Research Questions:

1. How many hours a week of intervention are public school districts providing students on the autism spectrum?
2. Which programs are school districts using for early intervention?
3. Are parents bridging the gap between intervention hours provided by the public school district and the number of recommended hours, and if so, how?

Research Predictions

- School districts are not providing the recommended year around 25 hours a week intervention.
- Parents are not satisfied with the services provided by the districts.
- Parents are providing additional interventions that are not provided by the school district.

Diagnosis

- Diagnosis of autism is done through observations of behavior for impairments in three areas:
  - Social interactions
  - Communication ability
  - Range of activity and interests

Learning Objectives

- Compare and contrast the National Academy of Sciences recommendations regarding early intervention to what is being provided in public school districts in Ohio and Michigan.
- Describe how parents help fill the gap between recommended hours and hours provided by school district.
- Recognize the gap between the recommendations and actual practices.
- Have an understanding of the difference in provision of services between school districts.
- Discuss with others what is being done in their school district in comparison to best practice recommendations.

This presentation will present information obtained during a doctoral research project completed in November of 2007. The presentation will describe if and how public school districts in Ohio and Michigan are following and meeting the National Academy of Sciences best practice recommendations regarding early intervention. The National Academy of Sciences recommends 25 hours a week, year around of one-on-one/small group early intervention as the key to overcoming many of autism’s limitations.
Freeman (1997) found that: differential and early diagnosis of autism is critical because the prognosis for autistic children has changed markedly since Kanner's (1943) initial work.

Identifying and diagnosing autism early can provide access to appropriate services which results in a better overall prognosis.

Children of all ages need to be taught the skills necessary for later academic success

EX: No Child Left Behind Act of 2001 with Early Reading First.

There is no known single cause for autism, but it is generally accepted that it is caused by abnormalities in brain structure or function.

“preschool children with any preschool participation significantly outperformed those without preschool.”

Importance of Early Intervention

competitive and successful nation and workforce . . .

more educational opportunities at an earlier age for more children (all children)

Early intervention for children with autism spectrum disorder is one of the most effective means of improving long-term social and academic outcomes

National Research Council, 2001
Cost of Autism

- The cost of behavior intervention is high due to the labor involved.
- Spending public funds on educating non-typical children is not a prudent expenditure.
- Early intervention for non-typical children is clearly cost-effective.

Target Population

- Rural, suburban and urban school districts in the Midwest states of Ohio and Michigan
- Parents of children aged 3 – 6 not yet in kindergarten that were identified as being on the autism spectrum.

Research Framework

The National Research Council’s 2001 report

*Educating Children with Autism*

School District State Location

- Michigan: 25
- Ohio: 70

School District Type

- Urban: 7
- Suburban: 16
- Rural: 34

Michigan
Ohio
Number with ASD 3-6 Not in Kindergarten

<table>
<thead>
<tr>
<th>Range</th>
<th>Michigan</th>
<th>Ohio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 10</td>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>11 - 20</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>21 - 30</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>31 - 40</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>More than 40</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Ohio Responses to “Other”:
- I do not know what specific intervention modality is employed
- We use bits and pieces of other programs and interventions as well, as required by individual student needs
- Preschool teachers use a variety of interventions and strategies to support the children with ASD. Our primary background is through the TEAACH methodology

Type of Early Intervention Program used for Students with ASD ages 3-6 and Not Yet in Kindergarten.

<table>
<thead>
<tr>
<th>Program</th>
<th>Michigan</th>
<th>Ohio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applied Behavior Analysis (ABA)</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Discreet Trial Training (DTT)</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>TEAACH</td>
<td>9</td>
<td>24</td>
</tr>
<tr>
<td>Floortime</td>
<td>7</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>25</td>
</tr>
</tbody>
</table>

Michigan Responses to “Other”:
- A combination of best practices and a pre school (ECDD) program that serves cross categorical children...
- Students are put into our Early Childhood Special Education Program where they receive interventions. If more interventions are needed students are reevaluated and given the help they need
- We use components of each/all of these plus other approaches, as the needs of the child and the decisions of the IEPT direct us

Number of Weekly Instructional Hours for ASD Students Not Yet in Kindergarten

<table>
<thead>
<tr>
<th>Hours</th>
<th>Michigan</th>
<th>Ohio</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6-10</td>
<td>16</td>
<td>12</td>
</tr>
<tr>
<td>11-15</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>16-20</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>21-25</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>26 or more</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Days a Week Children With ASD ages 3-6 and Not Yet in Kindergarten Attend School.

<table>
<thead>
<tr>
<th>Days</th>
<th>Michigan</th>
<th>Ohio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>2 days</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>3 days</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>4 days</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>5 days</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Varies based on IEP</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
Weeks a Year Children With ASD ages 3-6 Not Yet in Kindergarten Attend School

- 18 weeks or less: Michigan 2, Ohio 0
- 19 - 36 weeks: Michigan 10, Ohio 4
- 36 or more weeks: Michigan 36, Ohio 15

Parent Survey by State

- Michigan: 6
- Ohio: 29

Type of Program Used by District

- Applied Behavior Analysis (ABA): Michigan 2, Ohio 4
- Discreet Trial Training (DTT): Michigan 0, Ohio 0
- TEAACH: Michigan 2, Ohio 3
- Floortime: Michigan 0, Ohio 1
- Not sure: Michigan 2, Ohio 2
- Other: Michigan 7

“Other” Programs

- Mixture of things I assume
- I have not seen evidence of any of the above being carried out according to protocol.
- The public school in our district was not trained in any approach, so we switched to the local parochial school with an aide hired by us. We pulled our child out of the public special needs preschool after they lost him for a period of time when he wandered away. He spent most of the year staring out the window.
- Inclusion preschool with typically developing students ratio ~1:2 (4 special needs, 8 typically developing)

Parent by District Type

- Rural: Michigan 3, Ohio 9
- Suburban: Michigan 2, Ohio 13
- Urban: Michigan 1, Ohio 7

Weekly Hours Child Attends School

- 0-5 Hours: Michigan 0, Ohio 2
- 6-10 Hours: Michigan 2, Ohio 3
- 11-15 Hours: Michigan 0, Ohio 10
- 16-20 Hours: Michigan 8, Ohio 0
- 21-25 Hours: Michigan 5, Ohio 1
- 26 or more Hours: Michigan 2, Ohio 2
### Days a Week Child Attends School

![Bar chart showing the number of days a week children attend school in Michigan and Ohio.](image)

- 1 day: Michigan 1, Ohio 1
- 2 days: Michigan 1, Ohio 0
- 3 days: Michigan 4, Ohio 3
- 4 days: Michigan 16, Ohio 8

### Parent Comments

- **We did have private therapies for our son.** Speech and Occupational, but insurance did not cover so we had to drop due to the expense.
- **We spend a lot of time and money to help our son b/c the school does not provide....**
- **We also pay privately for an aide to accompany our son to his preschool five days a week.**
- **Took him out of public school and put him in private with the Ohio Autism Scholarship but I still will have to pay $280/month on top of the $20,000 per year that the scholarship pays!**

### Number of Weeks a Year Child Attends School

![Bar chart showing the number of weeks a year children attend school in Michigan and Ohio.](image)

- 18 or less: Michigan 1, Ohio 1
- 19 - 36: Michigan 2, Ohio 3
- 36 or more: Michigan 15, Ohio 13

### Recommendations for Further Research

- **Catalyst for other researchers to evaluate what is going on in other areas of the country.**
- **More detailed information from parents regarding types of interventions services their child received prior to age three, how they learned about these services and how these services were provided and paid for.**
- **Look at the results of early intervention and the need for educational assistance of these same children in their latter school years.**

### Conclusion

- **There is no clear cut solution.**
- "This is an increasingly growing diagnosis, but funding has not kept pace with the student needs. The burden of providing special education services is continuing to be placed on the local tax payers, resulting in a battle between the school and community. The issue should be between the school and legislators."