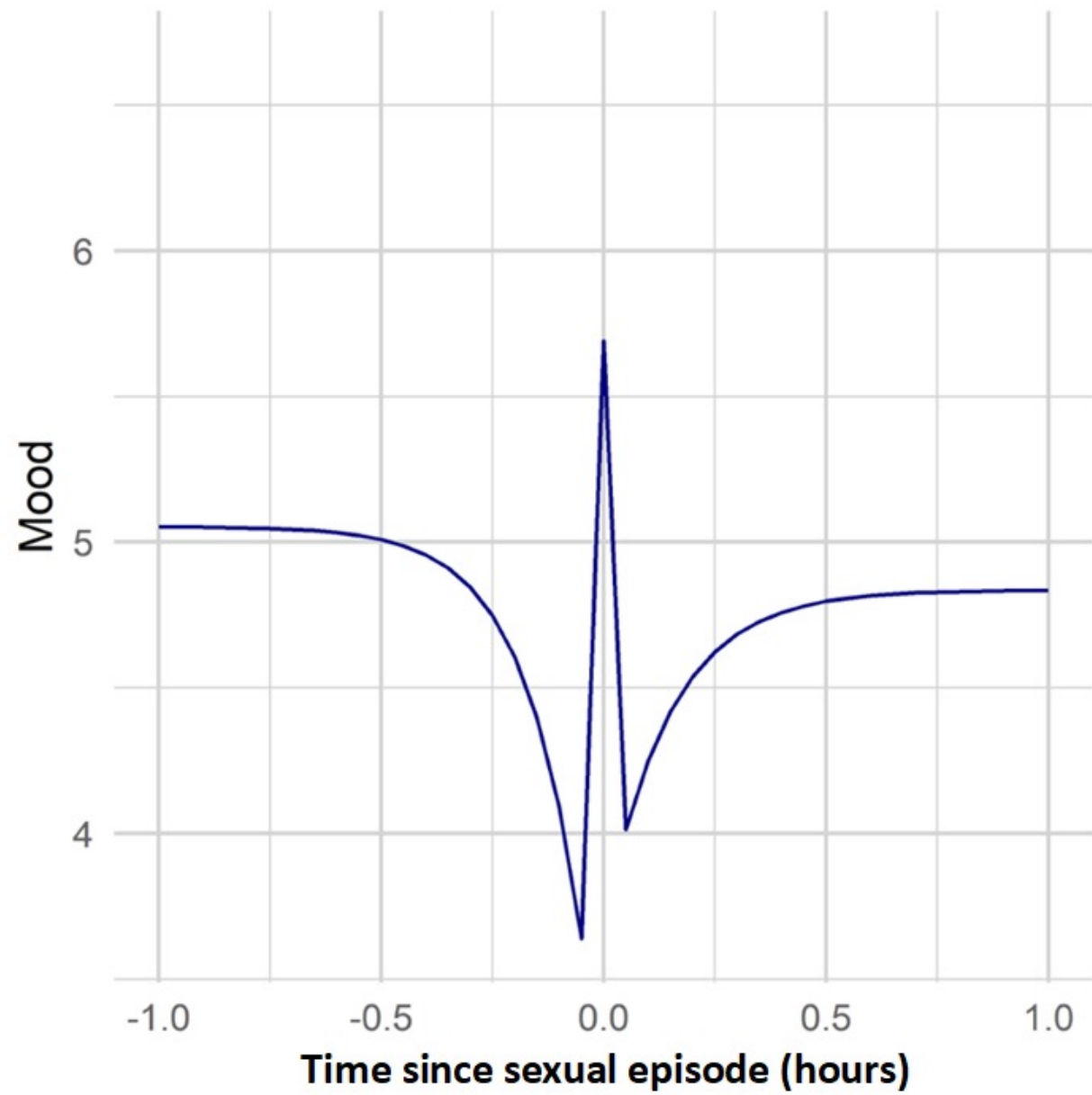
Modelling

- Hypotheses:
 - After porn use:
 - $m(t) = ae^{-bt} + c + \varepsilon$
 - Before porn use:
 - $m(t) = ae^{bt} + c + \varepsilon$
 - Null hypothesis:
 - $m(t) = d + \varepsilon$



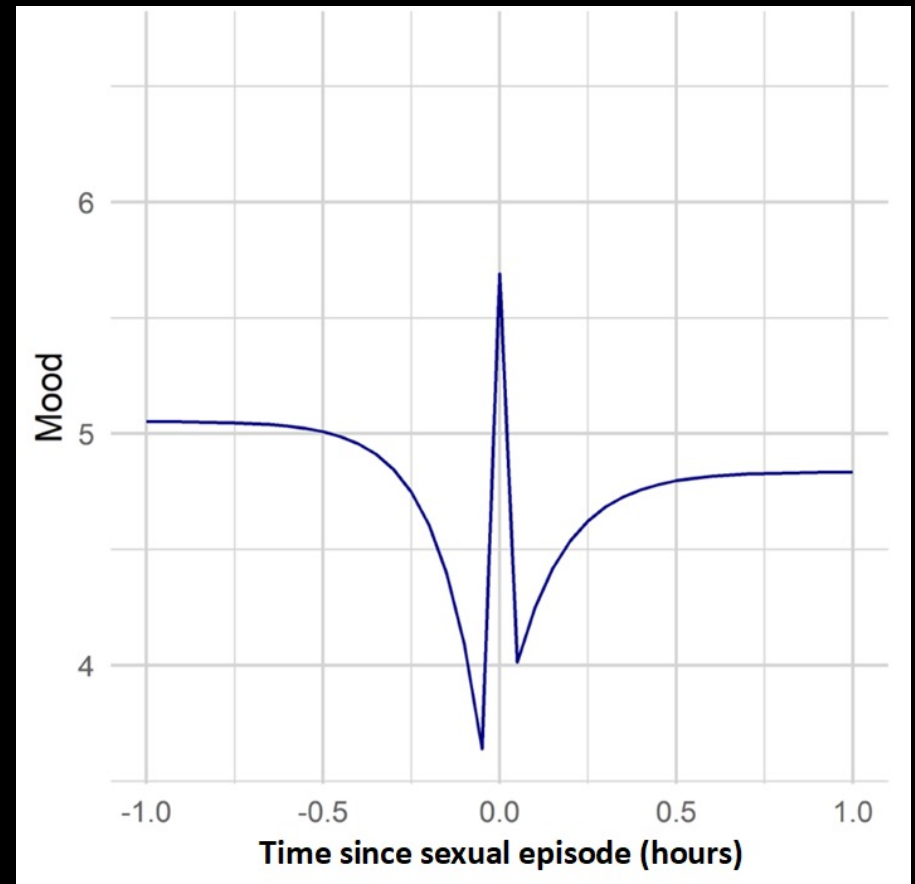


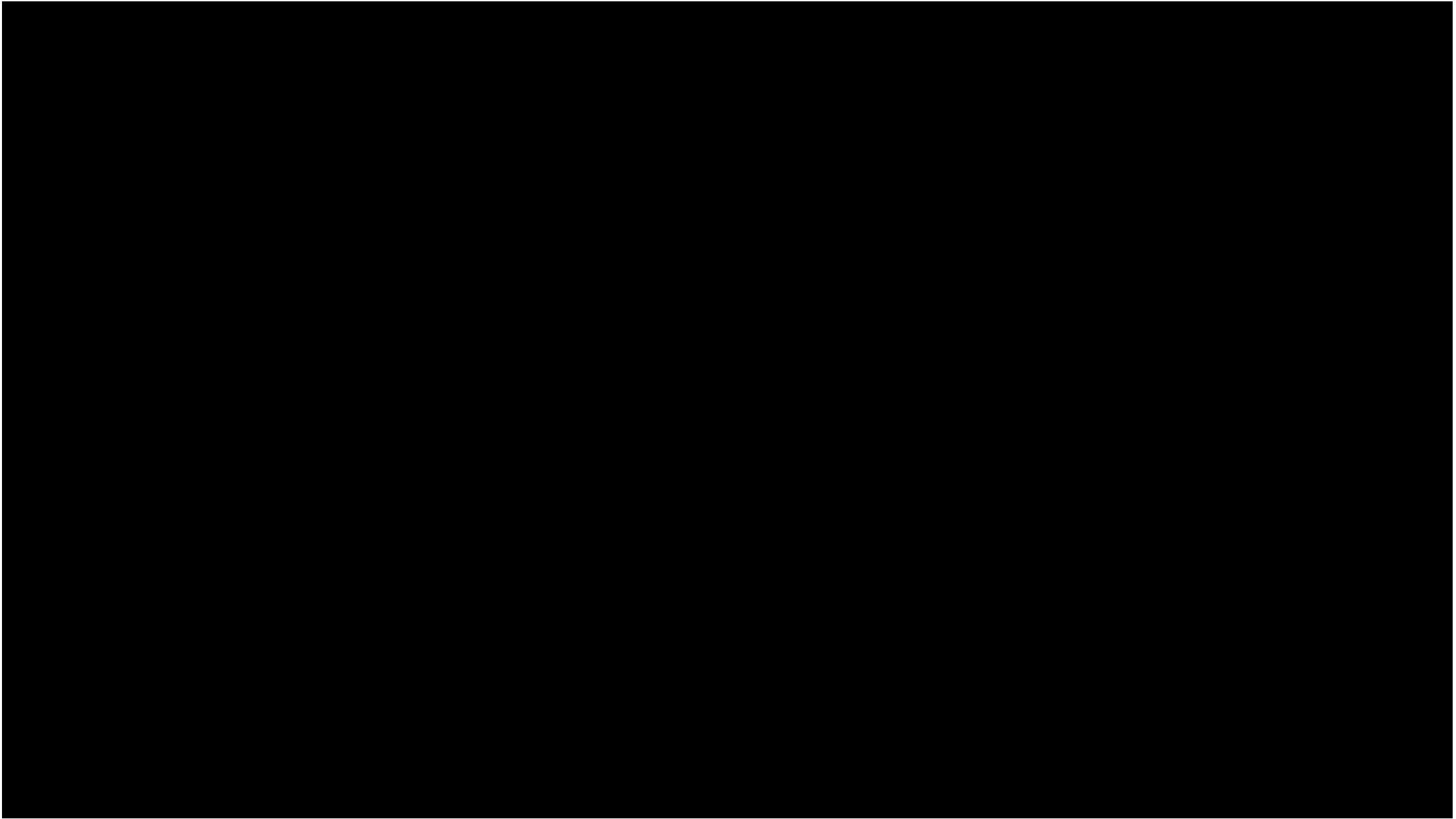


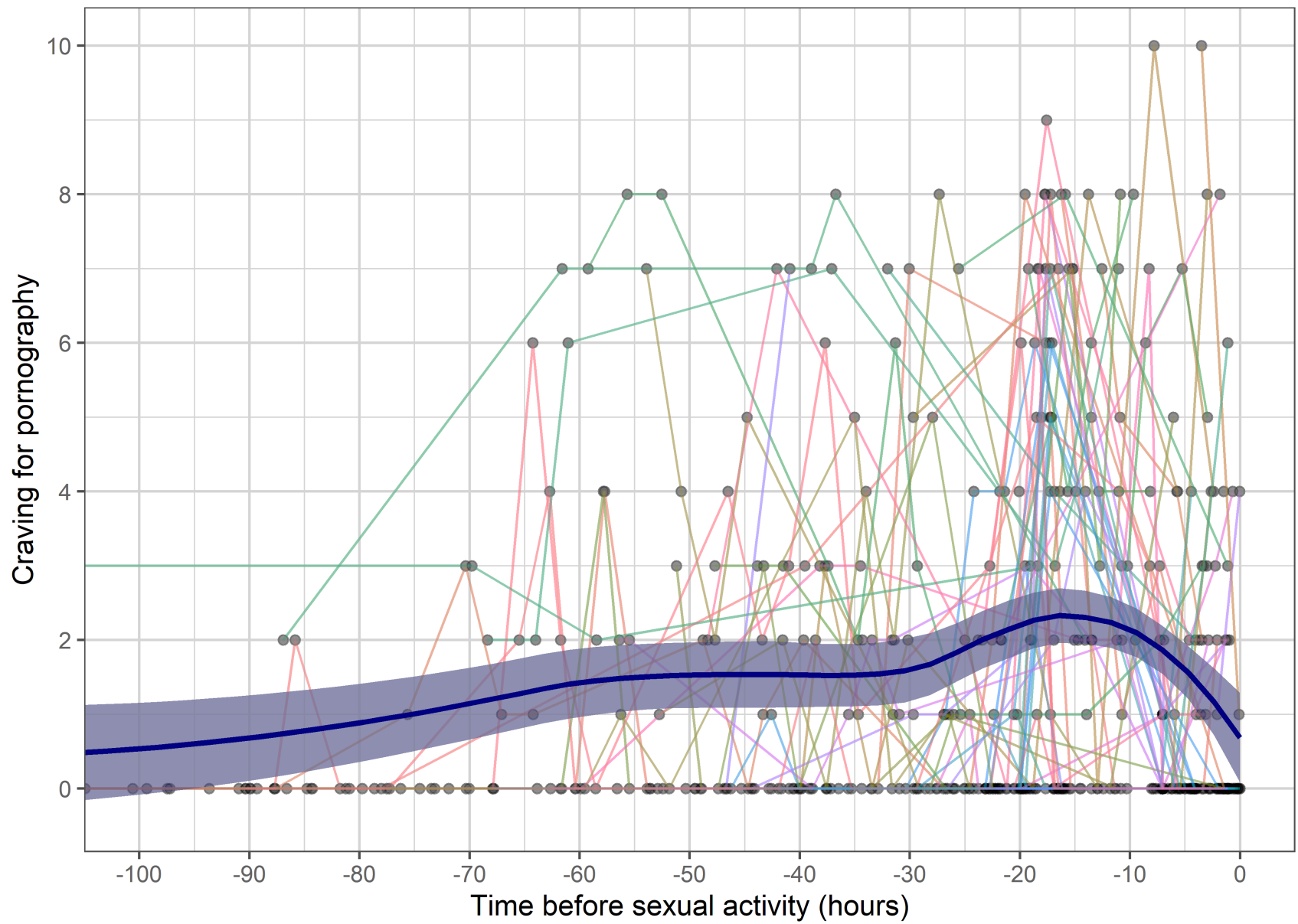


Conclusion

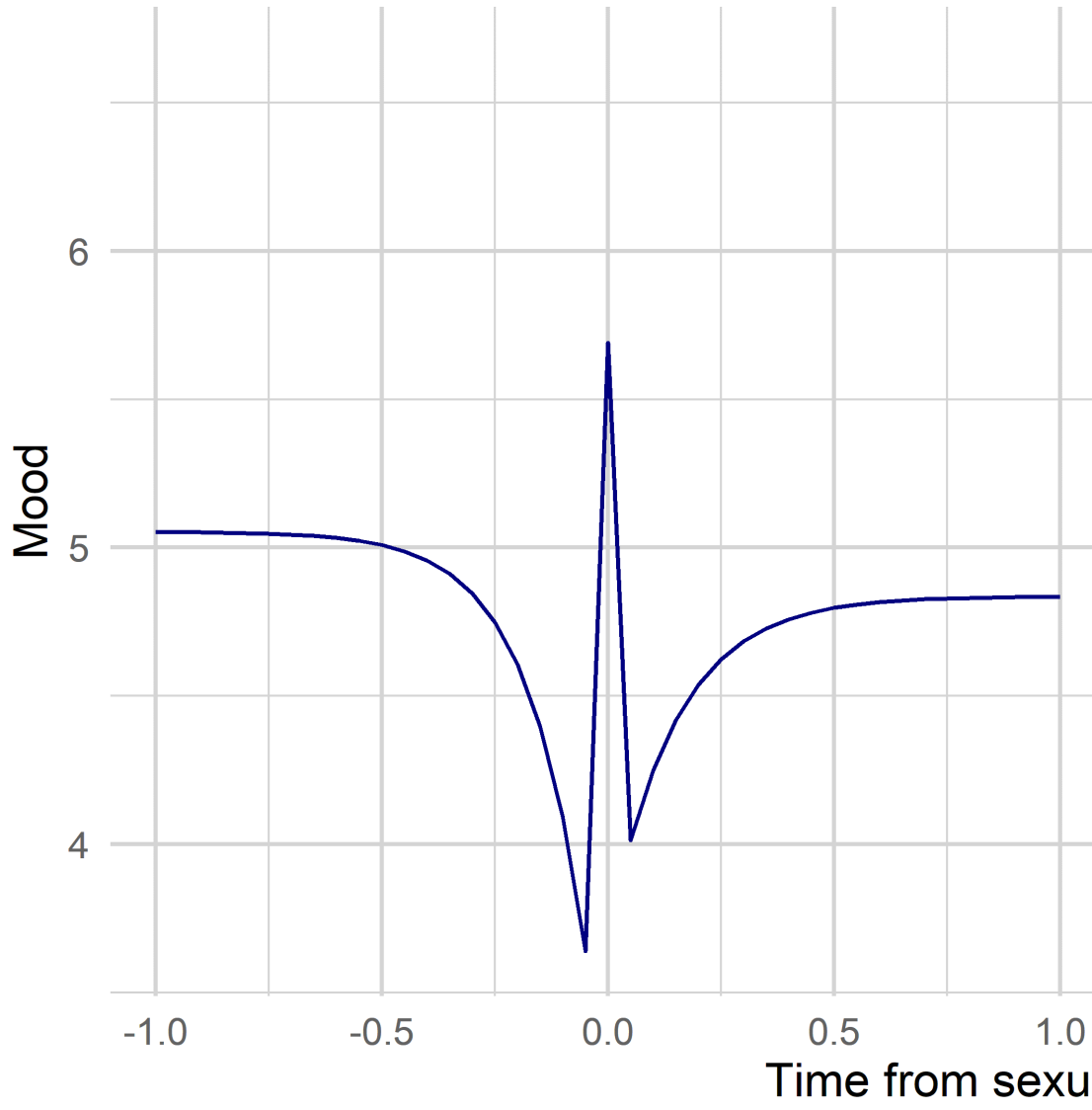
- Pornography use appears to follow opponent process model
- Possible bidirectional relationship between porn use and depression
- EMA can help prove causality
- Can this technique be applied to other behaviours?







High moral incongruence



Low moral incongruence

