INTRODUCTION

- Autism Spectrum Disorder is a neurodevelopmental disability affecting an individual’s social, communication, and behavioral abilities. (CDC)
- Not usually diagnosed until 3 or 4 years old, very little research in language and communication of infants as predictors of autism
- Infants with autism less likely than typical infants to utilize gestures that direct another person’s attention to oneself, or direct another person’s attention to an object, event or person. (Iverson, 2017)
- Gesture is a good indicator of a child’s level in the language-learning process (Watson, 2013)
- Social communication delays are present by 12 months, more specifically by 24 months (Tager-Flusberg & Paul, 2010)
- A prospective study of the emergence of early behavioral signs of autism (Iverson, Northrup, Leezenbaum, et al., 2010)
- Autism Spectrum Disorder is a neurodevelopmental disability affecting an individual’s social, communication, and behavioral abilities. (CDC)
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OBJECTIVE

The objective of this study is separated into two goals.
- To gain an understanding of effectiveness of parent coaching and early intervention on communication levels of at-risk infants
- To promote discussion about assessment and early intervention for infants

METHODS

Participants: 11 infants, between 6 to 13 months of age during initial intake assessment
- Infant behavior coded from approximately 6 minute video segments of Pre-Treatment and Post-Treatment Telehealth AOSI and IGDI Communication assessments
- Coding was reliability tested
- Behavior coded:
  - Vocalization
  - Single Word
  - Multiple Word
  - Gestures
    - Deictic
    - Conventional
    - Representational
- Gestures were coded only if they displayed communication with their parent

RESULTS

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Treatment</th>
<th>Pre-Tx</th>
<th>Post-Tx</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Minimum</td>
<td>Maximum</td>
<td>Standard Deviation</td>
</tr>
<tr>
<td>Mean IGDI Communication Pre-Treatment</td>
<td>11</td>
<td>4.00</td>
<td>42.00</td>
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<tr>
<td>Mean IGDI Communication Post-Treatment</td>
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<td>11.00</td>
<td>56.50</td>
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</tbody>
</table>

Figure 1: Telebaby Study Structure: Important to note that Pre-Treatment (Pre-Tx) Assessment were in two parts 1a and 1b, as well as Post-Treatment (Post-Tx) into 2a and 2b

Figure 2: Scatter Plot of IGDI Communication Mean from 1a & 1b Pre-Treatment Assessment

Figure 3: Graph Data of IGDI Communication Means in both Pre-Treatment Assessment, and Post-Treatment assessment: WC Score for 1a & 1b were averaged, WC Score for 2a & 2b were averaged to present this data

Figure 4: Descriptive Statistics of IGDI Communication Pre-Treatment and Post-Treatment

SUMMARY

- Results show a comparable difference between Pre-Treatment and Post-Treatment IGDI Communication measures
- Infants had significantly higher communication levels by the second assessment (p<0.05)
- Upward trend of communication can indicate improvement based off of treatment, and can be used as a basis for further studies within the area of infant communication and parent-coaching
- Although results show a promising correlation between parent-coaching treatment and IGDI communication levels, it will take 12+ months before any acknowledgement of correlation between this infant assessment and a future diagnosis of ASD or any developmental delay
- Demographic data like SES and Race/Ethnicity is not presented

DISCUSSION/ PUBLIC HEALTH IMPLICATIONS

- The findings for this study provides leverage for further research into indicators of developmental delay at the infant age
- This research also provides promising results of early intervention at a younger age than which it is currently implemented
- This early intervention can take the form of parent-coaching which could include providing the infant with a more enriching communicative environment as suggested in previous studies (Iverson, 2017)
- It should be noted that this study was conducted all through Telehealth communication, promoting the idea that effective developmental screening and parent-coaching treatment can be provided through this form of communication
- Utilization of Telehealth communication, could help to eradicate significant health disparities of ASD diagnosis found within communities due to lack of access

REFERENCES


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