

Supplementary Materials

Methods and Results for Sensitivity Analysis Using SES Composite

Parental income was assessed by asking participants' parent or caregiver present during the Wave 1 interview (typically mothers) "*about how much total income, before taxes did your family receive in 1994? Include your own income, the income of everyone else in your household, and income from welfare benefits, dividends, and all other sources.*" Income ranged from \$0 to \$800,000 (median = \$40,000). To calculate a *SES composite score*, income was first log-transformed and rescaled to a *z*-score. Parental education (described in the Method section of main article) was also rescaled to a *z*-score, and the non-missing *z*-scores for income and education were averaged. Extremely low values ($z < -5$) were Winsorized, and resulting scores were multiplied by 10 and re-centered such that the lowest observed value was 0, resulting in a composite score ranging from 0 to 63.85 ($M = 34.16$, $SD = 15.00$).

Figure S1 plots the genetic (*A*) and non-shared environmental (*E*) cross-paths from age at menarche to depressive symptoms, as estimated in LOSEM analyses using either (1) parental education only (solid lines; also shown in Figure 2A of the main article) or (2) the SES composite score (dashed lines). The overall pattern of results is similar across alternative operationalizations of social class, although the *A* path from age at menarche to depression appeared less negative when high social class was indicated by a combination of income and education, compared to when high social class was indicated solely by education.

We next fit a binary SEM. The SES composite score for participants whose parents had a college degree ranged from 31.42 to 63.85 ($M = 48.84$); for participants whose parents did not have any college education, SES composite ranged from 0 to 44.13 ($M = 24.05$). Consequently, the SES was dichotomized at 32. Based on this, all participants whose parents had a college education *or* who had an income level within the range of college-educated parents were classified as "high SES." The remainder of the sample was classified as "low SES." A greater proportion of the sample was categorized as "high SES" when considering both income and parental education (56%) than when considering only parental education (42%).

Table S1 recapitulates the parameter estimates from the binary SEM using parental education as the moderator (also found in Table 2 of the main document) and compares them to parameter estimates from the same model using the SES composite as the moderator. All parameter estimates are highly similar across the two measures of social class. In particular, when dividing the sample using an SES composite, we still observed the key interaction effects on the cross-paths from the genetic and environmental components of menarche to depression. Specifically, genes that predispose girls to later menarche were associated with reduced risk for depression, but only among socioeconomically advantaged girls.

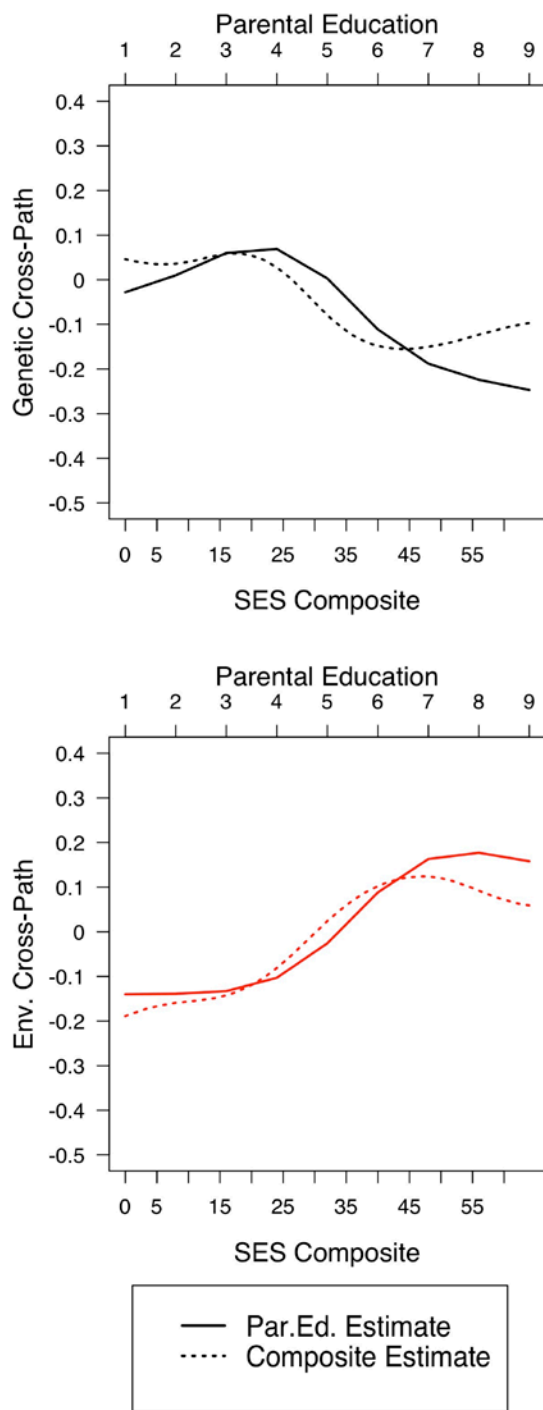
Table S1.***Parameter Estimates from Interaction Models Using Parental Education versus a SES Composite.***

| Parameter | Interaction Model: Parental Education | Interaction Model: SES Composite |
|---|--|-------------------------------------|
| <u><i>Intercepts</i></u> | | |
| Menarche | 12.343 (.074) | 12.337 (.084) |
| CESD | .160 (.058) | .158 (.066) |
| <u><i>Covariates</i></u> | | |
| SES → Menarche (s_M) | -.020 (.098) | .003 (.098) |
| Race → Menarche (r_M) | -.167 (.101) | -.223 (.103) |
| SES → CESD (s_D) | -.162 (.076) | -.129 (.079) |
| Race → CESD (r_D) | .169 (.079) | .127 (.076) |
| <u><i>Genetic and Environmental Influences on Menarche</i></u> | | |
| a_M | 1.067 (.076) | 1.116 (.079) |
| a'_M | -.034 (.106) | -.108 (.105) |
| e_M | .902 (.066) | .825 (.071) |
| e'_M | -.032 (.091) | .089 (.092) |
| <u><i>Menarche → CESD</i></u> | | |
| a_{MD} | .033 (.085) | .097 (.094) |
| a'_{MD} | -.289 (.125) | -.297 (.126) |
| e_{MD} | -.113 (.076) | -.155 (.092) |
| e'_{MD} | .326 (.110) | .280 (.118) |
| <u><i>Residual Genetic and Environmental Influences on CESD</i></u> | | |
| a_D | .812 (.060) | .815 (.072) |
| a'_D | -.080 (.104) | -.136 (.106) |
| e_D | .711 (.052) | .720 (.057) |
| e'_D | .011 (.081) | .057 (.083) |

Note. See Figures 1a and 1b in main document for path diagrams. Standard errors are in parentheses; parameters significantly different than zero at $p < .05$ are in bold. Parental education

was dichotomized into less than a college degree (parental education < 7 [reference group]) versus a college degree or higher. SES composite was dichotomized at SES = 32.

Figure S1. Results from LOSEM Analyses Using Parental Education and SES Composite



Note. See Figure 1a in main document for path diagram. Genetic cross-path corresponds to parameter labeled a_{MD} . Non-shared environmental (“Env.”) cross-path corresponds to parameter labeled e_{MD} .