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

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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 (~.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.

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