



# The Effects of Integrating Typically Developing Siblings into Outpatient Occupational Therapy and Home Interventions

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## Introduction

- Child disability is increasing every year<sup>12</sup>
- Many children with disabilities have typically developing siblings (TDS).
- Siblings play roles such as playmate, peer, role model, and even caregiver<sup>7</sup>.
- TDS are rarely integrated into occupational therapy (OT) sessions
- Children with disabilities participate in family activities less<sup>1</sup>
- TDS of children with disabilities are more likely to experience:
  - emotional adjustment issues
  - feelings of anxiety & neglect
  - a responsibility to demand less parental attention<sup>3 5 11</sup>
- TDS integration shows improvements in <sup>7 8</sup>:
  - skill competency
  - social skills
  - sibling relationship
  - whole family play

## Methods

This mixed methods study took place at Children's of Alabama (COA) Outpatient Centers. Five participants were recruited via convenience sampling of the OT caseload.

Inclusion Criteria

- TDS age 2+
- At least one primary caregiver
- One child receiving OT at COA

Participant Info	TDS sex (age)	SOT sex (age)	SOT diagnosis
Participant 1	Female (7 yo)	Male (7 yo)	Cerebral palsy
Participant 2	Female (4 yo)	Male (4 yo)	Developmental delay
Participant 3	Male (6 yo)	Male (6 yo)	Cerebral palsy
Participant 4	Male (8 yo)	Male (13 mo)	L1CAM deletion
Participant 5	Male (10 yo)	Male (5 yo)	Choroid plexus papilloma

Procedures:

- Data was collected before and after 4-week intervention
- Pre-test and post-test:
  - Caregiver interviews
  - PedsQL self-report<sup>10</sup> (SR) (if applicable) and parent-proxy report<sup>10</sup> (PPR), which measures Health-Related Quality of Life (HRQOL)
- TDS attended the first of four+ OT sessions, treating OT integrated them into the session (i.e. reciprocal play, ways to help, games)
- Families used learned TDS integration strategies at home and reported on their experience

## Results

### Common Themes:

- Belief that siblings were heavily influential & high TDS involvement before and after the study.
- Belief that families with lower TDS involvement would benefit from sibling integration.

Interview results were overall positive.

- Mixed reports: 2/5 positive change, 3/5 little/no change
  - No negative changes
  - 3/5 caregivers reported that they did not notice any major changes
- PedsQL results were mixed – see table.
- 4/5 caregivers reported higher HRQOL for the TDS than the SOT.
  - Generally, PPR was higher than SR for the TDS and lower for the SOT.

Overall Change	TDS SR	TDS PPR	SOT SR	SOT PPR	Interviews	Journals
	↑	↓	↑	↓	↑	↑

Overall, none of the findings were statistically significant due to the small sample size. A Wilcoxon signed rank and effect size calculation revealed:

Effect Size	TDS SR	TDS PPR	SOT SR	SOT PPR	TDS vs. SOT SR	TDS vs. SOT PPR
	Very large	Large	N/A*	Large	Medium	Negligible

\*Effect size could not be calculated for SOT SR due to only one non-zero difference in paired scores.

## Discussion

The results of this study are consistent with existing literature.

- The sibling relationship was influential on the whole family<sup>4 7</sup>
- TDS take on a protective and nurturing role<sup>7</sup>
- TDS act as playmate, peer, role model, and encourager<sup>7</sup>
- Roles of the SOT appeared to vary depending on the severity of their condition, the age difference between siblings, and their cognitive level<sup>9</sup>
- More severe disability of the SOT = increased caregiver burden<sup>6</sup>

### Key Points

- Parents reported different HRQOL levels compared to child reports <sup>2</sup>
  - Parents rated TDS HRQOL higher than self-report<sup>3</sup>
  - Parents rated SOT HRQOL lower than self-report
- Despite decreases in PPR at post-test, PPR scored more closely to SR compared to pre-test.
- Comparison of PedsQL and interviews suggest parents are more aware of child HRQOL after family-centered interventions

## Limitations

- Small sample size - male SOT only, limited SOT SR
- Limited TDS attendance due to school
- TDS were already heavily involved
- Short intervention period
- QOL is difficult to measure objectively
- Short term conditions (ex: sickness) affected results

## Future Directions & Conclusion

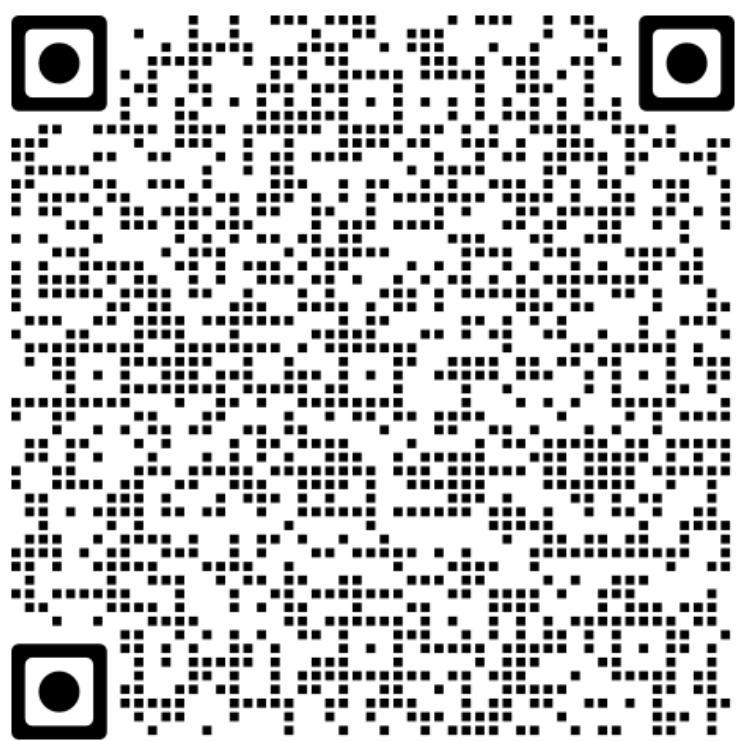
Sibling integration into OT should be further explored to determine longitudinal effects of similar interventions. Future directions include studies with:

- Larger sample sizes
- Longer intervention periods and more sibling integration sessions
- Families that report low TDS involvement
- Interviews and PedsQL for all siblings and caregivers
- Creating quantifiable values for score items on the PedsQL

### Conclusions

- Sibling integration in OT is a feasible and valuable intervention.
  - Client/family-centered
  - Focuses on occupational participation and role fulfillment
  - Encourages therapy carryover at home
- Sibling integration may improve quality of life and family participation.
- Parent perceptions of their children's quality of life may be inaccurate.
- Family-centered interventions appear to increase parent awareness of child HRQOL and the sibling relationship.

## References



## Acknowledgements & Contact Info

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