# The Impact of Autism and Intellectual Disability on the Need for Restraint and Seclusion in Pre-Adolescent Psychiatric Inpatients

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## ABSTRACT

Background: Manual restraint and seclusion (R/S) are last-resort methods used in psychiatric hospitals to manage aggressive and disruptive behaviors. Prior research suggests that the need for R/S is higher in pre-adolescents than in adolescents, although these incidents tend to be very brief and may be qualitatively different from those involving adults or adolescents (Pogge, Pappalardo, Buccolo, & Harvey, 2011, 2013). In particular, it appears that this intervention may be required by children whose behavior is less responsive to the kinds of environmental controls provided by the therapeutic milieu of the hospital. Two groups of children who may require more of these brief physical interventions are those who are intellectually disabled (ID) or suffer from Autism Spectrum Disorder (ASD; Beck, Durrett, Stinson, Coleman, Stuve, & Menditto, 2008; Kraus & Sheitman, 2004). The purpose of this study is to investigate the role ID and ASD may play in the use of R/S with children in an inpatient setting. Methods: The records of 5-12 year olds (N=777; mean age=9.71) consecutively admitted to an acute inpatient hospital between July 2016 and June 2017 were reviewed by a multidisciplinary treatment team and assigned a consensus DSM-5 diagnosis ID and/or ASD on the basis of all available information. Each case was then examined for the number and total duration of R/S events during their episode of inpatient care. Results: In this sample 48 children were determined to meet DSM-5 criteria for ASD (6.2%), 295 met criteria for ID (38.0%), 73 met criteria for both ASD and ID (9.4%), and 361 did not meet criteria for either condition (46.5%). Of these, 410 experienced at least one R/S event (52.8%). One-way ANOVA of these four patient groups (ID, ASD, Both, Neither) indicated that they were significantly different (p<.000) on both number of R/S incidents and total duration of R/S. Planned comparisons (p<.000) revealed that ID and ID/ASD patients required significantly more of these interventions than ASD patients without ID or patients with neither condition. Multiple regression analysis indicated that the effect of ID on R/S remained significant even when age is controlled. Conclusion: Previous research has indicated that R/S events involving pre-adolescents occur much more frequently but they are of much shorter duration than those involving adolescents or adults. These data suggest that a major factor contributing to the need for this intervention is intellectual disability (ID). Since prior studies suggest that the admission of ID children to psychiatric settings is on the rise (Pogge, Stokes, Buccolo, Pappalardo, & Harvey, 2014), these data suggest the need for specialized programs to address the unique challenges of treating ID children in psychiatric settings, in the hope that this may reduce the need for this sort of intrusive physical intervention.

## Background:

- Disruptive and aggressive behavior is a common reason for psychiatric hospitalization in children.
- Physical restraint and seclusion are last resort interventions that are highly regulated but still commonly required.
- A complicating factor in current inpatient child and adolescent psychiatric care is the high proportion of cases who appear have intellectual disability (ID) as either a co-morbidity or a primary presenting problem.
- Recent studies have also suggested that children with autism spectrum disorder (ASD) are also more likely to require restraint and seclusion during hospitalization.
- The comorbidity of ASD and ID could be an even more significant complicating factor.

## Present Study:

- A year of consecutive admissions to a child inpatient treatment facility were reviewed to determine:
  - Prevalence of ID and ASD.
  - Frequency and duration of restraint and seclusion episodes.
- All cases were examined, regardless of length of stay or eventual treatment outcomes.

## Methods:

### Subjects:

- The records of 5-12 year olds (N=777) consecutively admitted to an acute inpatient hospital between July 2016 and June 2017 were reviewed by a multidisciplinary treatment team and assigned a consensus DSM-5 diagnosis ID and/or ASD on the basis of all available information.
- Average age of the sample was 9.7 years.
- Average length of Stay was 16.3 days, but the range of LOS was 1-216 days.

### Restraint and Seclusion Operationalization:

- Occurrences of manual restraint and seclusion were taken from the medical record.
- These were evaluated separately and defined in terms of number and duration of events.
- No mechanical restraint used.

### Data Analyses:

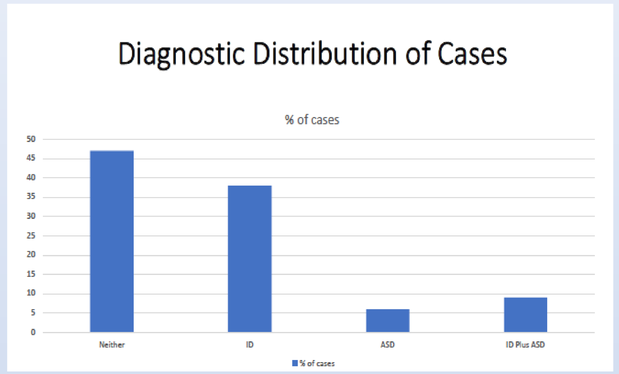
- We examined the association of diagnostic group (ASD, ID, Both, and Neither) with total number of restraint and seclusion (R/S) events, as well as total time in restraint and time in seclusion.
- We examined several possible covariates including age, sex, and length of inpatient stay.

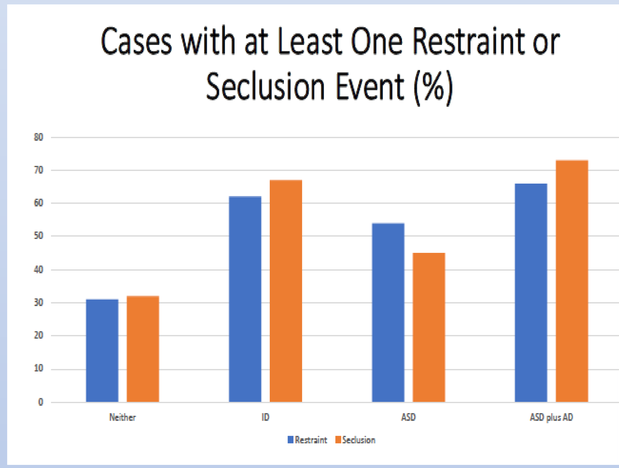
## Results:

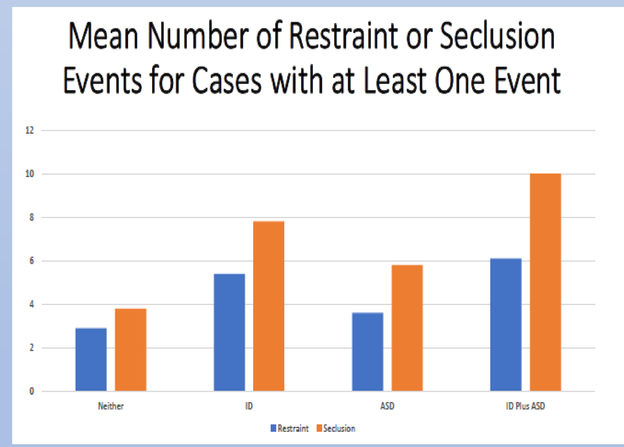
- 410 cases experienced at least one R/S event (52.8%).
- One-way ANOVA of these four patient groups indicated that they were significantly different (p<.000) on both number of R/S incidents and total duration of R/S.
- Planned comparisons (p<.000) revealed that ID and ID/ASD patients required significantly more of these interventions than ASD patients without ID or patients with neither condition.
- Multiple regression analysis indicated that the effect of ID on R/S remained significant even when age is controlled.
- Length of stay was correlated with restraint and seclusion frequency in all groups other than the dual-diagnosis group.

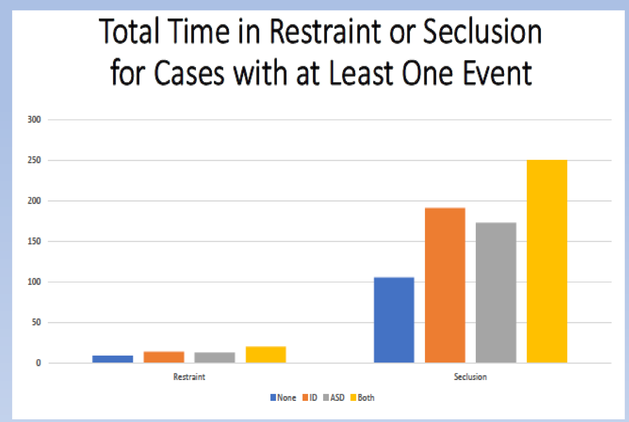
## Conclusions:

- ID was found to be very common in this sample, with almost 40% of the cases found to have ID with or without ASD.
- ID was a strong predictor of all aspects of restraint and seclusion.
- ASD alone did not lead to substantial differences in these interventions compared to patients with no developmental disorders.
- Management of ID in child inpatient psychiatric care appears to be quite important.

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