

New findings on the genetic aspects of resilience in depression: insight from the Greek financial crisis

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In the current issue of *Psychotherapy and Psychosomatics* a study explored the role of genes in depression vulnerability. The financial crisis that has afflicted Greece since 2008 has adversely affected the physical and mental health of the population, with reports pointing to a rise in the prevalence of depression from 3.3 percent prior to the crisis to 12.3 percent in 2013. The stress-diathesis model of depression postulates that individuals exhibit different vulnerability to depression once challenged with varying levels of stress. In psychosomatic practice, when the cumulative exposure to stressors exceeds coping resources, allostatic overload ensues, which may precipitate disease states or otherwise aggravate existing somatic and mental disorders. Evidence indicates that gene-environment interactions and epigenetic mechanisms may influence resilience to stress. Therefore, genetic factors may influence resilience to stress in patients with physical long-term conditions (LTCs) in the context of a financial crisis.

The 446 participants included 318 patients with at least 1 of 3 LTCs: rheumatological disorders ($n = 167$), type-II diabetes mellitus ($n = 85$), and chronic pulmonary obstructive disease ($n = 25$), or a combination of 2 conditions ($n = 41$), who attended specialty clinics or the emergency department (response rate: 86.2 percent) between September 2015 and March 2016, and 128 people without LTCs recruited from the hospital staff (response rate: 64.5 percent). Two allele variants were identified based on PCR fragment sizes: long (L, 530 bp) and short (S, 426 bp). The sample was split into 3 groups based on 5-HTTLPR genotypes: L/L ($n = 148$, 33.2 percent of the sample, 47.3 percent males), L/S ($n = 226$, 50.7 percent of sample, 42.5 percent males), and S/S ($n = 72$, 16.2 percent of sample, 48.6 percent males).

Results showed that 13 patients with 2 LTCs (33.3 percent) and 67 with 1 LTC (25.2 percent) were identified with probable depression (PHQ-9 ≥ 10) compared with 13 (10.2 percent) participants without LTCs. There were no significant differences in genotype frequencies across frequency of probable depression. S/S subjects presented a trend towards lower resilience levels compared with L/L and L/S. The odds for probable depression among L/L homozygotes were similar across all samples in all multivariable models applied. In contrast, among S-carriers, the odds of having probable [depression](#) were 3.7 for people with 1 LTC and 7.9 for those with 2 LTCs, compared with participants without LTCs.

Authors concluded that the 5-HTTLPR polymorphism contributes to the development of depressive symptomatology in patients with LTCs, while resilience levels may mediate this association. Future prospective studies are warranted to confirm our findings, while psychotherapy trials targeting resilience hold

promise for both prevention and amelioration of depressive symptoms in vulnerable people with somatic illnesses.

More information: Foteini Delis et al. Resilience Mediates the Influence of a Polymorphism in the Serotonin Transporter Gene on the Relationship between the Burden of Chronic Illness and Depression, *Psychotherapy and Psychosomatics* (2017). [DOI: 10.1159/000478020](https://doi.org/10.1159/000478020)

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