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Implementing the Break Pass Intervention with Differential Reinforcement to Improve Engagement in Play with Siblings for Children with Autism Spectrum Disorder

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Implementing the Break Pass Intervention with Differential Reinforcement to Improve Engagement in Play with Siblings for Children with Autism Spectrum Disorder

by

Shannon Shafmaster

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in Applied Behavior Analysis Department of Child and Family Studies College of Behavioral and Community Sciences University of South Florida

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Keywords: breaks, disruptive behavior, ASD

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ABSTRACT

This report describes the results from a study that examined the use of the break pass intervention to increase engagement in play with siblings for children with autism spectrum disorder. Two male children with ASD aged 6-years old, who had difficulty engaging in play activities with siblings participated in the study. The intervention used break passes to teach mands for breaks by providing the children with breaks throughout the play activity and to provide reinforcement for engaging in play with siblings in the absence of problem behavior. The impact of the intervention on engagement in play with siblings and disruptive behavior was examined using a multiple baseline design across participants. The results showed that using the break pass with differential reinforcement resulted in increases in engagement in play with sibling and decreases in disruptive behavior for both children.
CHAPTER ONE:
INTRODUCTION

Authors’ Note

Due to the COVID-19 pandemic, the thesis requirements for students graduating from the USF ABA program in 2022 have been modified and may include fewer participants or case studies.

Many children with autism spectrum disorder (ASD) display problem behavior during activities with siblings within family routines, such as hitting siblings, swiping items from the area, breaking materials of the activity and eloping the area causing termination in the activity during a play routine at home (Beyer, 2009 & Celiberti, & Harris, 1993). These types of problem behavior in children with ASD occurring during family routines cause concern to parents. Children with ASD raise parental stress when they engage in problem behaviors, which leads to many negative outcomes such as drop-out of interventions or negative parent to child relationship (Walsh et al., 2013). These problem behaviors in children with ASD present unique treatment challenges, leave children at risk for unfavorable long-term outcomes, and negatively impact family functioning. It is well-documented that the severity of problem behavior in children with ASD is associated with increased parenting stress and psychological distress among parents of these children (Estes et al., 2009).

To address problem behavior in children during family routines, in particular, bedtime routine, Friman et al. (1999) used the bedtime pass program (BPP) for two typically developing
children aged 3 and 10 years old. The children had difficulty with accepting the bedtime routine and engaged in crying and escaping from their bed after being put down. Friman et al. provided the children with break cards that provided permission for the children to leave their room one time for a short period when they used the break card. The results showed that allowing the children to use the break cards (passes) to escape their bed for a short period of time was effective for decreasing crying and leaving the bed and increasing quietness during bedtime. In another study, Moore et al. (2007) used the BPP for 19 neurotypical children ranging from 3-6 years old and found that BPP was effective in decreasing disruptive behavior of leaving their bedroom, becoming quiet, and crying less after bedtime was implemented.

Schools have adapted BPP to create the Class Pass Intervention (CPI) for use with students with disruptive behavior within the classroom, which is designed to allow students to use break passes to escape tasks rather than engaging in disruptive behavior (Cook et al., 2014). Like BPP, CPI provides students with the opportunity to engage in escape without engaging in disruptive behavior that interrupts the functioning of the classroom. The presentation of a pass signifies that the students are appropriately requesting escape from their academic task and earn a break period (Cook et al., 2014). It is hypothesized that the use of negative reinforcement associated with the class pass will not only decrease disruptive behavior but will also increase overall classroom engagement (Collins et al., 2016).

It has been considered that CPI is a multi-component intervention using negative reinforcement through escape form academic task and positive reinforcement through allowing students to save break passes and trade them for back-up reinforcers (Collins et al., 2016). Students are trained on how to use a break card and the rules they need to follow to earn a break and when they are allowed and not allowed to utilize a pass (Cook et al., 2014). The positive
reinforcement component added within CPI is an incentive for the students to hold onto their passes, not taking a break and then exchange them for a preferred reinforcer (established via a preference assessment) later. Having this positive reinforcement aspect leads to fade out the passes eventually while still providing contingent positive reinforcement (praise) to the students (Cook et al., 2014; Narozanick & Blair, 2019; Zuniga & Cividini-Motta 2021). However, in a recent study, Harris et al. (2020) suggested that a predetermined criterion (expectation) be established when students can exchange passes for backup reinforcers. The authors found that without establishing a criterion or without setting the contingency, some students would likely engage in problem behavior.

Researchers evaluating the use of CPI have commonly provided predetermined number of passes to students based on the intensity and frequency of their problem behavior at the beginning of each academic period or school day. If a target student is starting to engage in disruptive behavior, the teacher encourages the student to use one of the passes before the behavior sparks and disrupts the classroom, and after requesting a break via a pass, the would then go to a predetermined location that includes different activities or items and typically a visual timer that is set for the given duration (Narozanick & Blair, 2019; Zuniga & Cividini-Motta 2021).

Andreu (2016) implemented fading by gradually decreasing the number of passes offered to each student by one weekly until there are no more passes being offered. Another approach to fading, used by Zuniga & Cividini-Motta (2020), is using the baseline mean level of problem behavior for each student combined with the input of the student’s teachers to establish an appropriate mean level per student (e.g., 80% decrease of problem behavior from baseline level to intervention level. During fading, Zuniga and Cividini-Motta mirrored all components and
decreased the value of the back-up reinforcers based on the passes available whereas Andreu kept the number of passes needed for back-up reinforcers consistent throughout all phases. Narozanick and Blair (2019) also showed that fading could generate maintenance after the passes are eliminated, with verbal praise only.

Hollo and Burt (2018) explained that the utilization of a break card could be considered as a functional communicative response for a child to earn whatever, in this case, a break from work. Although most of the studies on CPI have targeted typical children without disabilities, Narozanick & Blair (2019) evaluated the use of CPI with children who were diagnosed with ASD in a variety of classroom settings (e.g., inclusive classroom, rotation of classrooms, self-contained pod). The focus of the study was to examine whether CPI was not only effective for children who are diagnosed ASD, but also whether CPI as a single component intervention, just using negative reinforcement, could still demonstrate a functional relationship between the intervention and behavior change. The authors suggested that children with ASD with limited social communication skills could benefit from CPI, in particular, CPI as a single component intervention.

Most studies discussed above have focused on disruptive behavior maintained by social negative reinforcement. Andreu (2016) extended CPI research to address disruptive behavior in children in the elementary school classroom setting, which was maintained by attention. In the study, three out of the four children engaged in disruptive behavior found to be maintained by attention whereas one child engaged in disruptive behavior maintained by escape. The author found CPI to be effective for increasing on-task behavior while decreasing disruptive behavior of the three students. Although the outcomes of CPI are promising, due to the small number of studies, there is minimal evidence on the outcomes of CPI for different groups of children and
settings. Furthermore, there are gaps in the literature on CPI, including no examination of using differential reinforcement (e.g., differential reinforcement of academic engagement), accumulating passes for a longer break, and implementing CPI with and without backup reinforcer (Harris et al., 2020; Narozanick & Blair 2019).

As discussed above, the literature clearly indicates that using the break pass has been successful in addressing children’s problem behavior in the home and school settings; however, currently, there are only two studies that evaluated its outcomes for children in the family home setting. In particular, none of the studies involved siblings to address problem behavior of children with ASD at home. Involving siblings in implementing intervention for children with ASD is important because siblings spend a considerable amount of time together and can potentially enhance generalization and maintenance of the skills for the child with ASD (Glugatch & Machalicek, 2021). Knott et al. (1995) suggested that children with ASD who have limited social communication skills would be more likely to engage in social play with siblings because they have common backgrounds and experiences, indicating that typically developing siblings can help their siblings with ASD improve social interaction skills.

Therefore, the current study aimed to further the break pass literature by using the break passes for children with ASD in the home setting, in particular, involving siblings in implementing the intervention. Specifically, the study evaluated implementing the break pass intervention with the additional component of differential reinforcement of play behavior by allowing children to receive passes contingent on engagement in play with siblings for gaining access to a break. The study focused on examining the extent to which the break pass intervention could increase engagement in play with sibling while decreasing disruptive behavior within the family routine in children with ASD.
CHAPTER TWO:

METHOD

Participants and Setting

This study involved two children who were diagnosed with ASD. The inclusion criterion included children diagnosed with ASD who: (a) aged between 4-7 years old; (b) had a minimum of one sibling, (c) could functionally communicate needing a break, (d) had the ability to participate in gross motor and fine motor movements, and (e) had difficulty playing with their siblings. Both children could communicate their needs and wants with verbal language. The children’s parents were concerned with their children’s low level of appropriate interactions with their siblings engaging in various problem behaviors. The study was conducted in in various locations of the participating children’s home, where play activities occurred.

Child 1 (LT)

LT was a Caucasian 6.9-year-old boy diagnosed with Down Syndrome along with ASD. He was diagnosed by his pediatric doctor at age 3.7. He was attending a public elementary school four days a week in a 1st-grade special education classroom where he received occupational therapy (OT) once per in addition to educational services. Outside of school, he received physical therapy once per week and applied behavior analysis (ABA) therapy once per week for 2 hours. He was living with his mother who did not have an occupation, father who ran own business, and his two typically developing siblings, a 10-year-old brother and a 5-year-old sister. LT was able to verbally express his wants; however, it was difficult for parents to understand what he was saying at times. LT used a mixture of verbal communication with sign
language. He has difficulties attending to long duration activities and following directions efficiently. During play with siblings, LT engaged in high rates of disruptive behavior (e.g., hitting, swiping, eloping) and was very active moving around frequently and did not sit still for longer than 10 s if a preferred item was not present. The study took place mostly on the coffee table in his living room, where they engaged in the chosen board game.

**Child 2 (NQ)**

NQ was a Jewish Caucasian 6.8-year-old boy diagnosed with ASD from a licensed psychologist at age 2.8 years. NQ attended a public elementary school in a general education kindergarten classroom. Where he received speech and OT services 1-2 times per week provided at the school. Outside of school, he received additional OT once per week and ABA services 3 times per week for 3 hours each session. NQ lived with his mom (a private practice social worker), his dad (an engineer), and his 1.3-year-old brother who was also diagnosed with ASD. NQ was able to communicate his needs verbally effectively. His parents were concerned that NQ had rarely interested in playing with peers and sibling. Although NQ played with his brother, he did not want to share his toys with the brother and engaged in disruptive behavior (e.g., crying, pushing his brother, hiding toys) when his brother came into the playroom to engage in play with him. NQ did not engage in play with his brother when it involved his own toys and protected his toys for the greater duration of play. The intervention took place at their home, mostly in the boy’s playroom, on the floor with selected toy.

**Materials**

The materials needed for this study were various board games (e.g., trouble, candy land, memory) or toys (e.g., magnet tiles, animal figures), a phone timer with the lap setting, a table, open area to play. Additional materials included break passes, a designated break area, and
backup reinforcer treasure box filled with the children’s preferred reinforcers (e.g., toy cars, candy, dinosaur, access to videos). A menu for the number of passes needed to trade in for the various backup reinforcers.

**Measurement**

**Target Behavior**

The target behavior measured in this study was engagement in play and disruptive behavior during a play activity with siblings. Each play activity involved engaging in board games (LT) or free play (NQ) with their siblings. The duration of observation varied throughout the study, ranging 1-10 min. For LT, engagement in play was defined as following directions of the game, taking turns by waiting until it is his turn, or completing his whole turn without engaging in problem behavior. For NQ, engagement in play was defined as engaging with the toys and his brother. NQ had to allow his brother to join the play and sharing the toys with his brother when his brother wanted a turn with his toy.

LT’s disruptive behavior was defined as swiping game pieces, not following directions, hitting sibling, eloping, or verbal protest (e.g., shouting “no” or saying curse words). NQ’s disruptive behavior was defined as hiding or protecting his toys out of his brother’s reach, screaming, crying, or pushing his brother out of the playroom. When the children engaged in a break by using a break card, the time spent for break was counted as engagement if they were behaving appropriately not engaging in problem behavior. Both engagement and disruptive behaviors were measured as percentage using the total engagement or disruption time in seconds divided by total duration of the game or session in seconds and then multiplied by 100.

**Treatment Integrity**

The researcher self-monitored the treatment integrity using a checklist (Appendix A), and
the researcher’s supervisor (a Board Certified Behavior Analyst) observed the researcher’s implementation to provide feedback on the integrity during one or two sessions during intervention. The treatment integrity focused on assessing whether the researcher: (1) provided break passes within the interval period, (2) provided praise for the being engaged, (3) prompted child to use a pass if needed, (4) withheld the pass when disruptive behavior was present, (5) provided child an opportunity for a break upon earning a pass, (6) provided child earned back-up reinforcer at the end of the game, and (7) collected passes at the end of the session. Treatment integrity was measured as a percentage based on the total number of steps implemented correctly divided by the total number of steps and then multiplied by 100. The treatment integrity self-assessed by the researcher was 100% in all sessions. The researcher’s supervisor’s feedback on the researcher’s implementation indicated that the treatment integrity was 100%.

**Interobserver Agreement (IOA)**

IOA was assessed for target behaviors during 29% of the sessions with one child’s parent (6%) and researcher’s supervisor (24%). IOA was calculated by taking the shorter engagement duration divided by the longer engagement duration of the two observers and multiplied by 100%. IOA was also calculated with the same measurement system for disruptive behavior duration. In baseline, IOA for LT was 89% for engagement and 96% for disruptive behavior. In intervention, IOA was 99% for engagement and 100% for disruptive behavior. In baseline, IOA for NQ was 99% for engagement and 98% for disruptive behavior. In intervention, IOA was 100% for engagement and 100% for disruptive behavior.

**Social Validity**

Social validity was addressed by providing the caregiver a 4-item questionnaire that asked to rank the intervention on a 5-point rating scale of strongly agree(5), agree(4), neutral(3),
disagree(2), and strongly disagree(1) for all questions. The questionnaire was designed to assess caregiver’s perceived acceptability and satisfaction with the break pass procedures and outcomes and included questions of whether: (a) using break passes was effective for decreasing problem behavior, (b) parents saw a change in their child’s behavior, (c) the break passes procedures were acceptable to implement during the game, and (d) they enjoyed using the break passes (see Appendix B).

**Experimental Design**

The study used a multiple baseline design across participants, which included baseline and the break pass intervention phase. Baseline levels had to be stable over 3 consecutive sessions before implementing the break pass intervention.

**Procedures**

**Baseline**

During baseline the researcher collected data on the target behaviors. No additional procedures or strategies were added to normal play sessions, and disruptive behavior was treated as usual allowing to escape from the play or keep their play materials. LT’s siblings also provided attention to LT during the disruptive behavior by saying “LT don’t hit”, “I’m going to get ya”, or “Hey, that is mean” and then engaged in alternative playing or tickling outside of the board game play. LT. NQ’s brother would engage in aggression towards NQ when NQ did not want to play or share toys with his brother. NQ’s parents responded to his behaviors by stating, “If you will not allow your brother to play with your toys, then you can not play with your brother’s toys.” Baseline observations ranged 1- 10 min across children. Due to a high rate of problem behavior and refusal of engaging in play, the observation session lasted only 1 min in
one baseline session for NQ. The data collection sessions with each participant were normally available 1-2 times per week.

**Break Pass Intervention**

The break pass intervention was implemented during play with siblings. Each child was allowed to choose which game or toy they could engage in during play. LT was presented with two board games that required them to take turns, such as *Candy Land* and *Memory*. NQ was also allowed to choose one toy out of two presented by the researcher, such as magnet tiles and animal figures. For LT, after the board game was set up, the expectations were stated to all family members for the game and how they should interact during the game. LT and his two siblings (older and younger) participated in the game, and occasionally his mother joined the games to reminded them of the expectations and praise their engagement. The expectations for LT while playing the board game were following the directions of the game (e.g., flipping over two cards and determining whether they were a match and then putting them back or moving the number of spaces indicated on the dice), keeping eyes on the game, remaining seated, refraining from touching the board when waiting for a turn, and asking for a break when needed by using words (i.e., ‘break’) or using a break card. The expectations for NQ during game time were engaging with the given toy, sharing the toy with his brother, allowing the brother to have a turn, not blocking the toy when the brother wanted the toy, and asking for a break when needed by using words (i.e., ‘I need a break, please’). The researcher involved NQ’s caregiver (nanny) in the play sessions to remind children of the expectations and provide the break passes.

Each child had an individual break pass board that was 8 in x 11 in with six spots for the break passes which were 2.5 in x 2.5 in (see Appendix C). LT’s break passes included a character from his favorite movie whereas NQ’s break passes included stars for which he had a
The children were taught how the break passes would work and what to do if they needed a break from the game. They were told that when they handed a pass over to the researcher or present parent, they would provide him access to his break area. LT had a designated area in his room that was set up with his bean bag, whereas NQ’s area was in his tent set in his bedroom that included blankets and calm down books to read on his break. During the start of the play the children were given their break pass board with one break pass placed on it and the opportunity to earn up to five additional break passes on a variable -interval (VI) 1-2 min schedule dependent on engagement in play with siblings.

They were taught to say “break” or “I need a break, please” as described above when they needed more break cards to ask for breaks. If they engaged in disruptive behavior during play, they were prompted to follow the expectations and complete the play activity with siblings before receiving a pass. They were prompted to use the break pass to access a break in their designated area for a set time interval. They could choose to return to the game earlier than the set time if they were engaging in appropriate behavior during the break. The children had the opportunity to turn in break passes for backup reinforcers of preferred tangibles after the game was completed. The backup reinforcers were selected based on the researcher’s observations and the children’s parents’ input. To earn backup reinforcers, the children had to continue to be engaged in play without engaging in problem behavior. The backup reinforcers had various costs that were determined by the preference level for each item (e.g., a candy piece cost 1 break pass, water balloons or Legos cost 6 break passes). The intervention observation sessions ranged from 4-8 min. The implementation sessions were conducted 1-2 times per week.
CHAPTER 3:
RESULTS

Child Behavior

Figure 1 displays data on each child’s percentage of engagement in play and percentage of time engaged in disruptive behavior during play with sibling in baseline and intervention. The results showed that the break pass intervention successfully increased engagement in play with siblings and decreased disruptive behavior for both LT and NQ.

During baseline, LT engaged in a high level of disruptive behavior ($M = 80\%$; range = $73\%-85\%$) and a low level of engagement behavior ($M = 20\%$; range = $15\%-27\%$). During intervention when the break passes were used, disruptive behavior decreased to below $5\%$ ($M = 1\%$; range = $0\%-2\%$) and engagement behavior remained above $80\%$ ($M = 99\%$; range = $98\%$-100\%) during the duration of the game with siblings. During baseline, NQ engaged in a high level of disruptive behavior ($M = 84\%$; range = $80\%-100\%$) and a low level of engagement ($M = 16\%$; range = $0\%-22\%$). During the implementation of break passes NQ’s disruptive behavior decreased to 0\% while his engagement increased to 100\%.

Across both children, data showed that there was an immediate change in both behaviors when the intervention was introduced. Engagement in play dramatically increased to 100\% for both children while the disruptive behavior decreased to 0\% during the first intervention session. In both baseline and intervention, the data were stable with a zero trend with little or no variability. The data clearly demonstrated a functional relationship between the introduction of break pass intervention and both target behaviors, suggesting using break passes was effective
for increasing engagement in play with siblings and decreasing disruptive behavior during the naturally occurring family routine in the home setting. It was found that both LT and NQ earned all 6 passes in each session by meeting the set criteria during intervention. However, neither child wanted to use any earned break passes during the duration of play in every session, as they both wanted to earn backup reinforcers of their choice by engaging in play with sibling.

![Figure 1](Image)

**Figure 1.** *Engagement in Play with Siblings and Disruptive Behavior across Phases.*
Social Validity

Social validity of the break pass intervention assessed with each child’s mother, showed that the intervention was rated highly. It was found that the parents were highly satisfied with the quick decrease in disruptive behavior and increase in engagement. Both caregivers gave a ‘5’ for all questions, indicating that they enjoyed the intervention and believed it was easy to use the break passes during the play and thought it was reinforcing for their child to earn the passes while engaging in play.
CHAPTER 4:
DISCUSSION

This study examined using the break pass intervention with two children with ASD who had difficulty engaging in plan with siblings. The interventions were implemented by the researcher in collaboration with parent or caregiver and involving the children’s older and/or younger brother. The results showed that the use of break pass was effective for increasing the children’s engagement in play with siblings while decreasing disruptive behavior and that the intervention has a high level of social validity.

Major Findings and Implications

The data indicated that both children engaged in play with siblings effectively with the break passes. They stayed engaged in the play for longer durations than during baseline. The results indicated that in addition to allowing access to a break, the inclusion of backup reinforcers with tangibles was effective to maintain the children’s attention to board games or play with toys with siblings and prevent engagement in problem behavior. Due to the researcher knowing the participants well and their preferences, a formal preference assessment was not conducted; however, in future research, a formal preference assessment should be conducted to identify potential reinforcers. Although the children had difficulty following the expectations and needed prompting at the beginning of each play session, the researcher noticed that the positive (differential) reinforcement of being able to take a break from the play when needed was more reinforcing than the negative reinforcement component. Neither child used any of their break
passes after earning the passes during the game even if they were prompted to use a break pass. Neither child engaged in high rates of behavior that required prompting to turn in a pass during the play.

LT needed a brief verbal reminder between 1-2 times during a play to have a calm body and use a pass if needed, but he stated he wanted to keep playing the game and then returned to engaging appropriately. He would jump back into playing the game appropriately to earn all his break passes to be able to turn them in for his highest preferred reinforcer. NQ also effectively engaged in play with his sibling during the intervention and stayed engaged. He shared toys with his brother and included his brother rather than playing parallel, which was never observed during baseline. NQ was observed to enjoy the concept of earning a backup reinforcer with his break passes for engaging in play, in the absence of disruptive behavior.

The components of the break pass intervention were similar to those used in the CPI examined by Andreu (2016) and Harris (2020), which were implemented in the school setting. In the two studies, the researchers found that the children, who were 8-9 years old with or without disabilities, enjoyed earning and keeping their reinforcers for the tangible trade in rather than using the passes if they needed a break. This case study adds to the literature by demonstrating that incorporating differential reinforcement of desirable behavior into the break pass intervention can be highly effective for children whose problem is maintained by both negative and positive reinforcement. Although they used problem behavior to avoid play with siblings most of the time and to gain access to games or toys, it was found during intervention that both children engage in play appropriately until they earned all the passes needed to receive the backup reinforcer of their choice.
The study also adds to the current literature on break passes by using the break pass within the home setting to increase engagement in play with siblings in children with ASD. This is the first study that involved siblings in implementing the break pass intervention to improve engagement in play activities in children with ASD. Compared to previous research (e.g., BPP during bedtime and CPI in the classroom), this study used the break passes for a child with ASD in the home setting with siblings to increase engagement in play within the family routine.

**Limitations**

Multiple limitations were encountered during the study. One limitation is limited data collection. The Covid-19 pandemic caused multiple cancelations and push backs for the researcher to collect data. LT and his family faced multiple illnesses outside of Covid, which required hospitalization or having to cancel due to emergency doctor visits. For NQ, due to his younger brother who was only 1.3 years old and who also had ASD, the play sessions were sometimes too brief to collect meaningful data.

Another limitation is limited IOA assessments. The researcher faced limited opportunities for IOA assessment and had to reach out to their supervisor multiple times to ask for help with IOA assessments, which were often unsuccessful with LT. The researcher attempted to assess IOA with the parent if the parent was available, but this was also frequently unsuccessful. The limited data collection was also caused by the infrequency of regularly scheduled service provision sessions. Additionally, some play durations were shorter than other games involved in different play sessions. This made the passes interval usually under a variable interval of 2 min and rarely were they passed out over the variable interval of 2 minutes. A final limitation, some days the siblings were not available or present in the home to partake in running a play session, which limited the data collection.
**Future Directions**

Given that the current investigation is the first study to evaluate the use of break passes within the play routine in a home setting involving siblings, more research is needed to understand the effectiveness and potential issues of using break passes within family routines. In addition, more research is needed to examine the applicability of using break passes in other family routines or contexts. Future researchers should expand the sample size to include more families in their investigations to demonstrate the link between the break pass intervention and increased appropriate behavior and decreased problem behavior during family routines in children with ASD. Future researchers should also select games or toys that take longer durations to play, as some games in this study took under 5 min in duration to complete and passes were handed out more frequently than if a game was of a longer duration. Future researchers should also consider providing training to parents on data collection and implementation support to help them implement the intervention while monitoring their child’s progress.
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https://doi.org/10.1007/s10864-020-09411-4
APPENDIX A

Treatment Integrity Checklist for Break Pass Intervention

During the training the following checklist will be used to calculate the researchers understanding of the intervention they will be implementing with one of the clients. If you completed the step fully, circle ‘Yes’. If the step was not completed at all or not fully, circle ‘No’.

<table>
<thead>
<tr>
<th>Did the researcher…</th>
<th>Circle Yes or No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hand out break passes within the interval period</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>2. Provide praise to participant for engagement behavior</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>3. Prompt the participant to use a pass if needed</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>4. Withhold providing a pass if disruptive behavior was present</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>5. Provide the opportunity for a break upon the child earing a pass</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>6. Allow the participant the opportunity to earn a back-up reinforcer at the end of the game</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td>7. Collect the passes at the end of the play period</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

Total number of Yes: ___

**Integrity:** ___/7 x 100 = ___%

Notes:

______________________________________________________________________________

______________________________________________________________________________

23
# APPENDIX B

## Caregiver Social Validity Questionnaire

1. **Break passes was effective for decreasing problem behavior**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>Disagree</td>
<td>Neutral</td>
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<td>Strongly agree</td>
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2. **Parents saw a change their child’s behavior**

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3. **Break passes procedures were acceptable to implement during the play**

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4. **Enjoyed using the break passes**

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If you have any suggestions and/or comments regarding Break Passes, please list below:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
APPENDIX C

Break Passes and Board

I am earning a break.......
I am earning a break.......