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Genetic and Environmental Contributions to Physical, Verbal, and Relational Bullying Victimization in Middle Childhood

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ABSTRACT:

Bullying includes different forms (i.e., physical, verbal, relational), but genetically informed studies have rarely explored them separately. The only study to elucidate the contributions of genetic and environmental factors for different forms of bullying used teacher report (Veldkamp et al., 2019). The present study is the first to explore additive genetic and environmental contributions to separate forms of self-reported bullying victimization. In the USC longitudinal study of Risk Factors for Antisocial Behavior, 9-10-year-old twins (548 pairs) reported bullying victimization. 74% of the children reported being verbally bullied, whereas 35% reported being physically bullied, and 62% reported relational bullying victimization. Intraclass correlations (ICCs) of verbal bullying victimization suggested genetic and nonshared environmental influences: monozygotic (MZ)_{male}=0.48, MZ_{female}=0.43, dizygotic (DZ)_{male}=0.33, DZ_{female}=0.20, opposite sex dizygotic (OZ)=0.36. ICCs of physical bullying victimization indicated genetic or shared environmental and nonshared environmental influence: MZ_{male}=0.33, MZ_{female}=0.33, DZ_{male}=0.28, DZ_{female}=0.07; OZ=0.28. ICCs of relational bullying victimization indicated shared and nonshared environmental influence: MZ_{male}=0.29, MZ_{female}=0.23, DZ_{male}=0.25, DZ_{female}=0.26 OZ=0.33. The best-fitting univariate decompositions confirmed these predictions: verbal ($a^2=49\%$, $e^2=51\%$), physical ($a^2=36\%$, $e^2=64\%$, although A and C could each be dropped independently, indicating ambiguous familial influences), relational bullying victimization: ($c^2 = 24\%$, $e^2=76\%$). Given sex differences in ICCs, we will also test sex limitation models.

Veldkamp, S. A., Boomsma, D. I., de Zeeuw, E. L., van Beijsterveldt, C. E., Bartels, M., Dolan, C. V., & van Bergen, E. (2019). Genetic and environmental influences on different forms of bullying perpetration, bullying victimization, and their co-occurrence. *Behavior genetics*, 49(5), 432-443.

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