

# Symptom patterns and the course of OCD



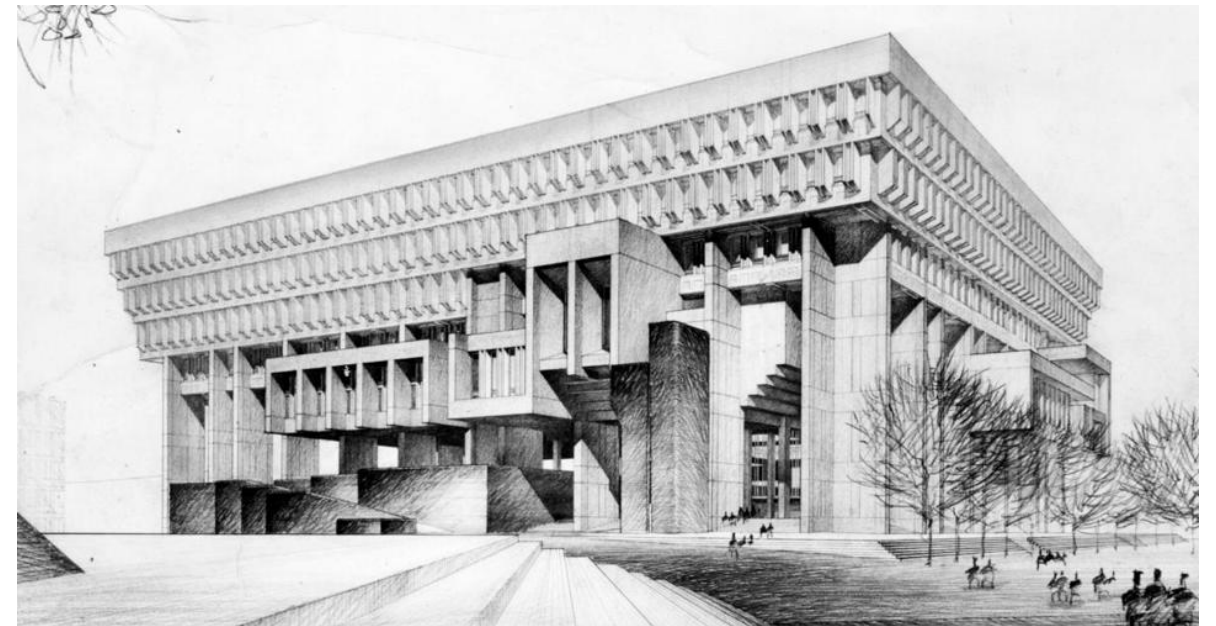
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Richard J. McNally<sup>3</sup>

<sup>1</sup>University of Amsterdam; <sup>2</sup>Rogers Memorial Hospital; <sup>3</sup>Harvard University

# Outline

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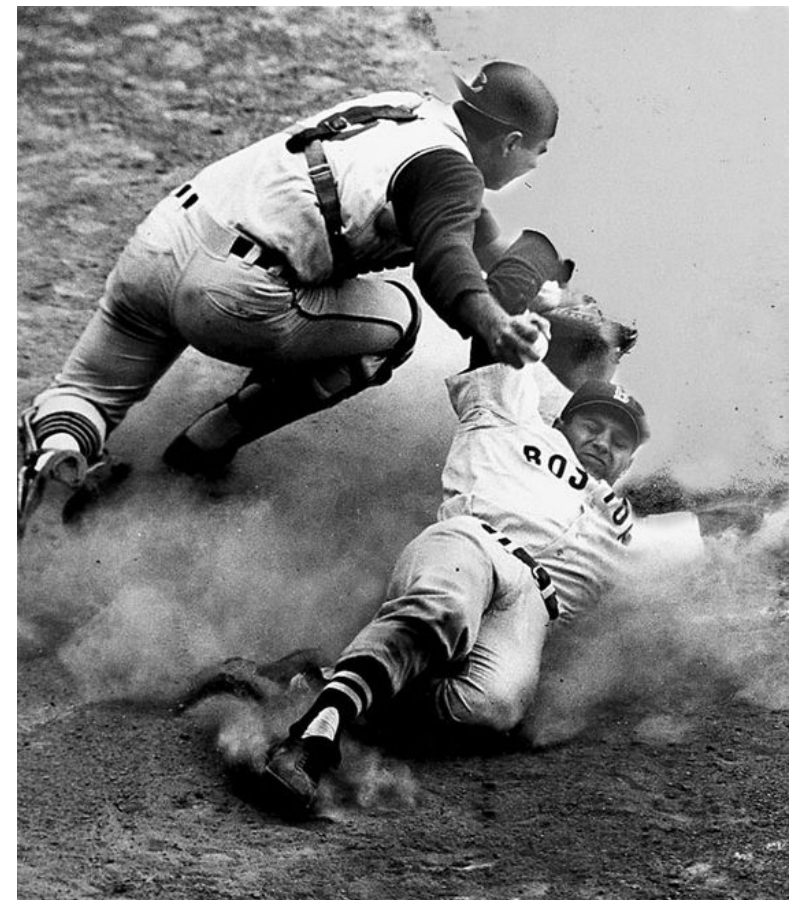
- Design of the study
- Initial results
- Tackle some issues
- More results
- Conclusion and discussion



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# Design of study

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- 449 adults (51 % female)
- Exposure and Response Prevention (ERP) at the OCD Center at Rogers Memorial Hospital (Oconomowoc)
- Upon **admission** to ERP and **discharge**:
  - Y-BOCS (Yale-Brown Obsessive and Compulsive Scale)
  - QIDS (Quick Inventory of Depressive Symptomatology)



# Design of study

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- 449 patients with OCD at baseline

Two groups: persisters (n = 248) and remitters  
OCD (n = 201)

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Admission

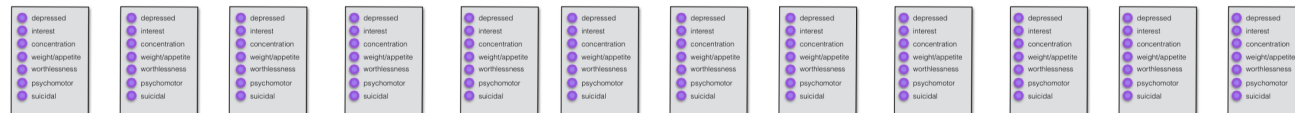


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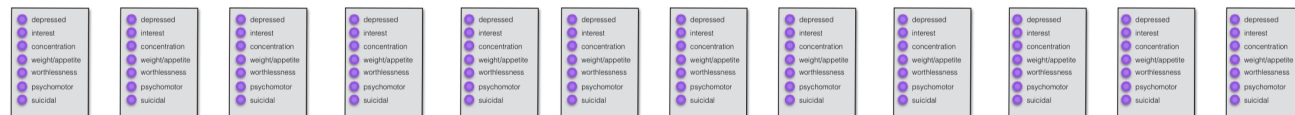
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Discharge

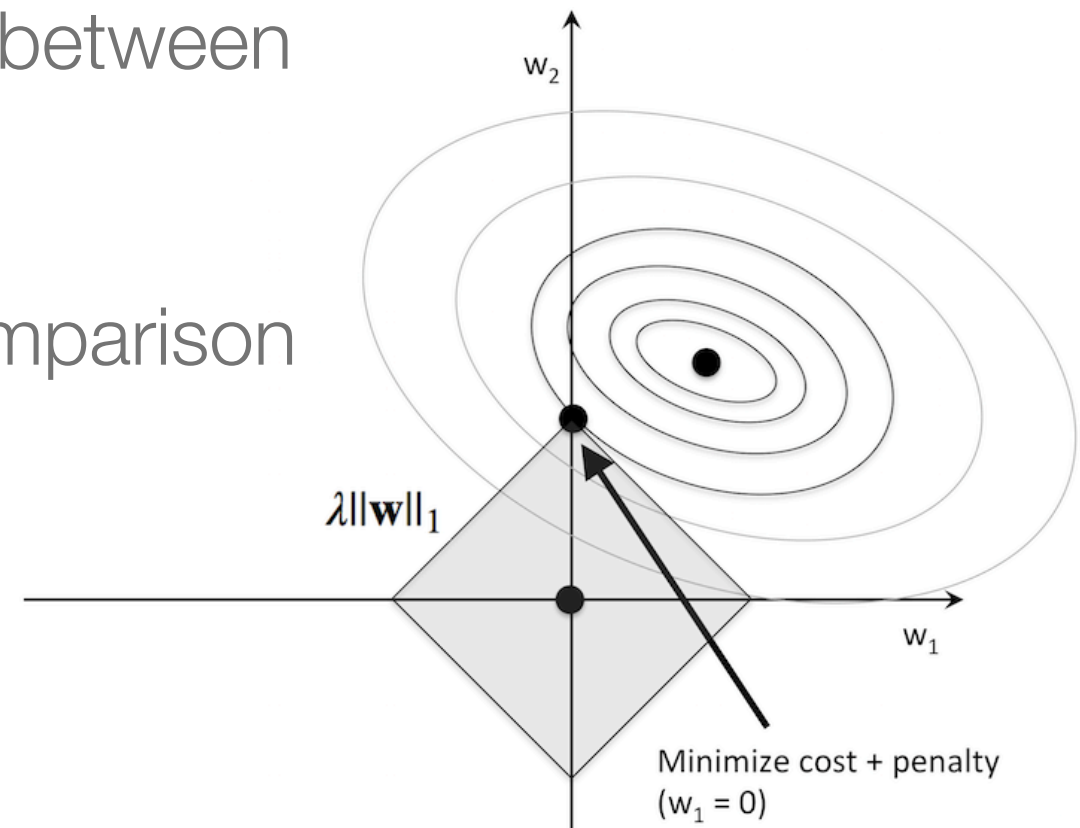




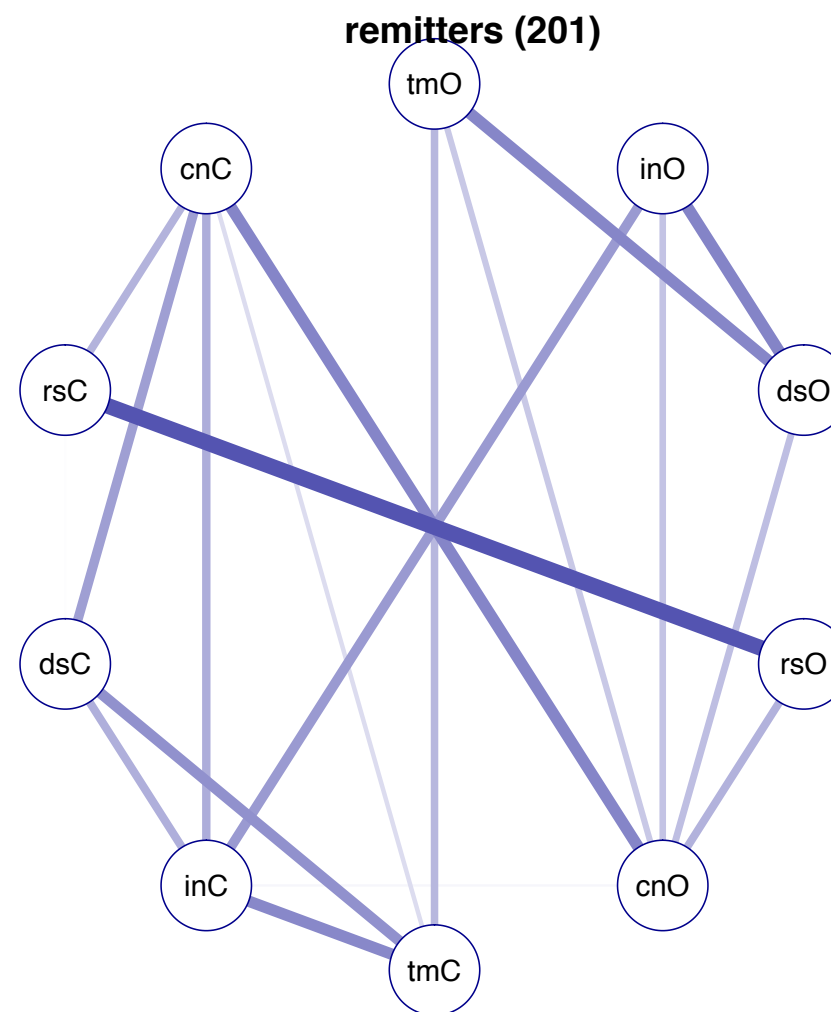
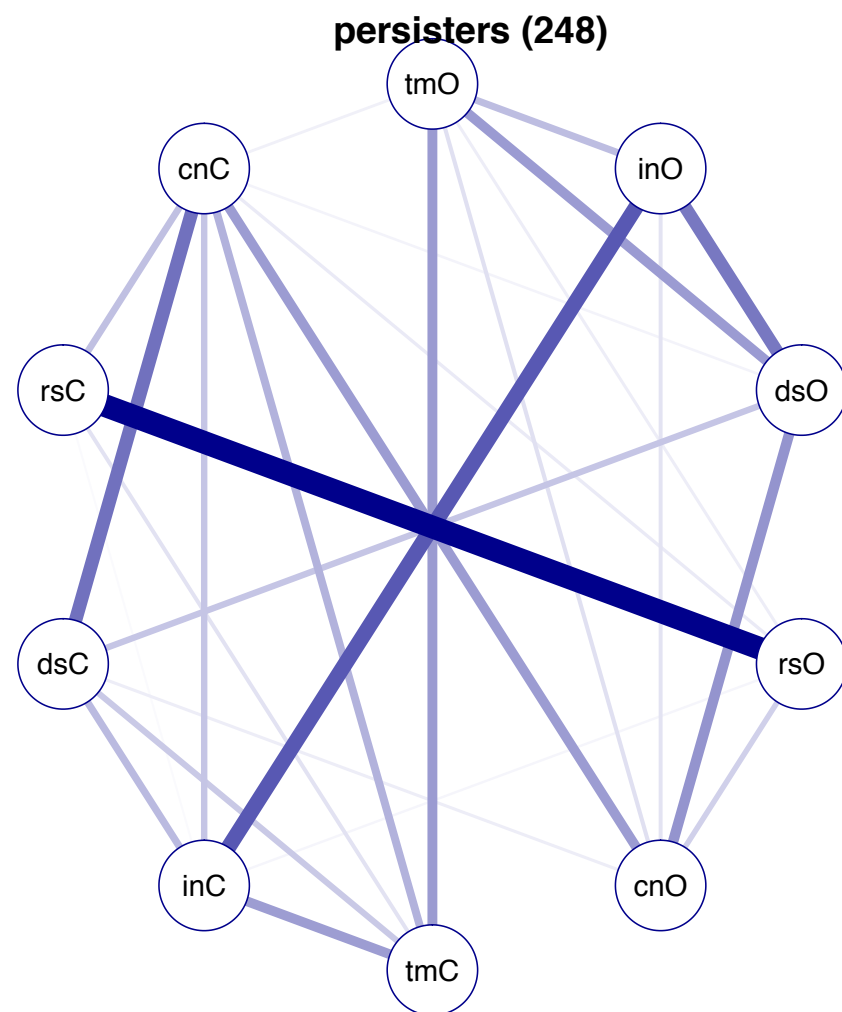
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- Networks of 10 OCD symptoms: from Y-BOCS at baseline
- Advanced network estimation: regularized partial correlations (EBICglasso; Epskamp et al. 2016)
- Regularization: to find optimal balance between parsimony and goodness of fit
- Comparison of networks: Network Comparison Test (NCT; van Borkulo et al. 2016)



# Networks of persisters and remitters



**tmO:** Time occupied by obsessive thoughts

**inO:** Interference due to obsessive thoughts

**dsO:** Distress associated with obsessive thoughts

**rsO:** Resistance against obsessions

**cnO:** Degree of control over obsessive thoughts

**tmC:** Time spent performing compulsive behaviors

**inC:** Interference due to compulsive behaviors

**dsC:** Distress associated with compulsive behaviors

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**cnC:** Degree of control over compulsive behaviors

- Code in R: `NCT(data1, data2, gamma = .5, it = 1000)`
- Persisters have a higher global strength ( $p = .011$ )

# But...

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...persisters have higher means on almost all symptoms

# Confounds

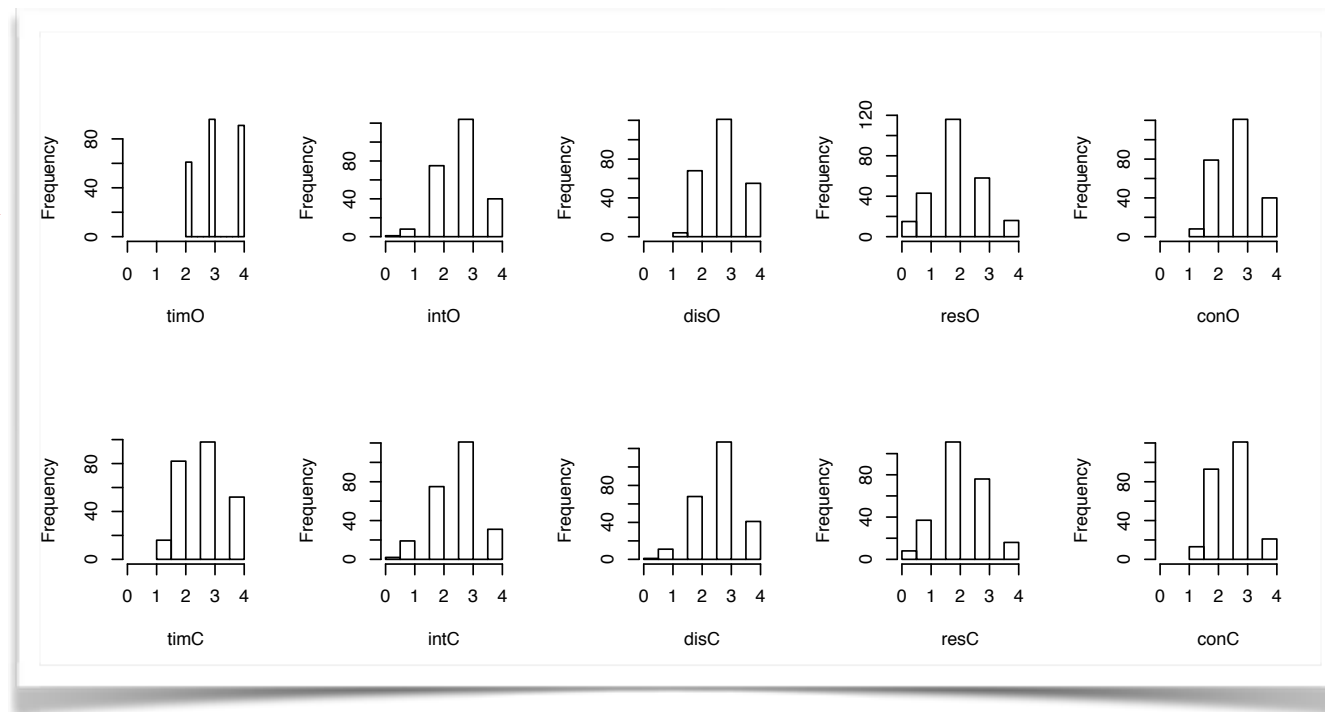
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- Severity?
- No. Not by itself (networks are about covariances)
- Possible confounds:
  - floor/ceiling effects (influences (co)variance)
  - An unmodelled latent variable that is related to OCD differently in more severe patients than in less severe patients

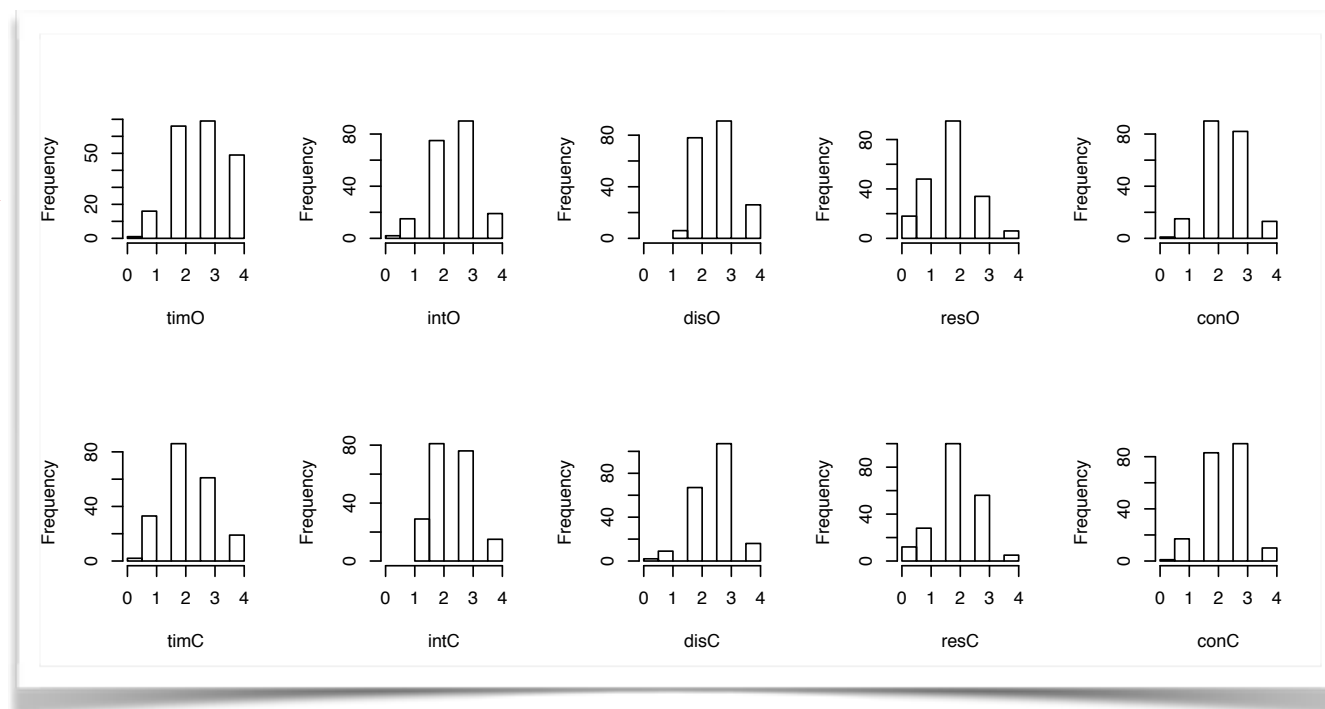


# Floor/ceiling effects

Persisters



Remitters

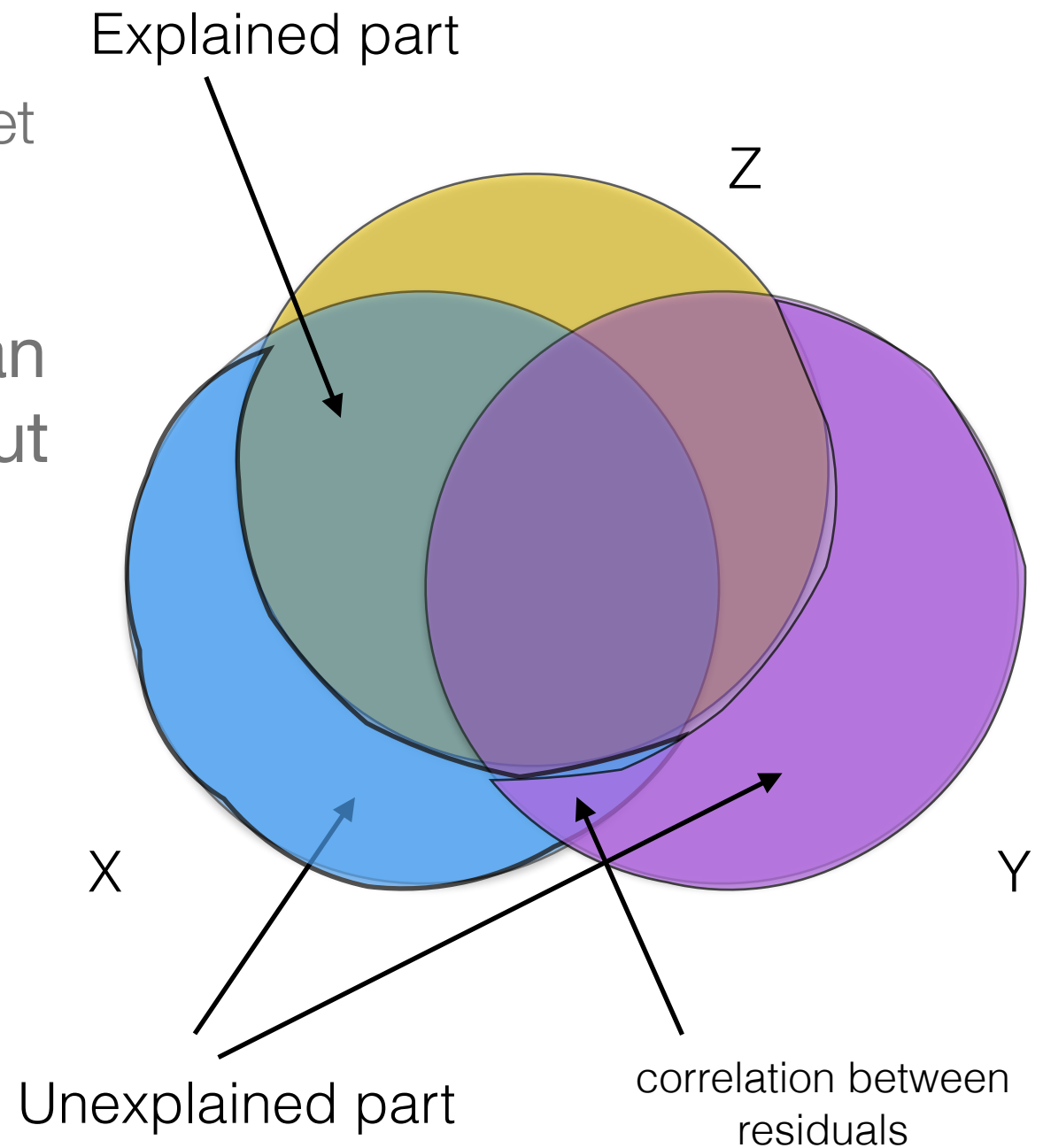




# Controlling for differences in severity

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- Regressing out (partialling out) external measure of severity:  
QIDS at admission (following van Borkulo et al. 2015)
- All variance in Y-BOCS items that can be explained by QIDS is partialled out



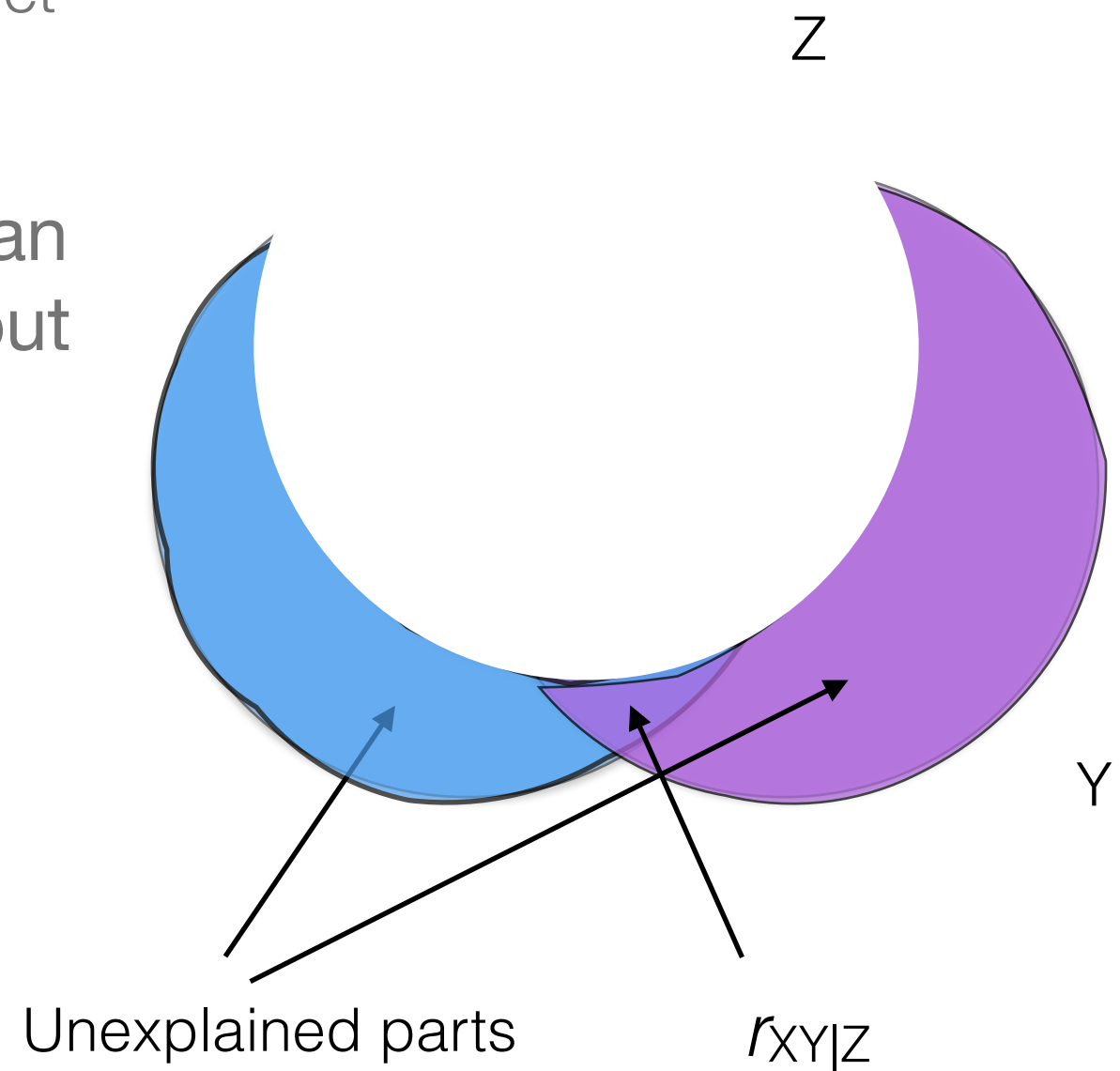
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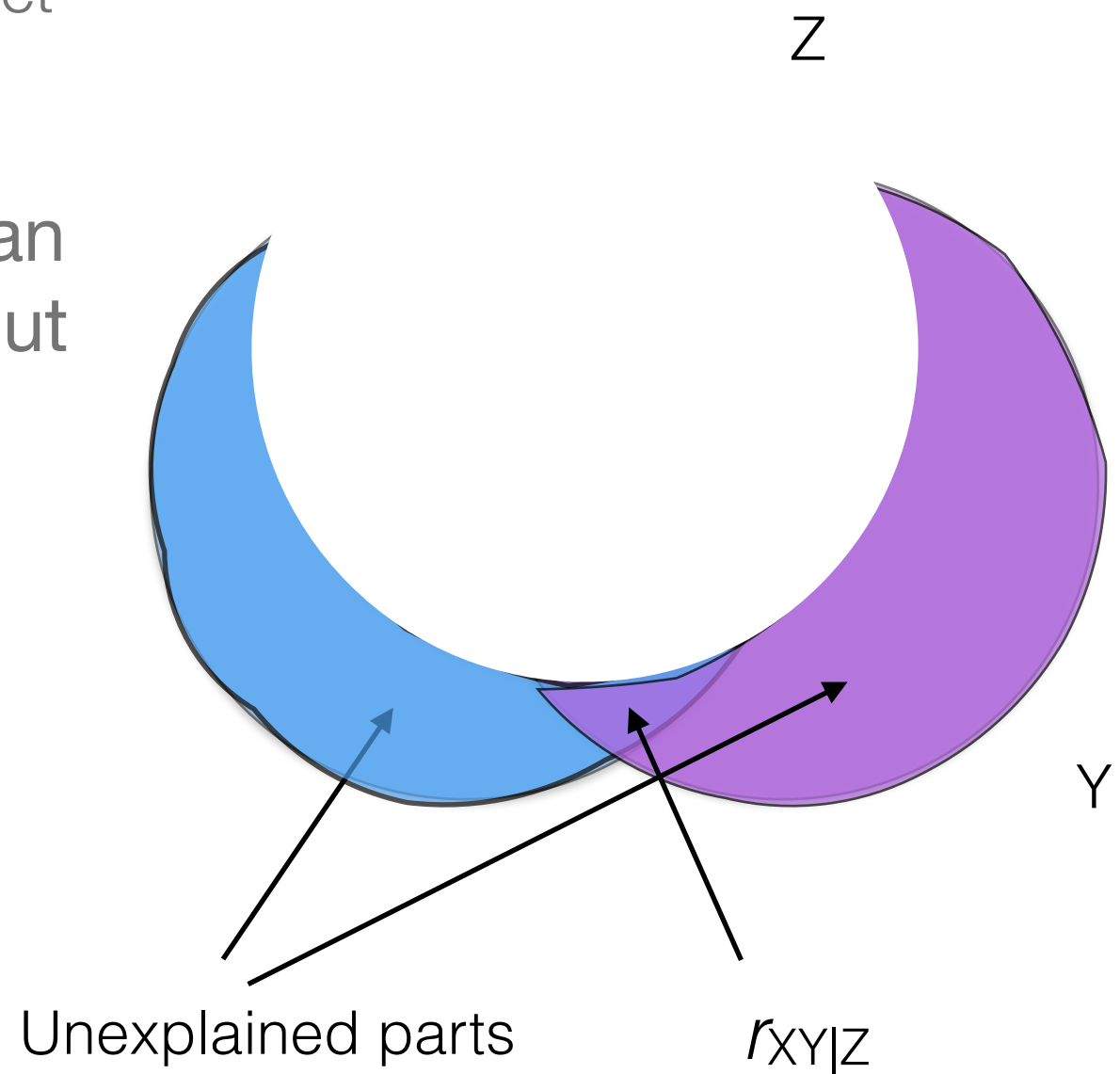
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*Ask me later if you want to know how this works! :-)*

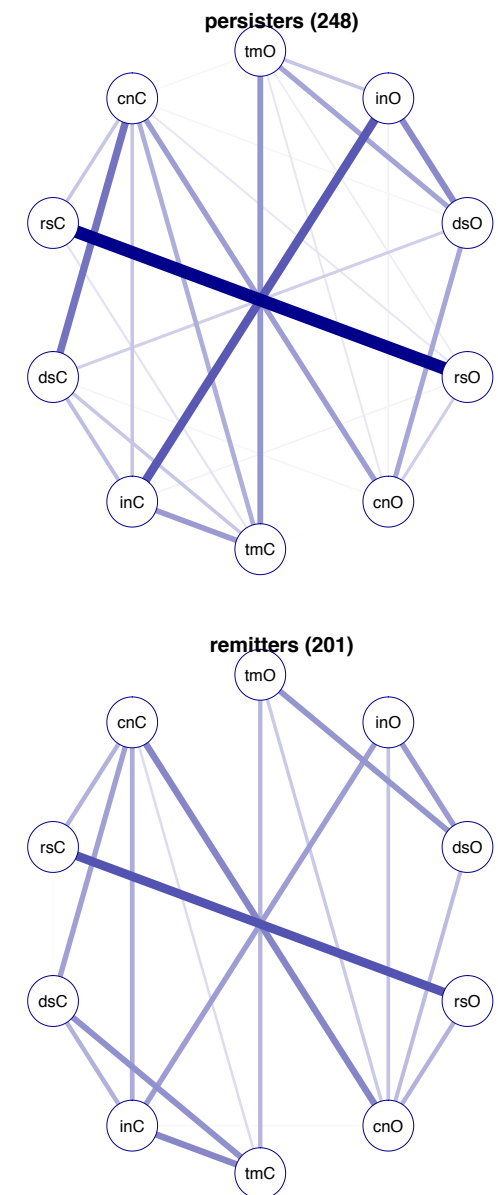


# An unmodelled latent variable related to OCD severity systematically

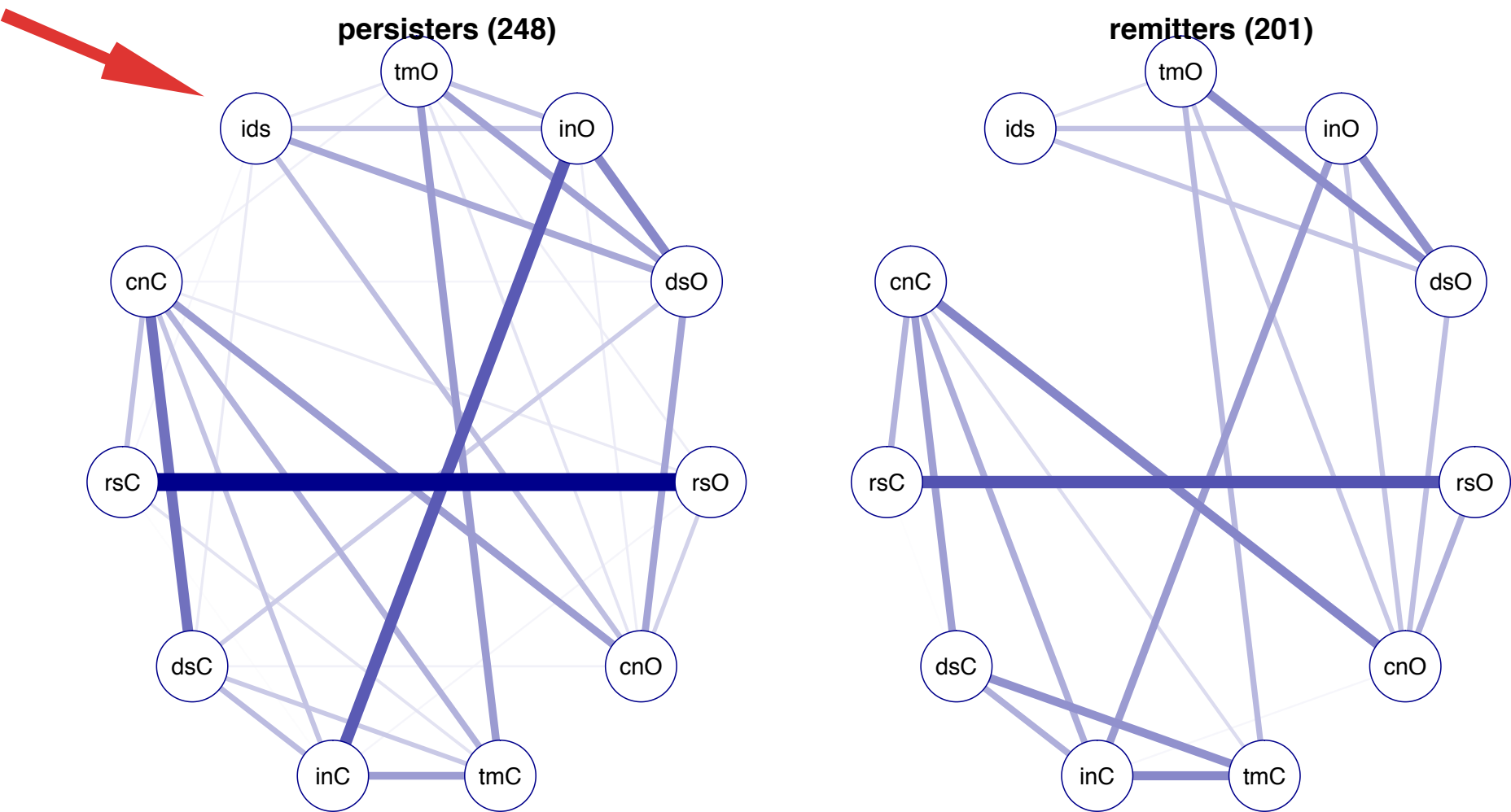
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Controlling for severity by partialling out QIDS at admission:

- Global strength invariance test:  $p = .07$
- Depression could be the unmodelled latent variable
- Apparently, depression is related differently to OCD in persisters compared to remitters.
- Let's model it...



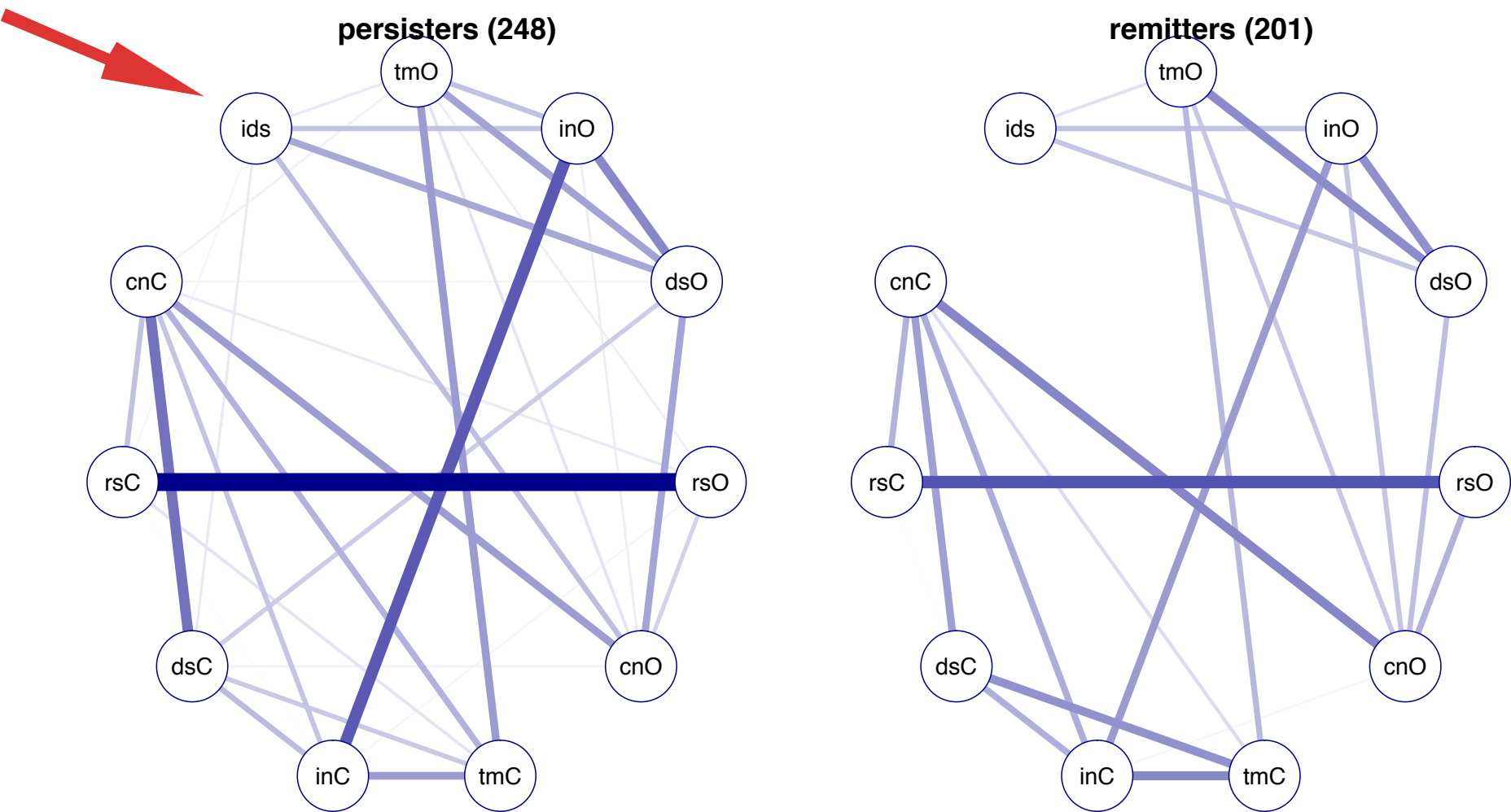
# Modelling OCD with depression



<b>tmO:</b> Time occupied by obsessive thoughts
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# Modelling OCD with depression



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Global strength invariance test:  $p = .003$

# Conclusion

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- OCD persisters have a higher global strength than remitters
- After controlling for differences in severity this difference becomes smaller
- Depressive symptomatology is differently related to OCD in more severe patients than in less severe patients
- In line with Abramowitz et al. (2000): severe depression interferes with ERP outcome



# Discussion

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Possible explanation of results (under the assumption that the association patterns in the groups also pertain to the individuals in the groups):

- Hampered effect of ERP in persisters because of stronger and/or more associations between obsessive thoughts and compulsive behaviors
- It is harder for persisters not to perform their usual compulsive behavior
- Depression possibly aggravates the obsessive thoughts component, thereby making it harder to suppress the compulsive behavior.
- Therapist may spend less time treating OCD if also attend to depression





# References and contact info

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Abramowitz, J. S., Franklin, M. E., Street, G. P., Kozak, M. J., Foa, E. B. (2000). Effects of comorbid depression on response to treatment of obsessive-compulsive disorder.

Epskamp, S., Borsboom, D., & Fried, E. I. (2017). Estimating psychological networks and their accuracy: A tutorial paper. Behavior Research Methods, 1–18.

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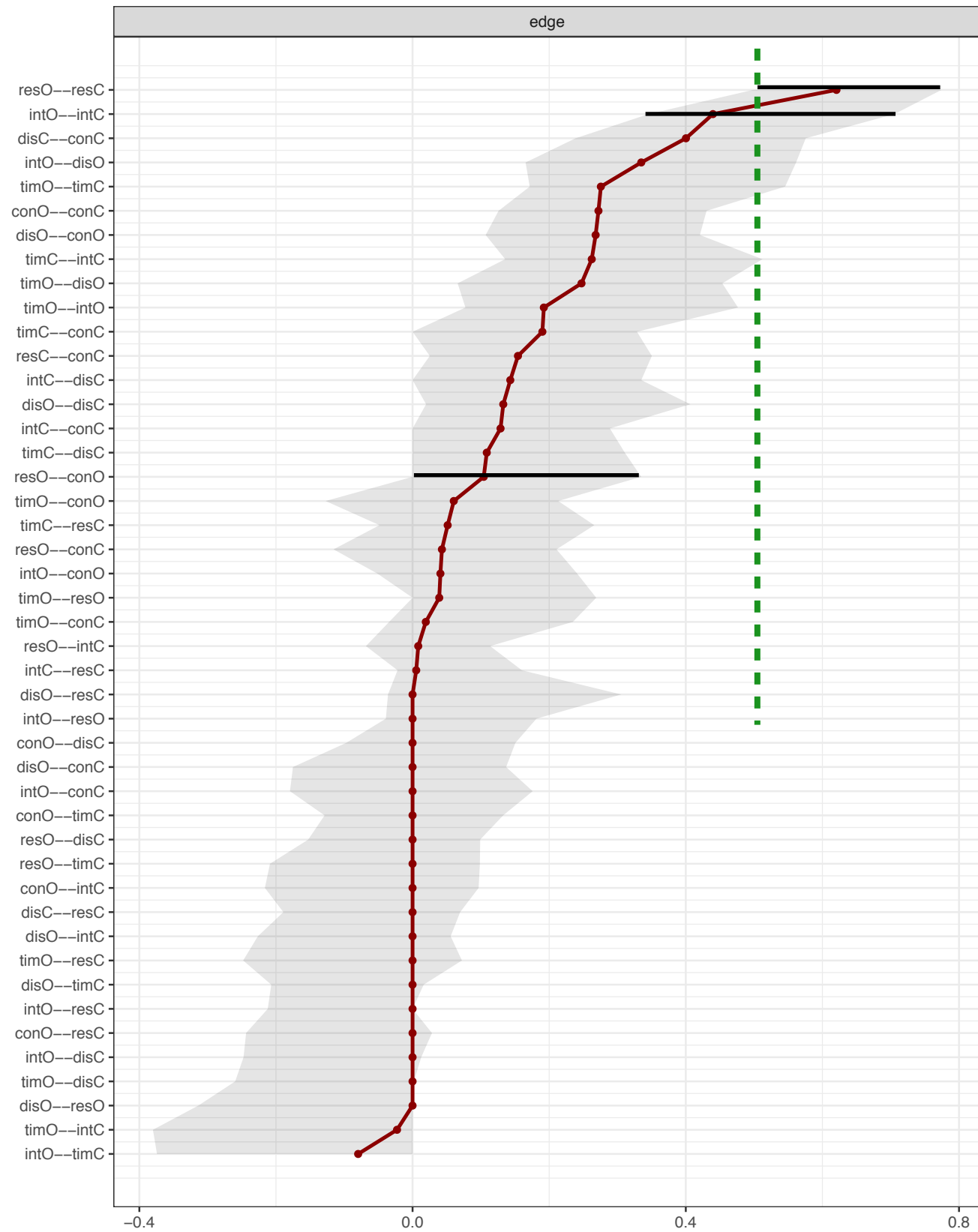
Van Borkulo, C. D., Boschloo, L., Kossakowski, J., Tio, P., Schoevers, R. A., Borsboom, D., & Waldorp, L. J. (2016). Comparing network structures on three aspects: A permutation test. doi: 10.13140/RG.2.2.29455.38569

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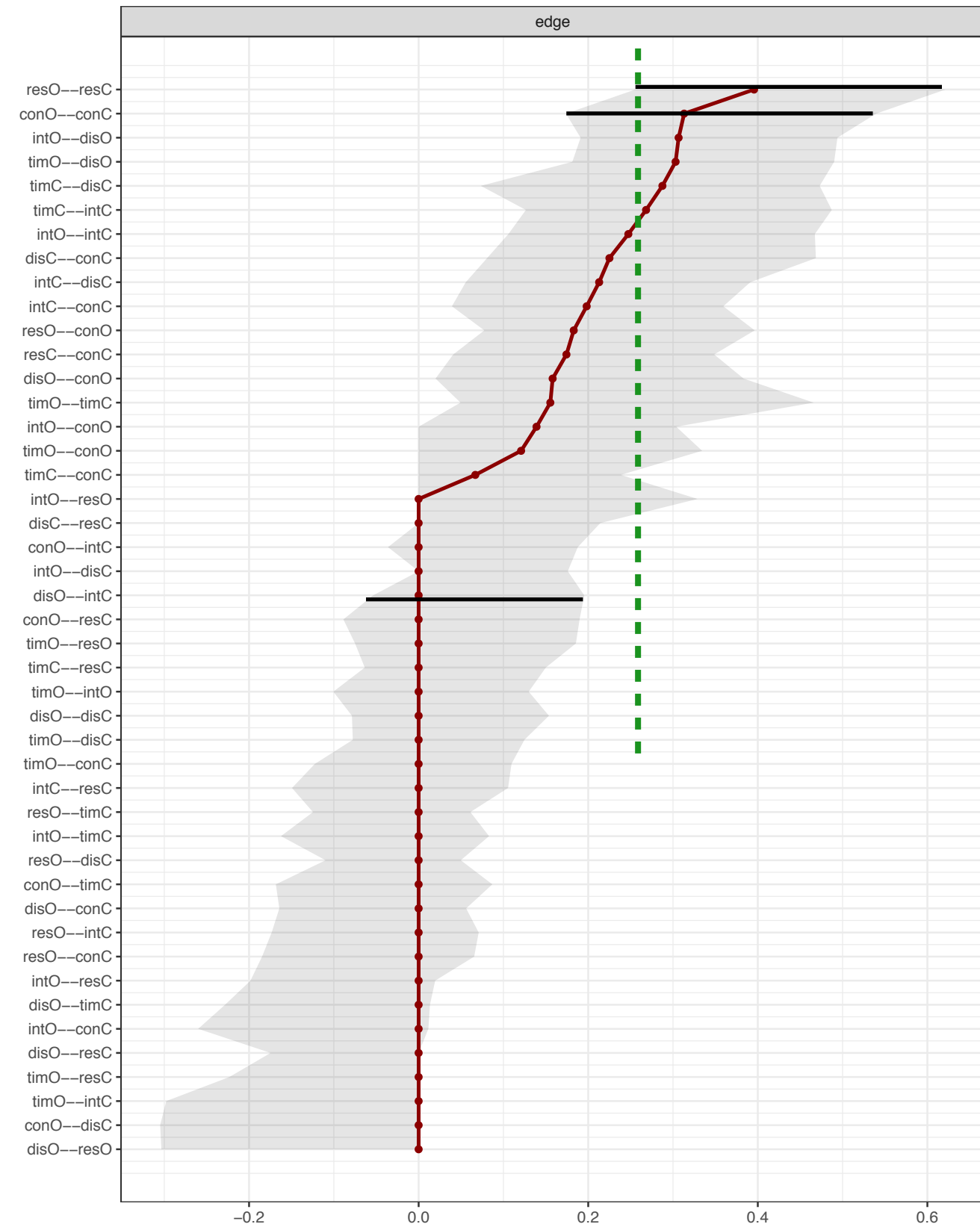




# Accuracy



Persisters



Remitters

Black lines as an example to show which CIs overlap and which do not