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# Robust estimation for factor loadings with application to postpartum depression

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## Robust estimation for factor loadings with application to postpartum depression

Factor analysis is a technique that can be used to understand how symptoms covary in terms of linear combinations of underlying factors. In large imaging datasets, estimated factors are used to explain variation of neurological manifestations of psychiatric conditions that otherwise would not be captured through traditional diagnoses. However, estimation is notoriously sensitive to selection of factor dimension and characteristics of the data. We introduce an estimation technique that aims to address these issues and compare this technique to standard estimation in simulation. As a case study, we explore the factor structure of psychiatric symptoms in the postpartum period. Our long-term goal is to gain understanding of how individuals might experience and report postpartum depression differently.