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The differential relations between ADHD and reading achievement: A quantile genetic approach.

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ABSTRACT: This paper extends the understanding of the relation between ADHD and reading comprehension, through examining how this relation differs depending on the quantile an individual falls in for each. Samples from three twin projects around the United States were used (Florida Twin Project, Colorado component of International Longitudinal Twin Study of Early Reading Development, & Western Reserve Reading and Math Projects). Phenotypic analysis using quantile regression showed relations between ADHD related behaviors and reading comprehension to be stronger in the lower quantiles of reading comprehension in two of three samples. A new method was developed extending this analysis into the bivariate genetic space. Results of this quantile genetic analysis revealed that overlapping common environmental influences accounted for a larger proportion of variance in the lower quantiles of these variables in two of three samples. Finally, in all three samples the phenotypic relation was strongest when shared environmental influences accounted for a larger proportion of the overall variance.

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