
***Perceived Social Support: Its Genetic and Environmental
Etiology and Association with Depression***

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Abstract

Almost all research on social support has ignored the genetic contribution to individual differences. The current thesis used a sample of 8,000 male and female adult twin pairs. After refining the perceived social support phenotype, this research explored its genetic and environmental etiology using the classical twin design (CTD). In attending to the biases of this design, the thesis compared CTD estimates for a range of phenotypes against estimates from the more comprehensive extended twin-family design. Although estimates of additive (A) and non-additive (NA) genetic variance were over- and under-estimated respectively, common environment (C) and broadsense genetic (G; A + NA) estimates were reasonably accurate with the latter only slightly overestimated. With these biases considered, C and G each explained approximately 1/5th of the variance in perceived support; the balance of variation was unique environment, although approximately 1/3rd of this may be measurement error. The additive genetic contribution differed in males and females.

The next section explored the association between perceived support, stress and depression. A comparison between phenotypic associations and those from a discordant monozygotic (MZ) design showed part of the associations reported in the literature are due to familial effects (G or C). After removing these, stress was still associated with depression while perceived support was not, except as a buffer against depression later on in males who experienced multiple stressors.

The final section extended the association between perceived support, stress and depression to include the serotonin transporter polymorphism (5HTTLPR). A review of the literature on stress × 5HTTLPR in predicting psychopathology suggested publication bias and raised questions about some of the interactions reported. The current analyses improved on the previous research by using 5HTTLPR (S/L) redefined by the SNP rs25531 (a/g) within the L allele. There was no interaction between the polymorphism and (a) stress or (b) both stress and social support in predicting depression. Future research exploring the associations studied in this thesis should use the full panel design in absence of behavior genetic techniques. Further, research on social support that uses quasi-experimental designs of traumatised populations would be valuable.

Certification

I certify that the substance of this thesis has not already been submitted for any degree and is not currently being submitted for any other degree or qualification.

I certify that any help received in preparing this thesis, and all sources used, have been acknowledged in this thesis.



Signature

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