

## Background

- In addition to the triad of impairments associated with autism spectrum disorders (ASD), approximately 70% of individuals with Autism also meet criteria for a co-morbid diagnosis of developmental disability (DD) due to deficits in cognitive ability and adaptive skills (Fombonne, 2003)
- Given these areas of difficulty, individuals with ASD and DD often demonstrate different **problem behaviours** (e.g., self-injurious behaviour, stereotyped behaviour, aggressive or destructive behaviour) and/or **mental health issues** (e.g., anxiety, compulsions)
- Rates of problem behaviour are close to 50% in individuals with ASD (Lecavalier, 2006) and between 10-20% in individuals with DD alone (McClintock et al., 2003)
- Few studies have reported on rates of problem behaviour in individuals with co-morbid diagnoses of ASD and DD
- Problem behaviours are more severe in older individuals with DD (Holden & Gitlesen, 2006)
- It is important that individuals receive treatment (e.g., participation in behavioural programs, medication, etc.) to reduce the frequency and/or intensity of such behaviours
- Needs of these individuals are often unrecognized and/or unmet (Liptak et al., 2006)
- Without treatment, problem behaviours are not likely to decrease (Horner et al., 2002)
- Formal behavioural methods shown to be most effective, yet non-evidence based methods (e.g., diets, etc.) and informal behavioural strategies are often used (Feldman et al., 2004; Condillac, 1997)
- Given the high frequency of problem behaviours and/or mental health concerns in these individuals, additional research regarding the frequency and treatment of such difficulties has important implications for service providers and policy makers and more importantly for improving outcomes for children with ASD and DD.

## Purpose and Objectives

- Document the frequency of four types of behavioural concerns (self-injurious, stereotypy, aggression, and mental health concerns) as a function of:
  - Diagnosis
  - Age
- Examine the treatment methods used to treat each type of behavioural concern across groups

## Method

### Participants

- Participants (n=182) were divided into four groups based on:
- Diagnosis (ASD + DD vs. DD alone)
  - Age (younger: 5-11 years vs. older: 12-18 years)

**Table 1: Participant Characteristics**

	Younger ASD + DD (n=54)	Older ASD + DD (n=43)	Younger DD (n=53)	Older DD (n=32)
Mean Age (SD)	8.26 (1.8)	14.81 (1.8)	8.30 (1.8)	14.75 (1.9)
Gender: Male	87%	70%	60%	53%

## Method

### Measure

#### GO4KIDDS Basic Survey

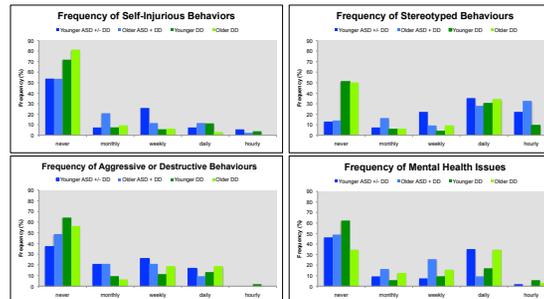
- Responses to a subset of questions (Rojahn et al., 1989) from the survey were examined.
- With regard to **self-injurious behaviours, stereotyped behaviours, aggressive or destructive behaviours, and mental health issues**:
  - How often in the **past 2 months** have you seen each of these behaviours in your child?
    - never \* monthly \* weekly \* daily \* hourly
  - If your child demonstrates any of the above behaviour/mental health issues, how are they **treated?** (*check all that apply*)
    - \* Not treated at all
    - \* Medication
    - \* Formal behavioural program
    - \* Informal behavioural program
    - \* Nonbehavioural strategies (e.g., diet/supplements, OT/PT, expressive therapies such as music, art, psychotherapy, etc.)
- No specific definitions regarding treatment were provided (i.e., parents interpreted what was meant by formal, informal, etc.)

## Results

### Question 1

Total Number of Different Types of Problem Behaviours	Younger ASD + DD (n=54)	Older ASD + DD (n=43)	Younger DD (n=53)	Older DD (n=32)
0	3.7%	4.7%	34%	25%
1	7.4%	25.6%	18.9%	25%
2	46.3%	27.9%	18.9%	12.5%
3	24.1%	16.3%	20.8%	25%
4	18.5%	25.6%	7.5%	12.5%

**Figure 1. Frequency of Different Types of Problem Behaviours/Mental Health Issues**



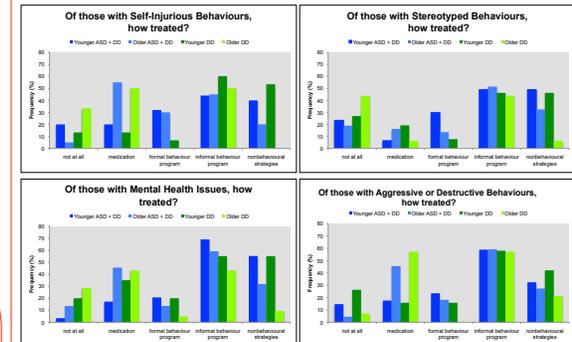
- Of the 182 children and youth represented in this project, 152 (83.5%) were identified as demonstrating some form of behavioural problem and/or mental health issue
- With the exception of mental health issues in the older DD group, stereotyped behaviours emerged as the most frequently identified behaviour across the four groups

## Results (cont'd)

- Four 2 X 2 (diagnosis and age) ANOVAs for the four behaviours/mental health issues showed only a main effect of diagnosis for self-injurious and stereotyped behaviours, indicating that children with ASD + DD demonstrate significantly more self-injurious and stereotyped behaviours than do children with DD alone

### Question 2

**Figure 2. Treatment Approaches Used for Children and Adolescents with Problem Behaviours/Mental Health Issues**



- Of the 152 individuals with identified behaviour problems/mental health issues, 147 (96.7%) were receiving one or more forms of treatment
- For those demonstrating behaviour problems/mental health issues, there appear to be more children and youth with ASD + DD receiving treatment than children and youth with DD alone
- Informal behaviour programs are the most frequently used form of treatment for behaviour problems/mental health issues across all four groups, with the exception of medication used to treat stereotyped and aggressive or destructive behaviours in older children with DD alone
- Formal behaviour programs are typically the least frequently used form of treatment for children and youth across all four groups

## Discussion

The findings of the current project are consistent with research that has shown that individuals with ASD and DD present with a variety of problem behaviours and/or mental health issues. Despite the research that has demonstrated that formal behavioural programs are the most effective, the most frequent form of treatment used within this sample was informal. Although we do not know why informal methods are the most frequent form of treatment used, it is our hypothesis that this is due to limited knowledge on the part of health care professionals, educators, and service providers, as well as limited availability of formal programming to appropriately treat these areas of difficulty. Further research is needed to examine the predictors of treatment choice. This research is currently being conducted through GO4KIDDS.

## Acknowledgments

- Data for this project were collected as part of the CIHR Team: GO4KIDDS: Great Outcomes for Kids Impacted by Severe Developmental Disabilities, Nominated Principal Investigator: Adrienne Perry, York University ([www.g4kids.ca](http://www.g4kids.ca)), which involves a series of studies on the health, well-being, and social inclusion of children with severe DD and their families
- Thank you to the parents/caregivers for participating
- The first author received a Studentship from CIHR Team: GO4KIDDS