Screening for Suicide Risk in Youth with Autism Spectrum Disorder and other Neurodevelopmental Disorders

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Overall Objectives

❖ Brief epidemiology of youth suicide

❖ Unique challenges in screening the ASD population
  ❖ And related populations, like ID

❖ Suicide risk screening tool instrument development overview

❖ Clinicians require population-specific and site-specific validated screening instruments
Youth Suicide in the U.S.

- 2nd leading cause of death for youth aged 10-24y
- 5,904 suicide deaths in 2015

Suicide Deaths among U.S. Youth Ages 10-24y

CDC WISQARS, 2016
Suicidal Behavior and Ideation

Suicidal Behavior
• ~2 million adolescents attempt suicide annually
  – 9% of high school students attempted suicide one or more times in the past year

Suicidal Thoughts
• 18% of high school students reported “seriously considered attempting suicide” in the last year
Younger Children and Suicidality

- Children under 12 yrs plan, attempt and die by suicide
  - 2\textsuperscript{nd} leading cause of death for 10-14 year olds
  - 10\textsuperscript{th} leading cause of death for children ages 5-11 years

CDC, 2015; CDC, 2016; Tishler, Reiss, & Rhodes, 2007; Natl Vital Stat Rep, 2006
Suicide in ASD populations

Medical & Psychiatric Conditions Among Adults with ASD

- Gastrointestinal disorders: 24% higher
- Hypertension: 42% higher
- Diabetes: 50% higher
- Obesity: 69% higher
- Sleep disorders: 90% higher
- Anxiety: 117% higher
- Depression: 123% higher

Image courtesy Lisa Croen, Kaiser Permanente Division of Research

Mayes, 2013; Richa, 2014
High Risk Factors

- Previous attempt
- Medical illness
- Mental illness
- Symptoms of depression, anxiety, agitation, impulsivity
- Exposure to suicide of a relative, friend or peer
- Physical/sexual abuse history
- Drug or alcohol abuse
- Lack of mental health treatment
- Suicide ideation
- Over age 60 and male
- Between the ages of 15 and 24
- Isolation
- Hopelessness
High Risk Factors for ASD population

- **Higher IQ**
  - IQ scores higher in suicidal youth than non-suicidal youth
  - Young people with ASD without comorbid ID at higher risk
  - Findings inconclusive

- **Comorbid Axis I disorders**
  - Psychiatric disorders correlated with elevated suicidal ideation and behavior.
  - 67% of adolescents with ID and/or ASD who expressed suicidal ideation met criteria for mood disorder

- **Recent psychosocial stressors for those with suicidal ideation**
  - 37% experienced loss in family
  - Less family and social support
  - Greater rejection, stress, and isolation
  - Difficulties with perspective taking

Ludi et al. 2012, Carlson et al. 1994; Walters 1995; Harris 2006; Coulter 1980
Can we save lives by screening for suicide risk? Experience from the medical setting
Underdetection

- Majority of those who die by suicide have contact with a medical professional within 3 months of killing themselves
  - 80% of adolescents contact within 3 months
  - Frequently present with somatic complaints

- **ASD population**: suicidal behavior may be overlooked due to diagnostic overshadowing and communication difficulties

Blum, 1996; Clark, 1993; Frankenfield, 2000; Gairin, 2003; Hannon & Taylor, 2013; Pan, 2009; Rhodes 2013
What are **valid** questions that nurses/physicians can use to screen pediatric patients for suicide risk?
Screening vs. Assessment: What’s the difference?

- **Suicide Screening**
  - Identify individuals at risk for suicide
  - Oral, paper/pencil, computer

- **Suicide Assessment**
  - Comprehensive evaluation
  - Confirms risk
  - Estimates imminent risk of danger to patient
  - Guides next steps
Ask Suicide-Screening Questions (ASQ)

• 3 pediatric EDs
  – Children’s National Medical Center, Washington, DC
  – Children’s Hospital Boston, Boston, MA
  – Nationwide Children’s Hospital, Columbus, OH

• September 2008 to January 2011

• 524 pediatric ED patients
  – 344 medical/surgical, 180 psychiatric
  – 57% female, 50% white, 53% privately insured
  – 10 to 21 years (mean=15.2 years; SD = 2.6y)

Horowitz et al. (2012) Arch Pediatr Adolsc Med
ASQ Study (con’t)

• Administered 17 candidate items:
  – “Have you ever felt hopeless, like things would never get better?”
  – “Do you feel like you might as well give up because you can’t make things better for yourself?”

• Administered gold standard: Suicidal Ideation Questionnaire (SIQ; Reynolds, 1987)

• Examined the least number of items with sound psychometrics

• Positive responses received psychiatric consultation
Sensitivity: 96.9% (95% CI, 91.3 - 99.4)
Specificity: 87.6% (95% CI, 84.0 - 90.5)

Negative predictive values:
- Medical/surgical patients: 99.7% (95% CI, 98.2 - 99.9)
- Psychiatric patients: 96.9% (95% CI, 89.3 - 99.6)

Results

• 98/524 (18.7%) screened positive for suicide risk
  – 14/344 (4%) medical/surgical chief complaints
  – 84/180 (47%) psychiatric chief complaints

• Feasible
  – 20 seconds
  – Non-disruptive to workflow

• Acceptable
  – Parents/guardians gave permission for screening
  – Over 95% of patients were in favor of screening

• ASQ is now available in the public domain
  – Translated into 8 languages

“What about screening kids with ASD?”

-Dr. Rachel Greenbaum

Surrey Place Centre
Literature Search Conclusion

• Patients presenting with suicidal thoughts present a high anxiety situation for clinicians
  – ASD patients present different challenges for clinicians

• Youth with ID and ASD have been excluded from research studies

• There are currently no standardized tools developed to screen for suicide risk in youth with ASD
Suicide Risk in Youth with Intellectual Disabilities: The Challenges of Screening

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ABSTRACT: Children and adolescents with intellectual disabilities (IDs), often diagnosed with comorbid psychiatric disorders, are a vulnerable population who may be at risk for developing suicidal thoughts and behaviors. Previous research has demonstrated that direct suicide screening can rapidly and effectively detect suicide risk and facilitate further clinical evaluation and management. Currently, there are no measures that screen for suicide risk designed specifically for individuals with ID. A review of the literature was conducted to (1) estimate the prevalence of suicidal thoughts, behaviors, and deaths by suicide in children and adolescents with ID; (2) describe associations between youth with ID and suicide risk; and (3) identify the limitations of commonly used suicide screening measures developed for non-ID youth. The literature review confirms that suicide risk exists in this population; youth with ID think about, attempt, and die by suicide. Standardized suicide risk screening is challenged by the lack of measures developed for this population. A summary of the findings is followed by a discussion of the practical clinical considerations surrounding the assessment of suicide risk in youth with ID.

Estimating Thoughts of Suicide in Youth with ASD

Talking About Death or Suicide: Prevalence and Clinical Correlates in Youth with Autism Spectrum Disorder in the Psychiatric Inpatient Setting

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Abstract  Little is known about suicidal ideation in youth with autism spectrum disorder (ASD), making it difficult to identify those at heightened risk. This study describes the prevalence of thoughts about death and suicide in 107 verbal youth with ASD with non-verbal IQ >55, assessed during inpatient psychiatric admission. Per parent report, 22% of youth with ASD had several day periods when they talked about death or suicide “often,” or “very often.” Clinical correlates included the presence of a comorbid mood (OR 2.71, 95% CI 1.12–6.55) or anxiety disorder (OR 2.32, 95% CI 1.10–4.93). The results suggest a need for developmentally appropriate suicide risk screening measures in ASD. Reliable detection of suicidal thoughts in this high-risk population will inform suicide prevention strategies.

Keywords  Autism spectrum disorder · Suicide · Inpatient · Suicidal ideation · Psychiatric patients · Screening · Autism Inpatient Collection (AIC)

Introduction

Suicide is an international public health crisis and the second leading cause of death for youth aged 10–24 years (Centers for Disease Control and Prevention 2015; World Health Organization 2014). While individuals with a variety of psychiatric diagnoses are at heightened risk for suicide, recent studies suggest that youth with autism spectrum disorder (ASD) are at elevated risk (Bennett 2016;
Summary of Findings

- Frequency with which their child has had periods lasting several days where he or she “talks about death or suicide” (Child & Adolescent Symptom Inventory, item #86)
- N=107, 10 yrs +, mean of 13, NVIQ ≥55, ADOS-2 + ASD
- Per parent report, 23% of youth talked about death or suicide “often” or “very often”
- Comorbid diagnoses:
  - **Mood disorder** – nearly 3 times more likely (Odds ratio: 2.71, CI: 1.12-6.55)
  - **Anxiety disorder** – over 2 times more likely (Odds ratio: 2.30, CI: 1.08-4.91)
  - **ADHD** – less likely (Odds ratio: 0.45, CI: 0.21-0.96)
Answering a Need

- Previously validated scales may not be applicable
- We do not know how the ASQ functions in people with ASD
- We need to validate the instrument in the ASD population
ASQ-ASD Multisite Instrument Development Study
Aim

- To test and adapt the ASQ for youth and adults with ASD
Instrument Development Study

- Collaboration with the Autism Developmental Disorders Inpatient Research Collaborative (ADDIRC)

- Sample: clients enrolled in the ADDIRC
  - Ages 12+
  - Diagnosed with ASD
  - Inpatient psychiatric treatment
Pilot Data

- Surrey Place Centre (Toronto, Ontario)
Summary

• Universal suicide risk screening for all youth in medical settings

• Clinicians require population-specific and site-specific validated screening instruments

• Youth with ASD at risk for suicide may go undetected, as there are no tools specifically created for ASD population

• We are currently testing the ASQ for implementation in the ASD population

• Screening studies can lead to evidence-based guidelines for screening and managing youth with ASD at risk for suicide
Thank you

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Questions?

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