GENETIC AND ENVIRONMENTAL BASES OF THE INTERPLAY BETWEEN MAGICAL IDEATION AND PERSONALITY

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Objectives: Sub-threshold psychotic symptoms are quite commonly present in general population. Among these, Magical Ideation (MI) has been proved to be a valid predictor of psychosis. However, the genetic and environmental influences on the interplay between MI and personality have not fully been explored.

Method: A total of 534 adult twins from the population-based Italian Twin Register were assessed for MI using the MI Scale (MIS) and for personality with the temperament and character inventory (TCI). A Multivariate Cholesky model was applied with Mx statistical program.

Results: The best-fitting model showed that additive genetic and unshared environmental factors explain approximately the same proportion of variance in MI, whereas a less strong genetic influence on personality traits emerged. Relevant correlations between MI and specific personality traits (novelty seeking, cooperativeness, self-directedness, self-transcendence) were found, suggesting shared influences for MI and these traits. Both genetic and environmental factors explained these correlations, with genetic factors playing a predominant role.

Conclusion: Moderate-to-substantial genetic effects on MI and personality were found. Shared genetic and environmental effects underlie the phenotypic correlation between MI (psychosis-proneness) and personality traits, i.e. self-directedness (negative association) and self-transcendence (positive association), potentially representing predictive markers of psychosis liability related to schizotypy and personality.