**Supplemental material**

**Table S1**

*Descriptive Statistics of Children's Bullying Behaviors and Conduct Problems Split by Sex*

| | *M* | *SD* | Observed range |
|---|---|---|---|
| Child bullying behaviors | | | |
| Age-5 (female) | .48 | .69 | 0-4.5 |
| Age-5 (male) | .73 | .92 | 0-6 |
| Age-7 (female) | .47 | .69 | 0-5 |
| Age-7 (male) | .68 | .89 | 0-5.5 |
| Age-10 (female) | .49 | .80 | 0-6 |
| Age-10 (male) | .80 | .96 | 0-6 |
| Age-12 (female) | .48 | .73 | 0-6 |
| Age-12 (male) | .80 | .97 | 0-6 |
| Child conduct problems | | | |
| Age-5 (female) | 1.03 | 1.28 | 0-9 |
| Age-5 (male) | 1.72 | 1.75 | 0-9 |
| Age-7 (female) | .67 | 1.13 | 0-8 |
| Age-7 (male) | 1.26 | 1.59 | 0-9 |
| Age-10 (female) | .56 | 1.17 | 0-11 |
| Age-10 (male) | .98 | 1.45 | 0-8 |
| Age-12 (female) | .54 | 1.15 | 0-10 |
| Age-12 (male) | .95 | 1.50 | 0-9 |

**Table S2**

*Fit Statistics for Univariate Group-Based Trajectory Modeling (GBTM) of Children's Bullying Behaviors for 2 Through 6 Classes*

| Model | AIC | BIC | Entropy | Class Percentages |
|---|---|---|---|---|
| 2 | 10287.39 | 10301.67 | 0.698 | 65, 35 |
| 3 | 10073.46 | 10099.16 | 0.720 | 43, 50, 7 |
| 4 | 10030.17 | 10061.57 | 0.711 | 34, 50, 14, 2 |
| **5** | **10007.75** | **10050.58** | **0.756** | **36, 50, 4, 9, 1** |
| 6 | 9986.17 | 10037.56 | 0.708 | 44, 32, 15, 2, 6, 1 |

*Note*. AIC: Akaike's Information Criterion; BIC: Bayesian Information Criterion.
Best fitting and chosen model indicated in bold.

**Table S3**

*Fit Statistics for Univariate Group-Based Trajectory Modeling (GBTM) of Children's Conduct Problems for 2 Through 6 Classes*

| Model | AIC | BIC | Entropy | Class Percentages |
|---|---|---|---|---|
| 2 | 11687.33 | 11710.17 | 0.736 | 68, 32 |
| 3 | 11458.44 | 11489.85 | 0.740 | 41, 51, 8 |
| **4** | **11412.96** | **11447.22** | **0.746** | **17, 52, 3, 28** |
| 5 | 11356.57 | 11399.40 | 0.637 | 17, 41, 23, 17, 2 |
| 6 | 11326.34 | 11377.74 | 0.637 | 17, 33, 22, 23, 4, 1 |

*Note*. AIC: Akaike's Information Criterion; BIC: Bayesian Information Criterion.
Best fitting and chosen model indicated in bold.

**Table S4**

*Univariates Fit Indices for Correct Classification of Group-Based Trajectory Modeling*

*for Bullying Behaviors and Conduct Problems Trajectories in Childhood*

| Fit indices for correct classification | Bullying behaviors trajectories | | | | | Conduct problems trajectories | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Not involved | Low stable | Low increasing | Moderate decreasing | High increasing | Not involved | Low decreasing | Moderate decreasing | High chronic |
| APP | .864 | .841 | .774 | .727 | .864 | .730 | .889 | .850 | .920 |
| OCC | 11.063 | 5.335 | 35.909 | 72.165 | 488.542 | 13.398 | 7.461 | 14.549 | 366.818 |
| Mismatch | -.0.002 | 0.018 | -0.008 | -0.006 | -0.000 | 0.060 | -.0.044 | -0.013 | -0.002 |

*Note*. APP: Average posterior probabilities; OCC: Odds of correct classification.

**Table S5**

*Fit Indices of Dual Group-Based Trajectory Modeling of Children's Bullying Behaviors and Conduct Problems Trajectories*

| Fit indices for overall model | |
|---|---|
| AIC | -20743.14 |
| BIC | -20857.35 |
| Entropy | .80 |

*Note*. AIC: Akaike's Information Criterion; BIC: Bayesian Information Criterion.

**Table S6**

*Fit Indices for Correct Classification of Dual Group-Based Trajectory Modeling of Bullying Behaviors and Conduct Problems Trajectories in Childhood*

| Fit indices for correct classification | Bullying behaviors trajectories | | | | | Conduct problems trajectories | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Not involved | Low stable | Low increasing | Moderate decreasing | High increasing | Not involved | Low decreasing | Moderate decreasing | High chronic |
| APP | .877 | .864 | .794 | .717 | .911 | .894 | .866 | .866 | .902 |
| OCC | 14.140 | 6.594 | 34.071 | 48.891 | 486.044 | 11.979 | 8.114 | 46.004 | 484.000 |
| Mismatch | 0.00 | 0.014 | 0.000 | -0.013 | -0.001 | 0.003 | 0.002 | -0.005 | -0.001 |

*Note*. APP: Average posterior probabilities; OCC: Odds of correct classification.

**Table S7**

*Trajectory Groups of Children's Bullying Behaviors and Conduct Problems According to Sex*

| Trajectory groups | Sex | | |
|---|---|---|---|
| Bullying behaviors | Male N (49%) | Female N (51%) | Total N (100%) |
| Not involved | 270 | 480 | 750 |
| Low stable | 578 | 553 | 1 131 |
| Low increasing | 158 | 70 | 228 |
| Moderate decreasing | 53 | 28 | 81 |
| High increasing | 33 | 9 | 42 |
| | 1 092 | 1 140 | 2 232 |
| Conduct problems | | | |
| Not involved | 334 | 597 | 931 |
| Low decreasing | 541 | 455 | 996 |
| Moderate decreasing | 187 | 78 | 265 |
| High chronic | 30 | 10 | 40 |
| | 1 092 | 1 140 | 2 232 |

*Note*. More children with lower SES and a higher number of boys were involved in groups with higher bullying behaviors and conduct problems. However, the low increasing bullying group did not differ according to SES. Interestingly, the same proportion of boys and girls was found in the largest group of bullying behaviors (low stable), and these children were more likely to come from high or moderate SES.

**Table S8**

*Trajectory Groups of Children's Bullying Behaviors and Conduct Problems According to SES*

| Trajectory groups | SES | | | |
|---|---|---|---|---|
| Bullying behaviors | Low N (33.24 %) | Moderate N (33.06 %) | High N (33.69 %) | Total |
| Not involved | 387 | 380 | 364 | |
| Low stable | 160 | 269 | 321 | |
| Low increasing | 123 | 57 | 48 | |
| Moderate decreasing | 38 | 27 | 16 | |
| High increasing | 34 | 5 | 3 | |
| | 742 | 738 | 752 | 2 232 |
| Conduct problems | | | | |
| Not involved | 230 | 324 | 377 | |
| Low decreasing | 341 | 337 | 318 | |
| Moderate decreasing | 141 | 68 | 56 | |
| High chronic | 30 | 9 | 1 | |
| | 742 | 738 | 752 | 2 232 |

**Table S9**

*Posterior Probability Sensitivity Analysis*

| | Bullying behaviors trajectories | | | | Conduct problems trajectories | | |
|---|---|---|---|---|---|---|---|
| | Low stable | Low increasing | Moderate decreasing | High increasing | Low decreasing | Moderate decreasing | High chronic |
| Cognitive functioning | | | | | | | |
| | RRR (95% CI) | | | | | | |
| **Univariate regressions** | | | | | | | |
| Executive functioning | .98 (.94, 1.0) | .94[t] (.88, 1.0) | .95 (.84, 1.1) | .90 (.79, 1.0) | .97[t] (.93, 1.0) | .95[t] (.90, 1.0) | **.86*** (.76, .97) |
| Theory of mind | **.96*** (.93, 1.0) | **.92*** (.86, .98) | **.78**** (.68, .90) | **.85*** (.74, .97) | **.95**** (.92, .98) | **.92**** (.87, .98) | **.73***** (.62, .86) |
| IQ | **.99*** (.98, 1.0) | **.96***** (.95, .98) | **.95**** (.92, .98) | **.95***** (.93, .97) | **.99*** (.98, 1.0) | **.96***** (.95, .98) | **.94***** (.92, .97) |
| **Multivariate regressions** | | | | | | | |
| Executive functioning | 1.0 (.96, 1.0) | .99 (.92, 1.1) | 1.0 (.91, 1.2) | .97 (.85, 1.1) | .98 (.94, 1.0) | .99 (.93, 1.1) | .93 (.83, 1.1) |
| Theory of mind | .97 (.93, 1.0) | .97 (.90, 1.0) | **.82*** (.70, .96) | .91 (.79, 1.0) | **.96*** (.92, .99) | .97 (.91, 1.0) | **.79**** (.66, .94) |
| IQ | .99 (.98, 1.0) | **.97***** (.95, .98) | **.96*** (.93, .99) | **.96**** (.93, .98) | 1.0 (.99, 1.0) | **.97***** (.95, .98) | **.96**** (.93, .98) |
| **Multivariate regressions while controlling for the age-5 other behavior** | | | | | | | |
| Executive functioning | .99 (.95, 1.0) | .97 (.90, 1.1) | 1.0 (.86, 1.2) | .92 (.78, 1.1) | .98 (.93, 1.0) | .99 (.92, 1.1) | .92 (.80, 1.1) |
| Theory of mind | .98 (.94, 1.0) | .95 (.88, 1.0) | **.79**** (.67, .94) | .86 (.69, 1.1) | .96[t] (.92, 1.0) | .95 (.89, 1.0) | **.70**** (.58, .86) |
| IQ | 1.0 (.98, 1.0) | **.98*** (.96, 1.0) | .98 (.94, 1.0) | .99 (.95, 1.0) | 1.0 (.99, 1.0) | **.97**** (.96, .99) | .97 (.94, 1.0) |

*Note*. A sensitivity check was conducted for the correct classification of the bullying behaviors and conduct problems classes in order to account for the uncertainty associated with class membership. All participants who had a posterior probability of less than 0.8 for their class membership were excluded from the sample. Then, multinomial logistic regression analysis was performed again with participants who had a posterior probability of > .80 for their class membership. Overall, the results yielded similar patterns of associations.
RRR: Relative Risk Ratio; The not involved trajectory group was used as the reference group for trajectories of both behaviors. Significant associations are shown in bold.
[t]$p < .10$. *$p < .05$. ** $p < .01$. ***$p < .001$.