Abstract

When analyzing genetic data, Structural Equations Modeling (SEM) provides a straightforward methodology to decompose phenotypic variance using a model-based approach. Furthermore, several models can be easily implemented, tested, and compared using SEM, allowing the researcher to obtain valuable information about the sources of variability. This methodology is briefly described and applied to re-analyze a Spanish set of IQ data using the biometric ACE model. In summary, we report heritability estimates that are consistent with those of previous studies and support substantial genetic contribution to phenotypic IQ; around 40% of the variance can be attributable to it. With regard to the environmental contribution, shared environment accounts for 50% of the variance, and non-shared environment accounts for the remaining 10%. These results are discussed in the text.