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Background

- Children with developmental disabilities (DD) desire friends (Knight, Petrie, Zuurmond, & Potts, 2009) but have fewer friends than typically developing (TD) children (Clifford, Lopes, Minnes, & Ouellette-Kuntz, 2008; Solish, Perry & Minnes, 2010)
 - Children with Autism Spectrum Disorders (ASD) may face additional difficulties because an ASD diagnosis is related to impairments in social interaction (APA, 2014).
- Friendships provide an environment for children with DD to practice skills essential to social, cognitive, communicative, and emotional development (Guralnick, Neville, Hammond, & Connor, 2006)
 - Important to understand nature of friendships for children with DD in order to facilitate positive development
- For children with DD, barriers to forming friendships may consist of:
 - child factors (e.g., language ability),
 - diagnosis-related factors,
 - or lack of facilitation of the social inclusion of children with DD in their communities.

Objective

- This study examines whether statistical relationships exist between child factors, diagnosis, and the number of friends the child has.
 - Child factors include age, language, and maladaptive behaviours (self injury, aggressive or destructive behaviours, and stereotyped behaviours)
 - Diagnostic categories include TD, ASD (most with comorbid DD), and DD (without ASD)
 - Number of friends: parents reported how many friends their child has

Method

- This project is part of the Great Outcomes for Kids Impacted by Severe Developmental Disabilities (GO4KIDDS) project
- The basic "report card" survey was administered (mostly online) to parents of children with severe DD
 - The survey contained items pertaining to the health, well-being, and social inclusion of the child as well as potential determinants of these outcomes
 - **Language Skills** were assessed using parent ratings on two items:
 - Receptive Language: "How much does your child understand spoken language?" (measured on a 5-point Likert scale)
 - Expressive Language: "How much does your child use spoken language to communicate?" (measured on a 5-point Likert scale)
 - **Maladaptive Behaviours:** parents were asked to rate how often their child had engaged in maladaptive behaviours such as aggression and stereotyped behaviours *in the past 2 months*.
 - Response options included "never", "monthly", "weekly", "daily", and "hourly"

Sample Demographics

	n	Age	Sex
TD	210	M=10.65	69% Male
ASD+DD	122	M=10.31	87% Male
DD only	86	M=11.43	51% Male

Results

Table 1
Relationships Between Child Factors and Number of Friends by Diagnostic Group

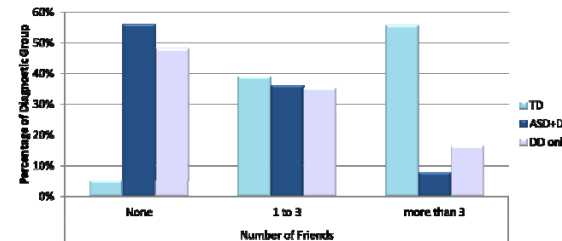
Diagnostic Group	Age	Receptive Language	Expressive Language	Aggressive Behaviours	Stereotyped Behaviours	Self-Injurious Behaviours
TD (n=210)	$r_s = .22^{**}$	$r_s = .60^{**}$	$r_s = .05$	$r_s = -.12$	$r_s = -.16^*$	$r_s = -.03$
DD only (n=86)	$r_s = -.25^*$	$r_s = .17$	$r_s = .24^*$	$r_s = -.01$	$r_s = -.13$	$r_s = -.13$
ASD+DD (n=122)	$r_s = -.22^*$	$r_s = .21^*$	$r_s = .36^{**}$	$r_s = -.00$	$r_s = -.17$	$r_s = -.09$

Note. * $p < .05$, two-tailed. ** $p < .01$, two-tailed.

Child Characteristics

- Compared to TD children, DD only and DD+ASD groups
 - had significantly lower receptive ($\chi^2=195.04$, $p < .001$) and expressive ($\chi^2=182.43$, $p < .001$) language skills.
 - were significantly more likely to engage in self-injurious behaviour ($\chi^2=68.55$, $p < .001$), aggressive or destructive behaviour ($\chi^2=76.39$, $p < .001$), and stereotyped behaviours ($\chi^2=182.23$, $p < .001$)

Number of Friends



The number of friends (none, one to three, or more than three) reported by parents of children in each diagnostic group (TD, ASD+DD, or DD only).

- DD only and DD+ASD children significantly less likely to have friends ($\chi^2=140.77$, $p < .001$) than TD peers.
 - No difference in number of friends between DD only and ASD+DD groups
- Compared to TD children, DD only and DD+ASD significantly more likely to be friends with other children with a DD
 - 48.7% of parents reported that child with DD had at least a few friends with DD
- Friendships of DD only and ASD+DD children more likely to be described as poor quality
 - 40.5% of parents of children in DD only and ASD+DD groups reported that the quality of their child's friendships was "very poor"

Discussion

- For all children, friendships are an important source of social support
 - They provide assistance, facilitate learning, and provide a sense of belonging (Overton & Rausch, 2002)
- Children with DD only and DD+ASD had significantly fewer friends than their TD peers
 - Interestingly, there was no difference in number of friends reported by children with ASD+DD when compared to children with DD only
 - Compared to TD group, DD only and DD+ASD more likely to have friendships rated as "poor quality"
- For TD children age was positively related to number of friends
 - For DD only and DD+ASD children age was inversely related to number of friends
 - Suggests younger children more likely to be inclusive of peers with DD only and DD+ASD than older children
- Though receptive language was not statistically related to number of friends for children with DD only, closer analysis of data revealed only DD children with "high" receptive language skills had friends
- Expressive language related to number of friends for children with DD only and DD+ASD
 - Highlights importance of expressive language interventions and alternative communication
- Interestingly, maladaptive behaviours not related to number of friends for children with DD only and DD+ASD
 - Could be because children with DD more likely to be friends with other children with DD and friends may also have maladaptive behaviours

Implications

- Parents of children with DD believe friendships enhance child's quality of life by contributing to the attainment of goals such as happiness, self-esteem, self-confidence, self-acceptance, and social competency (Overton & Rausch, 2002)
- Friendships also act as buffer against peer rejection and bullying (Humphrey & Symes, 2011; Overton & Rausch, 2002).
- Results suggest that increasing number of friends of children with DD should involve interventions for communication skills as well as attitudes of TD peers towards children with DD

Limitations

- Measures used were brief items included in larger survey, no psychometrics are available for these items
- Unequal group sizes
- "ASD+DD" vs. "DD only" may not be a clean dichotomy;
 - Groups may differ in other ways besides diagnosis
 - Results could be due to confounding variables such as cognitive, adaptive, and maladaptive level

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