

From Dysregulation to Engagement: Animal- Assisted Therapy in Pediatric Autism

Michele Kilmer, DNP, APRN, CPNP-PC
Assistant Director of Graduate Programs
University of Arkansas
Eleanor Mann School of Nursing



Objectives

- Describe the role of therapy animals in supporting individuals with autism spectrum disorders
- Summarize key findings from studies assessing the impact of animal-assisted therapy on prosocial behaviors and emotional regulation in the autism population
- Explain practical considerations for implementing animal-assisted therapy in educational settings.

Disclosures: None.

Access for Autism Program

- Studies assessing gaps in
 - Clinician knowledge
 - Caregiver experience
 - Child presentation
- Animal-assisted therapy
 - Sensory integration
 - Cognitive behavioral therapy
 - EMDR
 - Polyvagal Therapy
 - Pivotal Response Therapy
 - Parenting strategies

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Animal-Assisted Therapy

- Involves intentional, goal-directed use of animals to achieve therapeutic outcomes
- Goal-directed
- Not just “pet therapy”
- Research shows improvements in:
 - Communication
 - Socialization
 - Social-emotional competence
 - Attention
 - Self-regulation



Why Canines?

- Oxytocin release
- Reduction in cortisol
- Social interaction is not always naturally rewarding
- Nonverbal accessibility
- Consistent, predictable interaction

What does Gryffin do?

Therapy dog

- Serves multiple individuals
- AKC Good Citizen Certification
- Therapy Dog Certification
- Provides comfort measures





Trained to Interact

- Stop
- Settle
- Come
- Go
- Bring it
- Drop it
- Heel
- Loose leash
- Public awareness
- Fetch
- Hide and seek
- High five
- Stay
- Wait
- Treat
- Selfie
- Tug of war
- Brush fur
- Brush teeth
- Go potty
- Stay
- Wait
- Treat
- Selfie
- Tug of war
- Brush fur
- Brush teeth
- Go potty
- Water
- Down
- Up
- Under
- Roll it
- Soccer- no mouth
- Soccer- score goal
- Lay
- Chin
- Sit
- Crate
- Place
- Find it
- Say hi
- Hug
- Leave it
- Ring a bell
- Ball
- Frisbee
- Left
- Right
- No bark
- Look at me
- Last time
- Off
- No
- Yes
- Free/ Release
- Pull
- Block
- Stairs

What does Gryffin do?

Service dog

- Serves one person
- 3 tasks
- Accounts for person's disability or need



Tasks

- Grounding
- Blocking
- Tethering
- Interrupt self-harm behaviors
- Detect onset of anxiety and emotional dysregulation
- Provide deep pressure therapy
- Provide comfort measures
- Sense mobility issues
- Provide light pressure therapy
- Provide outlet for tactile stimulation





AAT Program

- Once weekly sessions for 8 to 12 weeks
- 30- to 45-minute sessions
- Opening Regulation
- Structured Activities
- Closing Regulation

Instruments

Baseline measures

- Vineland 3rd ed
- Social Responsiveness Scale 2nd ed
- Autism Diagnostic Observation Scale-2nd ed
- Childhood Autism Ratings Scale 2nd ed

In-session measures

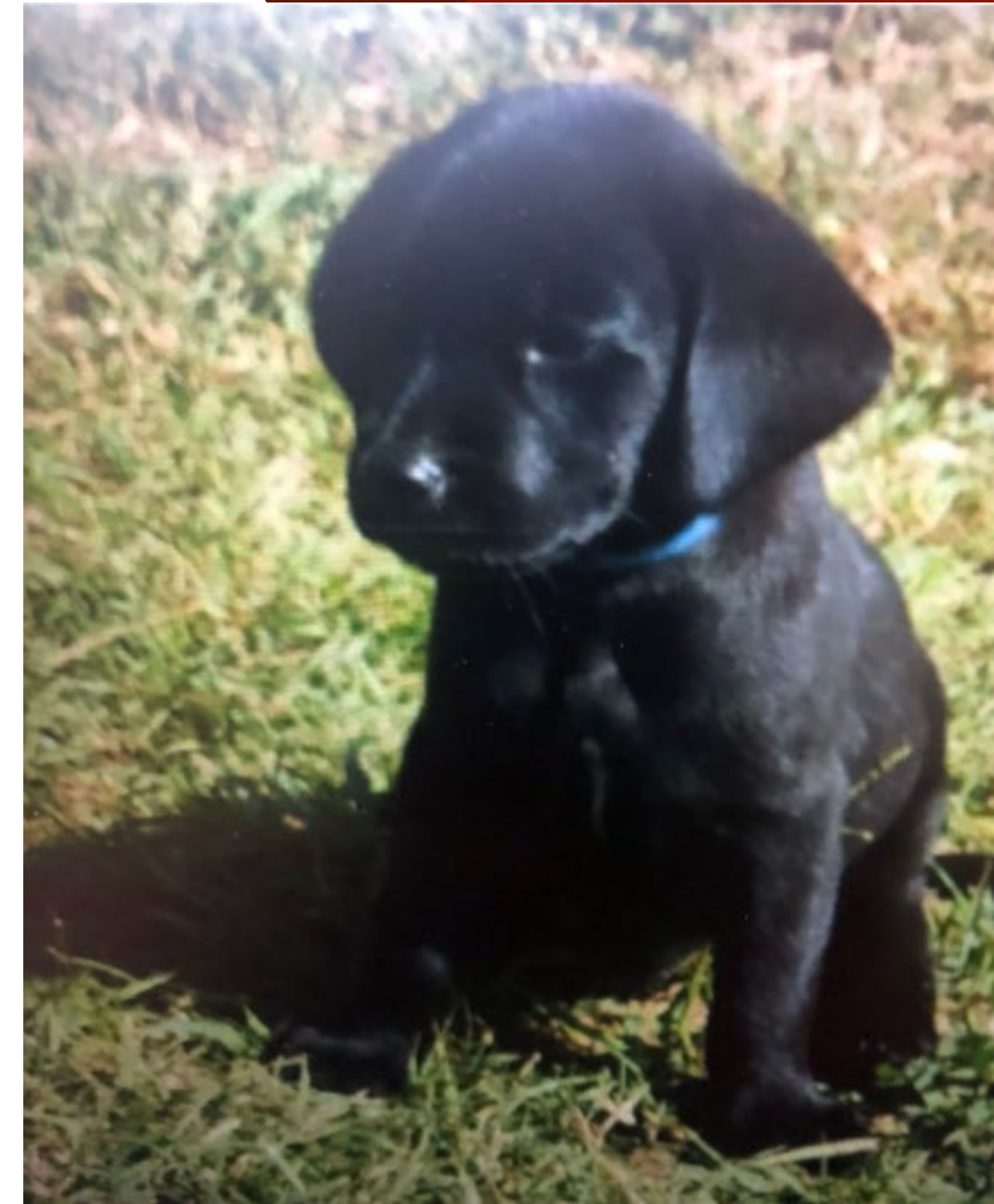
- OHAIRE ethogram
 - Assesses human behavior only
- 3 AAT ethogram- adapted
 - Assesses both human and canine behavior

Out-of-session measures

- Strengths and Difficulties Questionnaire
 - Monthly
- Positive and Negative Affect Schedule
 - Weekly

AAT Studies at A4A

- Prosocial Behavior
 - 8 participants
 - 6 months
- Human-animal interaction study
 - 8 participants
 - 6 months
- Case study
 - 1 participant
 - 2 months
- Verbality
 - 13 participants
 - 2 - 3 months
- Snuffles
 - 10 participants
 - 2 - 3 months
- Autistic Symptom Severity
 - 25 children
 - 2 - 3 months
- Social Responsiveness
 - 27 children
 - 2 - 3 months
- Canine Interaction
 - 30 children
 - 2 - 3 months
 - Affiliative, Social, Stress Behaviors





Case Study

Summer 2023

Case Study

- 7-year-old verbal male
- 22-month-old therapy canine
- 8- to 12-week study
- Prior therapies included psychological interventions and counseling
- Behavioral risk at school
- Sensory integration and CBT
- Evaluated 588 human-animal interactions



Case Study Results

- 99% of interactions were positive
- Communication and Affection domains were most prevalent
- Canine was the most common target of verbal interaction
- Strengths and Difficulties and PANAS domains reflected enhanced prosocial behavior and emotional regulation outside of AAT sessions





Verbal Ability Study

2023-2024

Aggregate Data in Verbal Ability Analysis

Gender:

- 12 males
- 1 female

Ethnicity:

- 10 Non-Hispanic White
- 2 Hispanic
- 1 Biracial

Canine:

- 1 year
- 144 sessions
- Completed therapy dog training

Age Range:

- 3 years to 10 years

Verbal Ability:

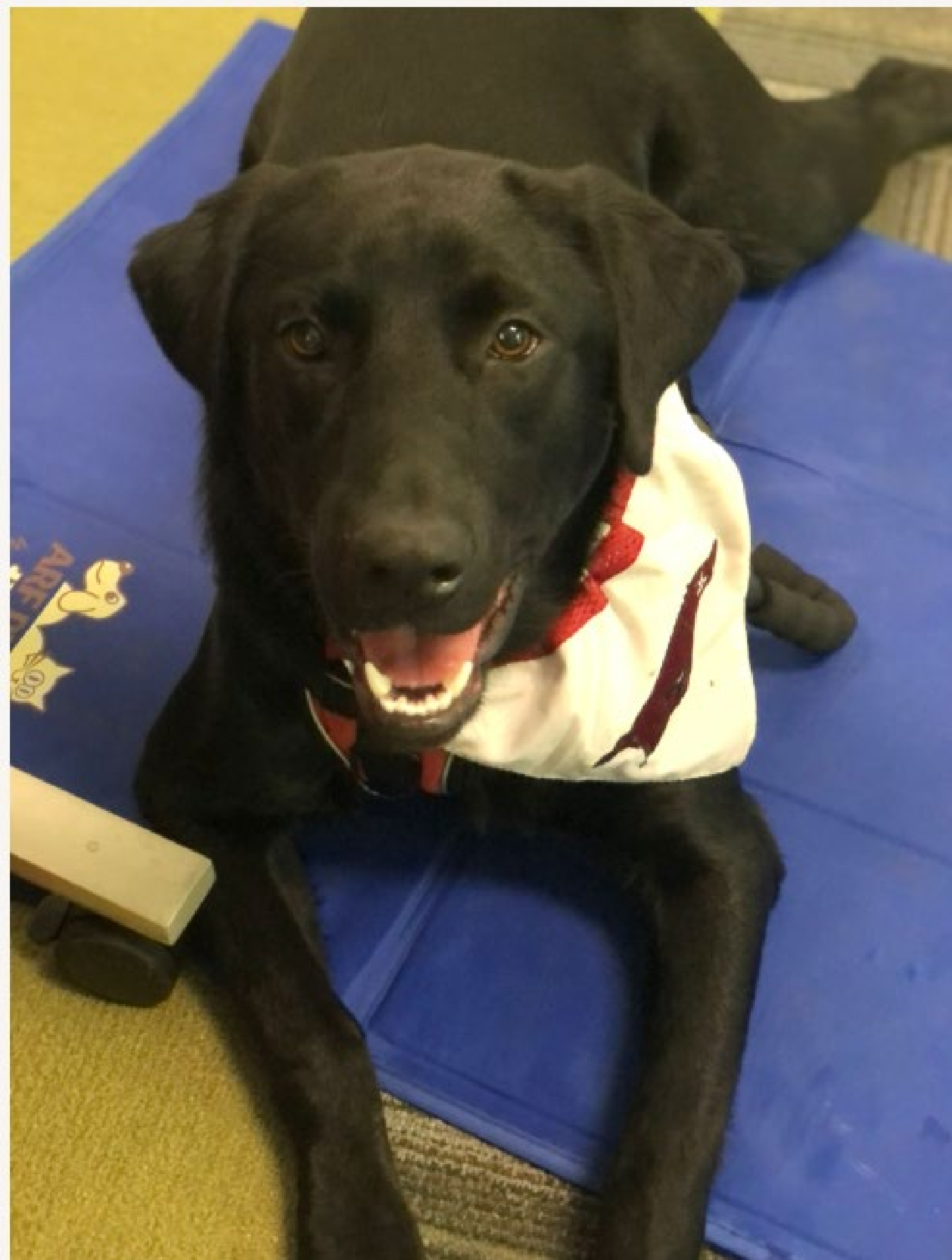
- 9 verbal
- 4 nonverbal, including no speech, preverbal, and phrase speech



Key Outcomes of the Verbal Ability Study

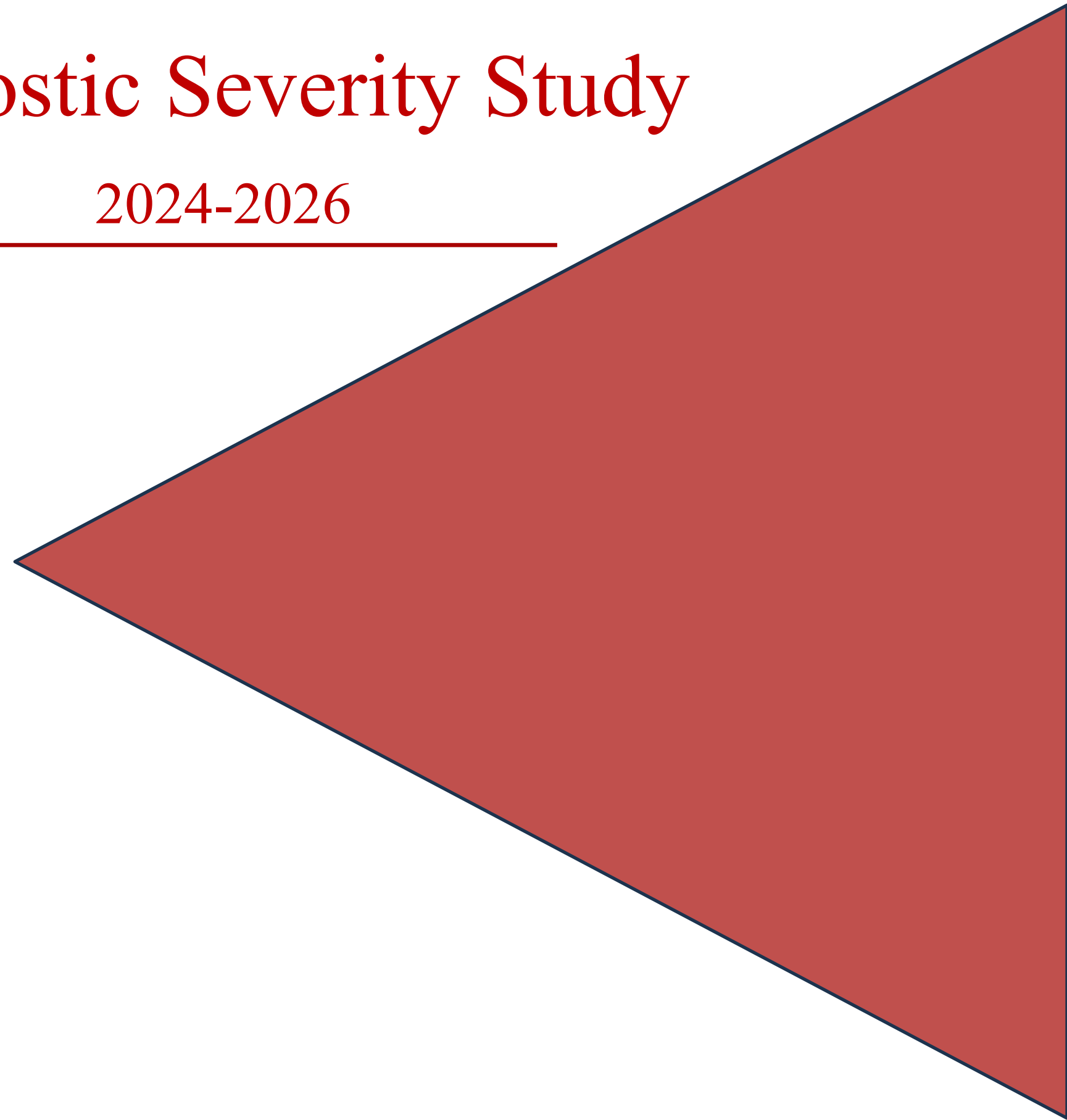
- Verbal Participants
 - Increased use of commands and verbal interactions
 - More directive engagement with Gryffin
 - Practiced communication skills in real time
 - Higher frequency of verbal behaviors
- Nonverbal Participants
 - Increased affectionate and physical interaction
 - More nonverbal communication (touch, proximity)
 - Strong engagement without reliance on speech
 - Demonstrated connection through behavior





Diagnostic Severity Study

2024-2026





Diagnostic Severity Study

- Participants categorized by Severity of ASD symptom severity per ADOS-2
 - Normal/Mild
 - Moderate
 - Severe
- Key Outcomes
 - Improved emotional regulation
 - Increased prosocial behavior
 - Minimal withdrawal behaviors
 - Evidence of carryover outside sessions

Results

Mild

Consistent participation

Smaller observable changes

Likely higher baseline functioning

Moderate

Highest engagement during sessions

Increased verbal interaction

Strong prosocial behavior gains

Most responsive

Severe

Increased affiliative behaviors

Improved emotional regulation

Engaged without increased distress



Social Responsiveness Study

2024-2026



Social Responsiveness Severity Study

- Participants categorized by Severity of ASD symptom severity per SRS-2
 - Normal/Mild
 - Moderate
 - Severe
- Key Outcomes
 - Strong overall engagement during sessions
 - Minimal withdrawal behaviors observed
 - No differences in basic participation



- None/ Mild Severity
 - Lower levels of verbal and comfort behaviors
 - Likely reflects higher baseline functioning
 - Less measurable change during sessions
- Moderate Severity
 - Highest verbal communication
 - Highest affiliative/comfort behaviors
 - Most active engagement with the canine
 - Strongest response to intervention
- Severe Severity
 - Demonstrated consistent engagement
 - Increased comfort-seeking behaviors
 - Participated without withdrawals or avoidance



The Snuffles Study 2023-2024

Aggregate Data in Snuffles Analysis

Snuffles

Gender:

- 5 males
- 1 female

Ethnicity:

- 3 Non-Hispanic White
- 2 Hispanic
- 2 Black

Age Range:

- 4 years to 14 years

Canine:

- 2 years old
- 68 sessions
- Completed therapy/service dog certification

Gryffin

Gender:

- 2 males
- 2 female
- 1 nonbinary

Ethnicity:

- 4 Non-Hispanic White
- 1 Hispanic
- 1 Biracial

Age Range:

- 4 years to 14 years



Key Outcomes

Gryffin Group

- Increased interaction with the therapist
- Higher environmental engagement
- More positive verbal and facial emotional displays
- Increased prosocial behaviors over time
- Decreased negative emotional expressions

Snuffles Group

- More interaction with caregivers than therapist
- Lower overall engagement with interventions
- Higher negative facial and verbal expressions
- Less consistent behavioral improvement



Interaction Differences

- Children interacted significantly more with Gryffin
- Increased:
 - Petting and physical connection
 - Comfort behaviors
 - Engagement over time

Interaction Differences

- Across Sessions
 - Increased verbalizations, comfort behaviors, duration of interaction
 - Suggests growing human-animal bond over time
- Outside of Sessions
 - Gryffin group
 - Improved SDQ scores; enhanced prosocial behavior and emotional regulation
 - Snuffles group
 - Mixed or less consistent improvements



What did the participants think
about Snuffles?



What do the participants think
about Gryffin?





*Gryffin will be
so proud of me!*

*Gryffin is
always happy to
see me!*

*Gryffin believes
in me!*



Implications

- When dysregulated, students cannot:
 - Focus on learning
 - Participate in classroom activities
 - Communicate effectively
 - Stay engaged
- AAT can support
 - Co-regulation
 - Reduced anxiety
 - Calming response
 - Nonjudgmental presence
 - Predictable interaction

Regulation → Engagement → Learning

Implications

- All groups benefited despite severity, verbal ability, age, and ethnicity
- Engagement looks different
 - Verbal Students
 - Commands
 - Talking to the canine
 - Practicing communication
 - Nonverbal students
 - Touch
 - Proximity
 - Shared attention



Implications

- Mild: smaller observable change
- Moderate: most active engagement
- Severe: comfort-base interaction



Connect with me

Michele Kilmer, DNP, APRN, CPNP-PC
michelek@uark.edu

Website: accessforautism.uark.edu
Instagram handle: @drpadfoot

