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An Evaluation of An Assessment of Check-In/ Check-Out with Children who are Homeless in an After School Care Program

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An Evaluation of An Assessment of Check-In/Check-Out with Children who are Homeless in an
After School Care Program

by

Ana Camacho

A thesis submitted in partial fulfillment
of the requirement for the degree of
Master of Arts in Applied Behavior Analysis
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Keywords: school-wide positive behavior interventions and support, check-in/check-out,
homeless, alternative school settings

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Abstract

Schoolwide Positive Behavior Interventions and Support (SWPBIS) is an approach designed to improve the correct implementation, consistent use, and maintenance of evidence-based practices related to behavior, classroom management and school discipline systems. Check-in/Check-out (CICO) is often recognized as a successful intervention in SWPBIS. However, most of the research on the use of CICO has focused on the school setting. This study provided an extension to the literature by examining the effects of the CICO program with homeless children attending an afterschool program. A non-concurrent multiple baseline across participants design was used to evaluate the CICO program effects. Students were exposed to a CICO intervention in which problem behaviors were targeted for reduction and task engagement was targeted for acquisition. Of the five participants selected for the study four participants were exposed to a CICO intervention. Results demonstrated a decrease in problem behaviors and an increase in task engagement for all four participants.

Keywords: school-wide positive behavior interventions and support, check-in/check-out, homeless, alternative school settings

Chapter 1:

Introduction

Approximately 578,424 people were classified as homeless in the beginning of 2014 in the United States (U.S. Department of Housing and Urban Development, 2014). About 37 percent of all homeless individuals were families and almost 60 percent of the homeless individuals in families were children under 18 years of age (U.S. Department of Housing and Urban Development, 2014). Many homeless children face several challenges such as physical and health problems, social problems, marginalization and trauma from psychological stressors and developmental delays (Reganick, 1997). Homeless children may also often lack structure, resulting in social and academic difficulties that can result in behavioral problems (Reganick, 1997; Zima, Wells, & Freeman, 1994).

Almost nine in ten homeless individuals in families were staying in shelters in 2014 (191,903 people) (U.S. Department of Housing and Urban Development, 2014). Communities across the nation respond to the homeless population with a variety of programs such as emergency shelters, transitional housing, rapid re-housing, and permanent supportive housing (Sulkowski & Michael, 2014). These programs can provide homeless families with a variety of resources such as afterschool programs for children to stay at while their parents are out looking for a job, working, or taking classes mandated by the programs. There is a growing recognition that afterschool programs for children can provide opportunities for positive youth development (Farrell, Collier-Meek, & Pons, 2013). After school programs (ASP) represent an opportunity to

connect the school day with family life as well as increasing academic and social skills for children (Farrell et al., 2013). The unstructured nature of ASPs can make problem behavior more likely to occur (Newcomer, Colvin, & Lewis, 2009). According to Farrell et al. (2013), the qualifications of the staff in the afterschool programs may not be adequate to appropriately address behavioral concerns. Schoolwide Positive Behavior Interventions and Support (SWPBIS) strategies could help student's activity engagement and reduce student's problem behavior in these types of afterschool programs.

SWPBIS is an approach designed to improve the correct implementation, consistent use, and maintenance of evidence-based practices related to behavior, classroom management and school discipline systems (Anderson & Kincaid, 2005; Eber, Sugai, Smith, & Scott, 2002; Simonsen, Sugai, & Negron, 2008; Sugai & Horner, 2002). SWPBIS is not a single intervention but rather, it consists of a range of techniques applied within schools (Farrell et al., 2013; Simonsen et al., 2008). For example, SWPBIS is a multi-tiered system of support: Universal (Tier 1, for all students), targeted (Tier 2, supports for students at risk), and individualized (Tier 3, for students with established problems) (Farrell et al., 2013; Simonsen et al., 2008). The three-tier model of SWPBIS is arranged so that if the student is unsuccessful in the first tier, the intensity of support increases for each student at the level of the student's need (Simonsen et al., 2008; Turnbull et al., 2002).

Tier 2 is designed for students who demonstrate little or no improvement in behavior or academic areas after the implementation of the Tier 1. Tier 2 consists of increased adult attention and monitoring and aims to prevent the development of serious problem behaviors and academic growth. (Hawken, Adolphson, Macleod, & Schumann, 2008; Sugai & Horner, 2006). The interventions in this tier should require a minimal amount of time and resources. Tier 2 is

designed for a group of students, and relies on student team-level self assessment of behavioral expectations while having the teacher check the reliability of the assessments (Kincaid, 2015; Simonsen et al., 2008).

One intervention that is used in SWPBIS as a tier 2 intervention is Check-in/Check-out (CICO). CICO has been shown to be an effective intervention at decreasing problem behaviors and increasing academic engagement for students in a school setting (Campbell & Anderson, 2011; Hawken, Adolphson, et al., 2008; Hawken, Bundock, Kladis, O'Keeffe, & Barrett, 2014; McIntosh, Campbell, Carter, & Dickey, 2009). CICO is a multi-component intervention that: (a) gives structure to the school day; (b) provides regular feedback; and (c) creates a student-mentor relationship with an adult in the school (Campbell & Anderson, 2011; Hawken, Bundock, et al., 2014; McIntosh et al., 2009; Simonsen et al., 2008; Swoszowski, McDaniel, Jolivette & Melius, 2013). A mentor is assigned to work with a group of students (15-30 students) on a one to one basis. The mentor spends about 10 to 15 hrs per week implementing CICO (Hawken, Bundock, et al., 2014). During the check in process, the student meets with the mentor first thing in the morning to receive their daily progress report (DPR), the point goal for the day, and the behavioral expectations. The DPR consists of a list of the general expectations customized to the school, and a Likert- type scale upon which teachers are able to rate the students' behavior for each expectation at the end of each class period or transition (Campbell & Anderson, 2011; Hawken, Bundock, et al., 2014; McIntosh et al., 2009; Simonsen, et al., 2008; Swoszowski, et al., 2013). A high score usually means a satisfactory period or transition while a low score means an unsatisfactory period or transition. The teacher tells the student his or her score and provides a positive statement concerning his or her behavior when the student has a high score or provides redirection if the student has an unsatisfactory score (Campbell & Anderson, 2011; Hawken,

Bundock, et al., 2014). At the end of the day, the student checks out with his or her mentor. The mentor adds up the points earned on the daily progress report. The Likert-type scale score per period is equal to the points. For example, if a student were to earn a score of 4 for three consecutive periods, then his total points score that day would be twelve. Feedback is given based on the student's percentage of points and goal attainment. A copy is made of the DPR and is sent to the student's home to be signed by his or her parents. During the check out process, points can be exchanged for tangible items such as candy, toys, etc, and or coupons that can be exchange for computer time, playground time, etc. A preference assessment can be done to find items and or coupons the student desires and would work for but typically there is an array of items that most students prefer that are available for purchase.

Campbell and Anderson (2011) conducted a study using CICO in a suburban elementary school implementing Tiers 1 and 2. The students participated in the study if (a) they had from two to five discipline referrals and the school's leadership team believed that CICO would be a good fit for the student, or (b) they were nominated by a teacher (Campbell & Anderson, 2011). All participants' problem behaviors were hypothesized to be maintained by adult attention through a functional assessment that consisted of interviews with the teachers and observations of each participant. CICO was effective at decreasing problem behavior (such as out of seat or location, noncompliance, negative verbal or physical interactions) for all participants and increased academic performance for all participants (Campbell & Anderson, 2011). CICO was implemented by the school for over a two year period, demonstrating that CICO was feasible and supported by the staff (Campbell & Anderson, 2011).

In another study, CICO was implemented across six elementary schools with 36 students

nominated for Tier 2 interventions due to their levels of problem behavior and need of support by the SWPBIS team (McIntosh et al., 2009). There was a substantial decrease in problem behaviors and referrals for misconduct, and a substantial increase in pro-social behaviors (such as adaptability, social skills, leadership, study skills, and functional communication) for students whose behavior was maintained by attention (McIntosh et al., 2009). The study also investigated whether the function of the problem behaviors moderates the effectiveness of CICO. Teachers were interviewed using the *Assessment Checklist for Teachers and Staff* about the student's behaviors. Overall, the teacher-identified function predicted the response to the intervention. Simple effect analyses demonstrated that there was statistically significant improvement in ratings of problem behavior, pro social behavior, and office discipline referrals for students whose function of the problem behavior was attention and no significant improvement for students whose function of the problem behavior was escape. The researchers recommended that escape reinforcement (e.g., students earning a break from task demands) be considered when implementing CICO for students whose problem behaviors were primarily maintained by escape.

Traditionally, CICO is implemented in public schools from elementary to high school levels. However, a few studies have evaluated the effectiveness of CICO in alternative settings. Swoszowski et al. (2013) evaluated the effects of CICO on off task behavior of four students with behavioral challenges and special needs in a residential facility. The implementation of CICO resulted in a decrease of off-task behavior defined as the student failing to engage in the teacher's instruction or the assigned task in both conditions. The intervention was reported as acceptable by the school CICO mentors when they were asked about their perception of the intervention on a social validity questionnaire.

In another study, CICO was implemented in a residential facility for students with

emotional and behavioral challenges (Ennis, Jolivette, Swoszowski, & Johnson, 2012). The participants went to a school that was in its fourth year of implementing SWPBIS. The participants included six middle and high school students that were recommended by their teacher to participate in the intervention. The study used a concurrent multiple baseline design across students to evaluate the efficacy of CICO. There was a decrease in problem behaviors for four of the six students with three students displaying a 20% or more decrease in problem behaviors

While there is numerous research studies supporting the use of SWPBIS in the school setting across elementary schools, the implementation of SWPBIS interventions in alternative settings is rare (Hawken, Adolphson, et al., 2008). There are not any known published studies of the implementation of CICO in an afterschool setting or with the homeless population to date. As previously stated, homeless children often lack structure which can result in social, academic difficulties and engagement in problem behaviors in school and in afterschool programs (Reganick, 1997). Check-in/Check-out could provide a structure that is consistently implemented by all teachers and has the potential of increasing appropriate behavior and task engagement. The purpose of this study was to extend the literature on the effects of a CICO program to an after school care setting for homeless children. The study evaluated CICO effects on both problem behavior (such as out of seat or location, negative verbal or physical interactions) and task engagement for children attending an after school care program.

Chapter 2:

Method

Participants and Setting

Five elementary aged children in an afterschool care program participated in this study. Participants were recruited for the study by publicly posting flyers at the afterschool program with the following criteria: age five to eleven, he or she should attend the after school program, participants should engage in problem behaviors while in the afterschool, the participant should end on yellow or red several times throughout the week. If parents were interested in their child participating after reading the flyer they contacted the primary investigator.

Lenin was a six-year-old male in kindergarten. Lenin lived with his single mom and one sibling at the homeless shelter. He attended the afterschool program for five months before participating in the study. Maurice was a seven-year-old male in first grade. Maurice lived with his single mom and three siblings at the homeless shelter. He attended the afterschool program for three months before participating in the study. Lenin and Maurice were both in the kindergarten and first grade group in the afterschool program.

Jordan was a nine-year-old male in second grade. He lived with his single mom and three siblings at the homeless shelter. He attended the afterschool program for five months before participating in the study. James was a nine-year-old male in third grade with divorced parents. He lived with his single dad off site. He lived in the homeless shelters several years ago but continue to attend the afterschool program. Jose was an eight-year-old male in second grade. He

lived with his single mom and two siblings off site. Jose lived in the homeless shelter several years ago and continued to attend the afterschool program. Jordan, James and Jose were in the first, second, and third grade group in the afterschool program.

The study took place in an afterschool program (K-5) at a charter school across the street from a local homeless shelter run by a non-profit organization. The participants all attended the same charter school from 8:00 am to 2:00 pm each weekday. The afterschool program ran from 2:00 p.m. to 5:30 p.m. Staff at the afterschool program consisted of a coordinator, 5 teachers, and about 2 aids. The children were separated into three different groups. The groups were divided as follows: (1) kindergarteners and first graders, (2) first, second, and third graders, and (3) fourth and fifth graders. The afterschool program took place at the charter school and used the cafeteria, one classroom, the library, playground and the restrooms. One board certified behavior analyst and one applied behavior analysis intern assisted at the program with children that engaged in problem behaviors, trained staff, and assisted with the implementation of a token economy and other applied behavior analysis strategies. A token system intervention was implemented throughout the program. A token in the form of pseudo money was given to the students when they engaged in behavior that followed the rules of the afterschool care system. The rules were as follows: keep hands and feet to yourself, use walking feet, stay with your group, follow directions, clean up after yourself, use nice words, share and take turns. The students were able to exchange their tokens for a tangible item at the end of the week (e.g. play doh, bracelets, lip gloss, footballs). The afterschool care program also had a color system that consisted of three colors: green, yellow, and red. Green meaning the student's behavior was good. Yellow meaning the student's behavior was mediocre and red meaning the student's behavior was poor. When a student was not following the rules of the afterschool care program then he or she was given a

warning. If the student, continued to engage in the inappropriate behavior he or she was moved down the color scale. A student was able to move up the color scale if he or she engaged in following directions throughout an entire activity (such as homework time). At the end of the day, the child's parent was notified what color the child ended on. The implementation of the token system and the color system in the afterschool program did not appear consistent and there were still some children who continued to engage in problem behaviors throughout activities during the afterschool program.

Functional Assessments

Functional assessments were conducted which consisted of staff interviews and direct observations of the five participants selected for the study. The interview was conducted using the Functional Assessment Checklist for Teachers and Staff (FACTS). The results of the FACTS assisted with identifying and defining the behaviors the participant engaged in and in which transition or activity the problem behavior was most problematic (e.g., higher in frequency, intensity, duration, etc.). The interview provided a hypothesis of the function that maintained the problem behavior. After each interview, observations were conducted during the activity that the problem behavior was reported to occur most frequently in the interview portion of the functional assessment. Three 10-min observations were conducted using an ABC data sheet. The FACTS information indicated that Lenin's behaviors were most problematic during Homework time. Lenin's teacher reported that Lenin engaged in disruptions such as yelling, screaming and whining, negative comments towards his peers, physical aggression, and elopement. When the teacher attempted to redirect him to do his homework Lenin would engage in noncompliance and whining. These behaviors usually resulted in gaining attention from his peers and adults and escaping or delaying the task. When Lenin engaged in these problem

behaviors, the teacher reprimanded him and provided him with help with his homework.

Maurice's behaviors were most problematic during outside play time. The teacher reported that Maurice engaged in property destruction and negative comments towards his peers. These behaviors usually resulted in gaining attention from his peers and adults. The teacher reported that when Maurice engaged in problem behaviors, she reprimanded him in the form of a warning. If Maurice continued to engage in the behavior then he would move down the color chart. If needed, the teacher would have Maurice do time out which consisted of Maurice sitting down away from the activity for five minutes. Once time out was over then the teacher went over the rules he had not followed and set the expectations for the rest of the day. During direct observations, when Maurice engaged in problem behavior the teacher reprimanded him and gave a warning. The teacher put him in time out during two of the three direct observations.

James's behaviors were reported by the teacher to be most disruptive during homework and group activities. James engaged in negative comments towards peers, disruption and not finishing his homework. These behaviors usually resulted in gaining attention from peers and adults. The teacher reported that she usually reprimanded James when he engaged in these behaviors.

Jordan's behaviors were reported by the teacher to be most disruptive during snack. Jordan engaged in disruption and negative comments towards peers or staff during this time. These behaviors usually resulted in gaining attention from peers and adults. The teacher reported that she usually reprimanded Jordan when he engaged in these behaviors. During direct observations, Jordan engaged in disruption during snack time in which there were instances that the teacher would reprimand him in front of the class or ignore his disruption but then provided attention by sitting by him and talking to him once she was finished giving instructions to the

class.

Jose's behaviors were reported by the teacher to be most disruptive during homework time. Jose engaged in noncompliance and disruption during this activity. The teacher reported that she would redirect Jose to do his homework and if he continued the problem behaviors then a reprimand was given. These behaviors usually resulted in Jose gaining attention from peers and adults and escape from the task.

Target Behaviors and Data Collection

Problem behaviors and task engagement for all five participants were targeted for change. Lenin's target behavior included: negative statements toward staff and/or peers, physical aggression, elopement, and noncompliance. Maurice's target behaviors included: negative statements toward staff and/or peers, property destruction, and noncompliance. Jordan's target behavior included: disruption, negative statements toward staff and/or peers, physical aggression and noncompliance. James' target behaviors included: disruption, negative statements toward staff and/or peers, and noncompliance. Jose's target behavior was noncompliance and disruption

Property destruction was defined as kicking, throwing, or hitting an object. Disruption was defined as making inappropriate noises in class, talking out of turn, and using objects in a manner in which they were not designed. Elopement was defined as leaving the participant's assigned area without permission from staff, behavior analysts, interns or volunteers. Physical aggression was defined as hitting and or kicking another peer with his or her own body or with an item. Negative statements toward staff and/or peers was defined as verbally making any inappropriate statement towards peers or staff. Noncompliance was defined as verbally refusing to follow staff's direction or not completing the direction within 15 s (Campbell & Anderson, 2011).

Task engagement for all participants was defined as having eyes oriented towards staff or relevant material for the task at hand, following directions within 15 s, and or appropriately asking for assistance from staff regarding the activity.

Direct observation data was collected by the primary investigator or a research assistant who was seated in the back or to the side of the classroom, playground or cafeteria. Observers were provided with a data sheet to collect data on the identified behaviors for each of the five participants (Appendix A). Data was collected during an observation period of 20 min using a 10-s interval recording system. The observation period was during the activity that problem behaviors were reported to occur most frequently in the functional assessment for each participant. Data collection for Lenin was during homework time, Maurice during outside time, James during group activity time, Jose during homework time, and Jordan during snack time. Problem behavior data was collected using partial interval recording and task engagement was collected through whole interval recording. Observations were conducted 2-3 times per week.

DPR data was also collected by the teacher throughout the entire afterschool program for all five participants (Appendix B). The DPR card included the participant's name, date, Check-in/Check-out (CICO) schedule, a column to record points earned for appropriate following of the afterschool rules, a column stating the point goal for the day, a column for the teacher's signature for each activity and a space for the parent signature.

Parents were approached by a mentor, research assistant or primary investigator, when the participant was picked up from the afterschool program. The mentor would report to the parent the participant's goal for the day, if the participant met the goal or had a hard day, a summary statement of the CICO score and ask the parent if he or she had any questions. If the parent did not have any questions then the parent would sign the DPR card.

Interobserver Agreement

Observers were trained on the target behaviors for each participant by the primary investigator (author). Training consisted of the primary investigator using a script to instruct the observers about the target behaviors for each participant. Two observers independently observed and collected data across all phases of the study for each participant. An agreement of the occurrence of task engagement was defined as both observers recording that the behavior did (+) or did not occur (-) during the entire interval. Interobserver Agreement (IOA) was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100 for a percentage. An agreement of the occurrence of problem behavior was defined as both observers recording that the behavior did (+) or did not occur (-) during any part of the interval. IOA for the problem behavior was calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. IOA was assessed for 25% of sessions for Lenin and resulted in a mean percent agreement of 97.5% (range 95.83-99.17%). For Maurice, IOA was assessed for 36.36% of sessions with a mean percent agreement of 97.09% (range 95.83-99.17%). For Jordan, IOA was assessed for 33.33% of sessions with a mean percent agreement of 99.29% (range 97.5-100%). For Jose, IOA was assessed for 38.46% of sessions with a mean percent agreement of 94.5% (range 81.67-100%). Finally, for James IOA was assessed for 38.09% of sessions and resulted in a mean percent agreement of 96.25% (range 83.33-100%).

Experimental Design

For this study a non-concurrent multiple baseline design across participants was used to evaluate the effects of CICO on problem behavior and task engagement. The rationale for this design was that it demonstrated the intervention's effect without requiring a reversal or

withdrawal of the intervention which could be unethical or not socially acceptable by the teachers or parents.

Procedures

Baseline. During baseline, the teachers conducted the afterschool program as usual which consisted of the token economy and the color system. In addition, the teachers completed the DPR for each of the five participants throughout the afterschool program but without providing any feedback to the participant.

Training CICO. Prior to the implementation of the CICO intervention, teachers attended a CICO training session conducted by the primary researcher. Behavioral skills training was used to teach the components of the CICO intervention. Teachers were instructed about CICO and how to implement it step by step. The researcher role modeled how to implement CICO then teachers were given a chance to describe the key points in the implementation of CICO. Then teachers were given the opportunity to immediately rehearse the implementation of CICO and the instructor provided praise for correct performance or corrective feedback for steps missed. Rehearsal of CICO was repeated until teachers were able to demonstrate all of the steps correctly.

Check-in/Check-out. Check-in/Check-out consisted of a meeting with the CICO mentor, who was the author or research assistants, periodic feedback meetings with the participant's teacher, and an end of the day meeting with the mentor (Campbell & Anderson, 2011). During this phase, participants started by checking in with a mentor, before the start of the afterschool program. The mentor provided the participants with a new DPR card (see appendix B for Lenin's DPR card), discussed the participant's daily point goal, went over the expectations for the participant, and provided positive verbal encouragement.

At the end of each activity throughout the ASP, the participants met with the teacher to

receive the points earned for that activity and individual feedback. The teachers determined the specific times for the feedback sessions, based on natural transitions during the afternoon. Feedback was based on the behavior during the time period since the last feedback session. The teacher awarded participants points contingent upon their performance of the behavioral expectations (i.e., follow directions, keep hands and feet to yourself, clean up after yourself, use nice words, share and take turns, stay with your group). Points were assigned using a 3-point scale. Within the 3-point scale the participants was able to earn 2 points for a great job, 1 point for doing okay, and 0 points for having a hard time. The participants were able to earn up to 2 points per activity. The number of activities per day depended on the time the participant's parent picked the participant up from the afterschool program. If the participant was picked up after just two activities then the total possible points earned was 12 while if the participant was picked up after four activities then the total possible points earned was 24. The goal for each participant was to earn 80% of possible points each day.

At the end of the afterschool program, the participants checked-out with the mentor immediately before the parents picked up the participant. The participant gave the DPR card to the mentor, and the mentor recorded the points earned for the day and provided feedback based upon the points earned. If the participant earned 80% of possible points, the mentor provided praise (e.g. "Great job meeting your goal!"). If the participant earned less than 80% of the possible points, the mentor provided neutral feedback (e.g. "You will have the chance to earn more points tomorrow"). The mentor discussed problem solving strategies with the participant, and encouraged them to earn more points the following day. The participants earned tangible rewards based on the percentage earned each day. The reinforcement items were based on the results of a preference assessment interview for each participant. During the interview, the

participants were asked what they would like to earn. They were asked to name five items they would like to earn and to rank them from the most preferred to the least preferred as shown in Table 3.

Treatment Integrity

Treatment Integrity was assessed for at least 20% of the days during the intervention phase for each participant. The researcher observed teacher-participant interactions throughout the day, including classroom feedback sessions. The researcher collected fidelity data using a 12-item checklist with key components of the CICO program (Campbell & Anderson, 2011). The checklist is located in Appendix C. Treatment integrity was calculated by dividing the total number of items performed correctly by the total number of items (12) and multiplying by 100 for a percentage. Treatment integrity for Lenin was collected for 26.67% of days and was calculated at 93.75%. Treatment integrity for Jordan was collected for 26.92% of days and was calculated at 93%. Treatment integrity for James was collected for 27.27% of days and was calculated at 97%. Finally, treatment integrity for Jose was collected for 20% of days and was calculated at 100%.

Social Validity

At the end of the study, staff completed a survey to evaluate the teachers' perception about the effectiveness and relevance of CICO at the afterschool program (Appendix D). A neutral individual, who did not partake in the study, reviewed the 5-point Likert scale with staff before completing it and answered any questions the staff had. The survey assessed the teacher's perception of the decrease in problem behavior, increase in task engagement, ease of implementation of CICO and if they would continue to implement CICO. The participants completed a survey to evaluate the participant's perception of CICO (Appendix E). The survey

assessed if the participant's would like to use CICO again, the least preferred component of CICO, the most preferred component of CICO and an overall grade of CICO.

Chapter 3:

Results

Problem Behavior and Task Engagement

The percentage of intervals scored with problem behavior and task engagement are shown in Figure 1 for all five participants. All four participants who received the Check-in/Check-out (CICO) intervention showed decreases in problem behavior and increases in task engagement. Table 1 contains the mean percentages of problem behavior and task engagement for all participants.

Figure 2 demonstrates data on the percentage of points earned during baseline and when CICO was implemented during the entire afterschool program and the percentage of points earned during the activity that was reported to be most problematic for each participant. Table 2 contains the mean percentages of CICO points earned daily and during the activity that it was reported to be most problematic for each participant. There was an increase in the mean percentages of daily points earned and activity points earned after the implementation of CICO for all participants.

Social Validity

The two teachers completed the social validity questionnaire. The teacher's questionnaire ratings ranged from 1 (*strongly disagree*) to 5 (*strongly agree*). Results from teacher one's questionnaire revealed that she was neutral overall with the intervention (mean = 3) as shown in Table 4. She disagreed: that the implementation of CICO led to a decrease in problem behavior,

and/or increase of task engagement during the afterschool program. She was neutral on ease of implementation but strongly agreed that she would continue to implement CICO in the afterschool program.

Results from teacher two showed positive responses (mean = 4.75) to the CICO program as shown in Table 4. She strongly agreed: that the implementations of CICO led to a decrease in problem behavior, and/or increase of task engagement during the afterschool program. She agreed on ease of implementation and strongly agreed that she would continue to implement CICO in the afterschool program.

Three of the four participants completed the social validity questionnaire. The participant's questionnaire consisted of open ended questions and one Likert-scale question. Ratings ranged from A (*I really like using CICO*) to F (*I hope we never use CICO again*). Participants (n=3) demonstrated a positive outlook concerning CICO. All participant gave CICO a high grade. All participants reported to want to use CICO again. Refer back to Table 5 for participant's self-report of the most favorite part of CICO and the least favorite part of CICO.

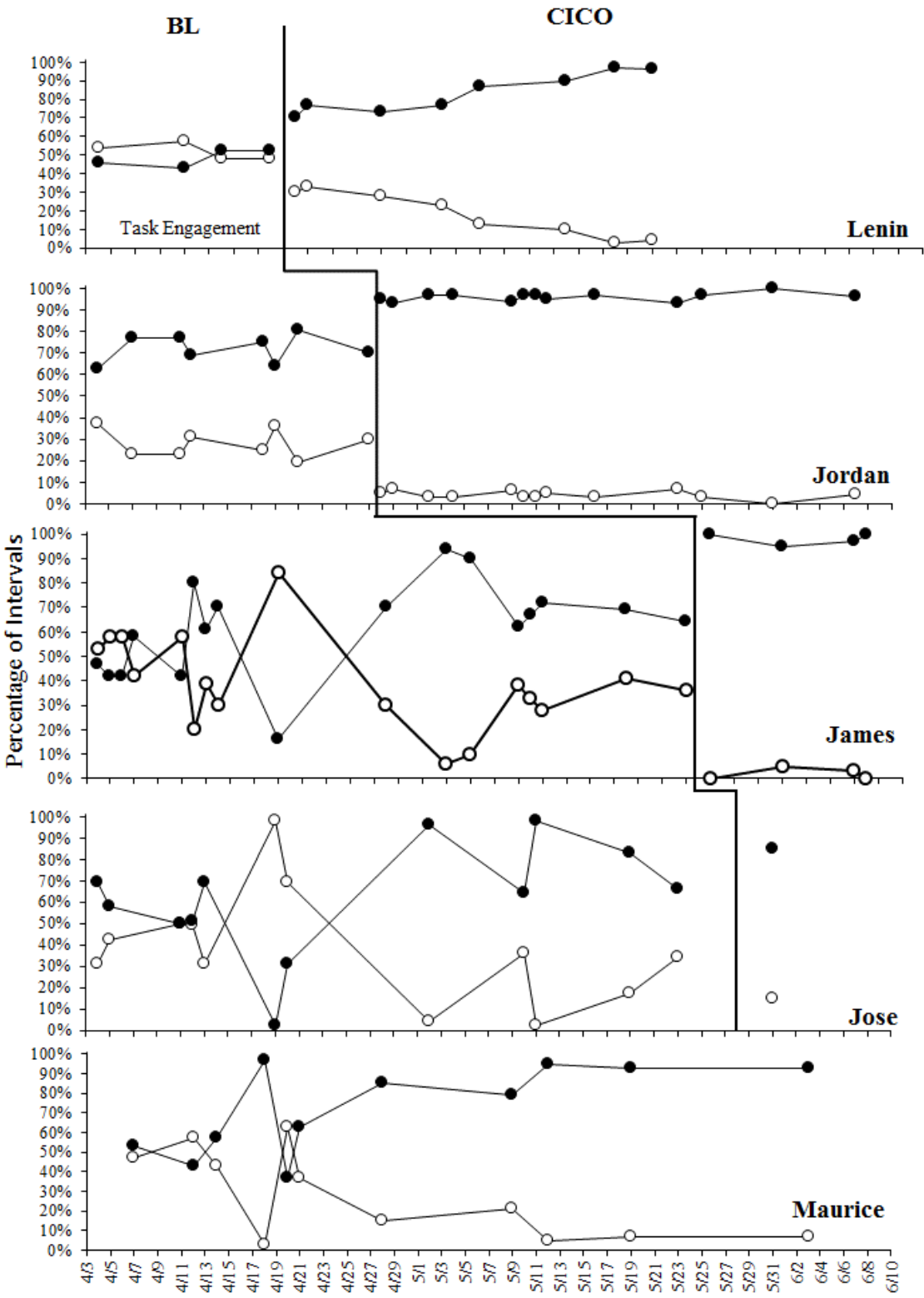


Figure 1. Displays percentage of intervals of problem behavior and academic engagement.

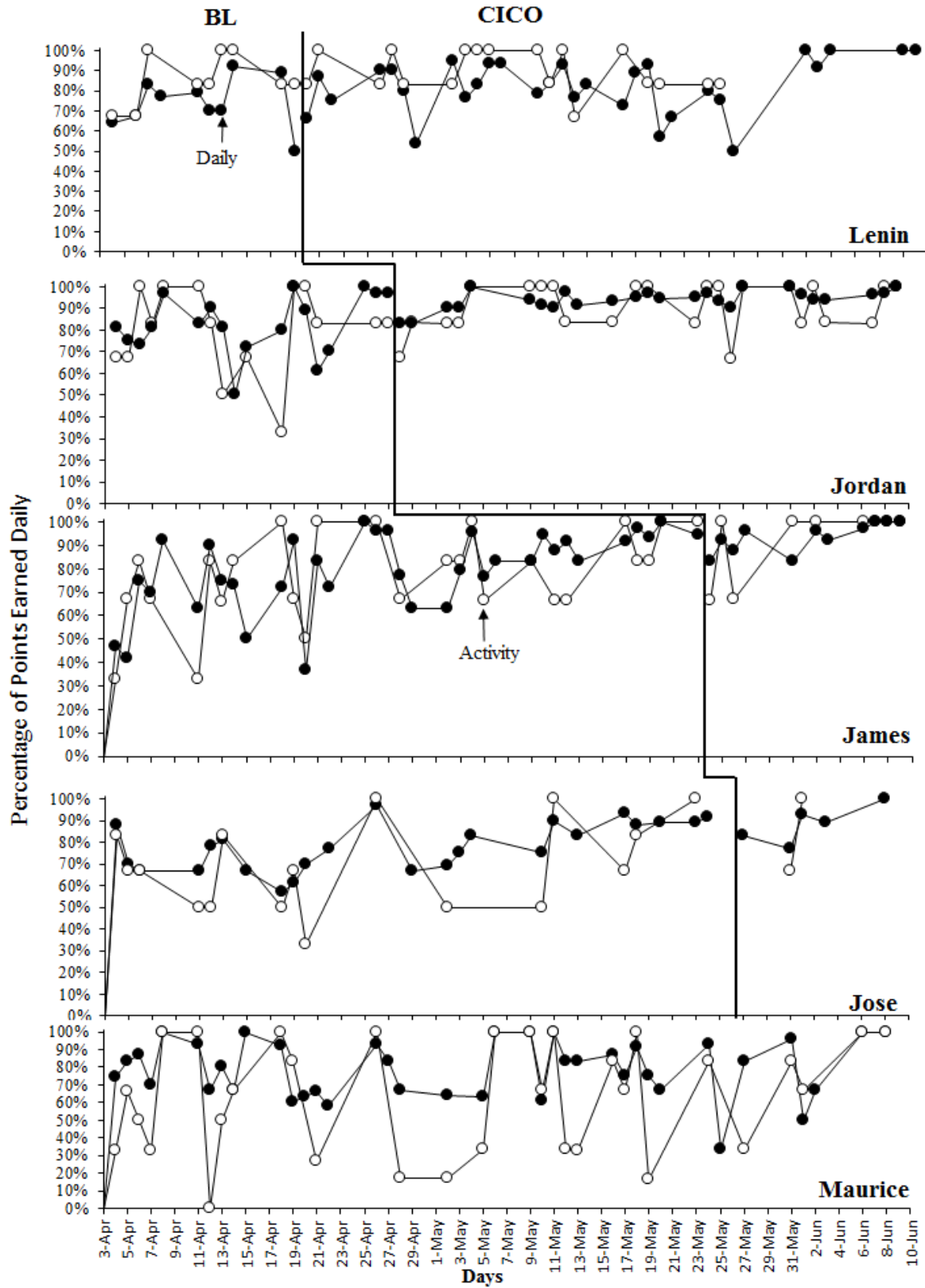


Figure 2. Displays percentage of points earned daily and during activity.

Table 1

Percentage of Intervals of Problem Behavior and Task Engagement

Participants	Problem Behavior		Task Engagement	
	Baseline	Intervention	Baseline	Intervention
Lenin	52%	18%	48%	83%
Jordan	28%	4%	72%	96%
James	39%	2%	62%	98%
Jose	39%	15%	61%	85%
Maurice	28%		72%	

Table 2

Mean Percentage of CICO points earned daily and during activity

Participants	Daily		Activity	
	Baseline	Intervention	Baseline	Intervention
Lenin	74%	82%	85%	90%
Jordan	82%	94%	80%	91%
James	79%	93%	78%	93%
Jose	78%	88%	69%	83%
Maurice	79%		64%	

Table 3

Participant's Interview Results of Preferred Items

Participants	1	2	3
Lenin	Chocolate Chip Cookies	Minecraft	Bouncy Balls
Maurice	Barbecue Chips	Glow in the Dark Ball	Coloring pencils
Jordan	Cookies	Minecraft	Skateboard
Jose	Pokemon Cards	Bouncy Balls	Chips
James	Pokemon Cards	Robots	Gooey Stuff

Table 4

Social Validity results for teachers

	Teacher One	Teacher Two
1. I feel that the implementation of CICO has led to the decrease in participant's problem behavior during the afterschool program.	2	5
2. I feel that the implementation of CICO has led to the increase of the participant's task engagement during the afterschool program.	2	5
3. I feel that CICO can be easily implemented in the afterschool program.	3	5
4. I feel that I will continue to implement CICO in the afterschool program.	5	4

Table 5

Social Validity Results for participants Lenin, Jordan and James.

	Lenin	Jordan	James
1. Would you like to use Check-In/Check-Out again?	Yes	Yes	Yes
2. What did you like best about using Check-In/Check-Out?	Earning a toy	To see if I am good or not	Earning points and toys
3. What did you like least about using Check-In/Check-Out?	The goal	Nothing	Nothing. Others should use it.
4. What grade would you give your experience with Check-In/Check-Out?	A	B	A

Chapter 4:

Discussion

The purpose of this study was to extend the literature on the effects of a Check-in/Check-out (CICO) program to an after school care setting for homeless children. The study evaluated the effects of CICO on both problem behavior and task engagement for children attending an after school care program. All four of the participants who received the intervention exhibited a decrease in problem behavior and an increase in task engagement during direct observations.

The results of this study align with those found in the literature that CICO is an effective intervention at decreasing problem behaviors and increasing academic engagement for students in a school setting (Campbell & Anderson, 2011; Hawken, Adolphson, et al., 2008; Hawken, Bundock, et al., 2014; McIntosh et al., 2009). As previously stated, CICO is usually implemented in public schools from elementary to high school levels. However, both Swoszowski et al. (2013) and Ennis et al. (2012) implemented CICO in alternative settings and both demonstrated similar results to the current study such as decreases in problem behavior. This suggests that CICO might be an effective intervention in a variety of settings than in addition to the school setting.

This study is the first study to implement CICO in an afterschool setting and with homeless youth. Homeless children tend to lack structure in their daily lives which can lead to academic difficulties, social problems and engagement in problem behaviors in school and in afterschool programs (Reganick, 1997). The current study shows that CICO could be an effective way to provide structure during one aspect of the children's day (e.g., afterschool program).

CICO is typically a tier 2 intervention in the Schoolwide Positive Behavior Interventions and Support (SWPBIS) multi-tiered system. A tier 1 intervention usually includes rules, expectations, and reward systems. This afterschool program had general rules (i.e., follow directions, use nice words, clean up after yourself, stay with your group, keep hands and feet to yourself, use walking feet and share and take turns), a token system and a color system in place but did not include all aspects of a tier 1 system. This study found that implementing a tier 2 intervention without the standard foundation of tier 1 in place was effective at decreasing target behaviors and increasing task engagement for the participants.

Participants who completed the questionnaire highly rated the social validity of the intervention except for Jordan who gave it a grade of a B for the overall grade of CICO. The two teachers implementing CICO both strongly agree that they would continue to implement CICO in the afterschool program. Teacher two, Jose, James and Jordan's teacher, highly rated the social validity of the intervention while teacher one, Lenin and Maurice's teacher, was neutral overall with the intervention. Teacher one did not think that the intervention led to a decrease in problem behavior, and/ or increase of task engagement with Lenin. Anecdotally, teacher one said that she thought Lenin needed to be evaluated for a learning disability. She did not believe that Lenin was understanding the daily point system since he still engage in some problem behavior in other activities throughout the program.

There were several challenges during this study. One challenge was the absence of the teachers in the afterschool care program. There were several days where one of the teachers was absent and another full time teacher had to give the participants their scores and feedback. Another challenge was school ending which meant there was not enough time to collect more data for Jose and to start Maurice in the intervention. However, Maurice's problem behavior

remained low throughout baseline indicating that he was doing well with the current token system in place and did not need additional interventions. Another challenge would be the inconsistency of the participant's attendance. Parents were allowed to pick up the participants at any time throughout the afterschool program. There were days that a participant would get picked up as early as 25 mins after the program started. Finally, there was only one data point collected for Jose during intervention due to Jose being absent and school ending.

In summary, this study is the only study that has evaluated CICO in an afterschool setting with homeless youth. The results demonstrated that the implementation of CICO decreased problem behavior and increased task engagement for the participants. Before the intervention took place there was greater variability for all of the participants concerning daily points earned and activity points earned. Once CICO was implemented the variability decreased.

Future research could replicate the current study but with tier 1 systems of support in place and implemented at high fidelity levels. This could result in less children in the after school program in need of tier 2 interventions. In addition, research could also evaluate the implementation of CICO in other less structured settings such as summer camps or after school programs that take place in community based settings. Lastly, research could evaluate the implementation of CICO in an afterschool care setting with the mentors being older peers instead of adults. This could possibly ease the implementation of CICO if staff response effort is decreased by giving some roles to the older peers. The staff could monitor and train the peer mentors to complete the check-in and check-out parts of the intervention which tend to be the most time consuming parts of the intervention.

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APPENDICES

Appendix A: Data Collection Sheet

Name: _____

Date: _____

Observer: _____

Time/Activity: _____

Circle: Problem Behavior (partial interval)

 Task Engagement (whole interval)

Mark a + for occurrence and - for non occurrence

Minutes	Intervals (10 s)					
	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Appendix B: CICO Daily Progress Report

CICO Daily Progress Report

Name: _____ Date: _____

2 = great	1 = OK	0 = hard time

	Follow directions	Use nice words	Share and take turns	Teacher Initials
1st	0 1 2	0 1 2	0 1 2	
2nd	0 1 2	0 1 2	0 1 2	
3rd	0 1 2	0 1 2	0 1 2	
4th	0 1 2	0 1 2	0 1 2	
5th	0 1 2	0 1 2	0 1 2	
6th	0 1 2	0 1 2	0 1 2	
7th	0 1 2	0 1 2	0 1 2	
Today's goal		Today's total points		

Comments:

Parent Signature: _____

Appendix C: Treatment Integrity Checklist

Yes	No	Description
		The participant checked in with the mentor.
		The mentor provided the daily point card.
		The mentor member provided a prompt for the participant to be successful that day.
		The participant approached the teacher to receive feedback.
		The teacher assigned points to the participant.
		The teacher provided verbal feedback regarding the participant's behavior.
		The participant checked out with the mentor.
		The participant presented the completed card to the mentor.
		The mentor added up and recorded total points.
		The mentor provided verbal feedback regarding the participant's behavior.

Appendix D: Social Validity Questionnaire for Teachers

Please read each statement and circle the corresponding number to indicate your opinion on the Check-in/Check-out program.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

5. I feel that the implementation of CICO has lead to the decrease in participant's problem behavior during the afterschool program.

1	2	3	4	5
----------	----------	----------	----------	----------

6. I feel that the implementation of CICO has lead to the increase of the participant's task engagement during the afterschool program.

1	2	3	4	5
----------	----------	----------	----------	----------

7. I feel that CICO can be easily implemented in the afterschool program.

1	2	3	4	5
----------	----------	----------	----------	----------

8. I feel that I will continue to implement CICO in the afterschool program.

1	2	3	4	5
----------	----------	----------	----------	----------

Appendix E: Social Validity Questionnaire for Students

Student Social Validity Questionnaire

Date: _____ Time: _____

1. Would you like to use Check-In/Check-Out again?
2. What did you like best about using Check-In/Check-Out?
3. What did you like least about using Check-In/Check-Out?
4. What grade would you give your experience with Check-In/Check-Out: Circle one.

A	B	C	D	F
I really liked using CICO	CICO is just ok	I didn't care	I did not like using CICO	I hope I never use CICO again

Appendix F: USF IRB Approval



RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
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February 29, 2016

Ana Camacho
ABA-Applied Behavior Analysis
Tampa, FL 33612

RE: Expedited Approval for Initial Review

IRB#: Pro00024777

Title: An Assessment of Check-In/Check-Out with Children who are Homeless in an After School Program

Study Approval Period: 2/29/2016 to 2/28/2017

Dear Ms. Camacho:

On 2/29/2016, the Institutional Review Board (IRB) reviewed and **APPROVED** the above application and all documents contained within, including those outlined below.

Approved Item(s):

Protocol Document(s):

[Protocol](#)

Consent/Assent Document(s)*:

[Parental Permission .pdf](#)

[Teacher Consent Form.pdf](#)

[Child Verbal Assent Form](#) (not stamped)

*Please use only the official IRB stamped informed consent/assent document(s) found under the "Attachments" tab. Please note, these consent/assent document(s) are only valid during the approval period indicated at the top of the form(s).

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR

56.110. The research proposed in this study is categorized under the following expedited review category:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

This study involving child participants falls under the minimal risk category 45 CFR 46.404: Research not involving greater than minimal risk

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) calendar days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,



John Schinka, Ph.D., Chairperson
USF Institutional Review Board