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## Genetic and Environmental Structure of Altruism Characterized by Recipients in Relation to Big Five Personality

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### ABSTRACT:

Altruism is a form of prosocial behavior with the goal of increasing the fitness of another individual as a recipient while reducing the fitness of the actor. Although there are many studies on its heterogeneity, only a few behavioral genetic studies have been conducted to examine the differential recipient types: family members favored by kin selection, the dynamic network of friends and acquaintances as direct reciprocity, and strangers as indirect reciprocity. The present study shows that there is a single common factor of altruism: additive-genetic effects explain 51% of altruism without shared environmental contribution. The genetic contribution of this single common factor is the genetic factor of neuroticism, extraversion, openness to experience, and conscientiousness. Only altruism toward strangers is affected by shared environmental factors. Genetic and environmental relationship between a general factor of altruism (GFA) and a general factor of personality (GFP) is examined.

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