A Contextual Approach to Mental Health and Autism

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Clinical Psychologist

Novartis U.S. Foundation Professor of Education, University of Virginia

Director, Supporting Transformative Autism Research (STAR)

Director, Blue Ridge Leadership Education in Neurodevelopmental Disabilities (LEND)

What is Mental Health?

- Emotional, psychological, & social well-being
 - Affects how we think, feel, and act
 - Affects how we handle stress, relate to others, & make choices
- Positive mental health helps us
 - Cope with life stress
 - Be physically healthy
 - Have good relationships
 - Work productively
 - Realize our full potential





Mental Health is a Priority

- Parent priorities for progress & outcomes in children with autism
 - Systematic review; consultation with parent advisory groups
 - Top 5 Priorities:
 - 1. Happiness
 - 2. Anxiety
 - 3. Hypersensitivity
 - 4. Self-Esteem
 - 5. Distress
- Autistic Adults and other Stakeholders Engage Together (AASET)
 - Stakeholder-driven project involving 350 autistic adults & other stakeholders
 - Top 3 Priorities:
 - 1. Mental Health
 - 2. Access to Healthcare
 - 3. Gender & Sexual Health

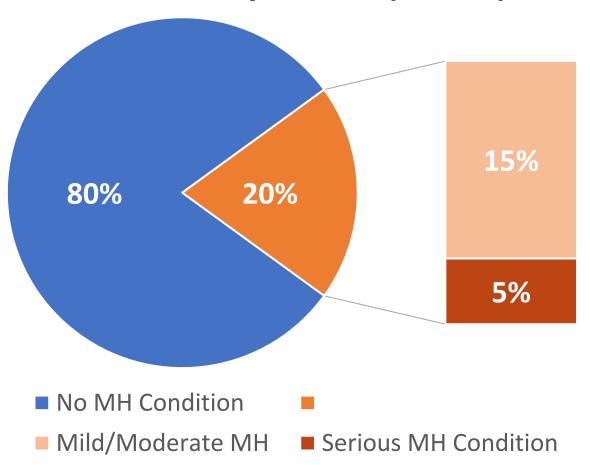


What are Mental Health Disorders?

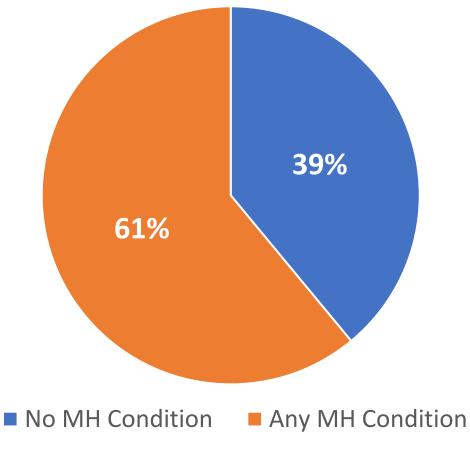
- Diagnosable mental health conditions, involving:
 - Significant difficulties in thinking, emotion, and/or behavior
 - Distress and/or problems functioning in day-to-day activities
- How common are mental health conditions?
 - Large-scale population studies and meta-analyses

Prevalence of Mental Health Conditions

General Population (Adults)



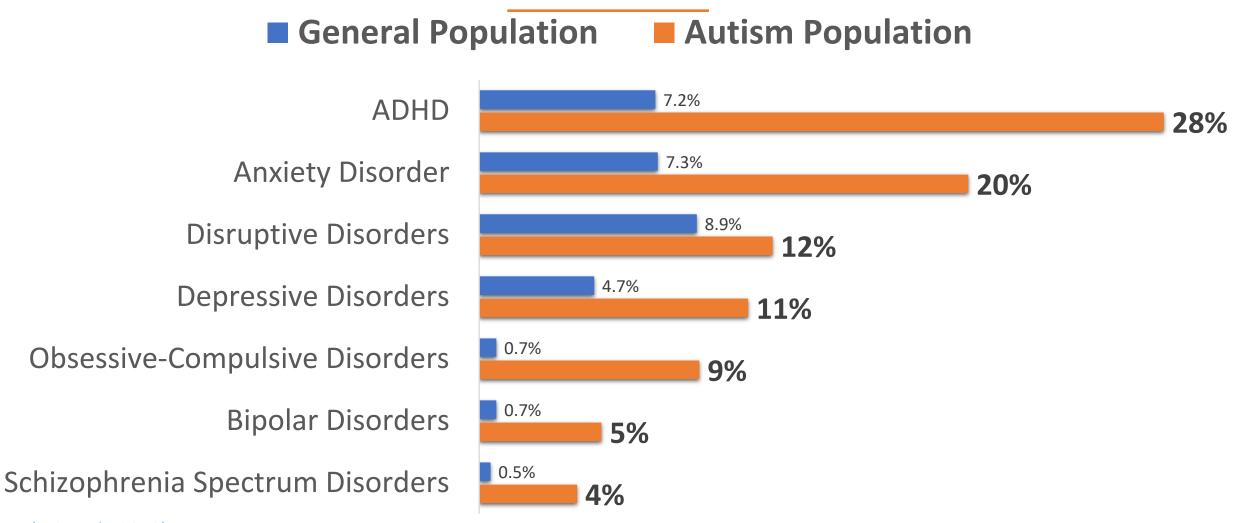
Autism Population (Adults)



(Center for Behavioral Health Statistics and Quality, SAMHSA, 2016)

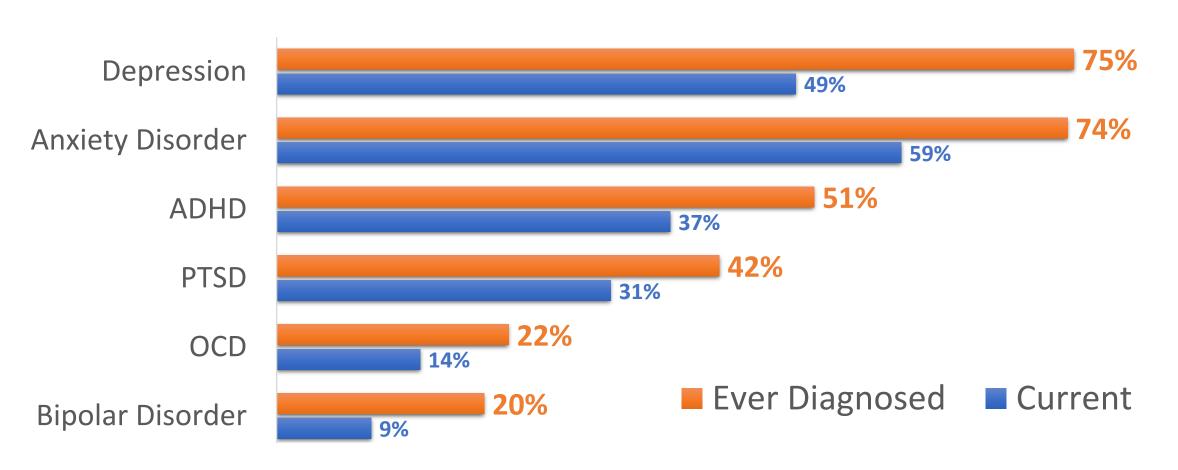
(Lugo-Marin et al, 2019)

Prevalence of Mental Health Conditions



(Lai et al., 2019)

Autistic Adults' Current & Lifetime Diagnoses



Mental Health Care Needs

- Despite high rates of mental health conditions, autistic children and adults face:
 - Significant <u>unmet</u> mental health care needs
 - Poor access to outpatient mental health services
 - Higher risk for emergency department and psychiatric <u>hospitalization</u>
 - Poor mental health <u>outcomes</u>

How can we address these needs?



First Step: Understanding the Issue

- What is the prevalence or scope of the issue?
- What factors may contribute?





Two Focus Domains

Externalizing Problems

Aggression & Disruptive Behavior



Internalizing Problems

Anxiety & Depression

Focus Area 1: Aggression & Disruptive Behavior

Prevalence of Aggression

Study 1: Simons Simplex Collection (SSC)

- 1380 children and adolescents with autism
- Ages 4-17

J Autism Dev Disord (2011) 41:926–937 DOI 10.1007/s10803-010-1118-4

ORIGINAL PAPER

Aggression in Children and Adolescents with ASD: Prevalence and Risk Factors

Stephen M. Kanne · Micah O. Mazurek

Study 2: Autism Treatment Network (ATN)

- 1584 children and adolescents with autism
- Ages 2-17



Contents lists available at SciVerse ScienceDirect

Research in Autism Spectrum Disorders

Journal homepage: http://ees.elsevier.com/RASD/default.asp



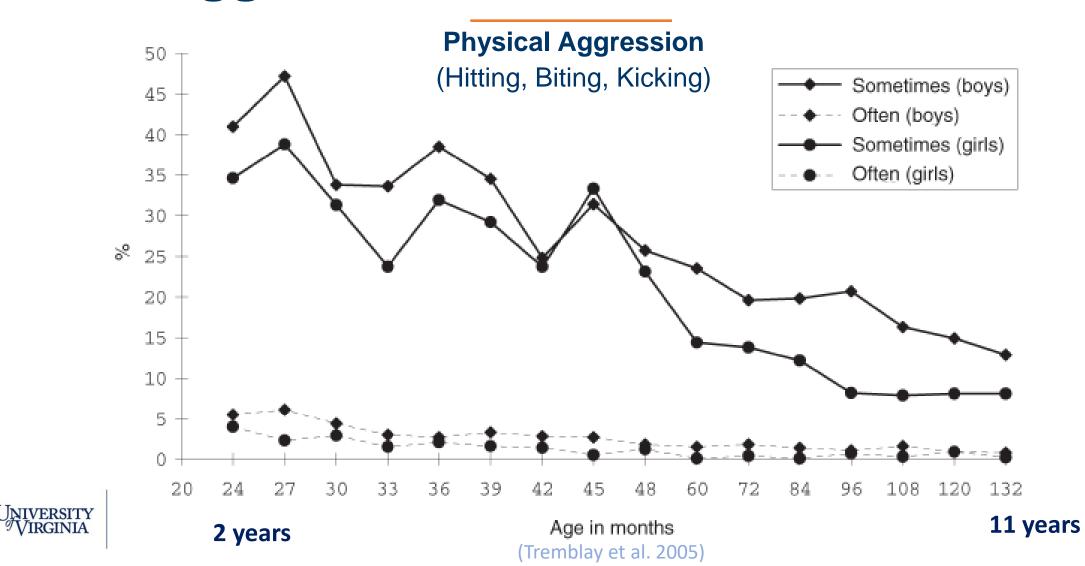
Physical aggression in children and adolescents with autism spectrum disorders

Micah O. Mazurek a,*, Stephen M. Kanne , Ericka L. Wodka b



SCHOOL of EDUCATION and HUMAN DEVELOPMENT

Aggression in Across Childhood

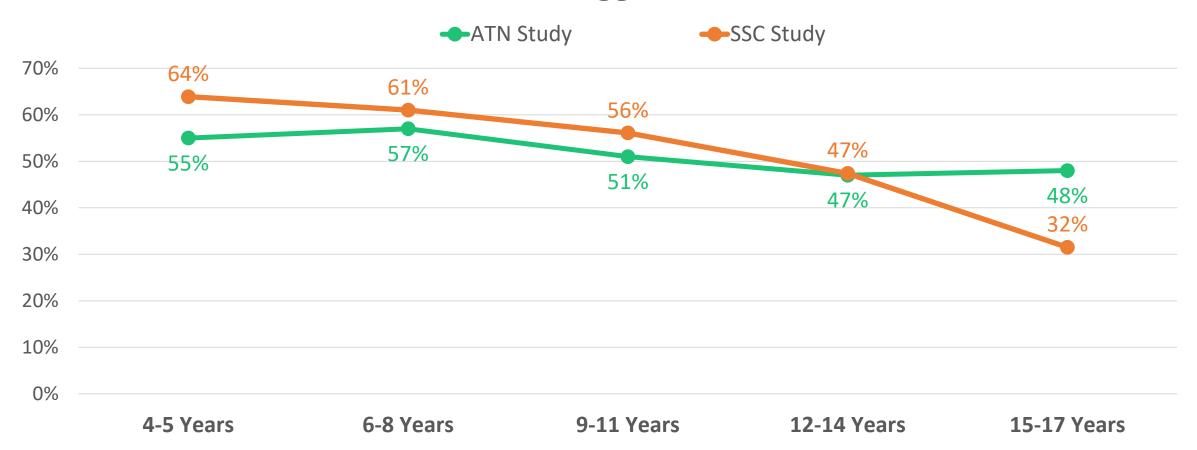






Prevalence of Aggression: Autism

Current Aggression



General Theories of Aggression

Biological

- Genetic predisposition
- Brain function
 - Brain regions responsible for emotional & behavioral control
 - Amygdala,
 - Prefrontal cortex
- Hormones and neurotransmitters

Physiological

- Arousal
 - Heart rate/blood pressure
- Physical discomfort



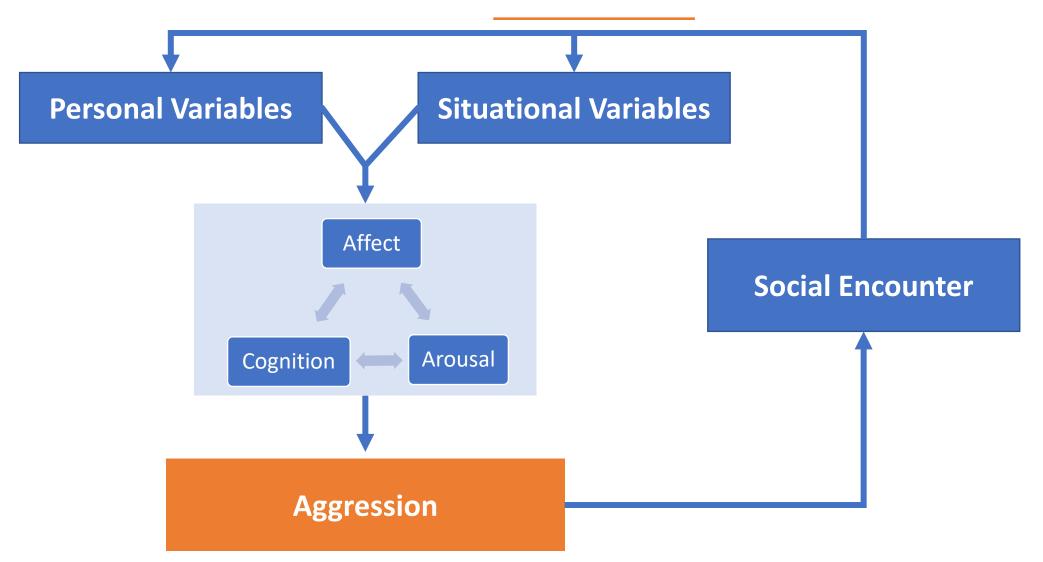


General Theories of Aggression

- Operant Learning
 - Behaviors are maintained by (or are a function of) the consequences that reliably follow them (Skinner, 1953)
- Observational Learning or Social Learning (Bandura, 1973)
 - Learning to behave aggressively by watching and imitating others
- Social Cognitive or Information-Processing (Huesmann, 1988; Dodge, 1980)
 - Aggression as outcome of social problem-solving process
 - Scripts or attributions guide behavior



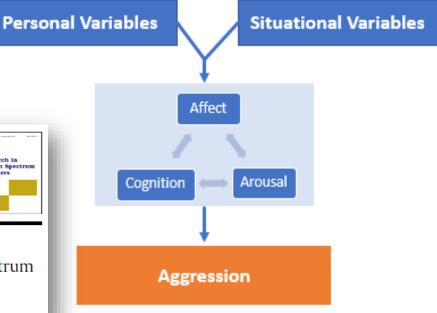
Meta-Theory of Aggression



Aggression in Autism

- Related Factors
 - Repetitive Behaviors, especially:
 - Stereotypic behavior
 - Ritualized behavior
 - Sameness behavior
 - Sensory Problems





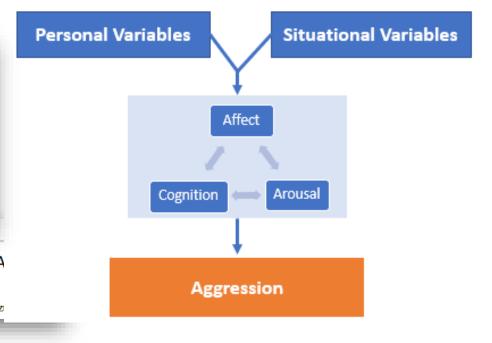
Aggression in Autism

- Related Factors
 - Sleep Problems
 - Gastrointestinal (GI) Problems
 - Anxiety
 - Seizures

Stephen M. Kanne · Micah O. Mazurek



Micah O. Mazurek a,*, Stephen M. Kanne a, Ericka L. Wodka



Aggression in Autism

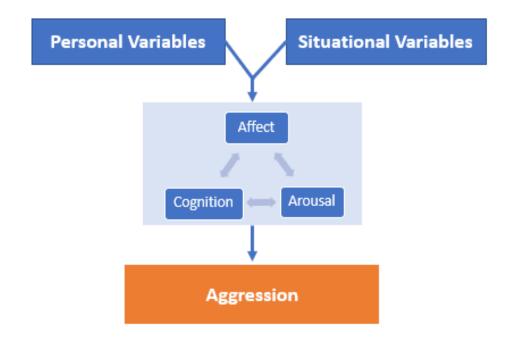
- Types of Aggression
- Greater likelihood of Reactive Aggression
 - Impulsive, "hot-tempered" aggressive response
 - Difficulties with Emotion Regulation
 - Difficulties Regulating Arousal

Aggression in children with autism spectrum disorders and a clinic-referred comparison group

Autism
2015, Vol. 19(3) 281–291
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1362361313518995
aut.sagepub.com

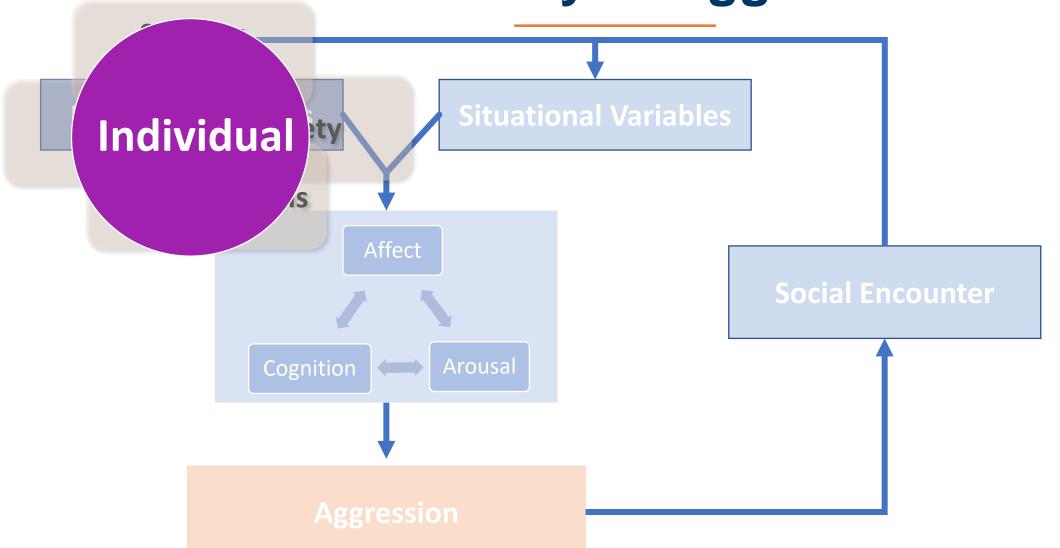
SSAGE

Cristan Farmer¹, Eric Butter², Micah O Mazurek³, Charles Cowan⁴, Janet Lainhart⁵, Edwin H Cook⁶, Mary Beth DeWitt⁷ and Michael Aman⁸



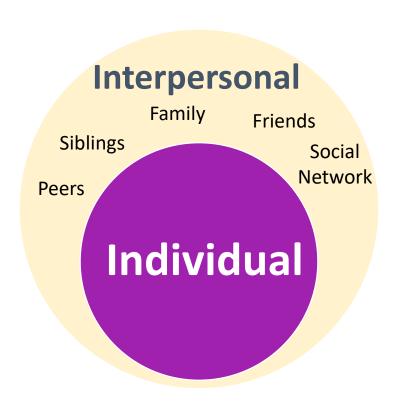
Meta-Theory of Aggression Sensory Problems **Situational Variables Anxiety** RRBs **Sleep Problems** Affect **Social Encounter** Cognition Arousal **Aggression**

Meta-Theory of Aggression

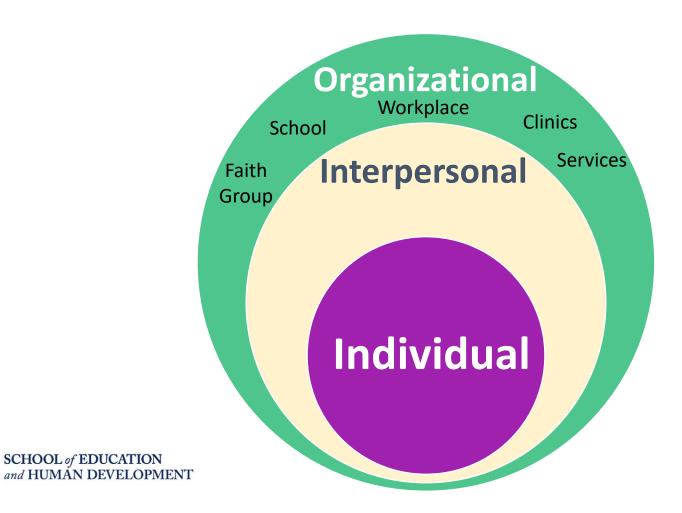










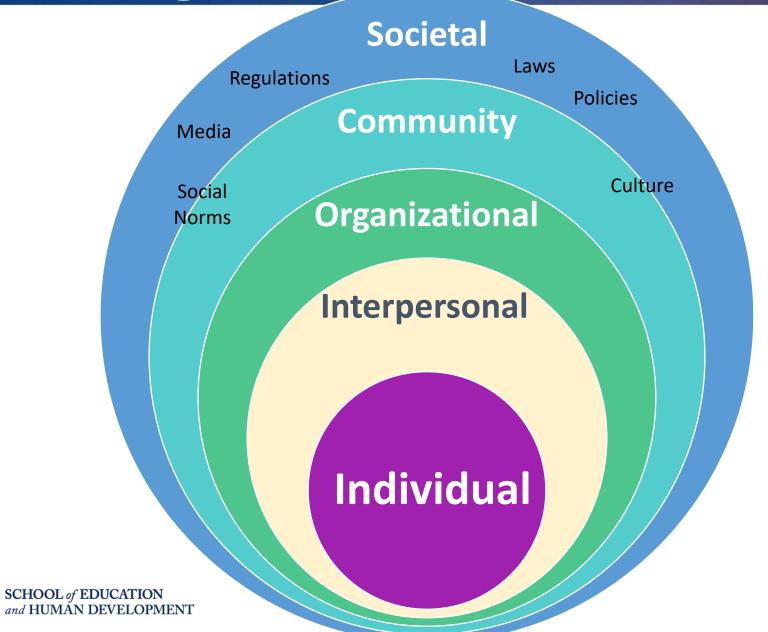




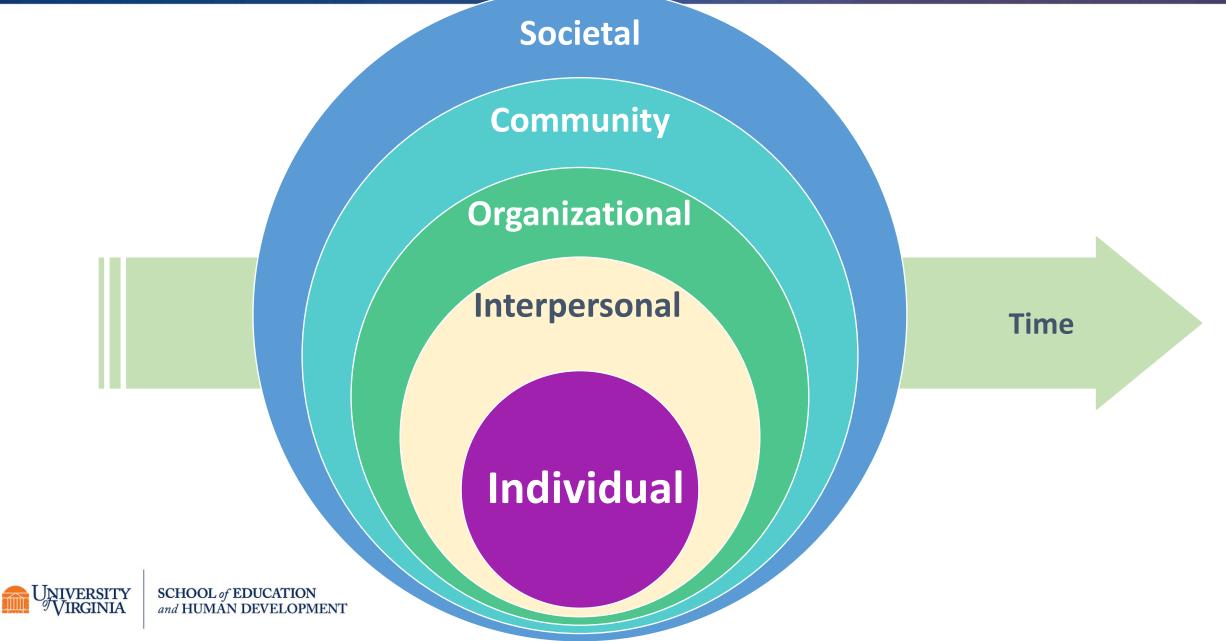
SCHOOL of EDUCATION

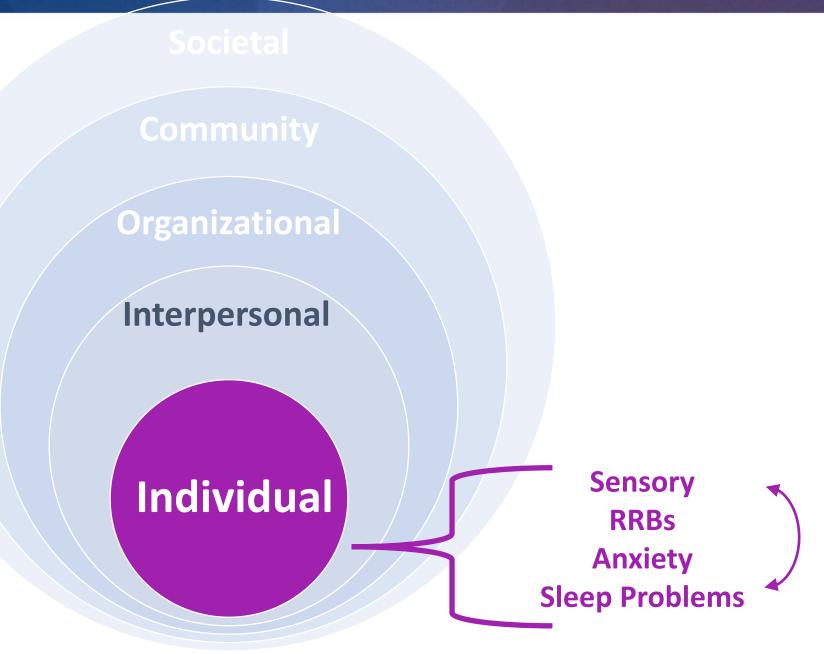


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Societal



Research in Autism Spectrum Disorders

Volume 85, July 2021, 101803

Relations among co-occurring psychopathology in youth with autism spectrum disorder, family resilience, and caregiver coping

Michelle Menezes ♀ ☒, Melissa F. Robinson, Sydney C. Simmons, Kathryn R. Smith, Nicole Zhong, Micah O. Mazurek

Community

Differential Effects of Child Difficulties on Family Burdens across Diagnostic Groups

Journal of Child and Family Studies 27, 872–884 (2018) Cite this article

Organizational

Interpersonal

Associations Among Autism Symptom Domains and Facets of Caregiver Strain

Sophie Brunt ☑, Rose Nevill & Micah O. Mazurek

Journal of Autism and Developmental Disorders (2023) Cite this article

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RESEARCH ARTICLE

The Social Ecology of Aggression in Youths With Autism Spectrum Disorder

Cynthia E. Brown D, Charles M. Borduin, Alex R. Dopp, and Micah O. Mazurek D

Caregiver Distress
Caregiver Coping
Family Relations
Peer Victimization

Societal

Community

Organizational

Interpersonal

Individual

Caregiver Distress
Caregiver Coping
Family Relations
Peer Victimization



Differential Effects of Child Difficulties on Family Burdens across Diagnostic Groups

Journal of Child and Family Studies 27, 872–884 (2018) Cite this article

Societal

ommunity

JARID

ournal of Applied Research in Intellectual Disabilities

bild
Published for the British Institut

Impact of multiple co-occurring emotional and behavioural conditions on children with autism and their families

Kristen Dovgan 🔀, Micah O. Mazurek

Caregiver Work Impact

Mental Healthcare
Access

Organizational

Interpersonal

Journal of Autism and Developmental Disorders https://doi.org/10.1007/s10803-022-05503-4

ORIGINAL PAPER

Emergency Department Utilization Among Youth with Autism Spectrum Disorder: Exploring the Role of Preventive Care, Medical Home, and Mental Health Access

Natalie M. Badgett^{1,2} • Elenora Sadikova¹ • Michelle Menezes¹ • Micah O. Mazurek¹

Individual

Societal

Community

Organizational

Interpersonal

Individual

Caregiver Work
Impact
Mental Healthcare
Access



SCHOOL of EDUCATION and HUMAN DEVELOPMENT

Societal

Community

Organizational

Interpersonal

Individual

Association Between Neighborhood Support and Family Resilience in Households with Autistic Children

Michelle Menezes [□], Jim Soland & Micah O. Mazurek

Journal of Autism and Developmental Disorders (2023) | Cite this article

Neighborhood Support

Screen-Based Media Use

Societal

J Autism Dev Disord DOI 10.1007/s10803-012-1659-9

Community

Television, Video Game and Social Media Use Among Children with ASD and Typically Developing Siblings

Micah O. Mazurek · Colleen Wenstrup

Organizat

Video game use and problem behaviors in boys with autism spectrum disorders

Micah O. Mazurek a,b,*, Christopher R. Engelhardt c

Video game access, parental rules, and Interpersona problem behavior: A study of boys with autism spectrum disorder

2014, Vol. 18(5) 529-537

SSAGE

Christopher R Engelhardt and Micah O Mazurek

Individual



Screen-Based Media Use

Caregiver Work Impact

Mental Healthcare
Access

Societal

Community

Organizational

Interpersonal

Individual

Neighborhood Support

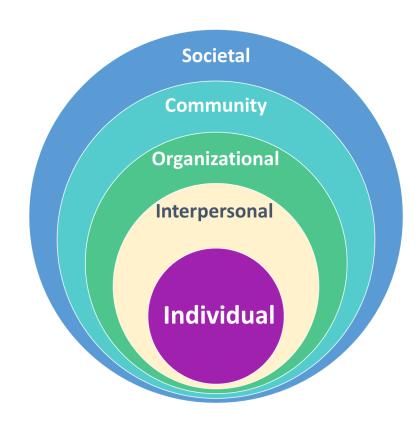
Caregiver Distress
Caregiver Coping
Family Relations
Peer Victimization

Sensory
RRBs
Anxiety
Sleep Problems



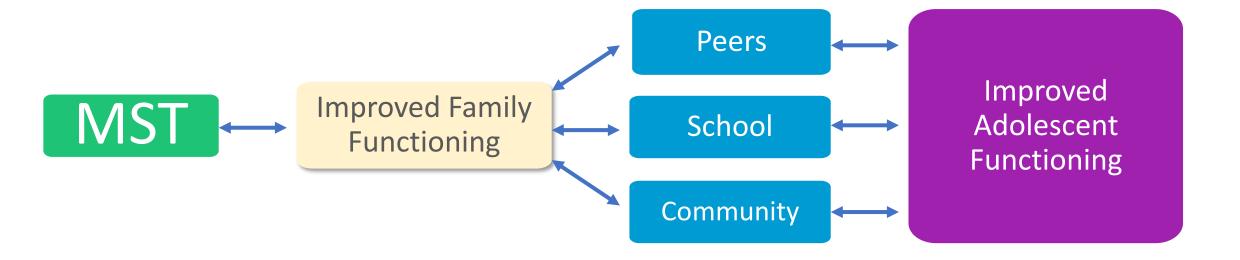
SCHOOL of EDUCATION and HUMAN DEVELOPMENT

- Need for comprehensive, coordinated, and family centered approach
 - Begin with careful assessment
 - Addressing underlying mechanisms
 - Understanding key factors across levels
 - Meeting needs across systems/contexts



- Example: Multisystemic Therapy
 - Based the ecological systems model





Societal

Community

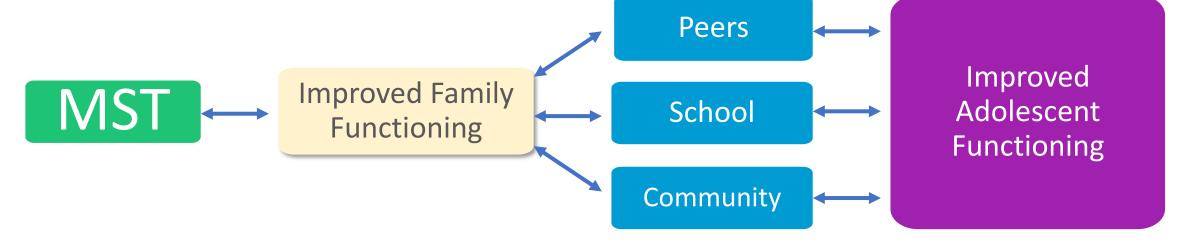
Organizational

Interpersonal

Individual

- MST Intervention Strategies
 - Behavior therapy
 - Parent management training
 - Cognitive behavioral therapy
 - Pragmatic family therapy
 - Pharmacological treatment

- MST Implementation
 - Therapy is done in home/community
 - Intensive approach, 3-5 month duration



Community
Organizational
Interpersonal
Individual

- Multisystemic Therapy for Youth with Autism
 - Pilot Study (n = 3)
 - Randomized Controlled Trial (n = 15): MST vs. Usual Care

Results

- Effects for MST (at 12-month follow-up)
 - Decreased aggressive behavior
 - Increased family adaptability
 - Increased family cohesion

Journal of Marital and Family Therapy doi: 10.1111/jmft.12012 July 2014, Vol. 40, No. 3, 319-331

> MULTISYSTEMIC THERAPY FOR DISRUPTIVE BEHAVIOR PROBLEMS IN YOUTHS WITH AUTISM SPECTRUM DISORDERS: A PROGRESS REPORT

David V. Wagner, Charles M. Borduin, Stephen M. Kanne, Micah O. Mazurek, Janet E. Farmer, and Rachel M. A. Brown EVIDENCE-BASED PRACTICE IN CHILD AND ADOLESCENT MENTAL HEALTH 2019, VOL. 4, NO. 1, 42–54 https://doi.org/10.1080/23794925.2018.1560237





Multisystemic Therapy for Disruptive Behavior Problems in Youths with Autism Spectrum Disorder: Results from a Small Randomized Clinical Trial

David V. Wagner 60°, Charles M. Borduinb, Micah O. Mazurekc, Stephen M. Kanned, and Alex R. Doppe

Focus Area 2: Anxiety & Depression



Anxiety & Depression

- Anxiety and depression are among the most common & concerning mental health conditions for autistic youth and adults
- What is the impact?
 - Reduced well-being
 - Reduced quality of life
 - Interference with day-to-day functioning
 - Increased risk for suicidality



Identifying Anxiety

Typical Types/Symptoms

- Social anxiety
 - Fear/anxiety about social situations
 - Fear of negative evaluation
- Generalized anxiety
 - Excessive worry
 - Physical/cognitive symptoms
- Specific phobia
 - Fear/anxiety about specific situation or object
 - Irrational or excessive



Autism-Specific

- Sensory-related anxiety
- Unusual phobias
- Excessive fears of change
- Compulsive or rigid routines
- Increased repetitive behaviors
- Agitation & avoidance



Identifying Depression

Typical Symptoms

- Depressed Mood/Sadness
- Loss of Interest or Pleasure
- Change in appetite
- Sleep problems
- Restless/slowing
- Fatigue
- Feeling worthless
- Trouble concentrating
- Thoughts of death or suicide

Autism-Specific

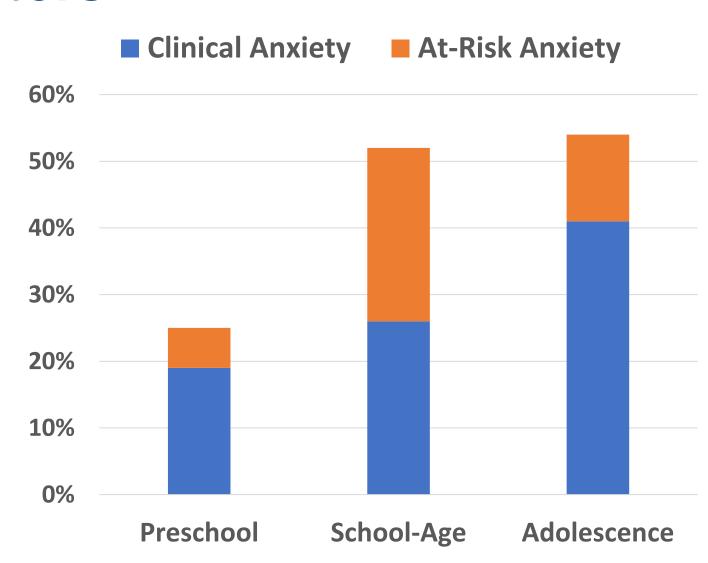
- Increased irritability
- Changes in special interest
 - Decreased pleasure
 - Increased intensity
 - Darker content
- Increased repetitive behavior
- Increased anxiety
- Increased aggression
- Reduced self-care





Age & Development







- Age & Development
- Social Communication
- IQ & Cognitive Ability

Friendship and Internalizing Symptoms Among Children and Adolescents with ASD

Micah O. Mazurek

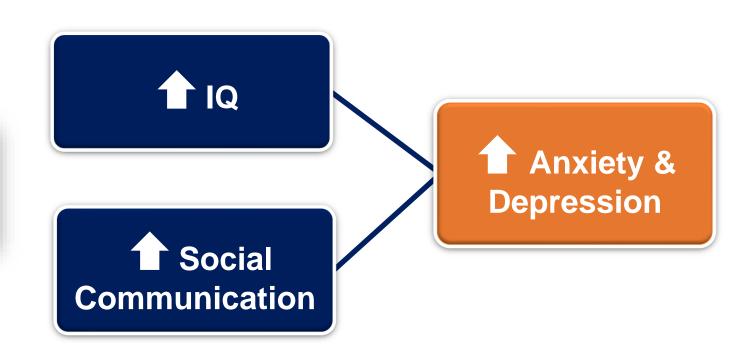
Stephen M. Kanne

Journal of Autism and Developmental Disorders 40, 1512–1520 (2010) | Cite this article

Age-related differences in the prevalence and correlates of anxiety in youth with autism spectrum disorders

Roma A. Vasa ^a ○ ☑, Luther Kalb ^b ☑, Micah Mazurek ^c ☑, Stephen Kanne ^c ☑,

Brian Freedman ^d ☑, Amy Keefer ^b ☑, Traci Clemons ^e ☑, Donna Murray ^f ☑





- Sensory Over-Responsivity
 - Correlated with anxiety
 - r = 0.45, p < 0.0001
 - Correlated with internalizing symptoms (e.g., depression & anxiety)
 - r = .51 p < .001



Research in Autism Spectrum Disorders
Volume 75, July 2020, 101573



Anxiety, Sensory Over-Responsivity, and Gastrointestinal Problems in Children with Autism Spectrum Disorders

Micah O. Mazurek [™], Roma A. Vasa, Luther G. Kalb, Stephen M. Kanne, Daniel Rosenberg, Amy Keefer, Donna S. Murray, Brian Freedman & Lea Ann Lowery

Journal of Abnormal Child Psychology 41, 165–176 (2013) Cite this article

Sensory over-responsivity, repetitive behavior, and emotional functioning in boys with and without autism spectrum disorder

Emily M. Istvan 🙎 🖂 , Rose E. Nevill, Micah O. Mazurek





- Longitudinal Relations
- Study 1
 - Children ages 2-17 (n=225)
 - 1-year follow-up



Research in Autism Spectrum Disorders

Research in Autism Spectrum Disorders

Volume 8, Issue 11, November 2014, Pages 1508-1515

One-year course and predictors of abdominal pain in children with autism spectrum disorders: The role of anxiety and sensory over-responsivity

Micah O. Mazurek ^a ♀ ☒, Amy Keefer ^b ☒, Amy Shui ^c ☒, Roma A. Vasa ^{d b} ☒

Sensory Reactivity & Anxiety



GI Problems



Research in Developmental Disabilities

Volume 83, December 2018, Pages 270-279



Individual

Individual-Level Factors

Predicting sleep problems in children with autism spectrum disorders

Amy M. Shui ^a Amy M. Shui ^a

- Longitudinal Relations
- Study 2:
 - 1210 children (ages 2-17)
 - 1-year follow-up
- Study 3
 - 437 children with ASD (ages 2-10)
 - 3.5-year follow-up

Anxiety & Depression



Sleep Problems

Journal of Autism and Developmental Disorders https://doi.org/10.1007/s10803-019-03894-5

ORIGINALPAPER



Course and Predictors of Sleep and Co-occurring Problems in Children with Autism Spectrum Disorder

Micah O. Mazurek¹ · Kristen Dovgan² · Ann M. Neumeyer³ · Beth A. Malow⁴

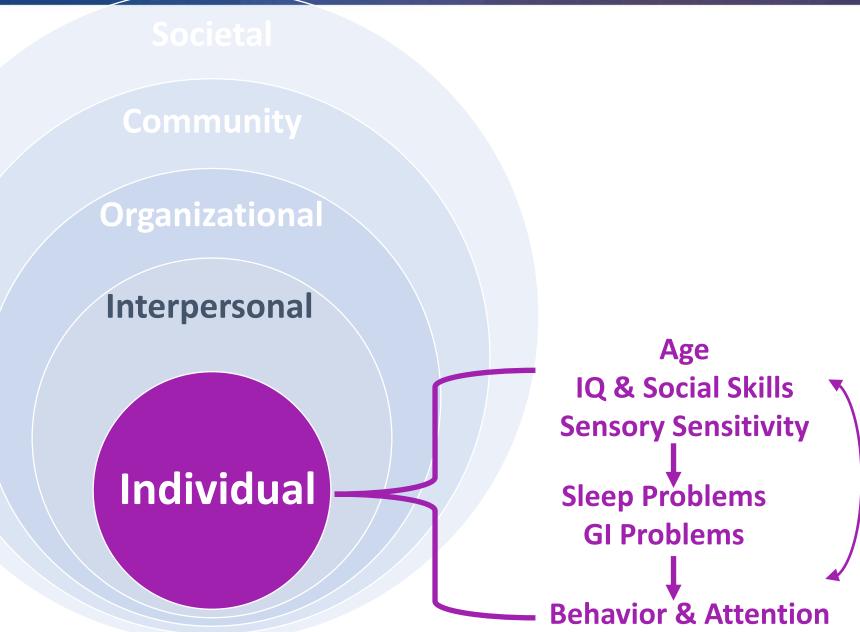
Sensory Reactivity & Anxiety



Sleep Problems



Inattention & Hyperactivity





SCHOOL of EDUCATION and HUMAN DEVELOPMENT

Societal

Community

Organizational

Interpersonal



Friendship and Anxiety/Depression Symptoms in Boys With and Without Autism Spectrum Disorder ⊘

Christina Harkins ≥; Michelle Menezes; Eleonora Sadikova; Micah Mazurek

Am J Intellect Dev Disabil (2023) 128 (2): 119-133.

Friendship and Internalizing Symptoms Among Children and Adolescents with ASD

Micah O. Mazurek [™] & Stephen M. Kanne

Journal of Autism and Developmental Disorders 40, 1512–1520 (2010) | Cite this article

> Autism. 2014 Apr;18(3):223-32. doi: 10.1177/1362361312474121. Epub 2013 Oct 3.

Loneliness, friendship, and well-being in adults with autism spectrum disorders

Micah O Mazurek 1

Relations among activity participation, friendship, and internalizing problems in children with autism spectrum disorder Autism
2019, Vol. 23(3) 750–758
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DOI: 10.1177/1362361318775541
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SSAGE

Kristen N Dovgan¹ and Micah O Mazurek²

Interpersonal

Relations among activity participation, friendship, and internalizing problems in children with autism spectrum disorder Autism
2019, Vol. 23(3) 750–758
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DOI: 10.1177/1362361318775541
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Kristen N Dovgan¹ and Micah O Mazurek²

Loneliness

Friendship Quality*
Number of Friends*



Research in Autism Spectrum Disorders

Volume 85, July 2021, 101803

Relations among co-occurring psychopathology in youth with autism spectrum disorder, family resilience, and caregiver coping

Michelle Menezes ♀ ☒, Melissa F. Robinson, Sydney C. Simmons, Kathryn R. Smith, Nicole Zhong, Micah O. Mazurek

Societal

Community

Organizational

Interpersonal

Caregiver Coping
Loneliness

Friendship Quality*
Number of Friends*



Autism in Adulthood > Vol. 5, No. 1 > Original Research Health Care Needs, Experiences, and **Perspectives of Autistic Adults** Micah O. Mazurek (D) M. Eleonora Sadikova, Nancy Cheak-Zamora (D), Amber Hardin, Kristin Sohi Beth A. Malow

MH Access Clinician Factors MH Strategies



Research in Autism Spectrum Disorders Volume 89, November 2021, 101862



Organizational

Interpersonal

Individual

They deserve the "same level of care that any other person deserves": Caregiver perspectives on healthcare for adults on the autism spectrum

Micah O. Mazurek ^a Q ⋈, Eleonora Sadikova ^a ⋈, Nancy Cheak-Zamora ^b ⋈, Amber Hardin ^a ⋈, Isabel Huerta ^a ⋈, Kristin Sohl ^c ⋈, Beth A. Malow ^d ⋈

Emergency Department Offization Among Touth with Autism Spectrum Disorder: Exploring the Role of Preventive Care, Medical Home, and Mental Health Access

Natalie M. Badgett . Elenora Sadikova, Michelle Menezes & Micah O. Mazurek

Journal of Autism and Developmental Disorders (2022) | Cite this article

Clinical Psychology Psychotherapy



RESEARCH ARTICLE Depen Access Co (1) (2) (5)



A mixed methods study of autistic adults' mental health therapy experiences

Micah O. Mazurek , Jessica Pappagianopoulos, Sophie Brunt, Eleonora Sadikova, Rose Nevill, Michelle Menezes, Christina Harkins

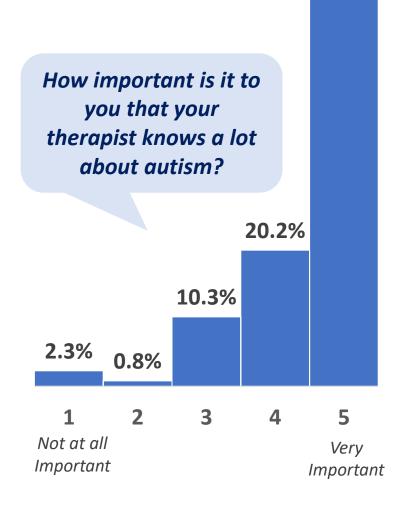
Mental Health Therapy Experiences

• n = 303 Autistic Adults

Prior Therapist(s)	N (%)	Autism Knowledge*
Psychologist	210 (69.3%)	3.41 (1.21)
Social Worker	126 (41.6%)	3.05 (1.27)
Licensed Professional Counselor	172 (56.8%)	3.07 (1.25)
Other type of therapist	35 (11.6%)	3.15 (1.23)

^{*}Responses to: "How much did this therapist know about autism?" 1 = no knowledge, 5 = a great deal of knowledge





66.5%

Mental Health Therapy Experiences

- Qualitative Themes: Overall Therapy Experiences
 - "What have you found to be most/least helpful in therapy?"

1. Therapist
Acceptance and
Understanding is
Crucial

2. Therapy Offers
Tools for Personal
Growth

3. Talking in Session Can be Difficult

4. Session Format
Can Help or Hinder
Progress

1a. Feeling heard, accepted, and validated (20%)

1b. Therapist understanding of autism (12%)

2a. Importance of talking through & processing issues (22%)

2b. Gaining new perspectives (11%)

2c. Developing selfunderstanding (6%) 3a. Verbal communication expectations (6%)

3b. Trouble talking about feelings (7%)

4a. Session structure affects the therapy experience (7%)

4b. Alternative activities can enhance therapy (5%)

Mental Health Therapy Experiences

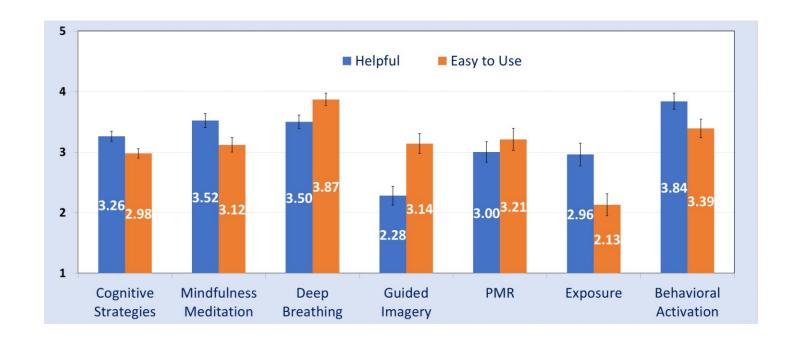
Cross-Cutting Themes: How Well The Strategies Worked

Helpful for Reducing Anxiety & Improving Mood

Trouble
Generalizing to
Daily Life

Difficult to Implement

Distressing or Anxiety-Provoking





Relations among activity participation, friendship, and internalizing problems in children with autism spectrum disorder Autism
2019, Vol. 23(3) 750–758
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DOI: 10.1177/1362361318775541
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SSAGE

Activities
Adverse Experiences

Communi

Kristen N Dovgan¹ and Micah O Mazurek²

Organizational

The Association Between Adverse Childhood Experiences and Sleep in Children with Autism Spectrum Disorder
Eleonora Sadikova and Micah O. Mazurek

Journal of Autism and Developmental Disorders

Interpersonal





Media Use & Content

Micah O. Mazurek ♥ & Colleen Wenstrup

Journal of Autism and Developmental Disorders 43, 1258-

PEDIATRICS

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

Media Use and Sleep Among Boys With Au

Christopher R. Engelhardt, Micah O. Mazurek and Kristin Sohl

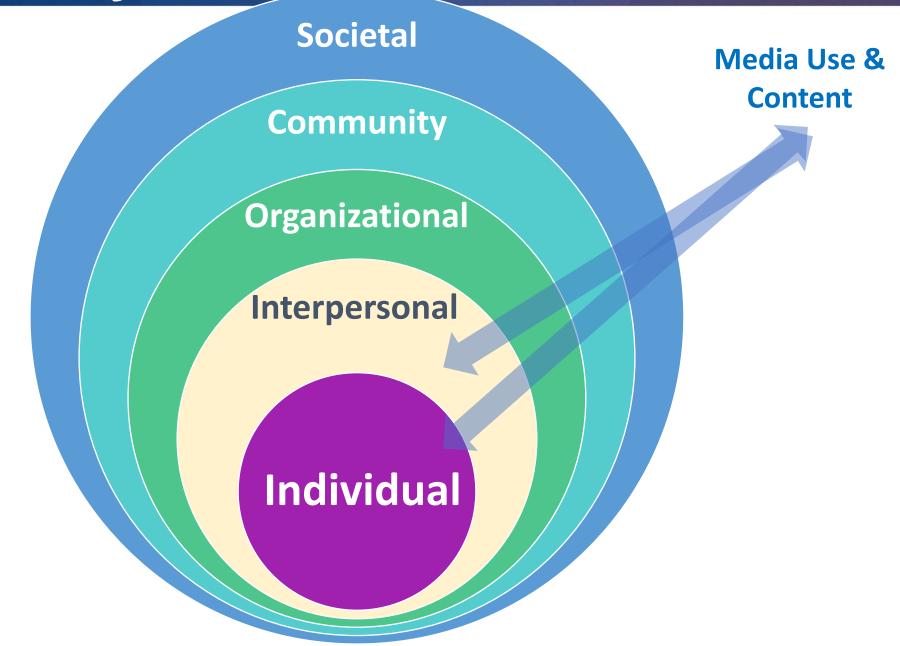
Bedtime Electronic Media Use and Sleep in Children with Autism Spectrum Disorder

Mazurek, Micah O. PhD*; Engelhardt, Christopher R. PhD*,† Hilgard, Joseph PhD‡; Sohl, Kristin MD§

Author Information ⊗

Journal of Developmental & Behavioral Pediatrics 37(7):p 525-531, September 2016. | **DOI:** 10.1097/DBP.000000000000314

Pediatrics December 2013, 132 (6) 1081-1089; DOI: https://doi.org/10.1542/peds.2013-2000

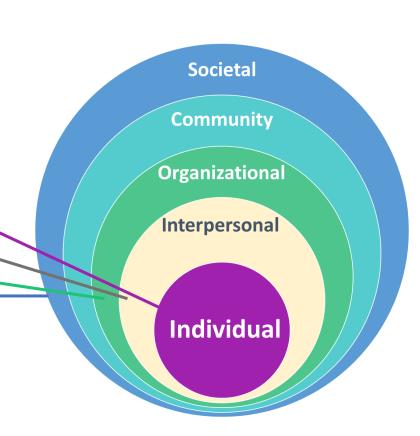


Societal **Activities** Media Use & **Adverse Experiences** Content **Community Organizational MH Access Clinician Factors Interpersonal MH Strategies** Age **IQ & Social Skills Sensory Sensitivity** Individual **Caregiver Coping Sleep Problems** Loneliness **GI Problems** Friendship Quality* Number of Friends* **Behavior & Attention**

- Need for comprehensive, coordinated, and personalized approach
 - Begin with careful assessment
 - Addressing underlying mechanisms
 - Understanding key factors across levels
 - Meeting needs across systems/contexts



- Example: Family-Based CBT for Insomnia (CBT-I)
- Manualized & Modular Treatment
 - Adapted for autism
 - Targeting anxiety & arousal
 - Addressing sensory sensitivity
 - Incorporating caregivers
 - Telehealth delivery
 - ↑ access to care
 - Managing screen-based media use





Societal Community Organizational Interpersonal Individual

Pilot Studies

- ↑Child and parent sleep
- Anxiety/Arousal
- **↑**Daytime functioning

Randomized Controlled Trial

- *n*=180 children with ASD
- Randomized to: CBT-Cl in-person;
 CBT-Cl remote; or Attention-Matched
 Control
- Objective measures of sleep, physiological arousal & daytime functioning

RESEARCH ARTICLE

Cognitive Behavioral Treatment of Insomnia in School-Aged Children with Autism Spectrum Disorder: A Pilot Feasibility Study

Christina S. McCrae , Wai Sze Chan, Ashley F. Curtis, Chelsea B. Deroche, Melissa Munoz, Stephanie Takamatsu, Julie E. Muckerman, Nicole Takahashi, Dillon McCann, Kevin McGovney, Pradeep Sahota, and Micah O. Mazurek

autism

Telehealth cognitive behavioral therapy for insomnia in children with autism spectrum disorder:
A pilot examining feasibility, satisfaction, and preliminary findings

Autism
2021, Vol. 25(3) 667–680
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DOI: 10.1177/1362361320949078
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Using Telehealth to Deliver Family-Based Cognitive Behavioral Treatment of Insomnia in a School-Aged Child With Autism Spectrum Disorder

Davenport, Mattina A., PhD | Berry, Jasmine R., MA | Mazurek, Micah O., PhD | McCrae, Christina S., PhD (5)

Journal of Cognitive Psychotherany Vol 35 Issue 4 DOI: 10 1891/ICPSY-D-20-00062

BMJ Open Protocol for targeting insomnia in school-aged children with autism spectrum disorder without intellectual disability: a randomised control trial

Christina S McCrae,¹ Micah O Mazurek,² Ashley F Curtis ¹, ¹, ³ David Q Beversdorf,⁴ Chelsea B Deroche,⁵ Mojgan Golzy,⁵ Kristin A Sohl,⁶ Zarah H Ner,⁶ Beth Ellen Davis,⁷ Melanie A Stearns ¹, ¹ Neetu Nair¹





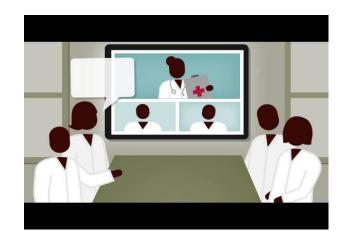
Models to Increase
Access to Care

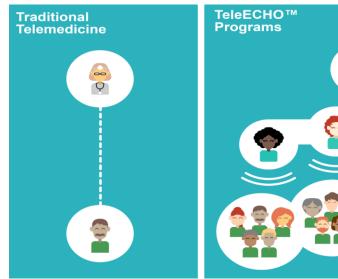
Treatments Addressing Multiple Contexts

Family, School & Community Based

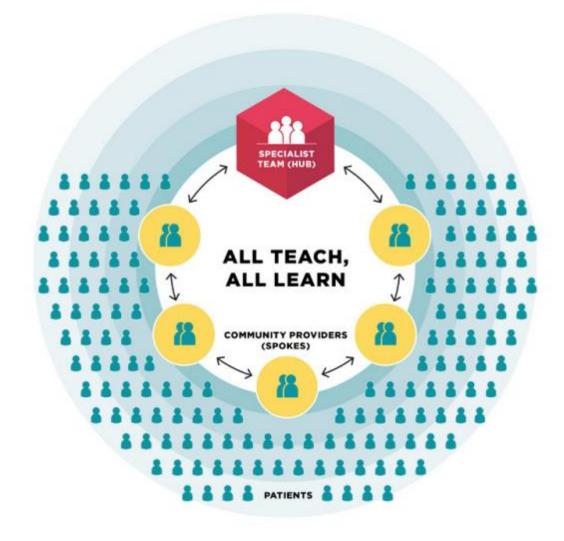














Journal of Autism and Developmental Disorders (2019) 49:127–137 https://doi.org/10.1007/s10803-018-3696-5

ORIGINAL PAPER

ECHO Autism STAT: Accelerating Early Access to Autism Diagnosis

Micah O. Mazurek¹ · Alicia Curran² · Courtney Burnette³ · Kristin Sohl^{2,4}

ECHO (Extension for Community Healthcare Outcomes) Autism STAT: A Diagnostic Accuracy Study of Community-Based Primary Care Diagnosis of Autism Spectrum Disorder

Sohl, Kristin MD, FAAP^{*,†}; Levinstein, Leeore MD^{*}; James, Alexandra MD, MPH, FAAP^{*,†}; Greer, Sophia MPH^{*}; Boles, Katrina MS[†]; Curran, Alicia Brewer BS[†]; Mahurin, Melissa BA[†]; Mazurek, Micah O. PhD[‡]; Nanclares, Valeria PsyD[†]

Author Information ⊗

Journal of Developmental & Behavioral Pediatrics 44(3):p e177-e184, April 2023. | DOI: 10.1097/DBP.000000000001172

JAMA Pediatrics | Original Investigation

Effectiveness of the Extension for Community Health Outcomes Model as Applied to Primary Care for Autism A Partial Stepped-Wedge Randomized Clinical Trial

Micah O. Mazurek, PhD; Robert A. Parker, ScD; James Chan, MA; Karen Kuhlthau, PhD; Kristin Sohl, MD; for the ECHO Autism Collaborative

ECHO Autism Transition: Enhancing healthcare for adolescents and young adults with autism spectrum disorder

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Micah O Mazurek¹, Gary Stobbe², Rachel Loftin³, Beth A Malow⁴, Mavara M Agrawal⁵, Mark Tapia⁶, Amy Hess⁷, Justin Farmer⁸, Nancy Cheak-Zamora⁹, Karen Kuhlthau¹⁰ and Kristin Sohl⁹

ECHO Autism: A New Model for Training Primary Care Providers in Best-Practice Care for Children With Autism

Micah O. Mazurek, PhD¹, Rachel Brown, MBBS¹, Alicia Curran, BS¹, and Kristin Sohl, MD¹

Clinical Pediatrics
2017, Vol. 56(3) 247–256
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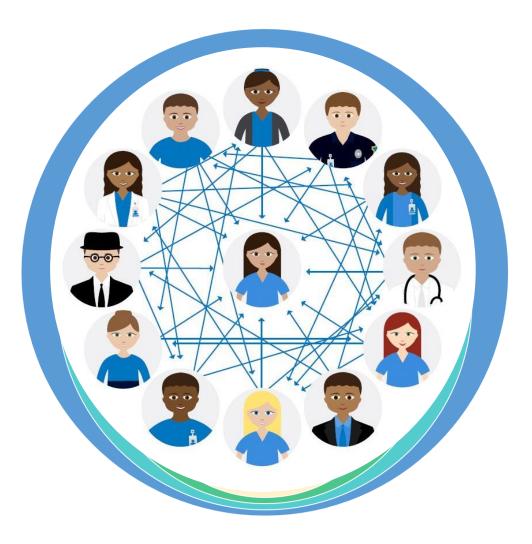
Models to Strengthen
Coordination Across
Systems



Models to Increase
Access to Care

Family, School & Community Based

Treatments Addressing Multiple Contexts



Thank you!

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