



# Peer Mediation and Theatre: A model of social support and inclusion for adults with ASD

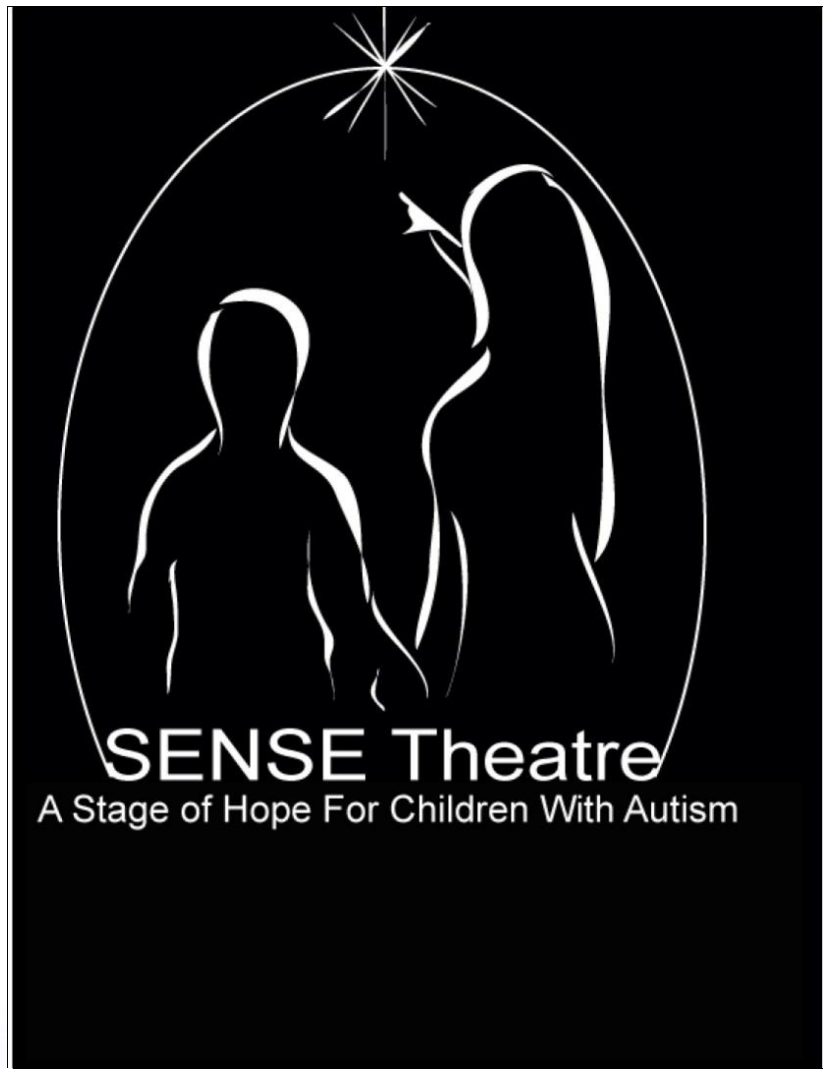
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Professor

Department of Psychiatry and  
Behavioral Sciences

October 21, 2021

# Objectives

- Introduce SENSE Theatre<sup>®</sup>
- Review key elements of the intervention
- Impact of theatre to provide a supportive, inclusive environment
- Previous findings in youth
- Current randomized clinical trial in adults with ASD



**SENSE Theatre<sup>®</sup>** is a unique intervention research program designed to improve the social and emotional functioning of children, adolescents and adults with autism spectrum disorder.

# SENSE Theatre® is based on Peers, Play and Performance

- **Peers:** peer-mediated intervention by highly trained typically developing actors (Odom & Strain, 1984). Peers are the target and interventionist.
- **Play:** Important for development, facilitates motivation to participate (Piaget & Inhelder, 1969).
- **Performance:** Use live and video modeling (Corbett, 2003), active practice contributes to near transfer and generalization of skills.

# Peer Mediation

- Peer-mediation enhances generalization of newly learned skills (Kamps, 1992) and increases peer acceptance (Kasari, 2012).
- Peers can be trained to not simply be a social partner but also an intentional model of (Prendeville, 2006) and reinforcement for (Banda, 2010) appropriate social behavior.

# Peer Mediation in SENSE Theatre<sup>®</sup>

- Trained peers offer a supportive context in which to learn in community settings.
- Peers also often benefit from providing support to others.



# Social Support & Inclusion

- The trained peers and actors provide a foundation of social support and inclusion.
- Peers participate in one-day training to learn about autism, the SENSE model and behavioral strategies.



# Inclusion on and off the stage

- SENSE Theatre® embraces a model of inclusion on and off the stage.
- Several collaborators, (e.g., musicians, writers and actors) are on the spectrum or have family members with ASD.





# Behavioral Techniques:

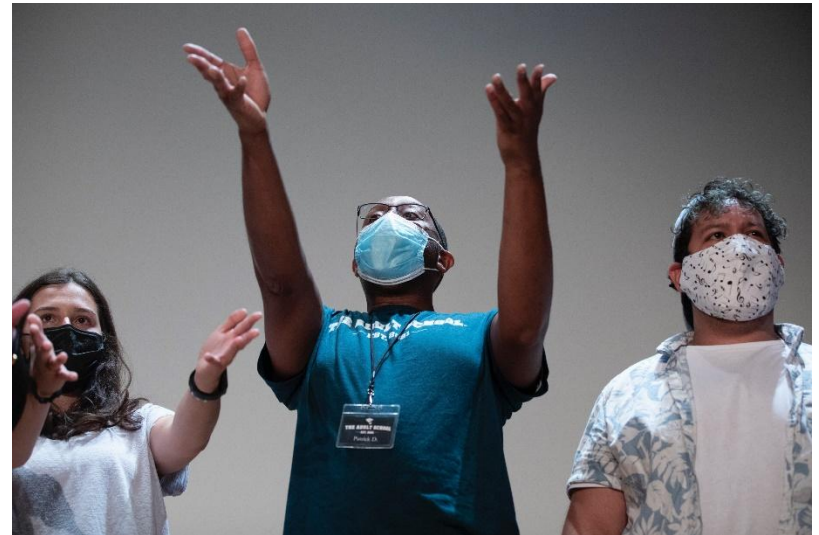
Implemented by trained typically developing (TD) peers and counselors.

- Shaping
- Intrinsic reinforcers
- Extinction
- Prompting
- In vivo and video peer modeling



# Theatre: A Safe, Supportive and Creative Space

- Theatre provides a safe, supportive and creative space to engage in reciprocal social interaction.
- Theatre allows us to engage in ways everyday life does not always allow.



# Theatre Techniques:

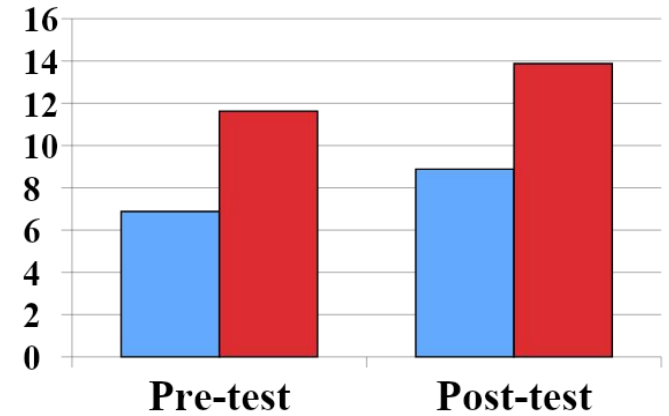
Implemented by TD actors as “expert models”

- Theatre Games
- Improvisation
- Role-Playing
- Scripting
- Singing
- Choreography
- Character work
- Performing a musical play

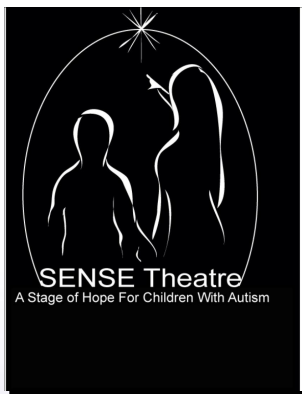
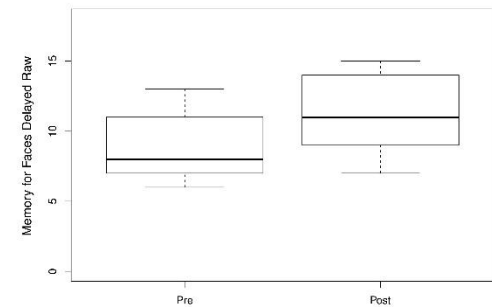




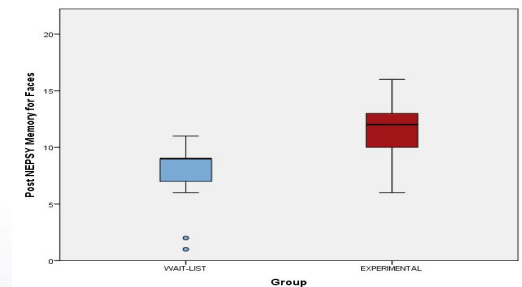
Corbett et al., (2011)  
SENSE Theatre 501(c)(3)



Corbett et al., (2014)  
Martin-McCoy-Jespersion  
Discovery Grant

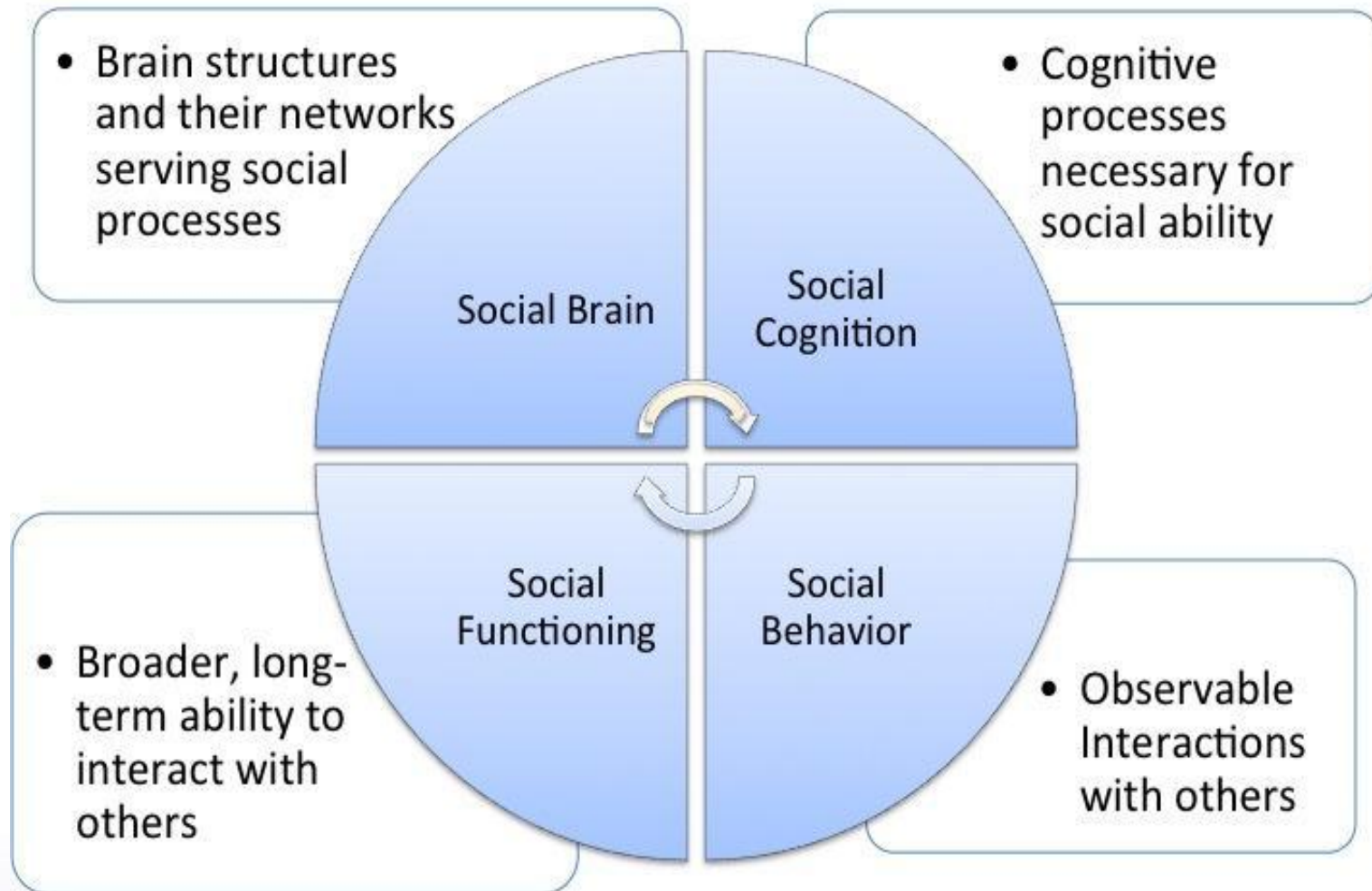


Corbett et al., (2016)  
NIMH MH097793



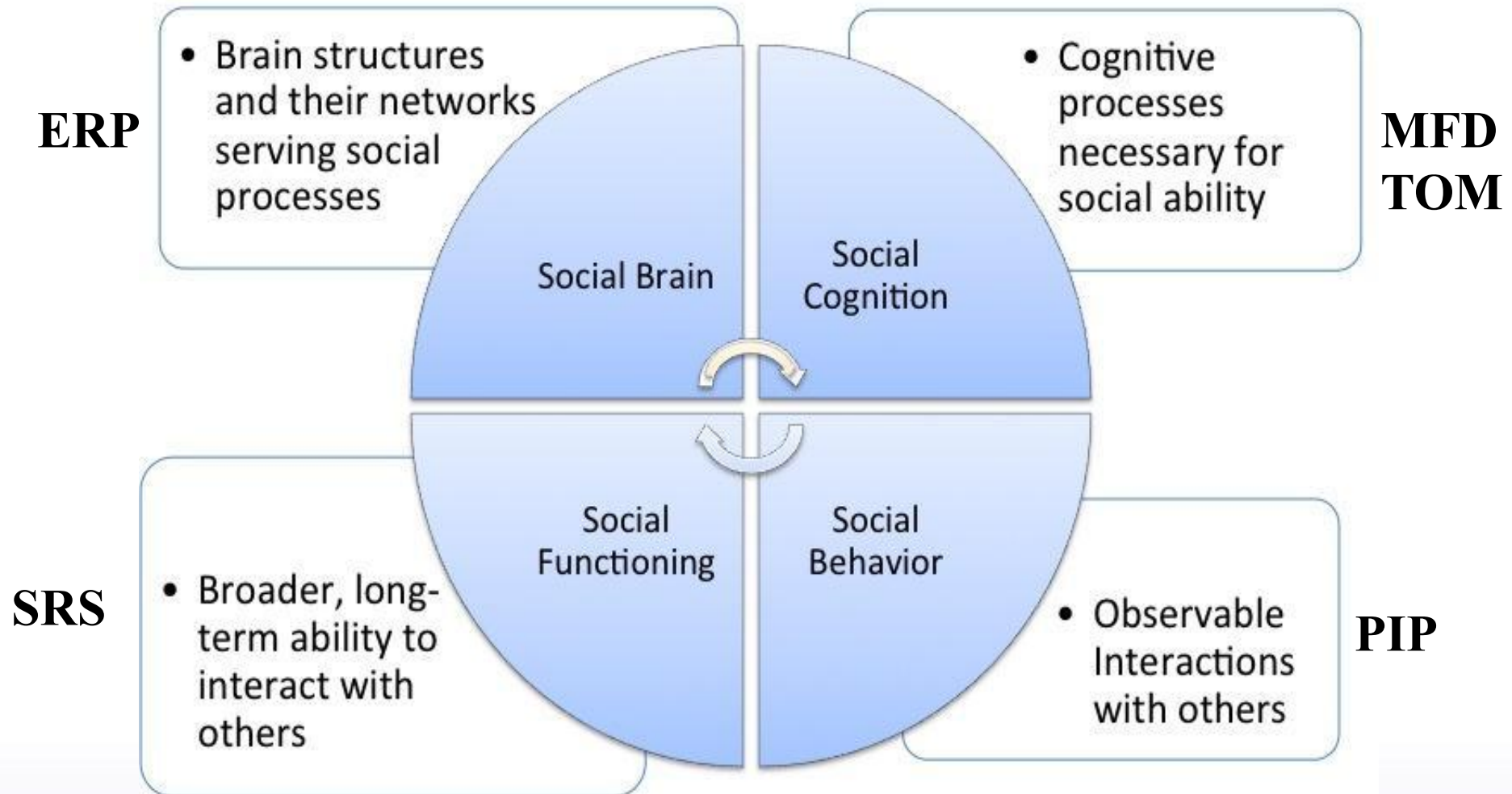
# Measuring Social Ability

## Kennedy & Adolphs model (2012)



# Measuring Social Ability

## Kennedy & Adolphs model (2012)



## Improvement in Social Competence Using a Randomized Trial of a Theatre Intervention for Children with Autism Spectrum Disorder

Blythe A. Corbett<sup>1,2,3</sup> · Alexandra P. Key<sup>2,4</sup> · Lydia Qualls<sup>1</sup> · Stephanie Fecteau<sup>1,8</sup> · Cassandra Newsom<sup>1,2,5</sup> · Catherine Coke<sup>6</sup> · Paul Yoder<sup>2,7</sup>



- Randomized Control Trial
- Participants: N = 30
- Experimental N = 17
- Waitlist control N = 13
- Sessions: 10 Saturdays
- Children 8-14 years,
- Funding: NIMH R34

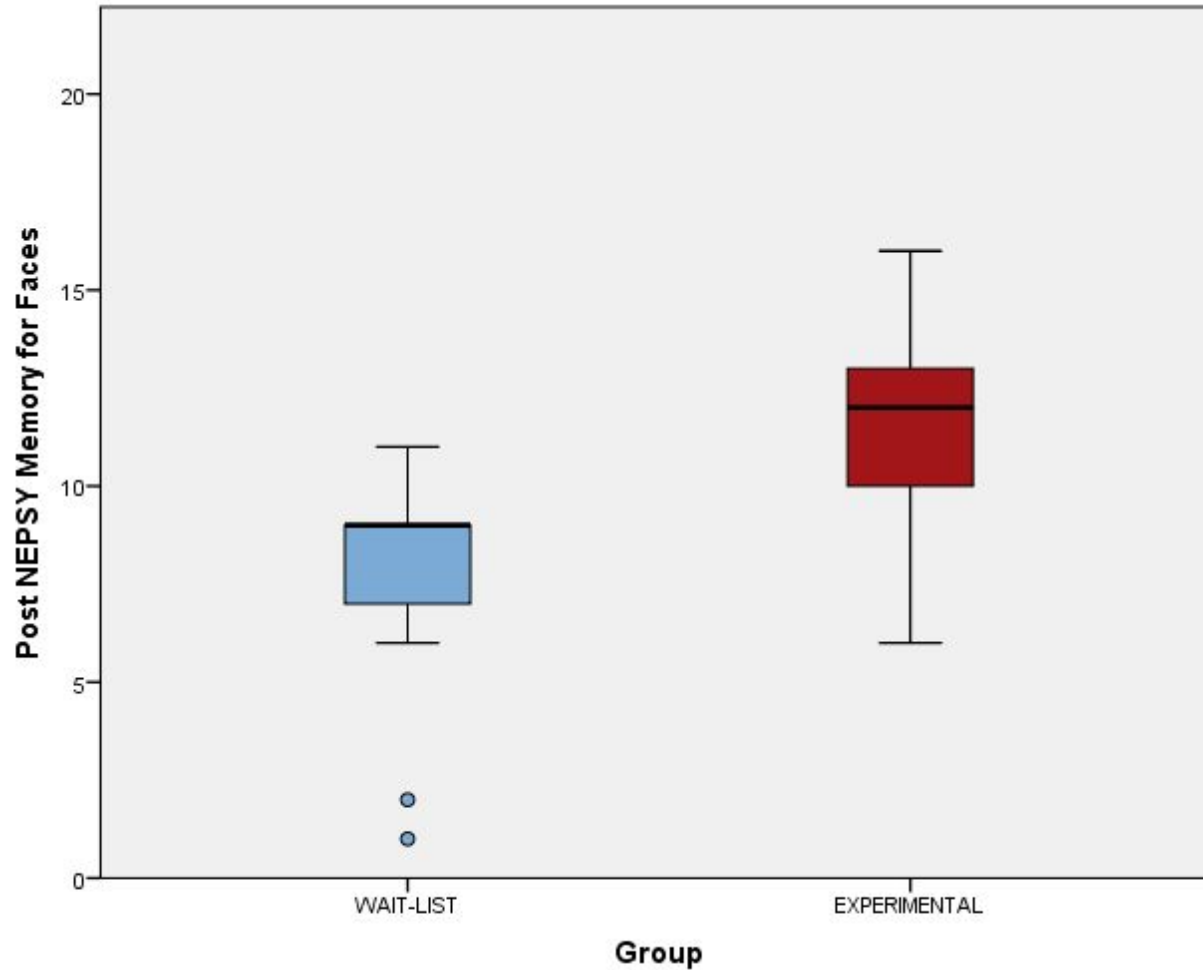
# Intervention Design

Month	October - November Pre-Test	October - November Pre-Test	January SENSE	February SENSE	March SENSE	March-April Post-Test	May-June Post-Test
Location	VAV Clinic	VKC Play-ground	USN Theatre	USN Theatre	Belmont Perform	VAV Clinic	VKC Play-ground
Purpose	<sup>1</sup> Diagnose <sup>2</sup> Baseline	<sup>3</sup> Peer Play Baseline	Role-Play, Improv, Rehearse	Role-Play, Improv, Rehearse	Role-Play, Improv, Rehearse	<sup>2</sup> Post treatment	<sup>3</sup> Peer Play Generalize
Cortisol	Home Morning 2 Afternoon Evening	Arrival 20 min 40 min 60 min	Beginning End	Beginning End	Beginning End	Home Morning 2 Afternoon Evening	Arrival 20 min 40 min 60 min

Measures: <sup>1</sup>ADOS, WASI, <sup>2</sup>NEPSY, ABAS, PSI, SRS, CELF, SCQ, <sup>3</sup>Peer Interaction Paradigm Coding

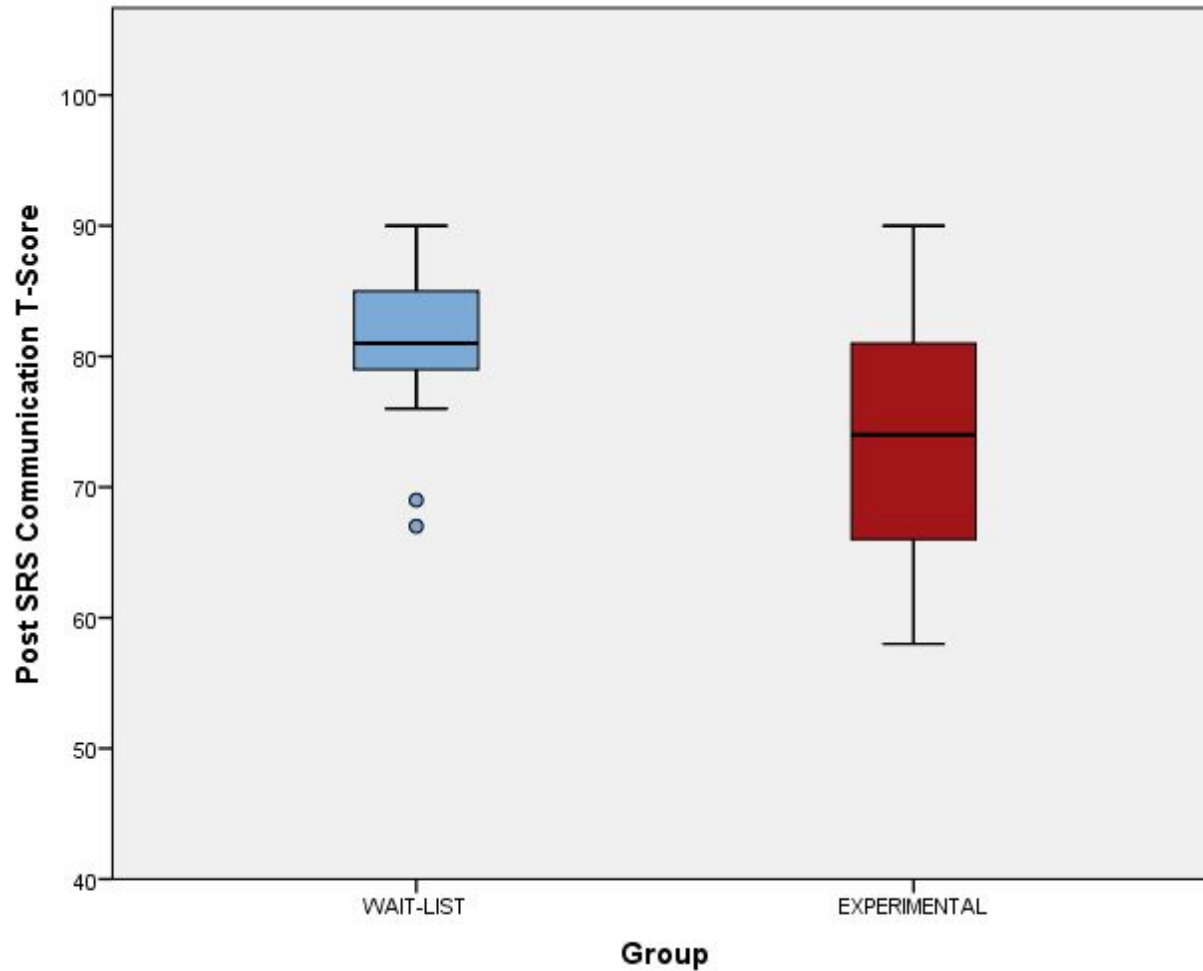


# Memory for Faces



$F(2,28) = 6.01, p = 0.02.$

# SRS Social Communication



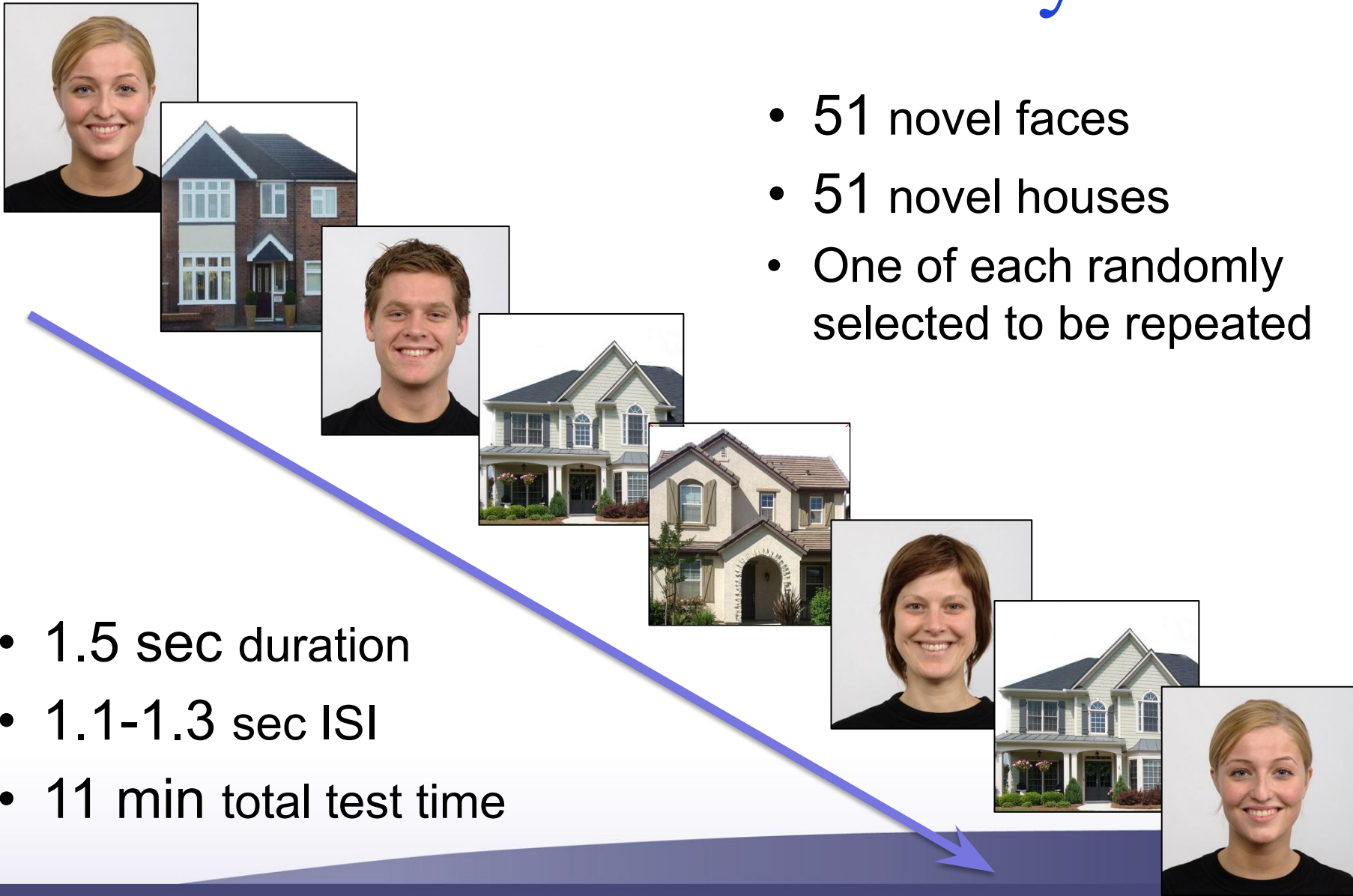
$F(2,28) 5.37, p = 0.03$

# Peer Interaction Paradigm Post-Treatment

- 1<sup>st</sup> exposure with two novel confederate TD children
- Post-treatment, 2<sup>nd</sup> exposure with a *familiar* and a novel TD
- Results show significant difference between Experimental and WLC for group play  $F(2,28), 4.35, p = 0.04$ .

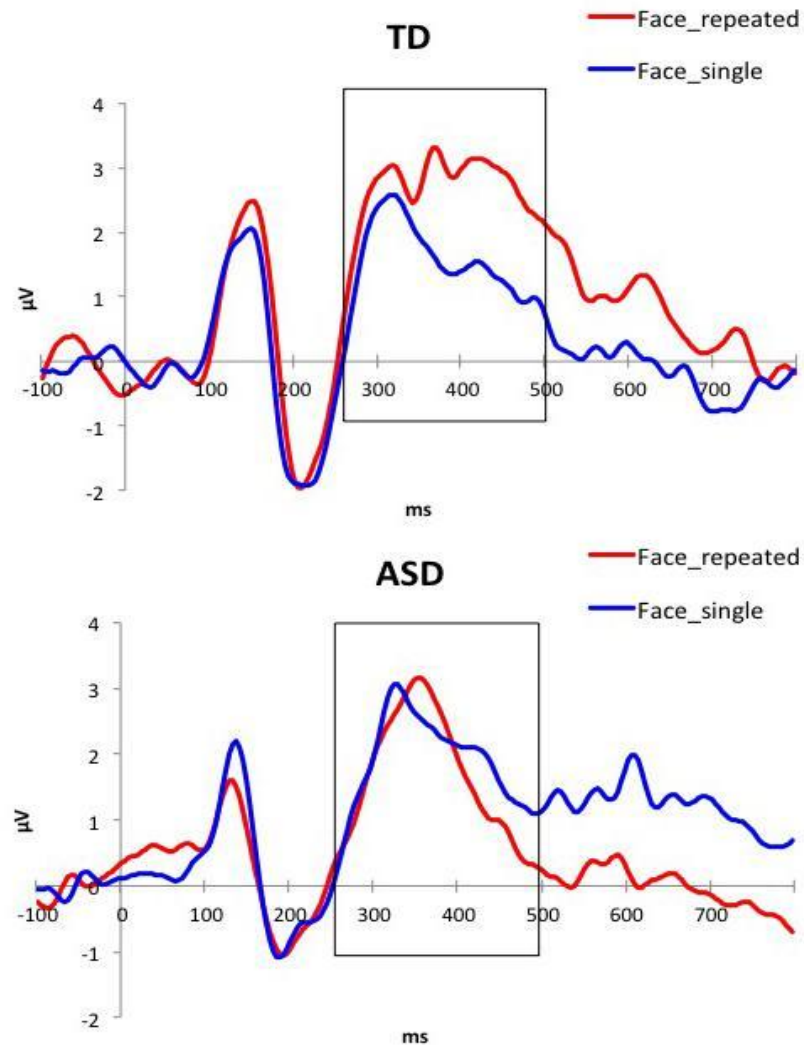


# Incidental Memory task

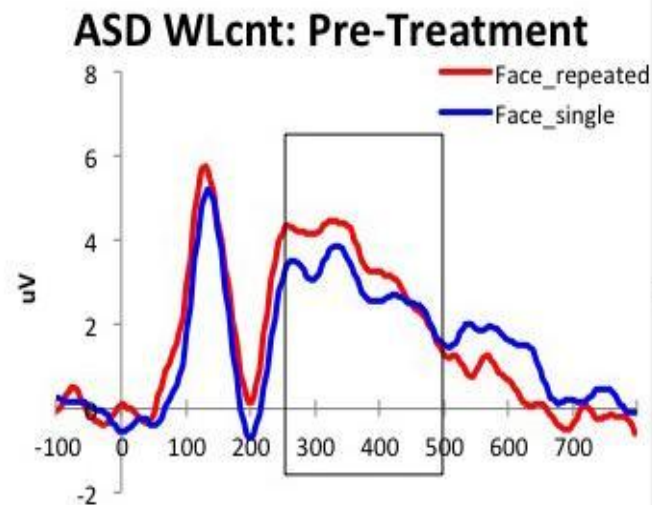
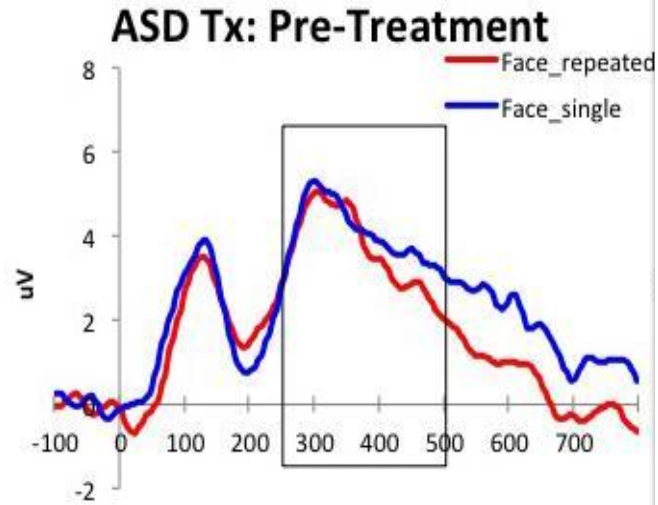


- 1.5 sec duration
- 1.1-1.3 sec ISI
- 11 min total test time

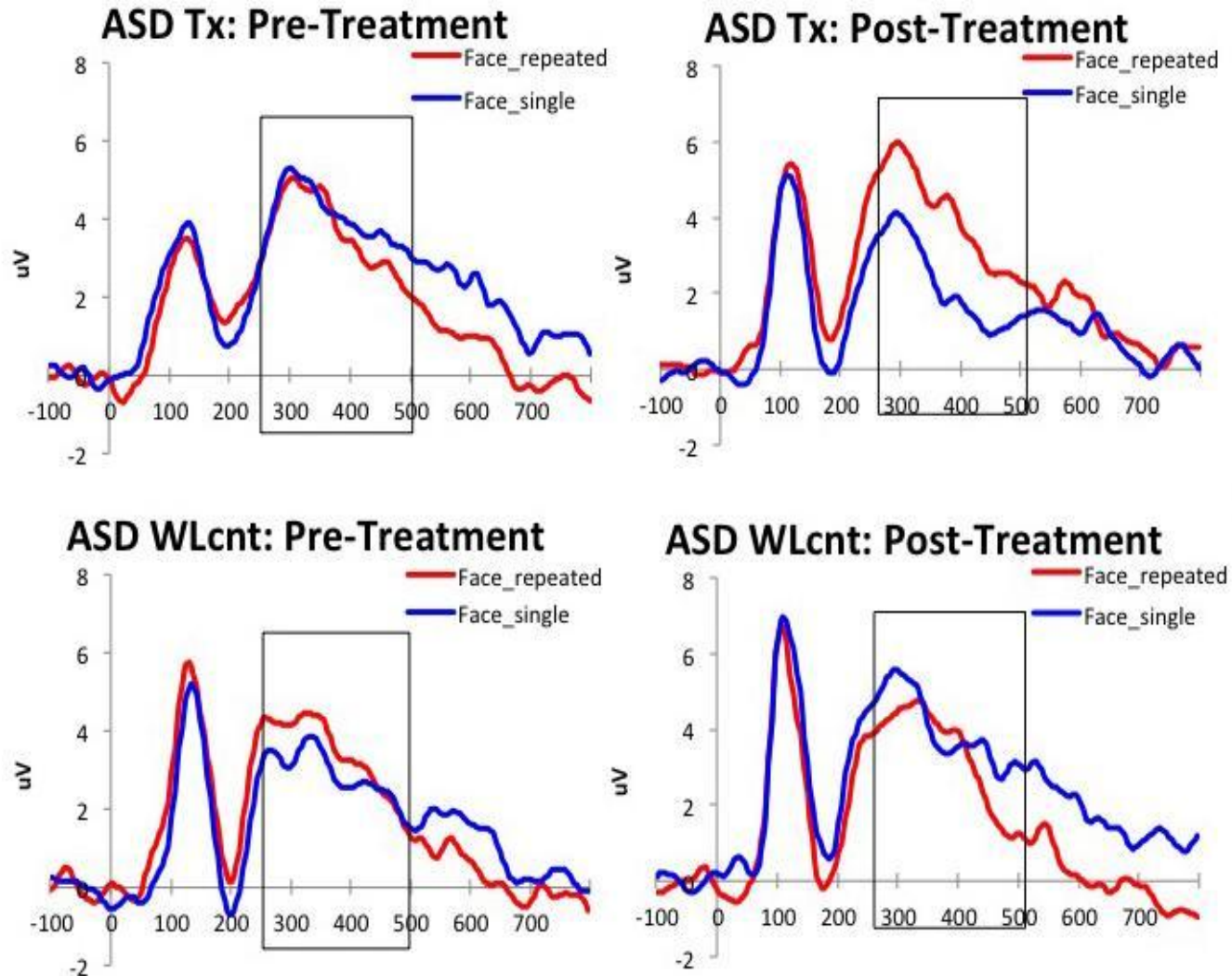
# Incidental Face Memory TD vs. ASD



# Social Brain: Incidental Face Memory



# Social Brain: Incidental Face Memory



# Intervention EXP/WLC (3 Cohorts)

Corbett, Ioannou, Key, Coke, Muscatello, Vandekar, 2019

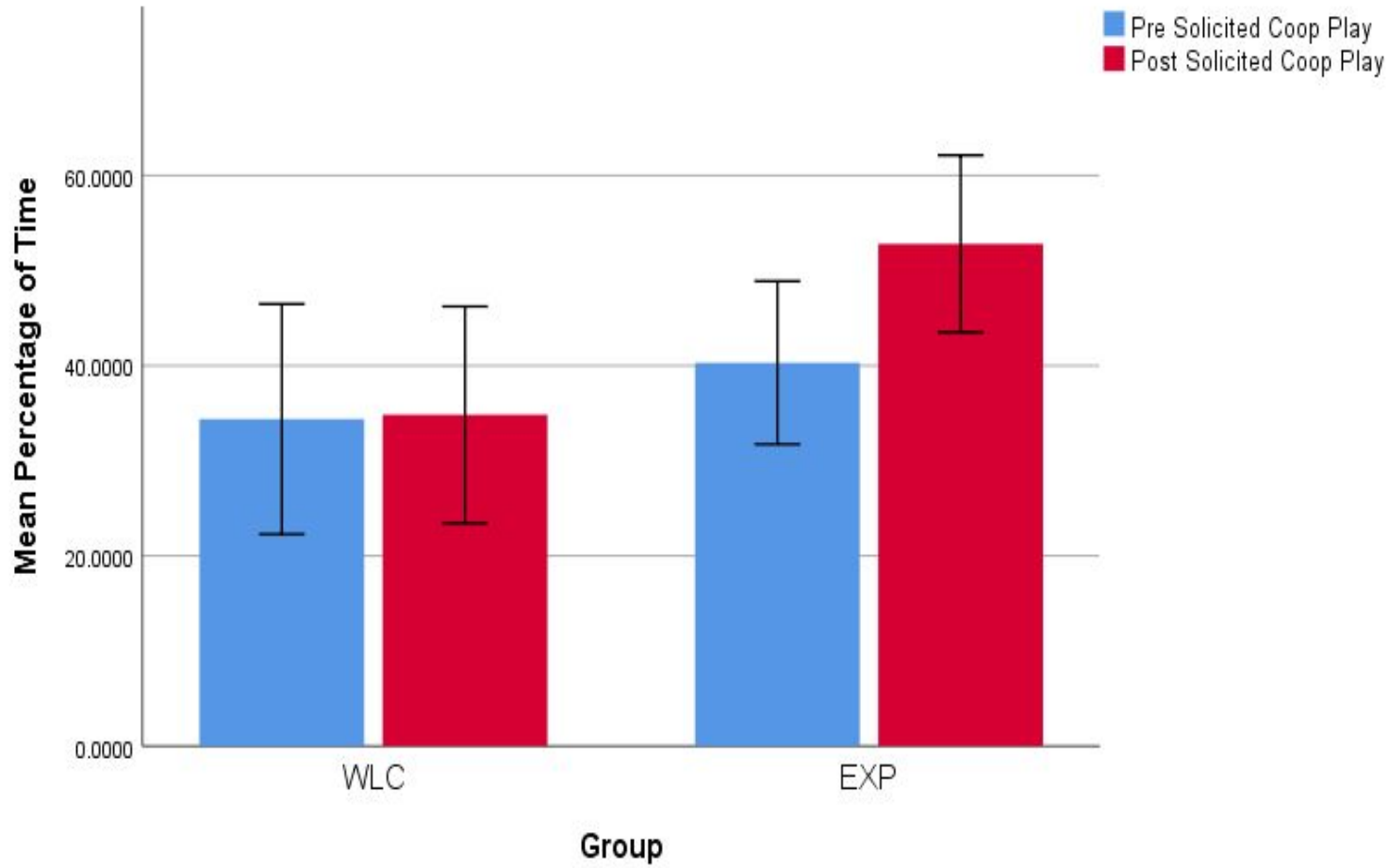
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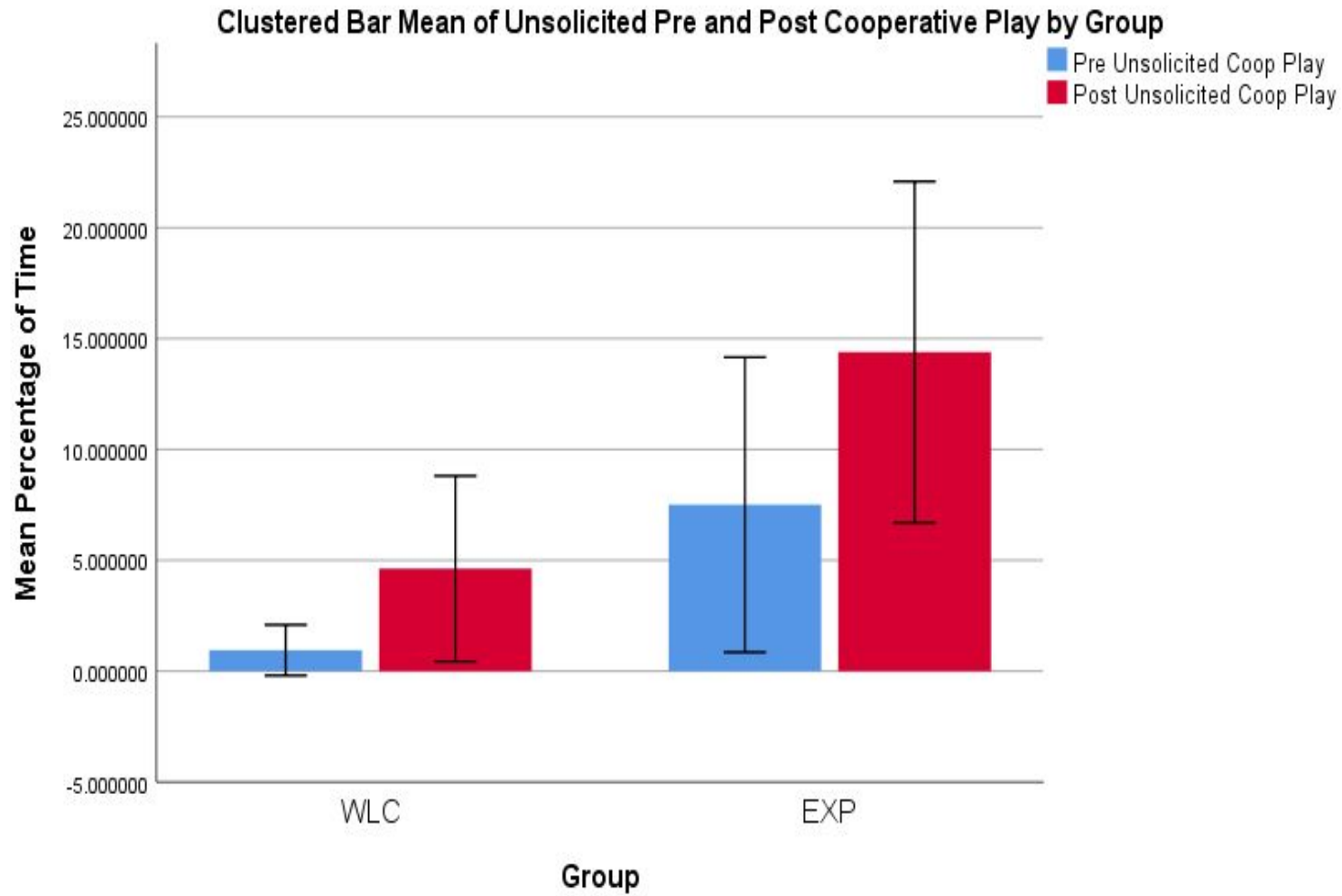
# Solicited Cooperative Play

Clustered Bar Mean of Solicited Pre and Post Cooperative Play by Group

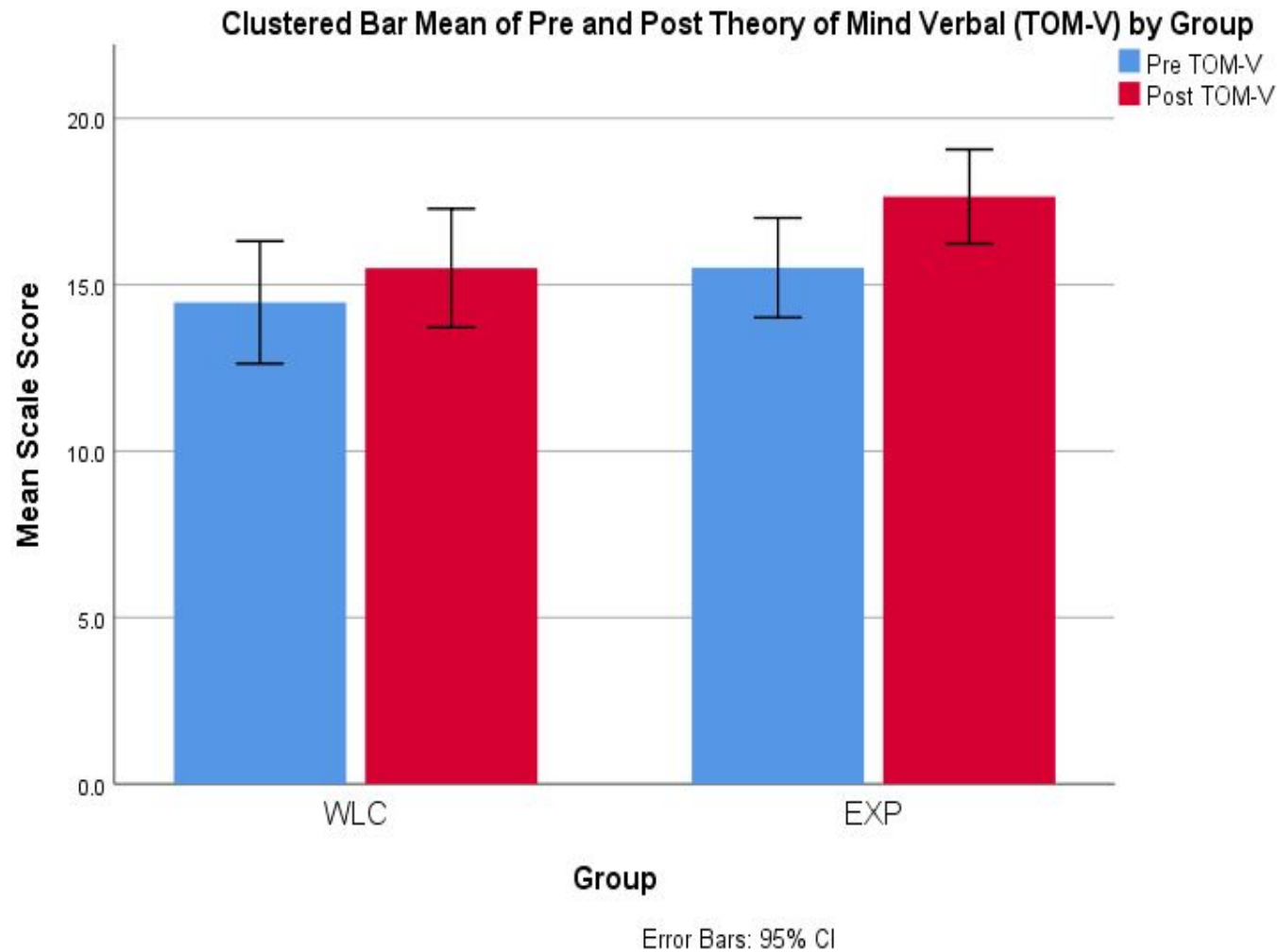


Error Bars: 95% CI

# Unsolicited Cooperative Play



# Theory of Mind-Verbal (TOM-V)



# NIMH Multisite Study

Examine reproducibility and transportability



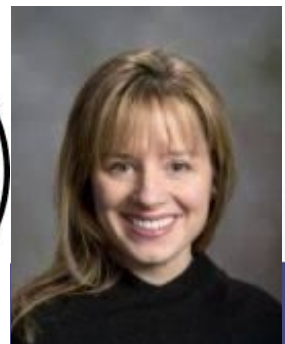
Vanderbilt leads study investigating impact of theatre on youth with autism

by [Jennifer Wetzel](#) | Jan. 15, 2018, 1:40 PM

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# VUMC Reporter

## Study seeks to improve social competence in adults with autism

Apr. 22, 2020, 2:16 PM



Improving social competence in adults with autism is the goal of an upcoming study using the SENSE Theatre program. (photo taken before social distancing.) (photo by Susan Urmy)

*by Kelsey Herbers*

Researchers from Vanderbilt University Medical Center are investigating whether participation in a specially designed theatre program can improve social competence in adults with autism.

The study, backed by \$1.3 million in funding from the National Institute of Mental Health, is led by Blythe Corbett, PhD, professor of Psychiatry and Behavioral Sciences at VUMC, who established the SENSE Theatre intervention research program in 2009.

# SENSE Theatre®

## Youth vs. Adult Study

Table 1. Components & Measures Compared Between SENSE Theatre® to SENSE Theatre® for Adults

Component	SENSE Theatre® for Youth	SENSE Theatre® for Adults
Participants	Children/Adolescents 8-16 years	Adults 18-35 years
Peers	Middle School and High School	Undergraduate Students
Play Themes	Belonging, acceptance, friendship, development, fantasy	Independence, transition, relationships, real-world situations, employment
Character	Imagination, understanding, perspective taking	Development, self-determination, subtext, inner monologue (underlying thoughts and feelings)
Theatre Activities	Emphasis on Theatre Games	Emphasis on Improvisation
Measures	SENSE Theatre® for Youth	SENSE Theatre® for Adults
Social Cognition	ERP Incidental Memory for Faces NEPSY Memory for Faces Delayed	ERP Incidental Memory for Faces Cambridge Face Memory/Wechsler Memory for Faces
Social Behavior	Peer Interaction Paradigm	Contextual Assessment of Social Skills
Social Functioning	Social Responsiveness Scale	Social Responsiveness Scale
Adaptive Behavior	Adaptive Behavior Assessment	Adaptive Behavior Assessment System
Mood Anxiety	Child Behavior Checklist State-Trait Anxiety - Child	Adult Behavior Checklist (Anxiety and Depression) State-Trait Anxiety Inventory - Adult
Depression		Beck Depression Inventory-II

# SENSE Theatre<sup>®</sup> Summary

- The theatre-based intervention contributes to improvement in core areas of social ability for youth with ASD.
- Improvement suggests an increased salience for social information even in the absence of explicit instruction.
- Highlights the importance of peer-mediation, reciprocal social engagement and active practice of socialization.



# VANDERBILT KENNEDY CENTER

FOR RESEARCH ON HUMAN DEVELOPMENT

## **SENSE Research**

- Mark Klemencic, B.S.
- Rachel Calvosa, B.S.
- Chuck Badlinger, M.A.\*

## **Statistics**

- Simon Vandekar, Ph.D.
- Kris Preacher, Ph.D.

## **Interns/Postdoctoral Fellows**

- Rachael Muscatello, Ph.D.
- Jessica Schwartzman, Ph.D.
- Hannah Hartnett, M.A.
- Katie Chance, B.A.

## **Undergrad/HS Students**

- Cassady Lutz, Kunj Patel
- Davin Bryant, Justin Angular
- Ian Smith, and many more peers and actors

## **Collaborators**

- Leah Lowe, Ph.D.
- Catherine Coke, B.A.\*
- Sasha Key, Ph.D.
- Jennifer Pilkington, MS, CCC-SLP
- Paul Yoder, Ph.D.





# Acknowledgments

We thank the children and families who participate in our research!

## *Current Funding*

**NIMH R01 MH114906**

**NIMH R01 MH111599**

**NIMH R33 MH120149**

## *Previous Relevant Funding*

NIMH R34 MH097793

NIMH R01 MH085717

VKC Directors Award

Martin-McCoy-Jespersion Discovery Grant in Positive Psychology

Vanderbilt Hobbs Grant

Autism Speaks Bakers Camp Scholarship Grant

Private Donations to SENSE Theatre®

# Questions?



# Thank you!



**SENSE Theatre**  
A Stage of Hope For Children With Autism