Is the Link Between Intelligence and Age at First Intercourse Causal or Correlational? A Cross-Generational Sibling Comparison Design Using the NLSY

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Abstract

Halpern *et al.* (2000) published a study based on early Add Health data with the provocative title "Smart Teens Don't Have Sex (or Kiss Much Either)." Several following papers reported the same result, between the intelligence of adolescent girls and age at first intercourse (AFI). However, the causal mechanism has not been carefully investigated. Harden and Mendle (2011) used Add Health data within a biometrical design and found that the relationship between intelligence and AFI was fully accounted for by shared environmental differences, suggesting at least the location of the causal mechanism - the part of the household environment shared by siblings that influences both child intelligence and AFI.

In this study, we use an intergenerational sibling comparison design to investigate the causal link between intelligence and AFI, using the National Longitudinal Survey of Youth 1979 and the NLSY-Children/Young Adult data. We measured maternal IQ using the AFQT, child IQ using PPVT, PIAT, and Digit Span, and AFI (using respondent self-report). Our analytic method used Kenny's (2001) reciprocal standard dyad model. This model supported analyses treating the data as only between-family data (as in past studies), and also allowed us to use within-family comparisons. These included two forms, first a comparison of offspring of mothers in relation to maternal IQ, then a comparison of offspring themselves in terms of offspring IQ.

When we evaluated the relationship between maternal/child intelligence and AFI, using a between-family design, we replicated earlier results. When we use a within-family design and compare offspring of sisters, and then compare the offspring themselves, the relationship between maternal/child intelligence and AFI virtually disappears. The finding is robust across gender and age. These results suggest that the cause of the intelligence-AFI link is not intelligence per se, but rather differences between families (parental education, SES, *etc*) that correlate with family-level (but not individual-level) intelligence.

Keywords: Age at first intercourse; Cross-sectional Data; Discordant Sibling Design; Intelligence; Quasi-Experimental; Siblings

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