Anxiety Genetics:
What do we know and how might that help?

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Anxiety genetics: what we know

- Genetics
- Environment

0 50 100

Stability vs. Change

Venn Diagram

Genetics and Environment overlap in a significant amount.
Anxiety genetics
Anxiety genetics: predicting outcomes
Predicting outcomes: developmental trajectories
Emotional symptoms across development

![Graph showing emotional symptoms score over age](image)

Palaiologou et al (in prep)
Emotional symptoms across development

Palaiologou et al. (in prep)

71%
14%
12%
3%
68%
56%
49%
52%

Emotional symptoms score

Age (years)

4 7 9 12 16 21 26
Age 26 outcomes of emotional symptom trajectories
Predicting emotional symptom trajectories

60-80%

before age 4

Palaiologou et al (in prep)
Selected predictors of emotional symptom trajectories

Neuroticism PRS
Bipolar PRS
Female sex
Townsend deprivation
Parental discipline age 4
Chaos in home age 4

IQ PRS
Number medications PRS
Neuroticism PRS
Male sex
Peer problems age 4
Conduct problems age 4
Chaos in home age 3

Broad depression PRS
Neuroticism PRS
Ever depressed PRS
Pain medication PRS
Female sex
Conduct probs age 4

Low internalising PRS
Low worry PRS
Low Neuroticism PRS
Male sex
Low peer probs age 4
Low conduct probs age 4
Low home chaos age 4

Palaiologou et al (in prep)
Predicting outcomes: psychological treatment response
Polygenic scores and psychological treatment response

Keers et al., (2016)
Psychotherapy and Psychosomatics

Andresson et al., (2018)
Molecular Psychiatry
Psychological treatment outcome

Predicting psychological treatment outcome

Anxiety Symptoms (GAD7)

- Comorbid symptoms
- Functional impairment
- Medication prescribed
- Unemployed
- Non-worker
- Disability

- Black
- Asian
- Mixed
- Other

- Moderate-severe, gradual improvement
- Moderate-severe, fast improvement
- Mild, small improvement

Predicting self-reported psychological treatment outcome

- Polygenic scores
- Clin & dem
- Polygen, clin & dem
Predicting outcomes
Anxiety genetics: how can it help?
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