Video Game Use Confers Risk for Conduct Disorder Among Early Adolescent Girls

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BACKGROUND

- There is increasing concern regarding the longitudinal impact of frequent and prolonged video game use on adolescent psychosocial development.
- Recent evidence indicates that excessive video game use during adolescence may be linked to aggressive behavior and internalizing problems, especially among adolescent girls (Adachi & Willoughby, 2016; Ohannessian, 2018).
- Notably, few studies to date have examined the longitudinal relationship between video game use and increased risk for conduct disorder.
- Further, a breadth of prior evidence suggests that this maladaptive association may be greater for girls than boys.

OBJECTIVE

Primary Objective: To examine the longitudinal association between daily video game use and risk for conduct disorder among early adolescents.

Secondary Objective: To determine if this potential maladaptive relationship differs by gender.

METHODS

Participants:
- 862 early adolescents from public middle schools located in the Northeast region of the United States
- 54% female
- Age: M = 12.75, SD = 0.71, Range = 11-14 years
- 51% Non-Hispanic White, 21% Hispanic or Latinx, 9% Black or African American, 3% Asian, 15% multi-racial/ethnic, and 1% other

Procedure:
- Self-report questionnaires were administered twice to students during school, separated by a 6-month interval between Fall of 2016 (T1) and Spring of 2017 (T2).
- Students received a $10 movie pass as an incentive for completing the survey at each time point.

Measures:
- The following validated self-report measures were administered at T1 and T2:
  - Daily Video Game Use: Technology Use Questionnaire (TUQ)
  - Conduct Disorder (CD): Delinquent Behaviors Scale (DBS)

Analytic Plan:
- Logistic Regression Models
  - Independent Variable: Daily Video Game Use (T1)
  - Dependent Variable: CD Presence (T2)
  - Covariates: Age (T1), Race (T1), and CD Presence (T1)

RESULTS

Table 1. Results of Logistic Regression Analysis on Risk for Conduct Disorder

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE</th>
<th>p</th>
<th>ORadj</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys (n = 389)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>.033</td>
<td>.210</td>
<td>.874</td>
<td>1.034</td>
<td>.69 - 1.56</td>
</tr>
<tr>
<td>Race (White)</td>
<td>.677</td>
<td>.298</td>
<td>.023</td>
<td>1.968</td>
<td>1.10 - 3.53</td>
</tr>
<tr>
<td>CD Presence (T1)</td>
<td>-2.243</td>
<td>.314</td>
<td>&lt;.001</td>
<td>.106</td>
<td>.06 - 0.20</td>
</tr>
<tr>
<td>TUQ (T2)</td>
<td>.026</td>
<td>.035</td>
<td>.465</td>
<td>1.026</td>
<td>.96 - 1.10</td>
</tr>
<tr>
<td>Constant</td>
<td>-.671</td>
<td>2.733</td>
<td>.806</td>
<td>.511</td>
<td>--</td>
</tr>
<tr>
<td>Girls (n = 473)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td>.298</td>
<td>.233</td>
<td>.200</td>
<td>1.347</td>
<td>.85 - 2.13</td>
</tr>
<tr>
<td>Race (White)</td>
<td>.389</td>
<td>.326</td>
<td>.233</td>
<td>1.475</td>
<td>.78 - 2.80</td>
</tr>
<tr>
<td>CD Presence (T1)</td>
<td>-.2750</td>
<td>.361</td>
<td>&lt;.001</td>
<td>.668</td>
<td>.03 - .13</td>
</tr>
<tr>
<td>TUQ (T2)</td>
<td>-.142</td>
<td>.057</td>
<td>.12</td>
<td>1.153</td>
<td>1.03 - 1.29</td>
</tr>
<tr>
<td>Constant</td>
<td>-.3961</td>
<td>2.990</td>
<td>.185</td>
<td>.019</td>
<td>--</td>
</tr>
</tbody>
</table>

Note: Logistic regression models were run separately for boys and girls.

CONCLUSIONS

- The logistic regression model predicting the probable presence of CD from daily console video game use (the main effects model) was significant for girls, $\chi^2(4)=73.30, p<.01$, but not for boys.
- Girls who reported playing console video games daily had a significantly greater likelihood of meeting criteria for CD at T2, $\text{OR}_{\text{adj}}=1.15$, 95% CI=1.03-1.29, $p<.01$.

Implications:
- These findings indicate that daily video game use may increase risk for conduct disorder among early adolescent girls. Notably, this relationship was not present among boys in the current sample.
- These gender differences are in line with previous findings (Ohannessian, 2018), and suggest that playing video games may be distinctly maladaptive for girls, compared to boys, during early adolescence.

Future studies should examine whether or not the genre of video game influences the link between daily video game use and subsequent risk for externalizing problems.