

Letters

RESEARCH LETTER

Suicidal Thoughts and Behaviors Among Children and Adolescents With Autism Spectrum Disorder

Identification of both autism spectrum disorder (ASD) and suicidal thoughts and behaviors (STBs) among children and adolescents (hereinafter, children) is increasing in the US. Suicide rates among children aged 10 to 14 years tripled between 2007 and 2021, becoming the second leading cause of death in the US for this age group.¹ Between 2018 and 2021, 315 suicides were reported among US children aged 5 to 11 years.¹ Individuals with ASD show increased rates of STBs, although prevalence estimates vary by study. Research on STBs among those with ASD is characterized by lack of knowledge about the developmental understanding of suicide and finality of death.² Given the increasing trend in STBs among preteens in the US and known elevated rates of STBs among those with ASD, this study examined age at onset of STBs among children with ASD.

Methods | Data were collected from May to October 2017 from responses to the Mental Health and Suicidal Behaviors Questionnaire, an online caregiver-answered survey created and distributed by the Interactive Autism Network (IAN). IAN was an international, web-based autism registry from 2006 to 2019 with approximately 55 000 participating families, including 21 000 children and 7500 adults with caregiver-confirmed, professionally diagnosed ASD at the time of this survey.³ This study was approved by the Johns Hopkins Institutional Review Board. All participants completed a consent waiver before beginning the survey. We followed the STROBE reporting guideline.

Respondents were caregivers of 8- to 25-year-old individuals with ASD. For the present study, inclusion criteria included caregiver-reported meaningful verbal ability of the child and a response to at least 1 question addressing STBs; questions and eligible responses are given in the Table. To explore age at STB onset, descriptive analyses were restricted to children aged 8 to 17 years. Statistical analysis was performed between August 7 and October 31, 2023, with R, version 4.2.3 (R Project for Statistical Computing).

Results | Responses from 968 caregivers of children with ASD were analyzed (mean child age, 13.4 [range, 8-17] years; 784 males [81.0%], 184 females [19.0%], and 821 White children [84.8%]). Of these, 530 (54.8%) were taking medications for emotional, behavioral, or mood-related problems.

Reported lifetime STB incidence was as follows: 392 (40.5%) reported wanting to die, 187 (19.3%) reported wanting to end their own life, and 72 (7.4%) reported having a suicide plan. Among those answering affirmatively to each of these questions regarding STBs, onset at 8 years or younger was re-

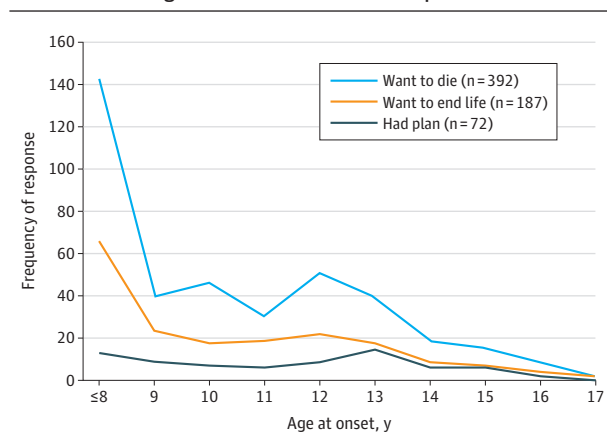
Table. Verbal Ability and Questions About Suicidal Thoughts and Behaviors in the Mental Health and Suicidal Behaviors Questionnaire

Question	Response options ^a
How would you describe (child)'s current verbal ability?	a. Meaningful, fluent speech b. Meaningful, phrase speech c. Meaningful, single words d. Nonmeaningful words or phrases only ^b e. Nonverbal ^b
Has (child) ever expressed any thoughts or feelings about wanting to die or not wanting to live anymore?	a. No b. Yes c. Don't know ^b d. Prefer not to answer ^b
Has (child) ever expressed any thoughts or feelings about wanting to end his or her life?	a. No b. Yes c. Don't know ^b d. Prefer not to answer ^b
Has (child) ever indicated that he or she had a plan to end his or her life?	a. No b. Yes c. Don't know ^b d. Prefer not to answer ^b
Has (child) ever tried to end his or her life?	a. No b. Yes c. Don't know ^b d. Prefer not to answer ^b

^a Affirmative answers to any of the questions about suicidal thoughts and behaviors were followed by questions about age at onset. An affirmative answer to the question about the child trying to end his or her life was also followed by a question about the method. Responses were coded as integer values representing age in years, with responses concerning children 8 years or younger grouped together.

^b Those with this response were excluded from evaluation.

Figure. Suicidal Thoughts and Behaviors (STBs) in Children and Adolescents Aged 8 to 17 Years With Autism Spectrum Disorder



Curves indicate responses to STB onset questions in the Mental Health and Suicidal Behaviors Questionnaire.

ported in 142 (36.2%), 66 (35.3%), and 13 (18.1%) children, respectively. The frequencies of caregiver-reported ages at STB onset are shown in the Figure. There was 1 suicide attempt by cutting in a child 8 years or younger.

Discussion | The findings of this survey study add to the literature on STBs among children with ASD² by indicating a possible earlier onset of STBs than what has been observed in typically developing youths.⁴ The disproportionate representation of White males in our sample of children with ASD is consistent with national literature,⁵ although we noted that this survey was not nationally representative. Other limitations include potential selection and recall biases. Caregiver report of STBs introduces another potential limitation, as there is known discordance between typically developing children and caregiver reports of STBs, and a meta-analysis⁶ found that estimates of STBs in self-reports of those with ASD were higher than estimates in parent reports.

Despite these limitations, the finding of early onset of STBs in children with ASD is notable, as this population has been underrepresented in prior suicide research and prevention initiatives. The unexpectedly high frequency of STBs among children with ASD who were 8 years or younger is particularly disturbing given the lack of validated suicide risk screening tools and interventions for this age group. Considering the high risk of STBs among individuals with ASD² and the increasing trends in STBs among young children,¹ future directions may include further phenomenological research on STBs in children with ASD to inform best practices for suicide prevention in this vulnerable group.

Benjamin Joffe Schindel, MD, MPH

Briella Baer Chen, PhD, MHS

Holly C. Wilcox, PhD, MA

Alison R. Marvin, PhD

J. Kiely Law, MD, MPH

Paul H. Lipkin, MD

Author Affiliations: Department of Neurology and Developmental Medicine, Kennedy Krieger Institute, Baltimore, Maryland (Schindel, Lipkin); Department of Special Education, Towson University, Towson, Maryland (Baer Chen); Department of Mental Health, The Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland (Wilcox); Autism Research and Engagement Core, Maryland Center for Developmental Disabilities, Kennedy Krieger Institute, Baltimore (Marvin); Maryland Center for Developmental Disabilities, Kennedy Krieger Institute, Baltimore (Law).

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Corresponding Author: Benjamin Joffe Schindel, MD, MPH, Department of Neurology and Developmental Medicine, Kennedy Krieger Institute, 716 N Broadway, Baltimore, MD 21205 (schindel@kennedykrieger.org).

Author Contributions: Dr Schindel had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: Baer Chen, Wilcox, Marvin, Law, Lipkin.

Acquisition, analysis, or interpretation of data: All authors.

Drafting of the manuscript: Schindel, Baer Chen, Wilcox, Lipkin.

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Additional Information: Dr Baer Chen was affiliated with the Interactive Autism Network, Kennedy Krieger Institute, during the design and data collection phases of this study.

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