Familial Resemblance for Borderline Personality Disorder Features: Genetic or Cultural Transmission?

Marijn Distel[1], Irene Rebollo-Mesa[1], Gonneke Willemsen[1], Catherine Derom[2], Timothy Trull[3] and Dorret Boomsma[1]

❖Aim

The current study investigates the genetic and environmental influences on individual differences in BPD features using an extended twin-family design which allows for testing of additive and non-additive genetic effects, individual specific environmental influence, assortment and cultural transmission.

❖Participants

Data were available for 5017 twins, 1266 siblings, 939 spouses and 3064 parents registered with the Netherlands Twin Register and the East Flanders Prospective Twin Survey.

❖Measure

BPD features were measured by the Personality Assessment Inventory-Borderline Features scale (Morey, 1991).

❖Analysis

Genetic modelling of the data was based on a reparametrization of the Phillips and Fulker model (1989) of mixed genetic and cultural transmission by Neale et al. (1994) and was carried out in MX (Neale, 2003).

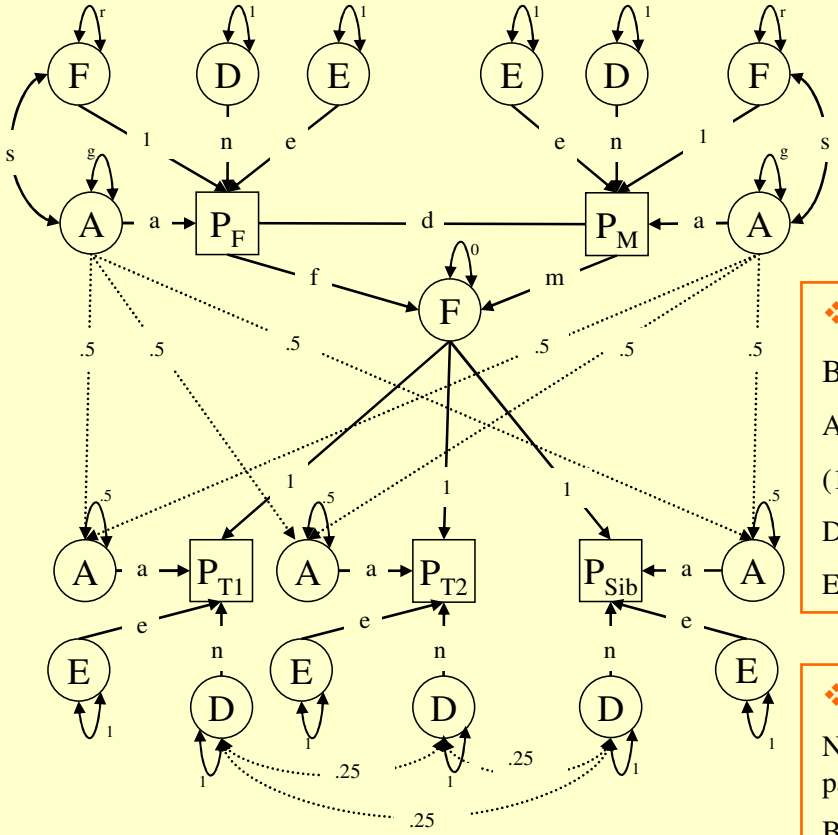

Fig 1. Family resemblance model for twins, siblings and parents.
Note: D and F cannot be estimated simultaneously.

❖Results

Best fitting model

A: 21.3% (95% CI 16 - 26)

(1.1% due to assortment)

D: 23.8% (95% CI 17 - 31)

E: 54.9% (95% CI 51 - 60)

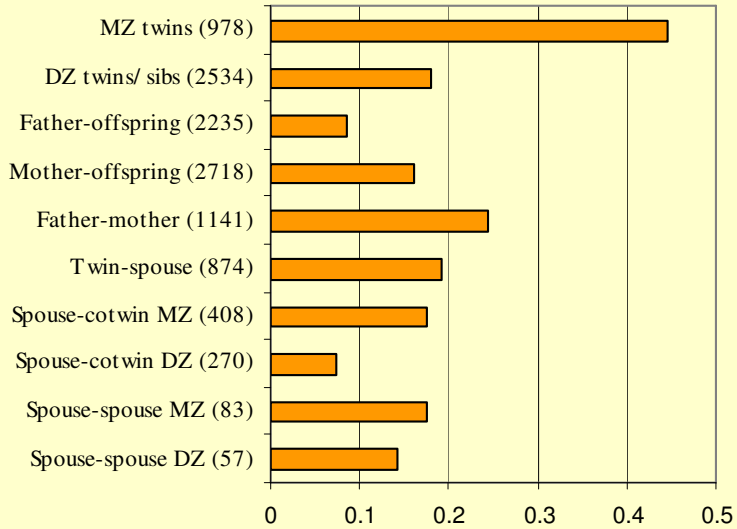

Fig 2. Correlations between family members of different degree of relatedness (number of pairs).

❖Conclusion

Not cultural but genetic transmission explains the resemblance for BPD features between parents and offspring.

Both additive and non-additive genetic effects influence individual differences in BPD features.

[1]Department of Biological Psychology, VU University Amsterdam, Amsterdam, The Netherlands. [2]Department of Human Genetics, Katholieke Universiteit Leuven, Leuven, Belgium. [3]Department of Psychological Sciences, University of Missouri-Columbia, Columbia, MO, USA.

ma.distel@psy.vu.nl