

# Prevalence and Clinical Features of Suicidal Ideation in Cognitively Able Children and Adolescents with Autism Spectrum Disorder

Scott L. J. Jackson, Kimberly S. Ellison, Elzbieta Jarzabek, Kathryn A. McNaughton, Talena Day, Max Rolison, James McPartland  
Contact: scott.jackson@yale.edu  
Yale Child Study Center, New Haven  
McPartland Lab: mcp.lab@yale.edu

## Background

- Findings regarding suicidal behavior in **adults** with autism spectrum disorder (ASD) are concerning, with abnormally high rates of suicidal ideation (66%) and suicidal plans/attempts (35%) being reported (Cassidy et al., 2014; Paquette-Smith, Weiss, & Lunskey, 2014).
- Since a history of suicidal behavior is one of the best predictors of future suicide attempts, it is critically important for researchers to investigate the prevalence, risk factors, and behavioral indicators of suicidal ideation in **youths** with ASD, so focused efforts can be made to identify those at risk and provide pre-emptive intervention.
- Previous studies examining suicidal behavior in youths with ASD are limited and inconsistent. In the studies that have examined this topic, the rates of suicidal ideation/thoughts have varied from 11% to 50% (Shatyermmann, 2008; Storch et al., 2013).
- Parent-report is often used to assess the rates of suicidal behavior for youths. In comparison to 0.5% of mothers of typically developing controls (TD), 13% -14% of mothers of children with ASD rated suicidal ideation or attempts as being "sometimes to very often a problem" for their children (Mayes et al., 2012).
- Some of the most common risk factors associated with suicidal ideation in TD children include: social isolation, impulsive/aggressive tendencies, and anxiety and/or depression; all of which are well-documented areas of difficulty for individuals with ASD (Mayes et al., 2012).

### Objective:

- The current study investigates prevalence rates and clinical features representing risk factors and/or warning signs for suicidal ideation in youths with ASD.

## Method

### Sample:

- The sample for this study was comprised of 34 youths with ASD (73.5% white) and 30 TD controls (63.3% white) matched on IQ and age:

	ASD (n=34)	TD (n=30)	Group Diff.	p
<b>Gender:</b>				
Male (Female)	28 (6)	15(15)	$\chi^2(1)=7.57$	<0.01
<b>Age:</b>				
Range	8 – 17 years old	8 – 17 years old		
Mean, SD	M=13.8, SD=2.88	M=13.0, SD=2.28	$F(1,62)=1.41$	0.24
<b>DAS-II GCA (IQ):</b>				
Range	79 – 161	87 – 129		
Mean, SD	M=103.9, SD=16.30	M=105.0, SD=11.52	$F(1,62)=0.09$	0.76

Note: DAS-II GCA = Differential Ability Scales (2<sup>nd</sup> edition), General Conceptual Ability

- ASD diagnosis was confirmed by a clinical team at the Yale Child Study Center using the *Autism Diagnostic Observation Schedule, 2<sup>nd</sup> Edition* (Lord, et al., 2012), the *Autism Diagnostic Interview, Revised* (Rutter et al., 2003), and clinical judgment.

## Method

### Measures:

- Suicidal Ideation** – Determined by parent-report of whether child "talks about killing self" over the past 6-months, as reported on the *Child Behavior Checklist* (CBCL; Achenbach & Rescorla, 2001).
- ASD Symptomology Severity** – *Social Responsiveness Scale, 2<sup>nd</sup> Edition*, Parent-Report (SRS-2; Constantino & Gruber, 2012).
- Emotional and Behavioral Problems** – CBCL, Parent-Report.
- Symptoms of Anxiety** – *Multidimensional Anxiety Scale for Children*, Parent-Report and Child-Report (MASC; March, 1999).

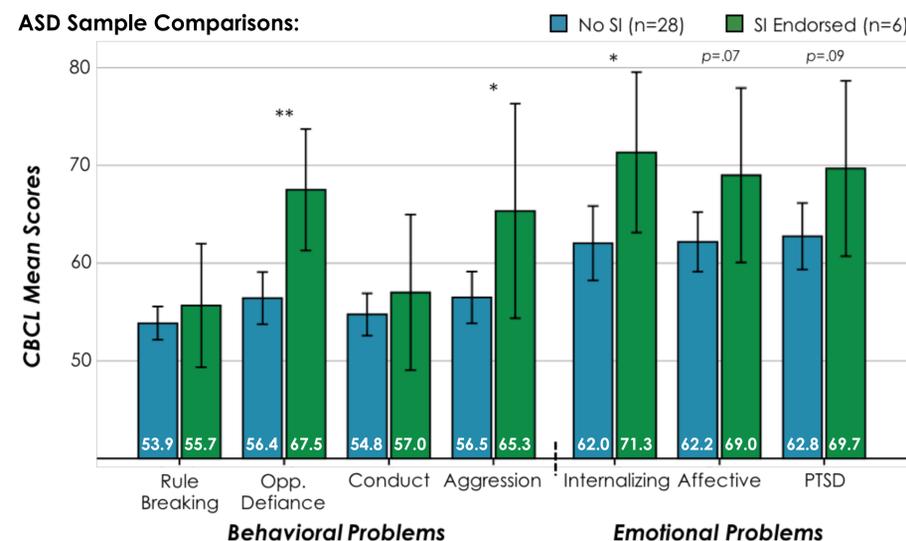
### Procedure:

- Data for this study was collected from 2013-2016 as part of a larger study conducted in the McPartland Lab at the Yale Child Study Center.
- Statistical analyses were conducted using IBM SPSS statistical software (ver. 24).

## Results

- Suicidal ideation (SI) was endorsed by **17.65%** of the youths with ASD (n=6).
- This was significantly greater [ $\chi^2(1)=3.73, p=0.05$ ] than the prevalence of SI reported for the TD control group (3.33%, n=1).
- In the ASD group, neither participant demographics (age, gender, ethnicity) nor ASD symptomology severity (SRS-2) were significantly associated with SI (0.28<ps<0.53), however, stronger cognitive abilities (DAS-II GCA) were marginally associated with a greater risk for SI (r=0.33, p=0.06).
- Based on CBCL scores, parents of youths with ASD who endorsed SI were more likely to report *behavioral difficulties* associated with **Oppositional Defiance** [ $F(1,32)=13.33$ ] and **Aggression** [ $F(1,32)=6.85$ ], and *emotional difficulties* associated with **Internalizing Problems** [ $F(1,32)=4.69$ ].

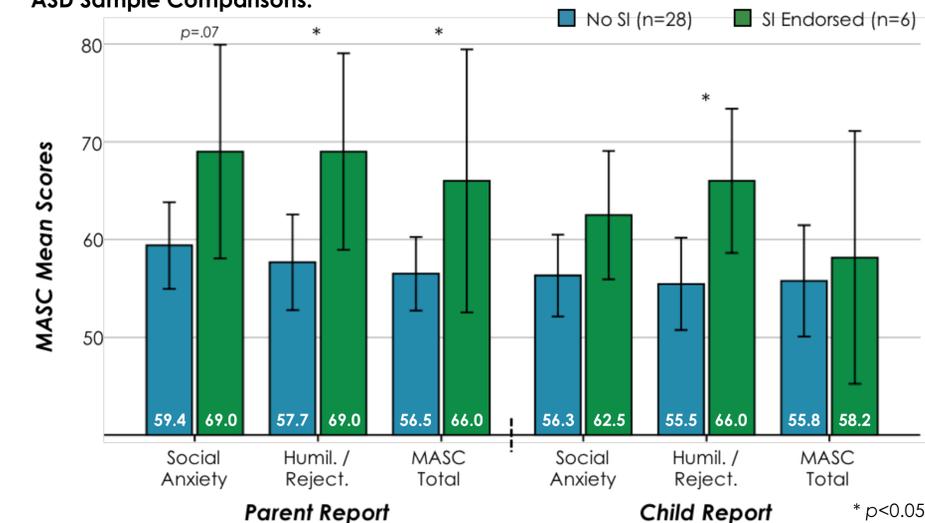
### ASD Sample Comparisons:



## Results

- Based on MASC scores, youths with ASD who endorsed SI reported greater concerns about feelings of **Humiliation and Rejection** [ $F(1,32)=4.12$ ], while their parents also reported greater perceived concerns with **Humiliation and Rejection** [ $F(1,32)=4.28$ ], and greater symptoms of **Total Anxiety** [ $F(1,32)=4.26$ ].

### ASD Sample Comparisons:



## Conclusions

- Results of this study support previous findings that rates of parent-reported suicidal ideation in children and adolescents with ASD are significantly higher than in their typically developing peers.
- Information about clinical features associated with suicidal ideation in youths with ASD provides valuable insights for:

**⚠ Risk factors:** Internalizing problems with depressive, anxious, and/or psychosomatic symptoms; elevated levels of concern over being teased and/or viewed negatively by others.

**⚠ Warning signs:** Increased emotional reactivity and/or oppositional behaviors; overt display of symptoms of depression and/or anxiety.

**THIS WAY → Guidance for future interventions:** Incorporate therapies aimed at increasing emotional awareness and facilitating the identification and communication of feelings and problems.

**THIS WAY → Insight into preventative efforts:** Identify problematic behaviors early; be prepared to address them as potential indicators of underlying emotional issues that may lead to suicidal thoughts or behaviors.

- Future research should examine this topic in larger samples and with standardized suicidal behavior assessments to expand upon these findings and provide further insights for clinicians and families.

### Funding Sources:

NIMH R01 MH100173 (McPartland)

NIMH 5T32 MH018268 (Crowley)