**Supplementary analyses**

We examined whether differences exist in broader socioeconomic status classifications by modeling a multi-group latent change score model involving 6 socioeconomic status classifications. These group classifications include:

(1) households with annual income less than £3,300, consisting of 3.60% of the total sample

(2) households with annual income between £3,300-£11,000, consisting of 18.74% of the total sample

(3) households with an annual income of £11,000-£22,000, consisting of 28.59% of the total sample

(4) households with an annual income of £22,000-£33,000, consisting of 22.82% of the total sample

(5) households with an annual income of £33,000-£55,000, consisting of 19.10% of the total sample, and

(6) households with an annual income greater than £55,000, consisting of 7.11% of the total sample.

Just like we did with the dichotomized classifications examining differences among participants from high-income vs low-income households, we began by fitting a multi-group bivariate latent change score model with unconstrained parameters, involving the 6 groups. We then compared the unconstrained model with a competing model where the coupling parameters and covariance between baseline scores of harsh parenting and psychopathology were all constrained to equality across the 6 groups.

We first examined whether participants in the 6-group classification significantly differed from each other in the association between harsh parenting and conduct problems. The unconstrained model had an acceptable model fit: CFI: 0.945; RMSEA: 0.076; SRMR: 0.072. Constraining the coupling parameters and the covariance between baseline scores of harsh parenting and conduct problems did not lead to a significant worsening of model fitness ΔX2 (15) = 14.505, p = 0.487, suggesting that the groups did not significantly differ from each other in the bi-directional association between harsh parenting and conduct problems.

We then examined if participants in any of the 6 groups significantly differed in the association between harsh parenting and emotional problems. Fit indices for this model were within an acceptable range (CFI: 0.948; RMSEA: 0.063; SRMR: 0.054). Constraining the model parameters (coupling and covariance parameters) did not lead to a significant drop in model fitness; ΔX2 (15) = 20.244, p = 0.162, suggesting that the groups did not significantly differ from each other in the association between harsh parenting and emotional problems.

Thus, just like in the two-group socioeconomic status classifications (high-income vs low-income), the results of the multi-group modeling involving 6 socioeconomic status classifications showed that participants across 6 socioeconomic status classified groups did not significantly differ from each other in the association between harsh parenting and conduct or emotional problems. See Table 2 and Table S1 for comparison.

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| Table S1 |
| Multi-group latent change score model of socioeconomic status across 6 stratifications   |
|  | Group 1: <£3,300 (3.60%) | Group 2: £,300-£11,000 (18.74%) | Group 3: £11,000-£22,000 (28.59%) | Group 4: £22,000-£33,000 (22.82%) | Group 5: £33,000-£55,000 (19.10%) |
|  | Lagged effects of harsh discipline  | Lagged effects of conduct or emotional problems | Lagged effects of harsh discipline | Lagged effects of conduct or emotional problems | Lagged effects of harsh discipline | Lagged effects of conduct or emotional problems | Lagged effects of harsh discipline | Lagged effects of conduct or emotional problems | Lagged effects of harsh discipline | Lagged effects of conduct or emotional problems |
|   | Std. *β* (SE) | Std. *β* (SE) |  Std. *β* (SE) | Std. *β* (SE) | Std. *β* (SE) | Std. *β* (SE) | Std. *β* (SE) | Std. *β* (SE) | Std. *β* (SE) | Std. *β* (SE) |
| Conduct problems | 0.043(0.011)\*\*\* | 0.076(0.013)\*\*\* | 0.040(0.011)\*\*\* | 0.064(0.011)\*\*\* | 0.059(0.011)\*\*\* | 0.084(0.013)\*\*\* | 0.016(0.018) | 0.092(0.023)\*\*\* | 0.061(0.029)\* | 0.051(0.030) |
| Emotional problems  | 0.032(0.012)\* | 0.013(0.014) | 0.035(0.012)\*\* | 0.014(0.011) | 0.045(0.012)\*\*\* | 0.024(0.012)\* | 0.041(0.020)\* | 0.000(0.021) | 0.105(0.033)\*\* | 0.011(0.030) |
|  |  |  |
|  | Group 6: >£55,000 (7.11%) |
| Conduct problems | 0.055(0.016)\*\* | 0.057(0.014)\*\*\* |
| Emotional problems  | 0.044(0.016)\*\* | 0.010(0.014) |
| \*\*\* = P < 000; \*\* p < 0.01; \* p <0.05Values with p<0.05 did not reach significance after correcting for multiple comparisons Different groups represent participants’ households' income range  |