2017-05-11

Infant Siblings of Children Diagnosed with Autism Spectrum Disorder Have Higher Perseveration

Katherine Christensen
Brigham Young University - Provo, katherinechristensen098@gmail.com

Allison Garner Kotter
Brigham Young University - Provo

Rachel Nuttall
Brigham Young University - Provo

Bread Iverson
Brigham Young University - Provo

Follow this and additional works at: https://scholarsarchive.byu.edu/fhssconference_studentpub

Part of the Psychiatry and Psychology Commons

The Annual Mary Lou Fulton Mentored Research Conference showcases some of the best student research from the College of Family, Home, and Social Sciences. The mentored learning program encourages undergraduate students to participate in hands-on and practical research under the direction of a faculty member. Students create these posters as an aide in presenting the results of their research to the public, faculty, and their peers.

BYU ScholarsArchive Citation
Christensen, Katherine; Kotter, Allison Garner; Nuttall, Rachel; Iverson, Bread; and Bayles, Taylor, "Infant Siblings of Children Diagnosed with Autism Spectrum Disorder Have Higher Perseveration" (2017). FHSS Mentored Research Conference. 329. https://scholarsarchive.byu.edu/fhssconference_studentpub/329

This Poster is brought to you for free and open access by the Family, Home, and Social Sciences at BYU ScholarsArchive. It has been accepted for inclusion in FHSS Mentored Research Conference by an authorized administrator of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.
Infant Siblings of Children Diagnosed with Autism Spectrum Disorder Have Higher Perseveration

K. Christensen, A. D. Kotter, R. Nuttall, J. Iverson, T. Bayles and R. A. Lundwall
Department of Psychology

Problem

- Children with ASD have difficulty with social cues, repetitive behaviors, and restricted interests
- Many of these signs show up after a diagnosis and many children remain undiagnosed until school-age
- We want to demonstrate the utility of a screening tool to identify infants at risk for ASD
- This tool could enable earlier identification and treatment for those who have unknown risk for ASD

Method

- 31 infants with a sibling with ASD (11 boys) and 31 age- and sex-matched controls (no ASD relatives)
- Ages ranging from 79 to 232 days old
- Infants completed a novelty preference task
- Used independent samples t-test to determine if ASD sibling status associated with higher perseveration rates

Results

- Perseveration rates were higher for infants with siblings with ASD
- Infants with an older sibling with ASD exhibited perseveration rates of 48%, while those without relatives with ASD showed rates of 25%
- Infants who show higher rates of perseveration might be more likely to develop ASD symptoms early on in childhood
- This is helpful because early treatments for ASD have been developed. Our task could be developed into a screening tool for infants with unknown risk

Group Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persev no DD sib</td>
<td>31</td>
<td>0.25</td>
<td>0.15</td>
<td>0.03</td>
</tr>
<tr>
<td>Persev has DD sib</td>
<td>31</td>
<td>0.48</td>
<td>0.21</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Independent Samples Test

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persev</td>
<td>-5.081</td>
<td>60</td>
<td>0.000</td>
<td>-0.23</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Conclusions

- Perseveration can distinguish between high- and low-risk ASD infant groups.

Application

- Our task could be used to screen any infant (regardless of a sibling with a developmental disorder) to determine increased perseveration behavior
- Understanding the role that perseveration has in attentional development will allow for earlier treatment for those at a higher risk for attentional difficulties
- Future longitudinal studies will track possible correlations between infant perseveration rates and ASD symptoms