The Relationship Between the Number of Siblings and the Social Interaction Behaviours of Children with Severe Developmental Disabilities

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Background

•Children with developmental disabilities (DD)
  •desire to participate in social activities and have friends (Knight, Petrie, Zuurmond, & Potts, 2009);
  •report less participation in social recreational activities than typically developing (TD) peers (Solish, Perry & Minnes, 2010)

•Social skill deficits likely to increase barriers to inclusion for this population

•Early childhood peer relationships provide environment for children to learn and practice skills essential to social, cognitive, communicative, and emotional development (Guralnick, Neville, Hammond, & Connor, 2006)

•Mothers of children with DD have difficulty identifying friends for their young children
•Relationships between children with DD and peers often weak (Guralnick et al., 2006)
•Orsmond, Wyngaarden Krauss, and Mallick Seltzer (2004) report that only 8% of adolescents with autism had friendships

Purpose and Research Questions

This study is part of a larger project looking at the social inclusion of children with severe DD (Bebko, Perry, & Minnes, in progress)

•Due to limited opportunities for early peer relationships outside the home likely that, for children with DD, more social interactions will occur with siblings in the home

•Therefore, we investigated whether the number of siblings the child has is related to the child's social skills and their social inclusion in recreational activities outside the home

Hypotheses

•1. There is a positive relationship between number of siblings and proportion of time spent interacting with peers outside the home

•2. There is a positive relationship between the social skills of the child with DD and peer interactions in school and community settings

Method

Participants were children with severe DD (N=24, M_{age}=11, 71% male)
  (Three children eliminated from data analysis due to incomplete data)

A behavior coding scheme, developed for the Great Outcomes for Kids Impacted by Severe Developmental Disabilities project, was used to measure social interaction
 •Each child observed for 20 minutes in community or school settings by 2 of 7 independent coders
  •Coders recorded whether a child initiated an interaction with or responded to peers during observation
  •Inter-rater reliability high (>80%)

•Information on number of siblings (none, one, two, or three) extracted from parent interviews
•Social skills measured by three subscales from the Socialization domain of the Vineland Adaptive Behavior Scales, Second Edition (VABS-II), completed by parents in questionnaire format

Results

SIBLINGS

As expected, target children with no siblings exhibited the lowest social interaction rates in school and community settings
  •However, relationship between siblings and social interactions was non linear
  •Proportion of social **initiations** peaked at two siblings, **responses** peaked at one sibling
  •**Children with three siblings had surprisingly low proportions of responses**
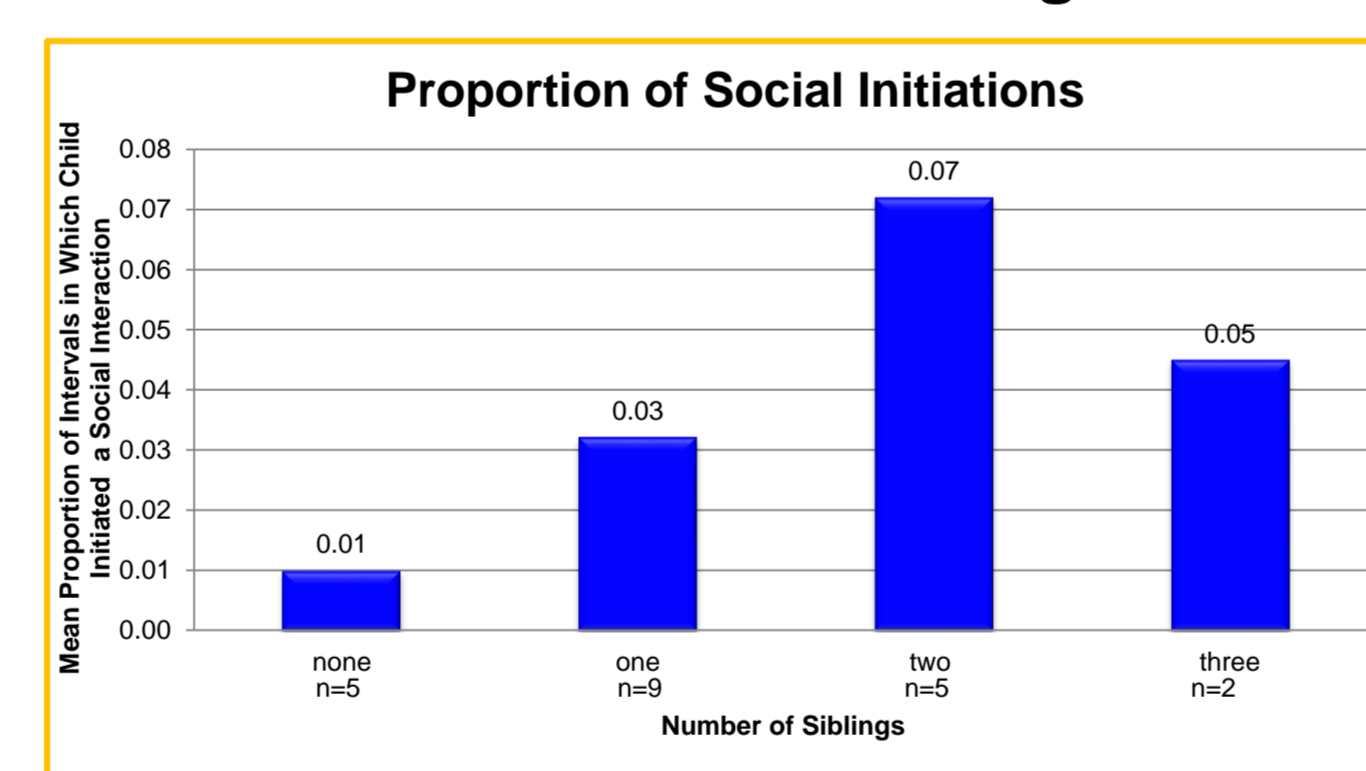
Children with two siblings were most likely to **initiate** social interactions in school and community settings.
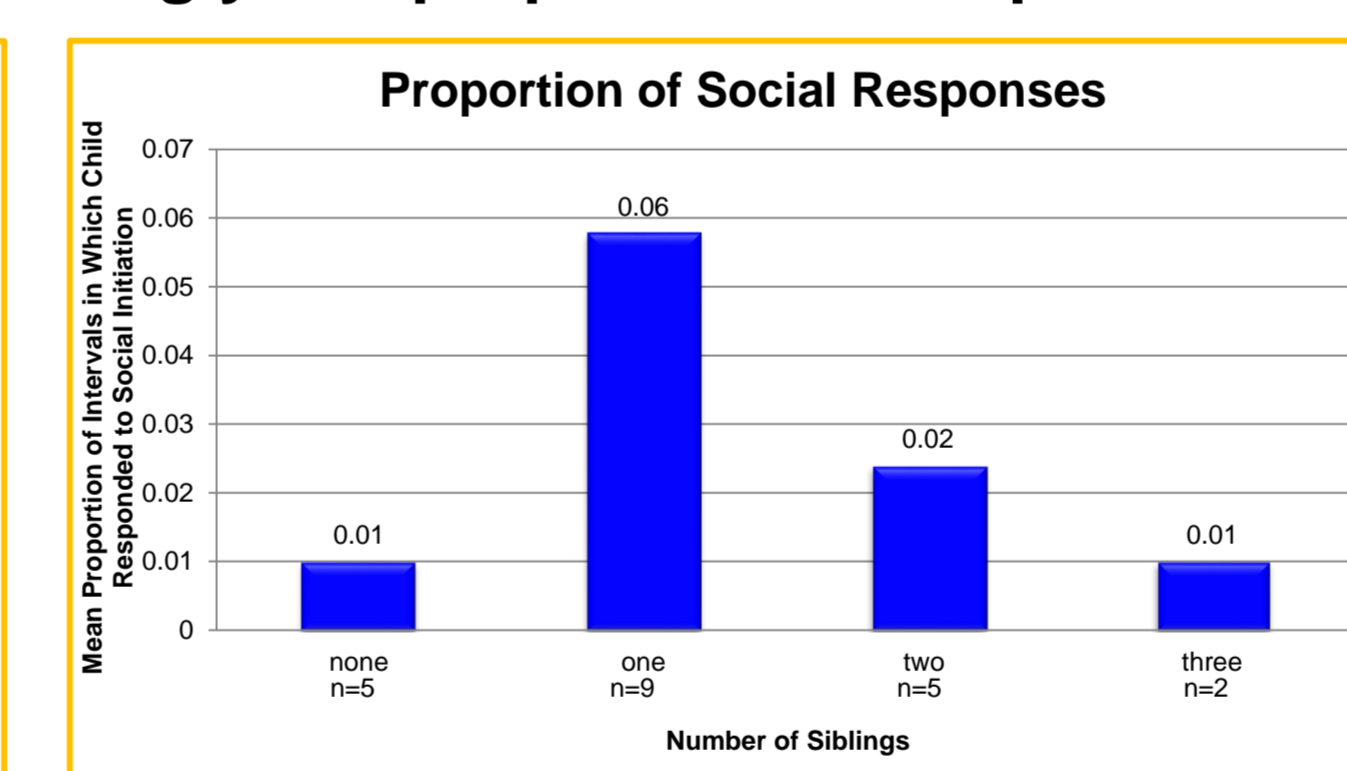
Children with one sibling were most likely to **respond** to peer initiations in school and community settings. Children with three siblings were equally as likely to respond to peer initiations as children with no siblings.

SOCIAL SKILLS

No significant relationship between number of siblings and social skill measures

Significant positive relationship between the number of initiations made by the target child and the Interpersonal Relationships v-scale score (r=0.45, p=0.04) and the Play and Leisure Time v-Scale score (r=0.50, p=0.02) of the VABS-II

No relationship between number of responses made by child and subscales of the socialization domain of the VABS-II

Discussion

Summary

•Relationship between number of siblings and proportion of time spent interacting with peers was non-linear

•Having siblings tends to be associated with better social interactions in school and community settings, with 1 or 2 siblings associated with better outcomes than none or 3 siblings (but n= 2 children in this subgroup)

•Social subscales of the VABS-II
  •Not related to number of siblings
  •Related to higher rates of initiating interactions with peers
  •Not related to responses in interactions with peers

Implications

•Low levels of interaction overall support need for interventions to improve social skills in children with severe DD

•For DD children with no siblings, play interventions with one or two peers may help develop skills needed to participate in social activities with larger groups of peers
  •Sibling and peer interventions found to be effective at improving social skills in children with DD
  •Gains from sibling and peer intervention generalize well across social conditions and maintain well across time (Ferriaoli & Harris, 2011; Kamps et al., 2002)

Limitations

•Small sample size (N=24) with unknown representativeness
•Observational data collection techniques subject to observer effect and observer bias
•Lack of objective data on nature of sibling relationships of sample children

Directions for Future Research

•Replication of findings with larger sample

•Exploration of nature of relationship between number of siblings and proportion of time spent interacting with peers outside home

  •How does nature of sibling relationships between TD and DD siblings differ as a function of total number of siblings in home?

  •Is proportion of time spent interacting with siblings related to proportion of time spent interacting with peers outside the home?

  •Are age and gender differences between TD and DD siblings relevant?