From Gameplay to Reality

— A case study of the Elm City

Team ofcdata:
Keying Zhang
Shixian Wang
Victor Xu
Vivian Pan
Wenqian Luo
Data Validity & Gameplay Analysis

**Game Data Validity**

- **Distribution of Time Taken to Complete a Chapter**
  - Most players took **20-60 mins** to complete a chapter
  - Those who made wrong choices in minigames took **25% longer**
  - Players were confused and making efforts to make decisions

- **Players paid attention to the game! Data is valid for further analysis**

**Insights into Gameplay Results**

- **Minigame Answer Accuracy by Topic**
  - Scored **15.7% better** in HIV-related questions than common issues like unprotected sex
  - Lower accuracy (<69%) for alcohol-related questions

- **More scenarios about common problems (underaged drinking/drug usage) can be included to better cater to students’ needs**

- **When better knowing the consequences, teenagers are more likely to refuse improper proposals**

- **Score Across 2 Minigames**

  - **When** better knowing the consequences, teenagers are more likely to refuse improper proposals

  - **More scenarios about common problems (underaged drinking/drug usage) can be included to better cater to students’ needs**
Minigames and Real-life Choices

For the **same amount of reward** in Priority Minigame, players made different choices about the following issues:

<table>
<thead>
<tr>
<th>Gameplay Choices</th>
<th>Corresponding Real-life Choices</th>
<th>Real-life Choices vs. Gameplay Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.2% choose to try drugs to see how it feels</td>
<td>8.7% 8th-graders have used illicit drugs in the last month</td>
<td><img src="#" alt="Graph" /> [0.442*x + 5.5 \ R^2 = 0.991]</td>
</tr>
<tr>
<td>42.9% choose to get paid to deliver drugs to someone at school</td>
<td>3% 8th-graders reported binge drinking over the past two weeks</td>
<td></td>
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<tr>
<td>6.25% choose to buy alcohol and get drunk</td>
<td>16% middle schoolers reported drinking alcohol over the last month</td>
<td></td>
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<tr>
<td>18.6% choose to have underage drinking after homecoming dance</td>
<td>22% 8th-graders reported having had casual sexual intercourse</td>
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<tr>
<td>36.2% choose to hook up with someone met at a party</td>
<td>45.7% middle schoolers reported unprotected sexual intercourse</td>
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<tr>
<td>91.8% choose to have unprotected sex</td>
<td></td>
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</tbody>
</table>

Players' decisions are highly correlated with teenagers' real-life choices. The data can potentially be used by researchers to predict potential risky behavior.

Sources: National Center for Drug Abuse Statistics; Centers for Disease Control and Prevention National Research Council, Institute of Medicine, Board on Children, Youth, and Families, Committee on the Science of Adolescence