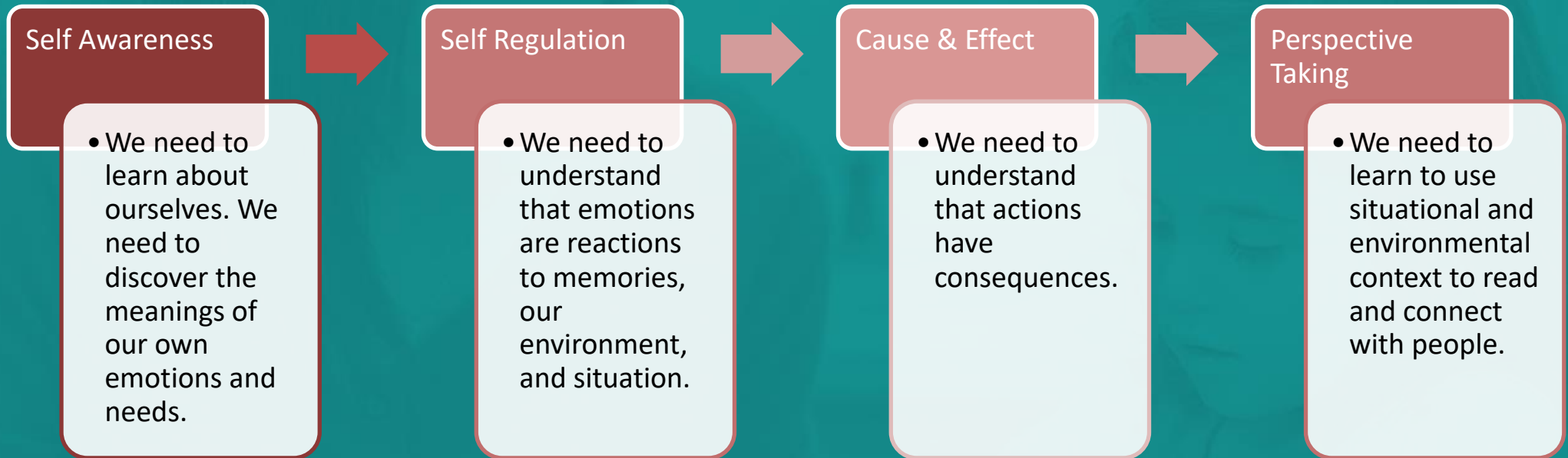


Promoting Self-Esteem and Confidence

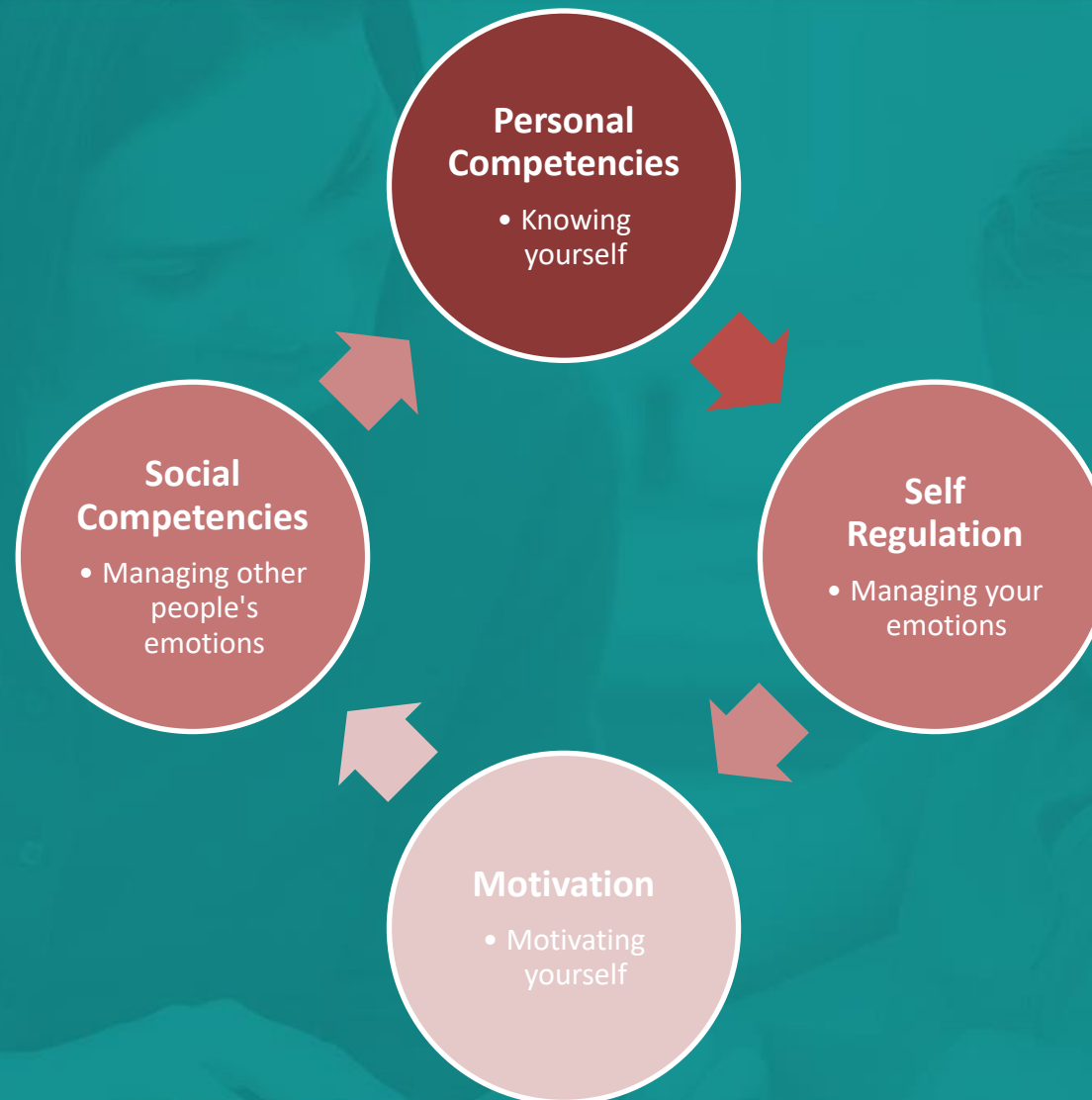
Intervention is successful

- when the student is not asked/taught to change.
- when the student learns about socialization, social rules and expectations and finds ways to adapt but not fit in or change their identity or who they are to fit in.
- when the student is invited on a journey to learn about typical social interactions, how social communication works, what it entails, how to talk to people. Focus is placed on self-awareness and self-discovery.
- When student learns about personal strengths, their unique identity.

Recommended Teaching Process



Prerequisites for successful social communication



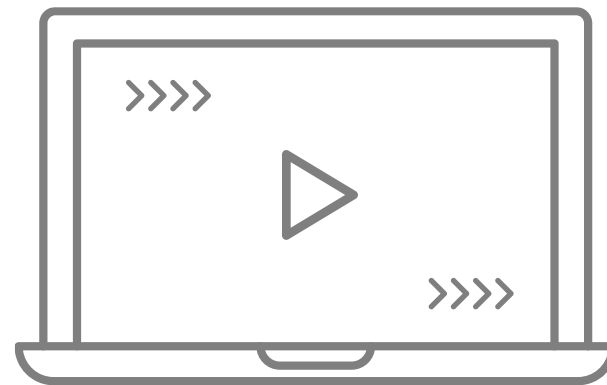
Video-based intervention

Use of produced video narrative teaching social communication skills

Purpose: To teach ability to:

- Understand real-life social situations
- Respond to real-life social situations

Presented in a video-based format



Video Modeling: Basics

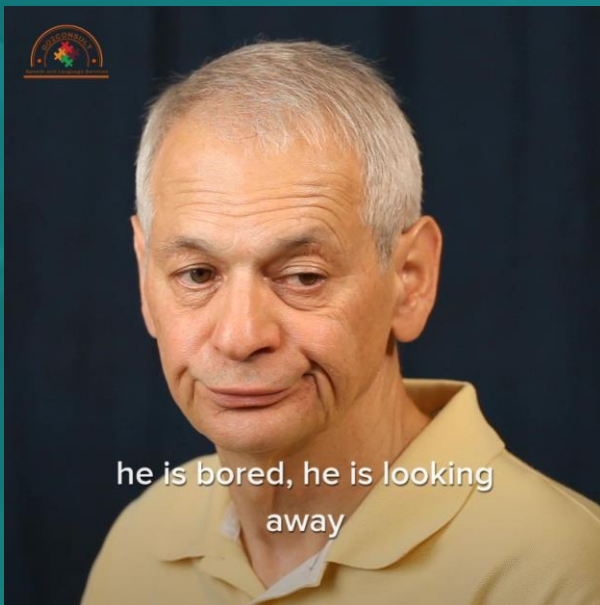
- Social Communication Intervention should not focus solely on appropriate versus inappropriate or expected versus unexpected behaviors. It is important to follow a teaching process that presents a rationale, teaches an underlying intent/emotion, encourages self-reflection and perspective taking.
- It is not recommended to show and discuss social scenes only focusing on what went wrong and how it should be done correctly. This is not the point of video modeling.
- Video modeling is a complex process that uses social scenes to help increase self-awareness, self-regulation, and perspective taking. It should not be used to show what “appropriate” and “inappropriate” behaviors look like to promote and encourage desired behavior.
- Video Modeling is successful when students engage in self-reflection, analysis and perspective taking.

Video-based intervention *(cont.)*



- Combines storytelling power of television
- Authenticity of real-life social situations
 - To obtain as naturalistic responses as possible
 - Powerful and prolific teaching tool
 - Both effective and time-efficient

Video-based intervention (*cont.*)



- A means for teaching persons with ASD or pragmatic communication disorders a “range of socially significant behaviors.”
(Rayner et al., 2009)
- Provides efficient & effective means of imitation models for children with ASD and training for normative behaviors.
(Lindsay et al., 2013)

Why Videos?

(cont.)

- Dr. Temple Grandin, a professor, author, and researcher with autism, explains, “I think in pictures. I do not think in language. All my thoughts are like videotapes running in my imagination. Pictures are my first language, and words are my second language (Grandin, 2002).
- For such individuals, videos, simulations, virtual environments (VEs), pictures, and other multimedia can be effective teaching tools (Grandin, 2002; Loftus, 2005; Parsons, 2006; Parsons et al., 2006; Dana, 2005).

Why Videos?

(cont.)

- Predictable & therefore controllable
- Enable errors to be made safely
- Offer a highly perfectible medium
- Give possibilities of non- verbal and verbal expressions (Murray, 1999)

Why is Video Modeling so Successful?

- Increases the child's attention to the modeled task (Bellini, 2007)...most children immediately direct their attention to the television or computer screen. And if you do not have attention, you will not have learning."
- Individuals with autism often benefit from visually cued instruction (Quill, 1997) and show strengths in processing visual rather than verbal information
- Children with autism can visually process information better if they have borders around their visual fields...therefore making a T.V. and computer screens a more effective way to learn a new skill. (Murray, 1999)

Video Modeling



Video based approaches have been proven to be a successful way to teach social communication skills.

During video model intervention, typically, a model (e.g., peer) demonstrates positive examples of a desired behavior (e.g., turn taking, eye contact, etc.). Each video model targets a student's needs, wants, and preferences.

For example, video modeling has been paired with strategies such as reinforcement to teach conversational skills in children with ASD.

Studies Showing the Enhancement of Communication

- Spontaneous requesting (Wert & Neisworth, 2003) • Recognizing emotions in speech and facial expressions (Corbett, 2003)
- Compliment-giving initiations and responses (Apple, Billingsley, & Schwartz, 2005)
- Language production (Buggey, 2005; Charlop-Christy et al., 2000)
- Conversational speech (Charlop & Milstein, 1989; Charlop-Christy et al., 2000; Nikopoulos & Keenan, 2003, 2004)

Studies Showing the Enhancement of Social Skills

Reciprocal play (Nikopoulos & Keenan, 2004);

Motor and verbal play sequences (D'Ateno, Mangiapanello, & Taylor, 2003);

Play-related comments (Taylor, Levin, & Jasper, 1999);

Socio-dramatic play (Dauphin, Kinney, & Stromer, 2004; Nikopoulos & Keenan, 2003)

Complying, greeting, and sharing (Simpson, Langone, & Ayres, 2004)

Spontaneous greeting (Charlop-Christy et al., 2000)

Social initiations (Nikopoulos & Keenan, 2004; Buggey, 2005)

Video Modeling Studies

Studies have demonstrated faster acquisition of social skills and increased generalization when using video modeling than when using modeling completed during a therapy session (Charlop-Christy, Le, & Freeman, 2001).

Video modeling has also been found to be an intervention that promotes independence in students with ASD (Hume, Loftin, & Lantz, 2009). Video modeling can encourage independence by moving away from teacher instruction and allowing the student to complete the task with minimal support leading to independence.

Video Modeling Studies *(cont.)*

Additionally, Cheng, Chiang, Ye, and Cheng (2010) looked at students with autism who were deficient in empathy and targeted enhancing empathy in a virtual learning environment. The study explored the understanding of empathy, perspective taking, and the use of empathy. A collaborative virtual learning environment (CVLE) with 3D animated scenarios was used, the study lasted 5 months, and results indicated the use of the system had significant and positive effects on participants learning and understanding empathy and their use of empathy.

Additionally, Charlop, Dennis, Carpenter, and Greenberg (2010) discovered that video modeling may promote socially expressive behaviors such as, appropriate verbal comments, intonation, gestures, and facial expressions of children with ASD.



Peer and Group Mediated Interventions

Research has indicated social skills intervention for children and adolescents with ASD benefit from peer-mediated interventions (Bass & Mulick, 2007; Reichow & Volkmar, 2010) and peer mentoring (Morrison, Kamps, Garcia, & Parker, 2001).

Peer-mediated interventions incorporate typically developing peers, such as classmates, into therapy to help target behavioral and social strategies (Bellini, Peters, Benner, & Hopf, 2007).

Specifically, research data has suggested that children with high functioning ASD may benefit from social connections with peers in general education classrooms.

Peer and Group Mediated Interventions *(cont.)*

Peers can be beneficial because: (a) they can model appropriate social behaviors, (b) they are readily available in a school setting, and (c) they can role-play with students with ASD in familiar settings. Kasari, Rotheram-Fuller, Locke, and Gulsrud (2012) compared two interventions for improving the social skills of children with high functioning ASD in general education classrooms.

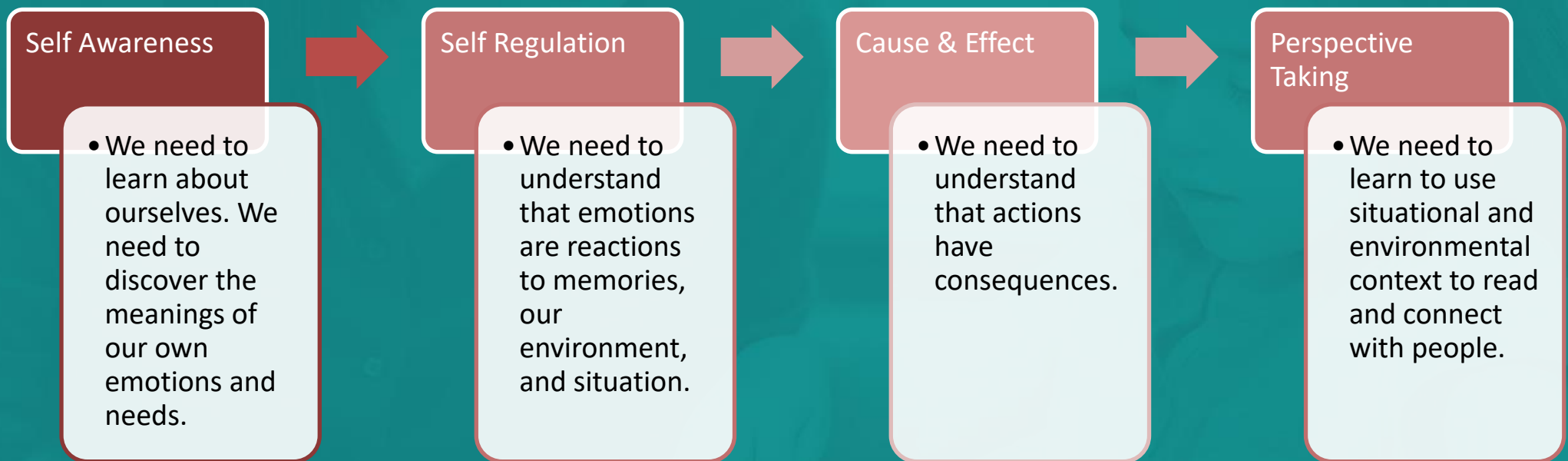
One intervention incorporated peer-mediated intervention whereas the other intervention used a child-assisted approach. The peer-mediated intervention was found to result in significant improvements in the areas of: social network salience, number of friendship nominations, teacher report of social skills in the classroom, and decreased isolation on the playground.

Peer and Group Mediated Interventions *(cont.)*

Further, Morrison, Kamps, Garcia, and Parker (2001) investigated peer mentoring as a method for improving social skills for students with ASD. In this study, students with ASD and a group of general education peers were taught to use and monitor social skills while playing games to increase initiations and social interaction skills (e.g., requesting, commenting, turn-taking, sharing). The results of the study demonstrated an increase in the number of initiations and social interaction time with peers during intervention, as well as use of the targeted social skills.

Sample Analysis of Social Scenes

Let's analyze 2-3 "empathy and sarcasm" scenes



Sample Curriculum

Full topic/lesson scripts can be downloaded from
<https://videolearningsquad.com/lesson-scripts/>

1. Self-Discovery
 - a. Reflective self-awareness (learning about social communication and autism, brain differences, about feeling different)
 - b. Discovering emotions (why do we need emotions, sources of emotion and how emotions help us, what do they feel like (rating intensity of emotions))
 - c. Discovering personal profile and their unique self

Sample Curriculum

3. Communication Tools

- a. Social Mind: Active and genuine listening & reading nonverbal language
- b. Entering conversations/ ending conversations
- c. Maintaining friendships

3. Special Topics

- a. Sarcasm
- b. Bullying
- c. Empathy
- d. Apologies
- e. Confrontations

Reflective self-awareness

- Discuss student's expectations with therapy, their goals and priorities and what they want to work on
- Brain Differences (learning about social communication, autism, brain differences and why it may be difficult to connect with people)
- Discuss neurodiversity
- Social communication differences and the importance of interoception
- Social communication differences and accommodations
- Student's strengths
- Sample video, "You are not alone"

Reflective self-awareness: sample lesson about brain differences



Reflective self-awareness: sample lesson about neurodiversity



Reflective self-awareness: sample lesson about interoception



Reflective self-awareness: sample lesson about accommodations



Reflective self-awareness – follow up questions

In this video, we discussed how different touches, smells, tastes, sounds, visuals can be overwhelming... can you think of something that is overwhelming to you, or something that makes you feel uncomfortable? What strategies do you use to deal with the overwhelming situations you might find yourself in? Remember these strategies are called accommodations and look different for different people. For example, people who find noise overstimulating may use noise cancelling headphones...

Reflective self-awareness: strengths



Reflective self-awareness: you are not alone



Discovering Emotions

- Why do we need emotions? (they reactions to the world around us)
- sources of emotion
- intensity of emotions, (rating emotions)
- what emotions feel like

Need to teach to tolerate emotions and not to extinguish them!

Discovering Emotions

- Emotions are responses to our environment and they help us stay safe. We need emotions because they help us read the environment and react appropriately.
- Emotions can also help us understand our experiences. For example, we would never know that losing a loved one is a sad experience if we never felt sadness. We would never know that falling in love is a joyful experience if we have never felt joy.
- Feeling emotions help us to categorize our emotions. For example, positive emotions relate to experiences we may look forward to. Negative emotions alert us of unpleasant experiences and things we may want to avoid. Our emotions also allow us to communicate with others.

Discovering Emotions

- Emotions guide us in our experiences and without emotional intelligence, we would not be able to tell what kind of experiences we want and what kind of experiences we want to avoid. Emotions serve a purpose as they connect the flow of information between us and external stimuli. Without emotions we would not be able to read our environments or situations and be able to respond appropriately.
- Emotions are brain/body reactions to both memories and our current situation and environment. Our emotions can be based off a response to a current event or similar event in the past. The way we handle emotions is based on our ability to tolerate the emotion.

Discovering Emotions

- When we are able to differentiate between our body sensations, and make sense of what different sensations mean or feel like, we are able to differentiate between emotions. That's why, our interoceptive system's ability to distinguish subtle differences is essential for the overall emotional experience.

Discovering Emotions

Examples of how emotions help us

Fear may act to prevent us from harm

Anger may act to fight against setbacks

Trust may act to link with people that might assist

Disgust may act to abandon what is unhealthy

Sadness may act to link with those we love

Anticipation may act to look forward and plan

Joy may act to remind us what is critical

Anxiety can be....

.....happy if awaiting for a gift or the first day of school.

.....or it could be hurtful if expecting to return to a past trauma.

Discovering Emotions

Activate emotions – learn to discriminate between emotions, create a continuum of emotions.

Love/pleasant -----fear/unpleasant

Learn about intensity of emotions

No feeling/emotion, when sleeping ----- strong, anxiety, fear, pain, can't tolerate it/unbearable hurt (this when people develop maladaptive behaviors – we'll them coping strategies: tapping, biting lips, walking around in circles when anxious waiting). Look at emotions in terms of energy, how much energy do emotions have, they can be strong in energy.

When emotions are high in energy or strong in intensity, people numb the emotions to numb the pain, because they cannot tolerate the hurt. So, they ignore the emotion, block it.

Why do we need emotions?



Follow up questions

In the video, we learned that emotions help us determine what we need. What are some “needs” that have to be met every day?

At any given moment there are many factors that may affect the way we feel. Noise levels, the number of people around, access to visuals, the time of day, the temperature, where you are. Our senses sight, hearing, touch, taste, hearing, orientation, and interoception tell us lots of things. Can you think of an outside factor that might make you feel nervous or anxious? What about happy? Why do we need emotions?

Self Regulation

- What happens when a person is not self-aware
- Cause-effect analysis, intent of messages, consequences of uncertainty
- Behavior is not something that happens for no reason

***Behavior is Not Something That
Happens For No Reason***



Discovering personal profile

- feeling different
- double empathy
- becoming friends with yourself
- establishing interests, likes, dislikes and deal breakers
- you don't have to like someone
- goals
- varieties of strategies
- friendships

Feeling Different



*Becoming Friends with Yourself
(building self-esteem)*



Social Anxiety

- When You Think This Program is Not for You
- Anxiety
- Classical conditioning
- Brave Ladder and Abdominal Breathing
- Positive Thinking
- Negative Self-Talk
- Jumping to Conclusions
- Personalization
- All or Nothing
- Catastrophic Thinking
- Mental Filter
- Overgeneralizing
- Should's and Shouldn't's

Classical Conditioning



Positive Thinking



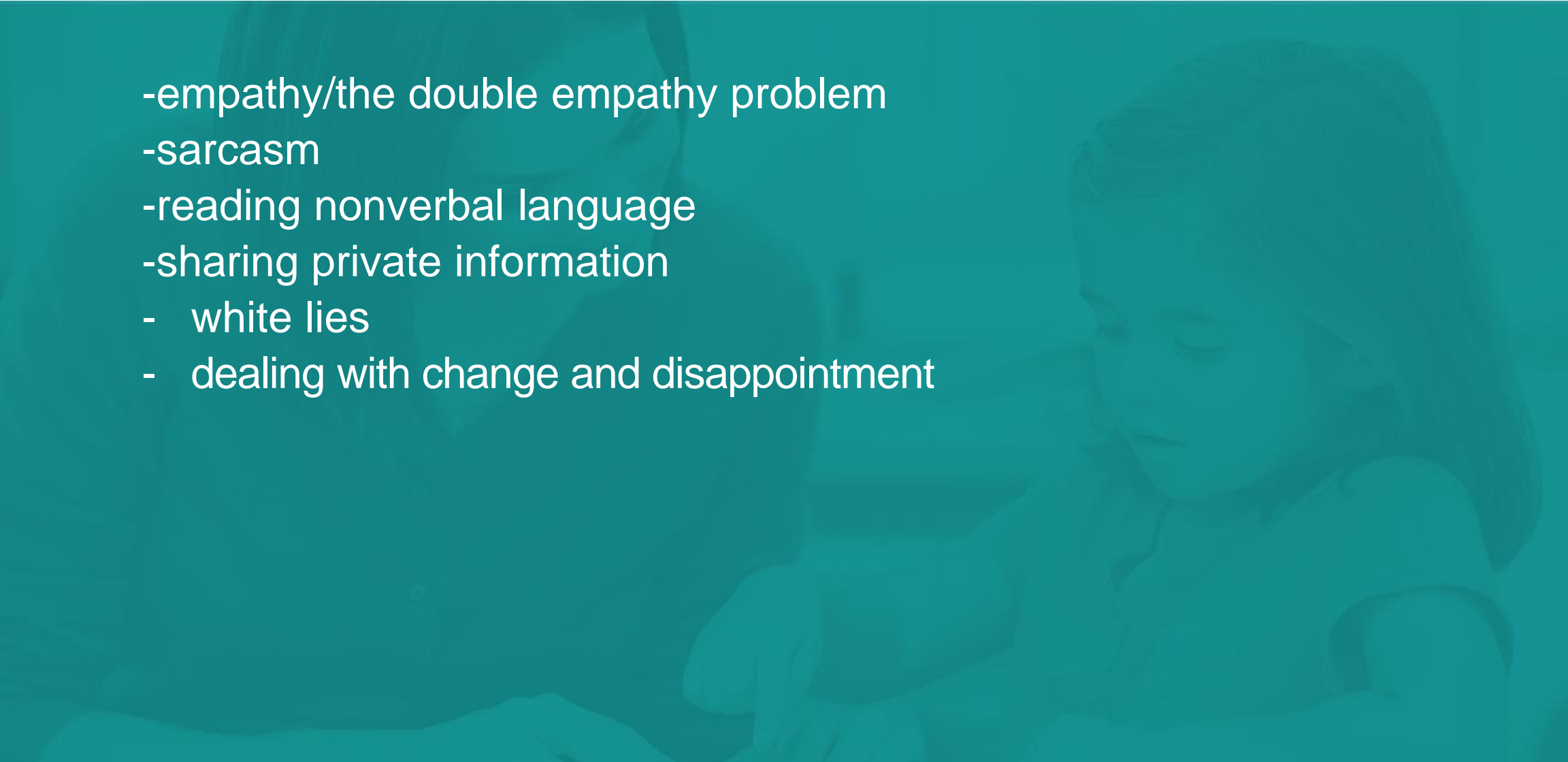
Communication Tools

Note: It is important to emphasize that the following is information and strategies that neurotypical students use in order to connect with each other. It is important to understand how the neurotypical world works and what the expectations are, in order to navigate it better and stay safe.

- social mind
- conversational adaptation
- maintaining friendships

Special Topics

- empathy/the double empathy problem
- sarcasm
- reading nonverbal language
- sharing private information
- white lies
- dealing with change and disappointment



Question?

- What if we explicitly teach how to decode facial expressions? How?
- Would visual bombardment work?

Sample video

- Auditory visual bombardment
- [Videolearningsquad.com](https://videolearningsquad.com)

Research Study #1

- To analyze effectiveness of a real-life video-based, peer-modeling approach for social communication differences/difficulties
- To analyze treatment outcomes in 2 groups:
 - autism
 - social communication disorder

Two Participant Groups



Group Profiles (N=29):

17 AUT students

12 SCD students

Age Range:

- 7:0 yrs. old-13:0 yrs. old (younger kids)
- 13:0 yrs. old-18:0 yrs. old (older kids)

Social Communication Disorder (SCD)

Inclusion:

- Having a current diagnosis of social communication disorder (based on special education eligibility criteria or medical records)
- obtained a standard score of ≤ 76 on the Clinical Assessment of Pragmatics (CAPs; Lavi, 2019) (subtests: Affective Expression, Paralinguistic Decoding and Paralinguistic Cues) and CASL 2 (subtests: Pragmatic Judgement, Meaning from Context, Inference)
- Attend public school
- Full-time general education classroom

Exclusion:

- Comorbid conditions
E.g., autism, mental health issues, personality disorders, general medical conditions

Autism

Inclusion:

- Having a current diagnosis of autism (based on special education eligibility criteria or medical records)
- obtained a standard score of ≤ 76 on the Clinical Assessment of Pragmatics (CAPs; Lavi, 2019) (subtests: Affective Expression, Paralinguistic Decoding and Paralinguistic Cues) and CASL 2 (subtests: Pragmatic Judgement, Meaning from Context, Inference)
- Attend public school
- General education classroom (min. 4 hrs)

Exclusion:

- Comorbid conditions
 - E.g., mental health issues, personality disorders, general medical conditions

Pre-Post Testing



- Pre and post treatment testing completed by using 3 subtests of the CAPs: social context appraisal, paralinguistic decoding and paralinguistic signals
- Participants were tested individually, in a separate setting, free from distractions
- Tested by CA licensed speech-language pathologists trained in the standardized administration of this pragmatic language therapy program

Study Design

Pre-Post Testing

The study lasted 6 weeks, 2x week.

Each study session lasted 30 min and consisted of small groups of 3 or less participants matched by age.

Treatment occurred in a quiet, separate room.

Study Design

Study participants were seen in group therapy that targeted 5 social communication topics

Through the continued visual bombardment of video-based peer modeling the student increased exposure to the understanding and judgment of social context in a practical age-appropriate situation.

The skill was absorbed and the student participated in decision-making, role-play, and performance activities correlating to the targeted 6 areas.



Empathy



Sarcasm
Deceit
Bullying



Conversational
Adaptation



Accepting
Change,
Negotiations,
Compromise



Idioms and
Expressions

Conceptual Framework of the study

The ability to understand social cues is a pre-requisite skill for learning about social situations:

We focused on the ability to evaluate social context first and then moved on to performance in social situations.

The program was designed to address appropriate expression of affective intent and higher order social communication skills.

Decoding Nonverbal Cues



Previous Nonverbal Language Interventions

- Soorya et al. (2015) investigated the efficacy of *Nonverbal communication, Emotion recognition, and Theory of mind Training* (NETT) in children diagnosed with ASD aged 8 to 11.
- NETT is a manualized intervention that targets nonverbal communication and emotion recognition. NETT has a cognitive behavioral approach and uses activities such as skills training, relationship development intervention, and thought bubbles. Parent training and homework are also incorporated in the training.
- Soorya et al. (2015) found that nonverbal communication, empathic responding, and social relations improved immediately after treatment, however, no significant differences were found at three-month follow up.

Previous Nonverbal Language Interventions (*cont.*)

- A study conducted by Thomeer et al. (2015) investigated the efficacy of the *Mind Reading* (MR) computer program in HFA children aged 7 to 12.
- MR aims to train students to decode facial expressions and prosody. MR training involves audio-visual stimuli of voices and faces to learn simple and complex emotions through observation of emotion expressions, structured lessons, quizzes, etc. The MR program also uses in vivo rehearsal trials throughout each session.
- This study found that students who received the treatment performed significantly better than the control group in regards to emotion decoding and encoding.

Typical Session Outline

1. Full topic introduction video/discussion-10 minutes
2. Topic discussion of problem-5 minutes
3. Visual Bombardment: Review facial expressions & vocal inflections (non-verbal communication video)-5 minutes
4. Watch and discuss practice videos-10 minutes
 - a) Role play of incorrect and correct social situations
 - b) Followed by asking "What went wrong?", "What went right?", and "How do you know it went well?"
 - c) Ask perspective taking questions such as "How did it make you feel?"

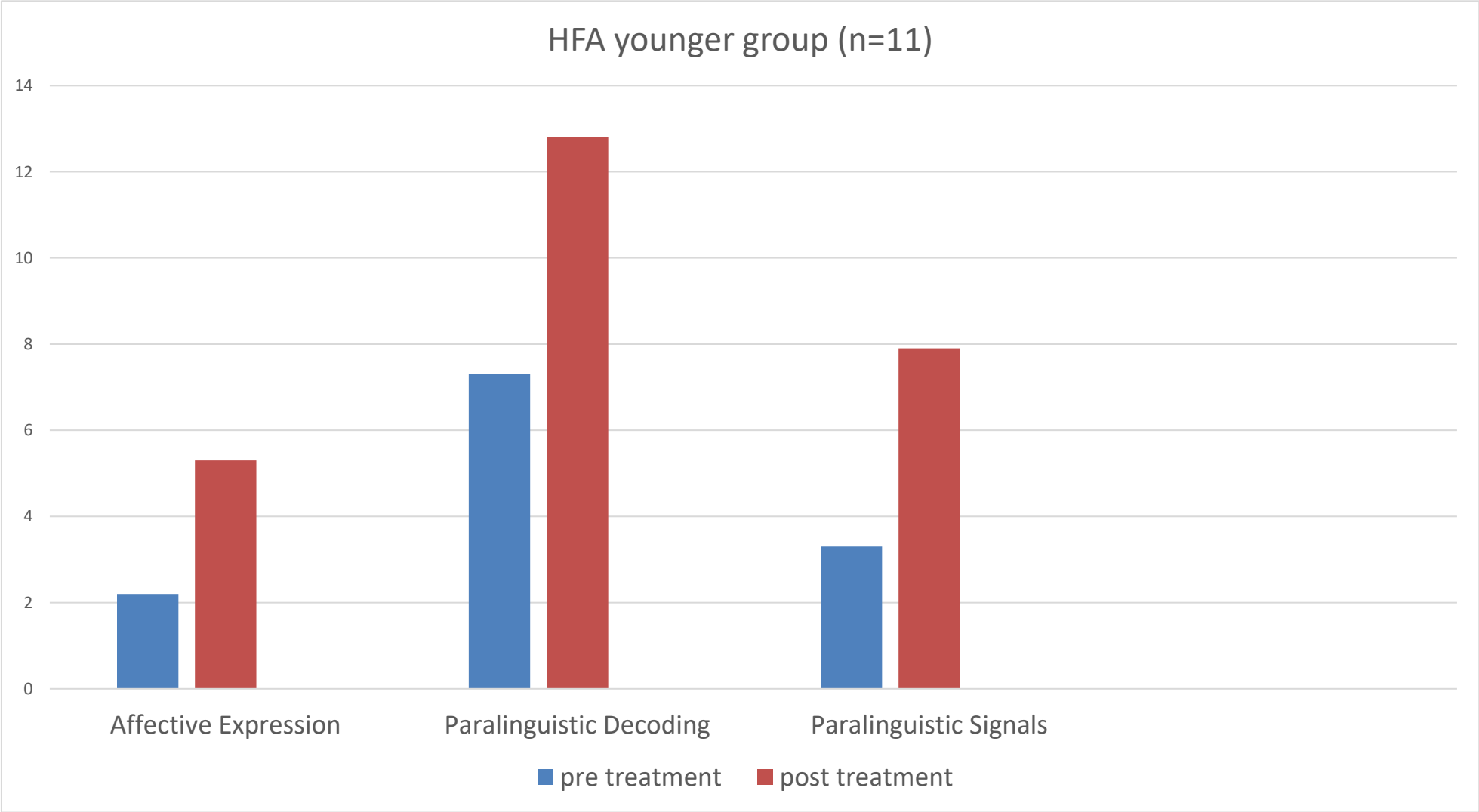
Study Results

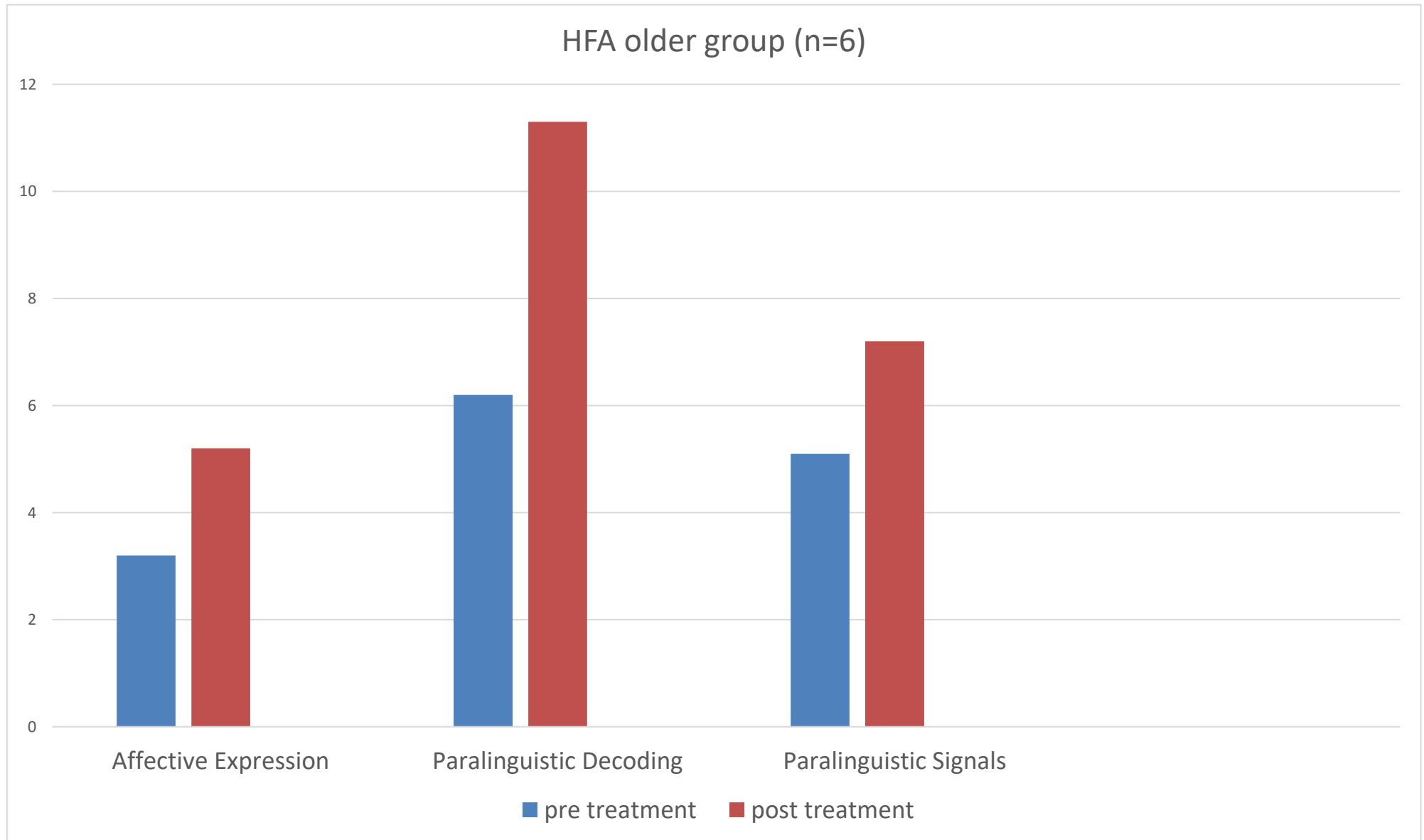
- Both groups demonstrated improvements in pragmatic judgment and performance
- Video-based modeling showed to be beneficial for improving comprehension of social context and pragmatic performance (both verbal and nonverbal).



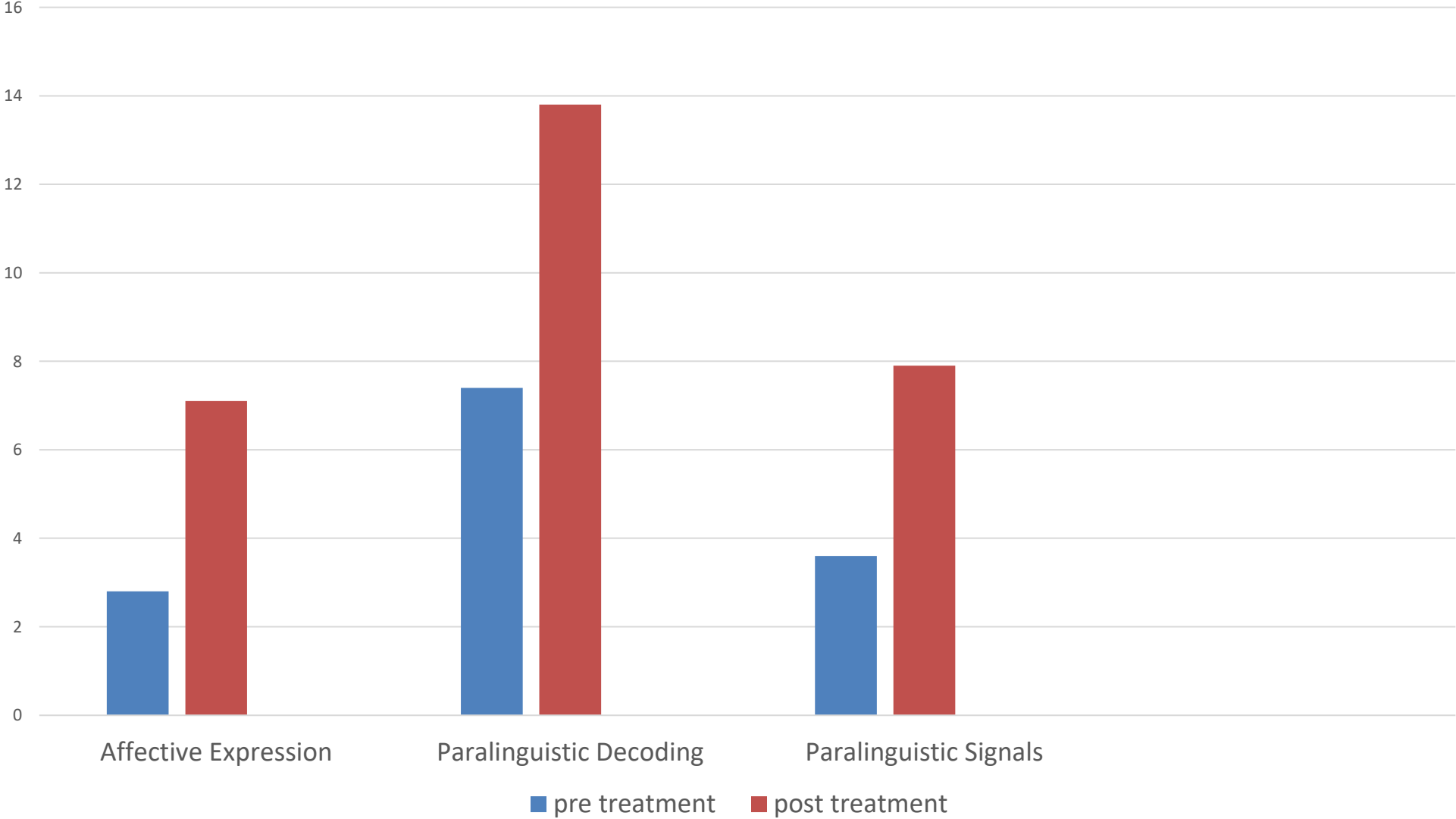
Post-intervention unadjusted means and standard deviations for dependent measures for two groups with post hoc pairwise least significant difference comparison p values and estimated Cohen's d effect sizes

	Groups				Comparisons	
	SDC		HFA		SDC vs. HFA	
Nonverbal Language						
CAPs Paralinguistic Decoding F(2, 18) = 6.21, p = .008, hp ² = .412	10.9 (1.24)		9.6 (1.17)		.003 (d=2.21)	
CAPs Paralinguistic Signals F(2, 18) = 5.54, p = .015, hp ² = .376	7.9 (1.62)		5.9 (1.74)		.054 (d = 1.52)	
Social Language Comprehension						

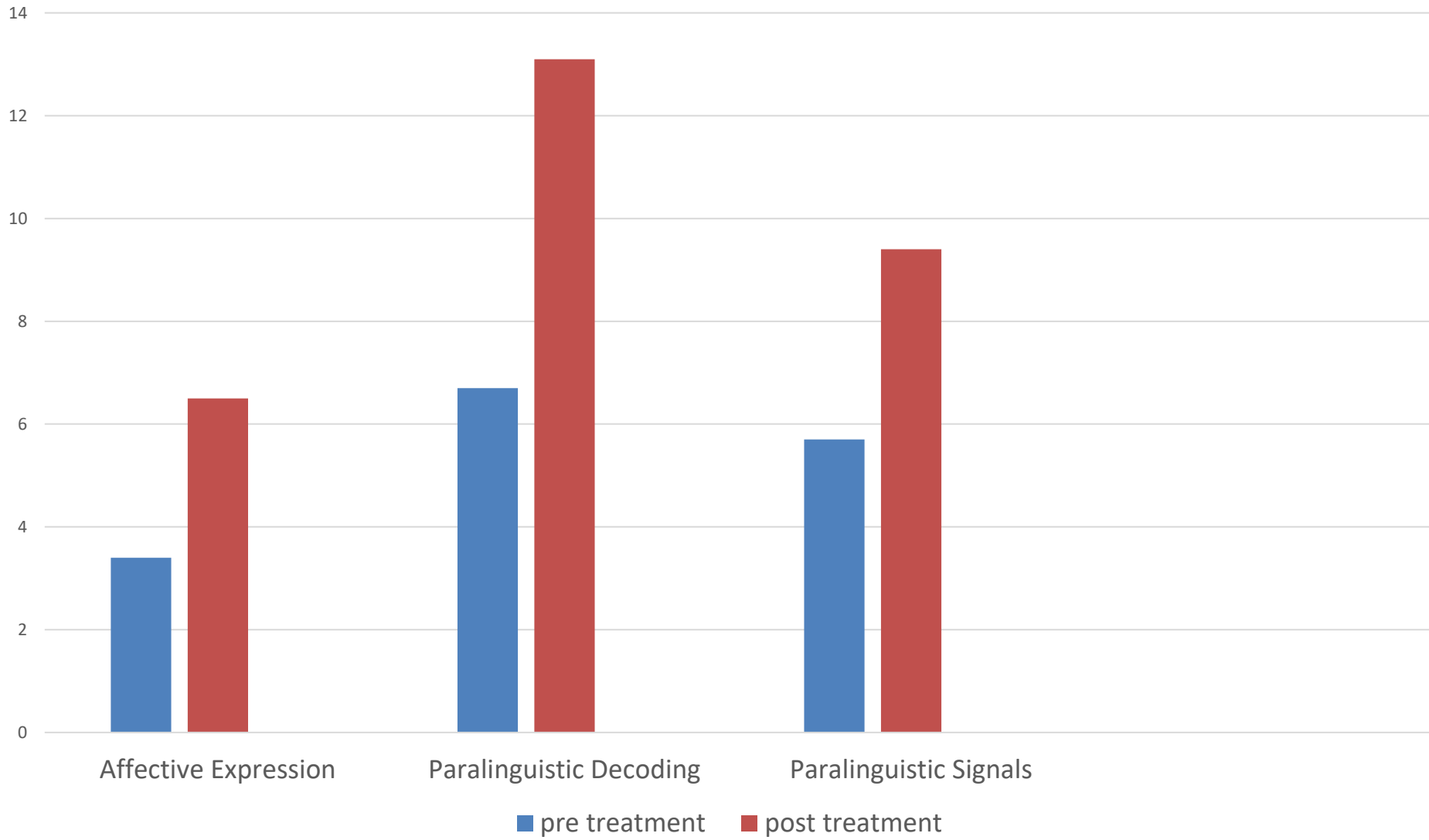




SCD younger group (n=6)



SCD older group n=5



And now, presentation of the 2nd
research study we conducted

Methods

Thirty children between the ages of 9;0 (years; months) and 10;11 were randomly assigned to the VABI and VMI groups. They received 30-min group intervention sessions 2 times per week for 8 weeks. Social language comprehension and nonverbal language measures were administered to assess intervention outcomes pre and post-intervention.

Methods

Eight similar-age children from the no-treatment group acted as a control group. Testing for these children was conducted during summer break, so the children in the CON group were not receiving school instruction. Children in the CON group were given the same measures as the children in the treatment groups, separated by a 8-week period of time.

Methods

Pre- and posttest assessments for all three groups were administered and were scored by a team of evaluators who were blind to group assignment and to the goals of the study.

Thirty-eight children with pragmatic language impairment (PLI) participated in the study. Children were eligible to participate if they obtained a standard score of ≤ 76 on 3 CAPs subtests; Lavi, 2019) (subtests: Affective Expression, Paralinguistic Decoding and Paralinguistic Cues) and CASL2 (Carrow-Woolfolk, 2017) (subtests: Pragmatic Judgement, Meaning from Context, Inference) and attended general education classrooms for at least 4 hours per day.

Methods

None of the participants presented with hearing impairment, visual impairment, gross neurological impairment, oral-structural anomalies, or emotional disorders. Participants were excluded from the study if they presented with intellectual disability, learning disability, and/or emotional disturbance. Additionally, students who presented with co-morbid disorders as defined by the DSM-V such as personality disorders, mental health disorders, or general medical conditions were excluded from the study.

Methods

- Intervention Procedure VABI. Children who were randomly assigned to the VABI group participated in a video modeling intervention that was heavily based on teaching nonverbal language cues. The VABI was structured around activities involving auditory and visual bombardment of facial expressions and vocal inflections and teaching their meanings.
 - A critical difference between the VABI and VMI programs related to teaching of meanings of nonverbal language through use of auditory and visual bombardment of various facial expressions and vocal inflections.
-

Pre-intervention means and standard deviations for dependent measures for three participant groups: visual auditory bombardment intervention group (VABI), video modeling intervention (VMI), and a no-intervention control group (CON).

	Group							
	VABI			VMI			CON	
	M	SD		M	SD		M	SD
Nonverbal Language								
CAPs Paralinguistic Decoding	8.6	1.2		9.2	0.9		8.8	1.3
CAPs Paralinguistic Signals	5.7	1.8		5.3	1.5		4.9	1.7
Social Language Comprehension								
CAPs Social Context Appraisal	10.7	1.2		11.3	1.6		10.9	1.8
CASL2 Pragmatic Language	23.4	2.4		22.8	2.6		22.5	1.9
CASL2 Idiomatic Language	4.6	1.7		3.9	2.1		4.2	1.5
CASL2 Nonliteral Language	5.6	2.2		6.1	1.6		6.3	2.1

	Group						Comparisons			
	VABI		VMI		CON		VABI vs. CON		VMI vs. CON	
Nonverbal Language										
CAPs Paralinguistic Decoding F(2, 18) = 6.21, p = .008, hp^2 = .412	10.9 (1.24)		9.6 (1.17)		8.9 (1.39)		.003 (d=2.21)		.261 (d = 0.04)	
CAPs Paralinguistic Signals F(2, 18) = 5.54, p = .015, hp^2 = .376	7.9 (1.62)		5.9 (1.74)		5.2 (1.67)		.054 (d = 1.52)		.322 (d = 0.30)	
Social Language Comprehension										
CAPs Social Context Appraisal F(2, 18) = 3.65, p = .035, hp^2 = .289	12.3 (1.4)		11.5 (1.5)		10.8 (1.9)		0.15 (d = .91)		.568 (d = -0.38)	
CASL2 Pragmatic Language F(2, 18) = 6.45, p = .007, hp^2 = .424	25.8 (2.8)		23.2 (2.3)		22.8 (2.1)		.003 (d = 1.24)		.247 (d = 0.24)	
CASL2 Idiomatic Language F(2, 18) = 5.42, p = .018, hp^2 = .379	6.8 (1.5)		4.9 (2.2)		4.3 (1.2)		.028 (d = .94)		.265 (d = -0.40)	
CASL2 Nonliteral Language F(2, 18) = 6.42, p = .007, hp^2 = .421	8.7 (2.1)		7.4 (1.4)		6.4 (1.8)		.011 (d = 0.91)		.355 (d = 0.21)	

Results: Both interventions were associated with statistically significant gains on social language comprehension measures when compared to a no-treatment condition. Effect size analyses demonstrated that the VABI group outperformed the VMI group on all outcome measures.

Conclusion: The results revealed signs of higher efficacy in an intervention approach in which clinicians treated multiple targets using meaningful activities with high levels of visual and auditory bombardment of nonverbal language cues.

Questions?



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