

NAME OF PRESENTING AUTHOR: Lianne de Vries

EMAIL ADDRESS OF PRESENTING AUTHOR: l.p.de.vries@vu.nl

LOCATION OF PRESENTING AUTHOR: Europe

TIME ZONE OF PRESENTING AUTHOR: Central European Time

TYPE OF SUBMISSION: **Oral paper**

MEMBER STATUS: Associate

ELIGIBLE FOR THOMPSON AWARD: **Yes**

ELIGIBLE FOR ROWEWARD: Yes

TITLE:

Genetic evidence for the overlap and bidirectional effects between resilience and well-being.

FULL AUTHOR LIST:

de Vries, L.P.^{1,2}, Baselmans, B.M.L.³, Luykx, J.J.⁴, de Zeeuw, E.¹, Minică, C.¹, de Geus, E.J.C.¹, Vinkers, C.H.^{5,6}, & Bartels, M.^{1,2}

AFFILIATIONS:

1. Department of Biological Psychology, Vrije Universiteit Amsterdam, The Netherlands
2. Amsterdam Public Health Research Institute, Amsterdam University Medical Centres, Amsterdam, The Netherlands
3. Institute for Molecular Bioscience, The University of Queensland, Brisbane, QLD, Australia
4. Department of Psychiatry, UMC Utrecht, Department of Translational Neuroscience, UMC Utrecht, The Netherlands
5. Department of Psychiatry, Amsterdam UMC, Location VUmc, The Netherlands
6. Department of Anatomy and Neurosciences, Amsterdam UMC, Location VUmc, The Netherlands.

KEYWORDS:

Resilience, Well-being, Twin-sibling model, polygenic scores, MR-DoC model

ABSTRACT:

Resilience and well-being are strongly related, happier people are known to show more resilience after stressful life events or trauma and vice versa. Less is known about the underlying sources of overlap and causality between the constructs. In a sample of 11.304 twins and 2.572 siblings from the Netherlands Twin Register, we investigated the overlap and possible direction of causation between resilience (operationalized as: not developing psychiatric symptoms despite negative life events) and well-being in multiple ways using longitudinal data, twin-sibling models, polygenic risk scores, and the Mendelian Randomization Direction of Causality (MR-DoC) model. We defined resilience as the difference between the actual level of anxious-depressed symptoms and the predicted level based on the number of life events experienced. Well-being was measured using the Satisfaction with Life Scale. The family-based genetic modelling showed strong phenotypic ($\sim .50$), genetic (.71), and environmental (.93) correlations between resilience and well-being and a large genetic (51%) contribution to the covariance. The causality and MR-DoC results are in line with a bidirectional causal relation. In summary, there is a large overlap between well-being and resilience, but the traits also appear to be different constructs that influence each other bidirectionally. As resilience and well-being are both negatively related to psychopathology, the high overlap and bidirectionality can have important implications for interventions to prevent or lower vulnerability for psychopathology.

GRANT SUPPORT:

This work is supported by an ERC consolidation grant (WELL-BEING 771057, M. Bartels), NWO large investment grant (NTR: 480-15-001/674) and ZonMW Addiction program (31160008).
