



Dyad A = client KM and therapist TL
 Dyad B = client DW and therapist SH
 Dyad C = client JC and therapist EZ

Table 1. Table depicting child participant IOH and IOS

Participant	Indices of Happiness (IOH)	Indices of Sadness (IOS)
KM	<p><i>Grinning</i>: corners of the mouth turned up with or without showing teeth.</p> <p><i>Scripting</i>: saying specific words and/or making specific vocalizations repeatedly for at least 3 seconds.</p>	<p><i>Screaming</i>: any occurrence of vocalizations louder than the conversational pitch for any period of time with or without pacing, running away, and/or crying.</p> <p><i>Hitting</i>: any occurrence of contacting another person's body with an open or closed hand that produces an audible sound with or without leaving a visible mark. Does not include appropriate activities such as high fives.</p> <p><i>Property Destruction</i>: any occurrence of swiping, pushing, throwing and/or kicking objects that results in the object's displacement of more than 1 foot from its original location. This does not include pushing, throwing, or kicking objects as part of an appropriate play activity such as throwing or kicking a ball, or pushing a wagon.</p> <p><i>Pouting</i>: any occurrence of crossing her arms in front of her body that may or may not be accompanied by lowering her head and/or covering her face with her hands that results in decreased visibility of parts of her face.</p>
DW	<p><i>Smiling</i>: corners of the mouth turned up with or without showing teeth and/or raising the eyebrows towards the hairline.</p> <p><i>Joking</i>: engaging in vocalizations that make her audience smile and/or laugh that is accompanied by directing the face towards the audience.</p>	<p><i>Frowning</i>: corners of the mouth turned down with or without narrowing of the eyebrows towards the nose and/or squinting her eyes.</p>
JC	<p><i>Smiling</i>: corners of the mouth turned up with or without showing teeth.</p>	<p><i>Frowning</i>: corners of the mouth turned down with or without narrowing of the eyebrows towards the nose.</p> <p><i>Eloping</i>: any occurrence of distancing herself from others by walking or running in the opposite direction that results in increased physical distance between herself and others.</p> <p><i>Grunting</i>: any occurrence of vocalizing low audible grunting or growling sounds that may or may not be accompanied by frowning.</p>

Table 2. Table depicting child participant approach and escape behaviors

Participant	Approach Behaviors (displayed as rate/session)			Escape Behaviors (displayed as rate/session)		
	Baseline	Intervention	Generalization	Baseline	Intervention	Generalization
<i>KM</i>	2	7.5	4	4	4	0
<i>DW</i>	0	1	6.5	0	0	0
<i>JC</i>	2.1	2	15	3.1	2	6

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Appendix A. Therapist Pairing Fidelity Sheet

Pairing Fidelity Sheet - Primary / Reli *(circle one)*

Client: _____

Date and Time: _____

Implementer: _____

Observer: _____

Child's Communication Level: _____

Aversive Stimuli: _____

Instructions: Rate as "+" if the behavior is observed, as "-" if the behavior is not observed, or as n/a if the step is not applicable (e.g., problem behavior did not occur during the session)

Number	Target Behavior	Rating
1	Therapist remains within arm's distance of the client as appropriate (proximity).	+ - n/a
2	The therapist places preferred items within sight but out of reach of the child and / or has control over child's access to items and activities (initiate).	+ - n/a
3	The therapist narrates the child's activities about every 30 seconds (describe).	+ - n/a
4	The therapist creates new ways to interact with a preferred item or activity at least 1 time per minute (create).	+ - n/a
5	The therapist uses behavior specific praise contingent on play skills at least once every 30 seconds (praise).	+ - n/a
6	The therapist makes sure not to interrupt the child's engagement in play (initiate).	+ - n/a
7	The therapist tacts reinforcers while delivering them every time (reflect).	+ - n/a
8	The therapist imitates appropriate play skills displayed by the child (imitate).	+ - n/a
9	The therapist does NOT present aversive stimuli (e.g. questions, demands, etc.) as individually defined for the child.	+ - n/a
10	The therapist engages in parallel or cooperative play depending on the child's preference (praise).	+ - n/a
11	The therapist does not reinforce inappropriate or problem behaviors (praise).	+ - n/a
12	The therapist models functional play at least 1 time per minute (create).	+ - n/a
13	The therapist repeats vocalizations made by the child at the child's communication level (reflect).	+ - n/a
14	The therapist comments and communicates at the child's communication level.	+ - n/a
15	The therapist matches the child's engagement in an activity by engaging in activities or items based on the observed behaviors from child indicating continued engagement is preferred (e.g., indices of happiness, handing items to caregiver, orientation towards caregiver, pointing, decreased proximity to therapist, etc.) within 10 s.	+ - n/a
16	The therapist matches the child's disengagement in an activity by withdrawing or changing activities based on behaviors indicating disengagement is preferred (e.g. turning back, resisting sharing, verbally declaring "no", increased proximity to therapist etc.) within 10 s.	+ - n/a
17	The therapist exhibited indices of happiness when engaging with the child.	+ - n/a
	Total Correct	
	Percentage Correct	

Appendix C. Role Play Script

Category	Scenario	Pairing
Proximity	<p>Stay close to the therapist and play with trains on the floor.</p> <p>Pick up a ball and start bouncing the ball.</p> <p>Move away from the therapist to engage with different toys. If the therapist decreases physical distance by moving closer, continue engaging with toys and orient body and face towards the therapist.</p> <p>Move away from the therapist to engage with different toys. If the therapist decreases physical distance by moving closer, continue to move away from the therapist and engage with different items/activities. Orient your body and face away from the therapist resulting in increased physical distance from the therapist.</p>	<p>Position yourself within arm's distance of the child, as appropriate for the situation.</p> <p>Catch the ball and throw or bounce it back to the child.</p> <p>Follow the child's lead and remain within arm's distance of the child. Be aware of opportunities to provide access to preferred items or activities.</p> <p>Be aware of the child's increase in physical distance and respect the child's need for increased distance. Engage with other toys until the child demonstrates interest in the toy or activity by orienting their face and body towards you.</p>
Initiate and Reflect	<p>Reach for and point to items on higher shelves out of your reach.</p> <p>Say "train" and point towards the box with the wooden trains.</p> <p>Demonstrate difficulty opening the container to access the trains.</p> <p>Say "ugh, it's stuck"</p> <p>Engage with the wooden toy trains and take the items delivered by the therapist.</p>	<p>Be aware of what items and/or activities the child is interested in and deliver them to the child by retrieving items from higher shelves or opening containers. Make sure you have control over the child's access to items by holding on to a container of toys and handing individual toys to the child.</p> <p>Repeat vocalizations made by the child at the child's communication level by saying "oh, you want the train", and "oh, its stuck, I can help"</p> <p>Tact the items you deliver every time, by saying "the box is open" and "here is the train" as you deliver the train.</p> <p>Hand the child additional pieces for the train track to control access to and delivery of preferred items.</p>
Describe and Praise	<p>Engage with the wooden train toys by adding things to the track and engaging in imaginative play with the trains. Incorporate items the therapist hands you into the game.</p> <p>Continue engaging with the toy train but reject items delivered by the therapist by saying "no" while frowning. Throw the item and push toys away with your feet while frowning, pulling the corner of your mouth downward and narrowing your eyebrows towards your nose.</p>	<p>Describe what the child is doing by narrating their activities, at least once every 30 seconds. You can say "you are building a big train track", or something like "the train goes up the bridge", "you made a long train", or "the train is going so fast", depending on your observations of the child's game play.</p> <p>Deliver behavior specific praise about the child's appropriate game play at least once every 30 seconds. You can say things like "you are so good at building train tracks", "I love the train you made", or "that was a great idea".</p> <p>Make sure not to reinforce inappropriate behaviors or problem behaviors. Ignore the behavior and redirect by engaging with other activities or items.</p>
Engage	<p>Stop engaging with toys and orient your body and face in the opposite direction of the therapist while making a frow by pulling the corners of your mouth downwards. If the therapist continues attempts to deliver the previously rejected items, increase the physical distance by orienting both body and face in the opposite direction of the therapist.</p> <p>As soon as the therapist withdraws or engages in a new activity, orient your body and face towards the therapist and move closer to the therapist. Engage with the toys the therapist is engaging with. Hand more items to the therapist to add to the game play. Point towards other items and react to the therapists' play by smiling and/or laughing.</p>	<p>Be aware of and match the child's displayed disengagement in an activity by withdrawing and changing activities within 10 seconds.</p> <p>Be aware of and match the child's displayed engagement in an activity, within 10 seconds, by continuing to engage in the preferred activity with the child.</p>
Imitate and Create	<p>Continue engaging with the toys in imaginative game play.</p> <p>Orient your face and body away from the therapist and ignore the therapist's game play while continuing to play by yourself.</p> <p>React to the way the therapist is playing with an item by smiling and imitating the way the therapist is playing.</p> <p>If the therapist presents aversive stimuli in the form of a demand, orient your face and body away from the therapist and ignore the therapist while frowning by pulling the corners of your mouth downwards and narrowing your eyebrows towards your nose.</p>	<p>Imitate appropriate play skills displayed by the child and engage in cooperative play (playing with the child), or parallel game play (playing next to the child) without interfering with the child's activity or game play, depending on the child's preference as observed through body and facial orientation.</p> <p>Model functional game play and create new ways to interact with preferred items or activities at least once per minute.</p> <p>Avoid presenting aversive stimuli depending on the individual child. Many children do NOT like questions, demands, physical touch, or loud noises. Be aware of and sensitive to the child's indices of happiness and sadness.</p>
Communicate	<p>Ask the therapist what their favorite color is while looking at their face with raised eyebrows. Wait for the therapist to answer and then tell them your favorite color and your mom, dads, and sibling's favorite color. Tell them your dog's favorite color is indigo blue.</p>	<p>Make sure to communicate with the child by commenting and communicating at the child's communication level.</p> <p>Unless the child asks you questions and looks at you to engage in the conversation, do NOT ask questions.</p>

Appendix D. Role Play Fidelity of Implementation

“C” Actor Role Play Fidelity Sheet - Primary / Reli *(circle one)*

“Client” Actor: _____

Date and Time: _____

Implementer: _____

Observer: _____

Instructions: Rate as “+” if the behavior is observed, and mark as “-” if the behavior is not observed.

Number	“Client” Actor Target Behavior	Rating
1	Stay close to the therapist and play with trains on the floor.	+ -
2	Pick up a ball and start bouncing the ball.	+ -
3	Move away from the therapist to engage with different toys. If the therapist decreases physical distance by moving closer, continue engaging with toys and orient body and face towards the therapist.	+ -
4	Move away from the therapist to engage with different toys. If the therapist decreases physical distance by moving closer, continue to move away from the therapist and engage with different items/activities. Orient your body and face away from the therapist resulting in increased physical distance from the therapist.	+ -
5	Reach for and point to items on higher shelves out of your reach.	+ -
6	Say “train” and point towards the box with the wooden trains.	+ -
7	Demonstrate difficulty opening the container to access the trains.	+ -
8	Say “ugh, it’s stuck”	+ -
9	Engage with the wooden toy trains and take the items delivered by the therapist.	+ -
10	Engage with the wooden train toys by adding things to the track and engaging in imaginative play with the trains. Incorporate items the therapist hands you into the game.	+ -
11	Continue engaging with the toy train but reject items delivered by the therapist by saying “no” while frowning. Throw the item and push toys away with your feet while frowning, pulling the corner of your mouth downward and narrowing your eyebrows towards your nose.	+ -
12	Stop engaging with toys and orient your body and face in the opposite direction of the therapist while making a frow by pulling the corners of your mouth downwards. If the therapist continues attempts to deliver the previously rejected items, increase the physical distance by orienting both body and face in the opposite direction of the therapist.	+ -
13	As soon as the therapist withdraws or engages in a new activity, orient your body and face towards the therapist and move closer to the therapist. Engage with the toys the therapist is engaging with. Hand more items to the therapist to add to the game play. Point towards other items and react to the therapists’ play by smiling and/or laughing.	+ -
14	Continue engaging with the toys in imaginative game play.	+ -
15	Orient your face and body away from the therapist and ignore the therapist’s game play while continuing to play by yourself.	+ -
16	React to the way the therapist is playing with an item by smiling and imitating the way the therapist is playing.	+ -
17	If the therapist presents aversive stimuli in the form of a demand, orient your face and body away from the therapist and ignore the therapist while frowning by pulling the corners of your mouth downwards and narrowing your eyebrows towards your nose.	+ -
18	Ask the therapist what their favorite color is while looking at their face with raised eyebrows. Wait for the therapist to answer and then tell them your favorite color and your mom, dads, and sibling’s favorite color. Tell them your dog’s favorite color is indigo blue.	+ -
	Total Correct	
	Percentage Correct	