Examining Gender Differences in the Longitudinal Relationship between Technology Use and Family Functioning in Emerging Adults

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Abstract
As technology use becomes more prevalent in youths’ lives, questions arise as to how technology may impact different contexts. Recent research indicates technology use during adolescence may be systematically related to family functioning. For instance, adolescent technology use has been found to predict conflict in some families. However, it is not clear whether this relationship holds for older youth. Therefore, the goal of the present study was to longitudinally examine whether technology use predicts family functioning in an emerging adult sample. Given that gender differences in technology use have been observed in youth (e.g. Ohannessian, 2009), gender differences also were examined.

Sample
- 862 15-20 year old youth (M = 17.14, SD = .76; 57% females)
- 57% Caucasian; 22% African-American; 12% Hispanic; 3% Asian; 7% Other
- All youth attended a public high school in Delaware, Pennsylvania, or Maryland
- Most of the participants lived with both biological parents; 88% lived with their biological mother and 60% lived with their biological father

Measures
Technology Use Questionnaire
The Technology Use Questionnaire was used to assess frequency of technology use. This questionnaire is comprised of nine items (i.e. watching television, talking on the phone, listening to music, text messaging, emailing/Ming, using an iPod, playing video games, working on the computer, and surfing the web) with responses ranging from 1 = none to 6 = 4 hours or more per day.

Family Satisfaction Scale (FSS)
The FSS (Olson & Wilson, 1982) is a 14-item survey designed to assess youths’ satisfaction with their family. The FSS includes scales assessing family satisfaction (α = .91), family cohesion (α = .84), and family adaptability (α = .81). A representative item is, “How satisfied are you with how close you feel to the rest of your family?”

Procedures
During the spring of 2008 (Time 1) and 2009 (Time 2), trained research assistants administered surveys to students who provided assent and had parental consent. The survey took approximately forty minutes to complete. Participants were informed that their participation was voluntary and they could withdraw from the study at any time. All youth were assured that their answers would be kept confidential. Upon completion of the survey, the participants were given a movie pass.

Results
Linear regression models were conducted to examine if technology use (assessed at Time 1) predicted later family functioning (assessed at Time 2). Each model included the types of technology noted previously as independent variables and one of the family scales as the dependent variable. The regression models were run separately by gender.

Males
For males, working on the computer predicted higher family satisfaction (β = .26, p < .05) and family adaptability (β = .30 p < .05) (see Table 1)

Females
For females, talking on the phone predicted lower family satisfaction (β = -.18, p < .05) and family adaptability (β = -.21, p < .005). Similarly, working on the computer predicted lower family satisfaction (β = -.19, p < .05), family adaptability (β = -.18, p < .05), and family cohesion (β = -.17, p < .05) (see Table 2).

Table 1
<table>
<thead>
<tr>
<th>Regression Results for Males: Predicting Family Functioning at Time 2 from Technology Use at Time 1</th>
<th>Wishing television</th>
<th>Talking on the phone</th>
<th>Listening to music</th>
<th>Texting</th>
<th>Emailing/Ming</th>
<th>Playing video games</th>
<th>Using an iPod</th>
<th>Working on the computer</th>
<th>Surfing the web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Satisfaction</td>
<td>.10</td>
<td>-.14</td>
<td>-.14</td>
<td>.02</td>
<td>-.15</td>
<td>.12</td>
<td>.15</td>
<td>.26*</td>
<td>-.28</td>
</tr>
<tr>
<td>Family Adaptability</td>
<td>.08</td>
<td>- .09</td>
<td>-.05</td>
<td>-.14</td>
<td>.06</td>
<td>.36</td>
<td>.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Cohesion</td>
<td>.09</td>
<td>.12</td>
<td>-.13</td>
<td>.02</td>
<td>-.14</td>
<td>.11</td>
<td>.19</td>
<td>.21</td>
<td>-.27</td>
</tr>
</tbody>
</table>

*β<.05, **β<.01, ***β<.001
Note: Standardized regression coefficients presented

Table 2
<table>
<thead>
<tr>
<th>Regression Results for Females: Predicting Family Functioning at Time 2 from Technology Use at Time 1</th>
<th>Watching television</th>
<th>Talking on the phone</th>
<th>Listening to music</th>
<th>Texting</th>
<th>Emailing/Ming</th>
<th>Playing video games</th>
<th>Using an iPod</th>
<th>Working on the computer</th>
<th>Surfing the web</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Satisfaction</td>
<td>.11</td>
<td>-.18**</td>
<td>-.02</td>
<td>.12</td>
<td>.07</td>
<td>-.04</td>
<td>-.04</td>
<td>-.19*</td>
<td>.06</td>
</tr>
<tr>
<td>Family Adaptability</td>
<td>.09</td>
<td>-.21**</td>
<td>.00</td>
<td>.13</td>
<td>.06</td>
<td>-.05</td>
<td>-.08</td>
<td>-.18*</td>
<td>.11</td>
</tr>
<tr>
<td>Family Cohesion</td>
<td>.07</td>
<td>-.13</td>
<td>-.02</td>
<td>.06</td>
<td>.06</td>
<td>.03</td>
<td>.03</td>
<td>-.17*</td>
<td>.06</td>
</tr>
</tbody>
</table>

*β<.05, **β<.01, ***β<.001
Note: Standardized regression coefficients presented

Conclusions
Results from this study suggest that gender differences exist in the relationship between technology use and family functioning. Interestingly, technology use predicted more positive family functioning one year later for males, but less positive family functioning one year later for females. The results for females extend prior work on the relationship between technology use and family functioning during adolescence to early adulthood. Given that females tend to be relatively more attached to the family, it is not surprising that technology use that may replace time spent with family (e.g., working on the computer and talking on the phone) is negatively associated with perceptions of the family for females. It would be important for future research to examine the underlying processes involved in the relationship between technology and family functioning so that the gender differences observed in this study may be better understood.

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