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The Effects of a Buddy Bench on Students' Solitary Behavior at Recess

Andrew Alan Griffin Jr.

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Educational Specialist

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ABSTRACT

The Effects of a Buddy Bench on Student's Solitary Behavior at Recess

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Students with internalizing behaviors are often overlooked in terms of receiving interventions that could change academic outcomes and prevent problems that could have serious implications, including social withdrawal, social isolation, and suicidal ideation. Recent research has found the use of social emotional learning (SEL), school-wide positive behavior support (SWPBS), and social skill instruction, to be effective in treating students with both internalizing and externalizing behavior problems. The use of peers has also shown promise in helping students with behavior problems. In this study, a multiple baseline across participants' design was used across two playgrounds to evaluate a buddy bench intervention, which utilized peers to help socially withdrawn students increase social engagement and peer interactions and decrease social isolation. All students ($N = 448$) in grades 1st through 6th were observed during the pre-lunch recess period. Results revealed that from baseline to intervention phases there was a decrease of between 19% (on the 4th to 6th grade playground) and 24% (on the 1st to 3rd grade playground) in the number of students engaged in solitary behavior on the playground. The majority of students reported positive attitudes towards the intervention. Teachers reported mixed feelings about the social validity of the Buddy Bench. Limitations and implications are discussed.

Keywords: internalizing behaviors, buddy bench, social isolation, recess, social engagement

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CHAPTER 1: INTRODUCTION

School-wide positive behavior support (SWPBS) is a widely used intervention designed to foster the learning environment in schools by improving student's social interactions, reducing problem behavior, and addressing social-emotional concerns (Lewis & Sugai 1999; Young, Caldarella, Richardson, & Young, 2011). Recently, an intervention called the "Buddy Bench" has been used as a proactive approach to help create an environment in which all students can thrive (Associated Press, 2013; Jorgensen, 2015). While this intervention can benefit all students, its primary focus is students with or at risk for Emotional and Behavioral Disorders (EBD). The Buddy Bench intervention is specifically aimed at helping students who exhibit internalizing EBD symptoms such as social withdrawal, anxiety and depression, by creating an environment where students are more likely to befriend and interact with peers.

The idea of using a Buddy Bench has spread across the nation as schools in Connecticut, Ohio, Utah, Virginia, Washington, and other states have installed such a bench and reported anecdotal success (Associated Press, 2013; Jorgensen, 2015). However, only one study mentioning the words "buddy bench" or "friendship bench" was identified in the literature. The results of this action research study suggested potentially positive effects of such a bench (Arthur, 2004). Due to the lack of controlled research studies on the use of Buddy Benches at schools, this study investigated the use of this intervention. A local Title I elementary school in central Utah, was identified with a history of students who are at risk for both externalizing behaviors and internalizing behavior problems. School teachers and administrators implemented a Buddy Bench intervention on the 1st to 3rd grade playground and the 4th to 6th grade playground and instructed students on using the Buddy Bench as a tool in making friends and joining others in play activities. We hypothesized that elementary students would benefit from

the intervention and that in turn would increase peer conversation, initiations, and social interactions, as well as decrease social withdrawal and isolation across grades on the playground.

In this research study, the following specific research questions were addressed:

1. Was the Buddy Bench implemented with fidelity during lunch recess?
2. Was the Buddy Bench intervention effective at decreasing solitary behavior on the playground during the lunch recess?
3. Was the Buddy Bench intervention viewed as socially valid by teachers and students?

CHAPTER 2: LITERATURE REVIEW

Students with Emotional and Behavioral Disorders (EBD) most often exhibit negative behaviors in one of two ways, externalizing behaviors or internalizing behaviors. Externalizing behaviors include acting out and other aggressive and antisocial behaviors that are usually obvious and therefore targeted for interventions within the school setting (Brumariu, 2010; Merrell & Gimpel, 1998). While externalizing behaviors are more commonly identified and addressed in K-12 schools, less effort has been dedicated to identifying students with internalizing disorders and subsequently developing successful interventions (Morris, Shah, & Morris, 2002; Rubin & Coplan, 2004).

Internalizing problems can lead to EBD including depression, anxiety, obsessive-compulsive disorders, social withdrawal, and somatic problems (Brumariu, 2010; Gage, 2013; Merrell & Gimpel, 1998). Additionally, Gresham and Kern (2004) stated that internalizing behaviors are any type of behavior “directed inwardly toward the individual and represent an over-controlled and inner-directed pattern of behavior” (p. 262). Due to their discrete appearance, internalizing symptoms often receive less attention from school personnel despite the growing chasm in academic and post-high school success among these students and their peers (Gresham & Kern, 2004; Kauffman, 2001). Research has supported the notion that these students need attention as much as those with more visible misbehavior (Eisenberg et al., 2009).

Negative Outcomes for Students with EBD

Students exhibiting atypical behavior and symptoms of EBD often struggle at school and throughout life. Research has shown that students with EBD display below-average academic performance, with many students scoring below the 25th percentile in reading, math, and writing measures (Lane, Barton-Arwood, Nelson, & Wehby, 2008). Students with EBD have high

incidences of reading failure, which correlate with school dropout rates (Jennings, Caldwell, & Lerner, 2013). In fact, both students with externalizing and internalizing behaviors consistently have lower graduation rates, less post-school employment success, lower postsecondary enrollment rates and are more likely to be arrested or involved with the criminal justice system compared to students not exhibiting EBD symptoms (Fergusson & Woodward, 2002; McCall, 2011; Woodward & Fergusson, 2001).

Furthermore, while the general school population has experienced an overall improvement in graduation, employment and college placement rates over the past 20 years, students with EBD have not improved at the same rate as general education students and other special education populations (Wagner et al., 2005). Students with EBD not only struggle to keep up with their peers, but over time the gap has consistently widened. These statistics are alarming when examining post school outcomes. Students who drop-out of school earn considerably less money throughout their lifetimes and students with EBD are at a higher risk for dropping out and becoming part of this statistic (Amos, 2008). Students with internalizing behaviors are part of group of students that rarely receive adequate help in transitioning to higher education; research on helping students with internalizing behaviors transition to college is nearly nonexistent (McClintick-Greene, 2012).

Typical and Atypical Playground Behavior

Researchers have examined typical and atypical playground behavior and have identified those behaviors that are indicative of students at-risk for EBD. Arthur (2004) noted that feeling left out, feeling lonely, spending time in social isolation and having bad experiences on the playground is atypical playground behavior rather than the norm. Research by Coplan, Ooi, and Rose-Krasnor (2015) also found that solitary behavior is atypical playground behavior. These

researchers found that group and dyadic play consisted of 89% of play behavior for pre-adolescent students in their study ($N = 290$). Furthermore, children in the *group-social* or *average* clusters displayed normal social-emotional functioning and reported the lowest levels of anxiety, depression, and loneliness. Children rated as non-social (comprising about 8% of their sample) had the most extreme social-emotional problems, including social anxiety, depression, and loneliness. An additional survey completed by parents also suggested that these children had more peer and emotional problems in comparison to more social peers.

Coplan and colleagues (2013) found that students who engage in social isolation behavior have different reasons for doing so. Some students may be alone because they are shy (fear/anxiety related) or prefer being alone (non-fear related), while others feel excluded, rejected or isolated by peers. Additionally, Coplan and colleagues (2015) suggested that different interventions are suited to different types of withdrawn behavior (fear/anxiety related vs. exclusion related). They also suggested that students varying from normal social playground behavior displayed the highest level of internalizing and peer relation difficulties. Furthermore, they proposed that teachers overseeing recess may act as effective agents identifying at-risk students, simply by observing students who tend to be alone. Finally, they provided some of the first research supporting the idea that observed social participation can be a marker variable for social-emotional adjustment in late childhood.

School-Wide Positive Behavior Support

Research on the use of social skill interventions, SWPBS, and social-emotional learning (SEL) techniques for students with or at risk for EBD is overwhelmingly supported as a successful and worthwhile school intervention. For example, research has found these methods to be efficient in helping students gain skills, change attitudes, and improve behavior (Catalano,

Berglund, Ryan, Lonczak, & Hawkins, 2002; Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Greenberg, Domitrovich, & Bumbarger, 2001; Hahn et al., 2007; Sugai & Horner, 2006). Gresham (2015) recently conducted a meta-analysis on 30 years of research on tier two and tier three social skill interventions, often used as part of SWPBS, and discovered that 65% of students with EBD improved when provided with such instruction.

Hunter, Chenier, and Gresham (2014) used peers to help students with socially withdrawn behavior. As part of a Check In/Check Out (CICO) intervention, researchers selected four elementary students, ages 9–11, without psychological diagnoses and who did not participate in special education but scored “at risk” on the Student Internalizing Behavior Screener (SIBS; Cook et al., 2011). They then collected baseline data on behaviors to be avoided by students and the occurrence of replacement behaviors by these students. Each behavior selected was idiosyncratic to the individual. After the baseline phase, students began an intervention package, which included checking in with an adult mentor (in this case two school psychologist interns) at the beginning and end of the school day. Participants reviewed daily goals and the rewards to be earned if goals were reached. Goals were determined by averaging the number of points earned by the students in the past three days. If the students had problems executing the desired behaviors, the school psychologist intern attempted to problem-solve using a cognitive behavioral intervention lasting approximately five minutes per intervention. Students also carried with them a form on which they received feedback throughout the day from their teachers. At the end of the day they again checked in with the school psychologist intern and received verbal praise and their desired reward if goals were met. If goals were not met, they did not receive the reward but spent some time problem solving with their adult mentor. Hunter and colleagues compared pre and post internalizing and social skills scales and found that results

suggested internalizing behaviors students decreased and that social skills increased. They also suggested that this approach could be a valuable intervention for reducing internalizing behaviors through the increase of pro-social replacement behaviors and as a result of the mentor relationship and reinforcement system. Hunter and colleagues also suggested that the intervention has potential as an effective treatment in increasing pro-social behavior as a function of reducing internalizing symptoms in elementary students.

Smith, Evans-McCleon, Urbanski, and Justice (2015) also used a CICO procedure and involved an older peer mentor (a high school student) in assisting, and monitoring the target student (an elementary student with EBD). Researchers found that this was a cost and time efficient method of improving pro-social behavior in both the mentor and the mentee. Despite the promising results, additional supporting interventions are needed, particularly on school recess playgrounds.

Addressing Recess Playground Behavior with SWPBS

Recess, while sometimes viewed as an activity that strains precious instruction time, is seen in SWPBS framework as an invaluable opportunity to improve school climate (Franzen & Kamps, 2008). When recess is used effectively, experts suggest that it helps students develop physically and mentally, improve social skills and perform better academically (Ginsburg, 2007; Pellegrini & Bohn, 2005). When utilized, recess can be viewed as some of most effective minutes of the school day, rather than being thought of as lost instruction time.

Marchant et al. (2007) found success modifying socially withdrawn behavior on the playground through the use of a treatment package, which included social instruction, self-management and reinforcement. These researchers targeted three students who displayed internalizing symptoms at recess and used peer and adult mediators alongside the

aforementioned treatment package to change student behavior. Marchant and colleagues observed that students improved their communication skills, increased appropriate play at recess and increased social interaction. This intervention while effective, requires many resources on behalf of the school, including teacher mediators and school psychologists, student mediators, and materials such as a motivator device.

Another example of an effective recess intervention is the Playworks program, which Bleeker et al. (2012) evaluated. The Playworks program includes adult-lead recess activities and opportunities for students to participate in structured recess activities. Adult volunteers led multiple activities at recess, and encouraged peer inclusion and group activities at recess. The goal was to enhance the quality of recess. Researchers followed several schools using the Playworks program and compared these to non-participating schools of a similar demographic. They found that students were involved in less bullying and exclusionary behavior, and displayed more on-task behavior (attention) during classroom instruction and better classroom behavior in Playworks schools as compared to non-participating schools. Researchers suggested that when recess is utilized, it is a valuable part of the day for students, which carries over socially, and academically. While interventions like Playworks, have been promising, they are intensive and involve the coordination of many people (e.g., trained school coordinators, volunteer adults, and other personnel; Bleeker et al., 2012). Many schools simply lack the resources to run such involved interventions.

An alternative playground intervention used by Teerlink, Caldarella, Anderson, Richardson, and Guzman (2016), which didn't require extensive resources or the involvement of adult mentors, utilized peer praise notes (PPNs) at recess in an attempt to improve student behavior. Teerlink and colleagues trained students to monitor recess and distribute PPNs to peers

during instances when they displayed behavior that was responsible, respectful or safe, as outlined by school rules during the school's recess period. Copies of the PPN's were given to the student, the student's teacher and the office to be used for data collection and a weekly mystery motivator drawing. Teerlink and colleagues found that PPNs appeared to be effective at decreasing incidences of office disciplinary referrals (ODRs), improving social relations on the playground, improving student behavior, and increasing the amount of structured play on the playground. In an attempt to make the current study simple, easy to implement, and effective, we also utilized peers in a recess intervention through the use of a Buddy Bench.

Recently, the Associated Press (2013) reported that an elementary student's idea made a difference in helping to solve social isolation among peers in his school. A second grade student, Christian Bucks, from Roundtown Elementary School in Pennsylvania campaigned the idea of a "Buddy Bench" to his school. This bench, decorated with a special design was placed in a recess area and all students were instructed that if they felt lonely that they could sit on the bench and someone would be their buddy. School administration also instructed all students that if they saw a peer sitting alone at the Buddy Bench that they should befriend and invite the student who was feeling lonely to play. The idea spread across the nation as schools in Connecticut, Ohio, Utah, Virginia, Washington, and other states also installed buddy benches and reported anecdotal success (Associated Press, 2013; Jorgensen, 2015).

Media outlets have followed and reported on the recent emergence of the Buddy Bench around the country, and it appears to be an efficient and practical way to help students with social problems (Associated Press, 2013; Jorgensen, 2015). However, no scholarly research has specifically explored the effects of Buddy Benches, making our analysis and incorporation of such an element quite timely. Like other recess interventions, this intervention aims to change

school climate by structuring part (albeit a small part) of recess in the hopes of cueing students to interact and befriend student that might otherwise spend recess alone.

While there is considerable research on social inclusion, only one study mentioning the words “buddy bench” or “friendship bench” was identified. Arthur (2004) conducted a study examining the impact of peer-involved pro-social interventions at six elementary schools. This researcher tracked the effectiveness of “Playground Buddies,” “Buddy Benches,” “Find a Friend,” “Friendship Benches,” “Super-Play Day,” classroom activities, and assembly interventions. Each intervention aimed to help students befriend peers that felt left out. While the details of each of these programs were not outlined in depth, each was an intervention aimed at social emotional learning and helping students with internalizing behaviors. Arthur administered a questionnaire pre and post intervention and asked students how often they felt left out and how often they had bad experiences on the playground. In five out of six schools studied by Arthur, students reported decreased instances of bad experiences and feeling left out at post intervention compared to pre intervention. However, Arthur collected no observational data to verify the self-report from students.

CHAPTER 3: METHOD

Settings and Participants

This study took place at an urban Title 1 elementary school in central Utah. All students (N = 448) in grades 1st through 6th were observed during the pre-lunch recess period. This school has a large percentage of minority and low SES students. Approximately 65% were non-Caucasian (of minorities, 86% Hispanic, 5% Pacific islander, 4% American Indian, 3% African-American, 2% Asian), 75% received free and reduced lunch (low SES), and 47% were English Language Learners. We selected grades 1st through 6th because teachers and school administration noted several children in these grades who exhibited internalizing behavior such as social withdrawal and isolation. Because these grades contained students with internalizing symptoms, we were able to observe withdrawn behavior and the interventions effect on these students. Kindergarten recess was not included since it was on a different schedule and on a separate enclosed playground.

A total of 21 teachers were involved in briefing students on the purpose of the Buddy Bench and how to use it; 20 teachers were female and one was male, 20 were Caucasian and one teacher was Hispanic. The school principal, a female Caucasian educator with 21 years experience (four years as a principal), also participated.

The principal investigator, a graduate student in the school psychology EDS program at Brigham Young University (BYU), trained observers and general education teachers in all aspects of the intervention including how teachers were to inform each class on the use of the Buddy Bench. This student was being trained to be a school psychologist and was supervised by a faculty member at BYU.

Four undergraduate university students served as data collectors. These students were studying psychology, education, or a related field and were trained by the principal investigator to collect observational data during the lunch recesses (see data collection section for details).

There were two observed playgrounds at the school. The 4th to 6th grade school playground was a large square shaped area in which students were free to roam during the recess period (see Appendix A). Students were not permitted to leave the area during the recess period and two adult recess aides supervised recess each day. The south half of the playground area contained a large grass field including a kickball/softball area and an area to play football and soccer. On the northeast corner of the playground area was a black top and four basketball hoops. On the northwest corner of the playground area was the playground structure. This structure had monkey bars, slides and climbing equipment. Students were provided soccer balls, footballs, jump ropes, basketballs and other equipment to play with.

The 1st to 3rd grade playground was located on the opposite side of the school. This playground was also located in a square shaped area in which students were free to roam during the recess period (see Appendix A). Students were not permitted to leave the area during the recess period and two adult recess aides supervised recess each day. The southwest corner of this playground contained a playground with monkey bars, slides and climbing equipment and a swing set. The southeast portion of the playground contained a large blacktop and areas to play basketball and jump rope. The northern half of the playground contained a large grass field and areas to play football and soccer. Students were provided soccer balls, footballs, jump ropes, basketballs and other equipment to play with.

Playground Observation Schedule

The observed recess periods occurred daily at noon, with each grade holding a 15-minute recess before lunch. After students ate their lunch, they were free to play again on the playground during the remainder of lunchtime, which behavior we also observed. Occasionally, several grades were on each playground at the same time. The recess schedule is outlined below in Table 1. Per school district policy, during instances of inclement weather, when it was inappropriate for children to play outside, students remained in their classrooms and instead were given 15-minutes of free time to play board games, use computer games and learning programs, socialize with friends, and perform other inside play activities. During this 15-minute period, the classroom teacher left the room and two aides roamed the halls as monitors. We decided to suspend data gathering on these days, since the independent variable was not used. Because of the mild Utah climate, there were a minimal number of days (7 of 59 days) in which students spent recess inside because of inclement weather.

Table 1

Lunch and Playground Recess Schedule

	Grade	Recess Time	Lunchtime
Playground 1			
	4	11:55-12:10	12:10-12:40
	5	11:50-12:05	12:05-12:35
	6	11:45-12:00	12:00-12:30
Playground 2			
	1	12:10-12:25	12:25-12:55
	2	12:05-12:20	12:20-12:50
	3	12:00-12:15	12:15-12:45

Independent Variable

This study had one independent variable, the placement of a bench on the playground, referred to as the “Buddy Bench,” followed by instruction on its use to the classes involved. The Buddy Bench was placed at a prominent location, within earshot of observers (see Appendix A). Rules were posted in every classroom in the school and students were reminded of the rules via daily school-wide announcement by the principal (see Appendix B).

Treatment fidelity. Four measures of treatment fidelity were used to measure students’ use of the Buddy Bench: (a) Number of students using the Buddy Bench per recess period; (b) Number of play invitations extended to target students at the Buddy Bench; (c) Number of play invitations accepted by students at the bench; and (d) Number of successful teacher-directed prompts. The definitions of each treatment fidelity measure are presented below.

Number of students using the Buddy Bench. Observers noted the number of students using the Buddy Bench during each observation period. Using the Buddy Bench was defined as sitting at or leaning on the bench. If a student was sitting on the ground or standing near the Buddy Bench this was not considered using the bench. Data was compiled for all observation intervals by each observer each day and an average was calculated for comparison across time.

Number of play invitations extended to students at the Buddy Bench. Observers noted the number of play invitations extended to students using the Buddy Bench during each observation period. If a student joined another student sitting at the Buddy Bench and invited them to play this was considered an invitation. If a student walked near the Buddy Bench and interacted with a student sitting at the bench and invited him to play this was considered an invitation. If a student or group of students were playing near the Buddy Bench and the student at

the bench decided to play with them of his own accord, this was not considered an invitation extended to the student.

Number of play invitations accepted by students. Observers noted the number of play invitations accepted by students using the Buddy Bench during each observation period. If a student was sitting at the Buddy Bench and was asked by another student to play, after which the student showed some form of acknowledgement of acceptance and left with the student or group to play this was considered a play invitation accepted. If a student sitting at the bench declined their invitation this was not considered a play invitation accepted.

Number of successful teacher-directed prompts. Observers noted the number of students using the Buddy Bench as a result of a direct teacher prompt to do so, during each observation period. In order for it to count as successful teacher-directed prompt, observers would only count instances in which they saw and heard a teacher or aide make a verbal prompting (in which they were in earshot of) and in which the student followed the direction of the teacher and used the bench. If a student received direction to sit at the bench and did so, this was considered a successful teacher-directed prompt. If a student received direction to use the bench but did not follow these directions, this was not considered a successful teacher-directed prompt. Data was compiled for all observation intervals by each observer each day and an average was calculated for comparison across time.

Dependent Variable

The dependent variable measured was the number of students engaged in withdrawn or solitary behavior. Observers scanned the playground area for 20-second intervals (with 10 second recording periods in-between intervals) and recorded using partial-interval recording the

number of students engaging in any type of solitary behavior. The definition of this variable is presented below.

Solitary behavior was defined as not engaged with other students or engaging in behavior alone with no other students within five feet. If a student was sitting or standing alone it was defined as solitary behavior. If a student was standing alone, but was engaged in throwing a football with another student more than five feet away, it was not defined as solitary behavior. Data was compiled for all observations intervals by each observer each day and an average was calculated for comparison across conditions.

Materials

Materials needed for this study were two Buddy Benches. The Buddy Benches were made of durable metal and plastic material and were each 6-feet long. These benches had a colorful design and were labeled “Buddy Bench”. Instruction for the use of the Buddy Bench was posted in every classroom in the school and the principal reminded students daily via school-wide loudspeaker announcements how to use the Buddy Bench (see Appendix B). These Buddy Benches were portable (though heavy and not easily movable by children) so that school staff could remove the benches at the end of each day. Buddy Benches were purchased with research funds and donated to the school at the conclusion of the study. Observation sheets (Appendix C) were also used during the study.

Interobserver Agreement

Observers were trained to match above 80% interrater reliability. Interobserver agreement was assessed by the use of a second observer who independently collected data. Approximately 50% of data collection sessions included an interobserver. Agreement was calculated by dividing the smaller total by the larger total, multiplied by 100, in order to obtain

an inter-observer agreement percentage. The average inter-observer agreement across all observations was 87.97%, above the 80% considered acceptable by Cooper, Heron, and Heward (2007).

Procedures and Experimental Design

This study was conducted using a multiple baseline across participants' design (Cooper et al., 2007), with a withdrawal phase added on one playground to increase rigor. Institutional Review Board and school district approval was obtained (see Appendix D). We administered several conditions, amongst the two different groups of participants. Observers watched and recorded how many students spent time alone during lunch recess rather than playing on the playground. The 4th to 6th grade playground, participated in two conditions: (a) Baseline and (b) Intervention. The 1st to 3rd grade playground participated in four conditions: (a) Baseline, (b) Intervention, (c) Withdrawal, and (d) Return to Intervention. The four experimental conditions are described below.

Baseline. To establish a baseline, the research team observed the playground with no changes made other than the presence of observers. The Buddy Bench had not yet been installed on the playground and the teachers had not yet instructed students on what to do with it. Before the collection of baseline data, observers were present at the recess period in an effort to habituate students to their presence. We collected at least 20 baseline data points on each playground before moving to the intervention condition.

Intervention. The principal investigator instructed classroom teachers to brief their classes (Appendix E) that the Buddy Bench was where students could go if they felt lonely and wanted to make a friend. Students were then instructed by classroom teachers that if they saw someone sitting at the Buddy Bench, they should sit with this peer and/or engage in conversation

and ask the peer to join them in activities on the playground (see Appendix G). All instruction directly to students was given by classroom teachers rather than by the research team. A short role-play was included during student instruction as a model for all students. A teacher-prompting element to the intervention, consisting of teachers on recess duty prompting students engaged in solitary behavior to use the bench, was also included. This was done in order to add to the effectiveness of the intervention. The teachers at the school were not involved in the intervention on a day-to-day basis, but rather took turns periodically monitoring the playground. We collected 39 intervention data points on the 1st to 3rd grade playground before starting the intervention on the 4th to 6th grade playground.

Withdrawal. After a notable change as a result of the intervention was observed on the 1st through 3rd grade playground, a withdrawal phase was introduced on this playground. The Buddy Bench was removed and students were informed during morning announcement that the bench would not be used and teachers no longer prompted students to befriend solitary students. During the withdrawal phase, we collected a total of 15 data points. When a visible trend was observed, a final “return to intervention” phase was initiated. A withdrawal phase was not included on the 4th through 6th grade playground due to the school year ending.

Return to intervention. During the return to intervention phase, the Buddy Bench was returned to the playground and students once again received promptings to use the bench during morning announcement and by recess supervisors. Five data points were collected before the conclusion of the school year.

Social Validity

In order to assess whether the intervention was viewed as effective, easy to use, and practical, the school principal distributed a post-intervention social validity survey to all

participating students and teachers. These surveys were adapted from those used by Teerlink et al. (2016). The surveys contained 7 questions and took participants less than 10 minutes to complete (see Appendix F). All responses were coded on a five-point Likert scale, which ranged from *strongly disagree* to *strongly agree*. There was also a space provided on the surveys for participants to make comments regarding aspects of the intervention that they liked or disliked.

Data Analysis

We hypothesized that elementary students would use the Buddy Bench and that peers would invite and befriend them. To analyze treatment fidelity, we used descriptive statistics to determine; (a) Number of students using the Buddy Bench per recess period; (b) Number of play invitations extended to target students at the Buddy Bench; (c) Number of play invitations accepted by students; and (d) Number of successful teacher-directed prompts.

We expected the frequency of students spending time in solitary behavior to decrease as a result of the intervention. All of the dependent variable data (students engaged in solitary behavior) was graphed to provide a visual representation of results. This visual representation of the data was analyzed for changes in level, trend, and variability to determine the effectiveness of the intervention. An effect size was also calculated using a Tau U calculator (www.singlecaseresearch.org/calculators/tau-u). Tau-U is a nonparametric statistic appropriate for single-subject research which analyzes non-overlapping data points between different phases (Parker, Vannest, Davis, & Sauber, 2011). While Parker et al. (2011) provided no recommendations on interpretation of the Tau-U statistic, Rakap (2015) recommended interpreting Tau-U effect sizes of less than 0.65 as small, 0.66 to 0.92 as medium, and greater than 0.92 as large. Each playgrounds baseline data was contrasted with the first intervention phase data, and reversal data was contrasted with the second intervention phase data.

All social validity data were analyzed by the principal investigator using descriptive statistics of Likert ratings and qualitative coding of written comments. The percentage of respondents who *agreed* or *strongly agreed* with each statement on the survey was calculated. Open-ended comments were analyzed qualitatively, similar to Teerlink et al. (2016). First, the principal investigator analyzed, organized and coded statements from students and teachers by grouping responses associated with approval or disapproval of the Buddy Bench. Next, the principal investigator grouped common themes and calculated the percentage of participants whose comments fit each theme. The most common themes were listed as well as any unique responses, which were provided to display valuable information on the perceptions of students and teachers regarding the Buddy Bench.

CHAPTER 4: RESULTS

While the Buddy Bench intervention was associated with students inviting peers to play, the teacher-directed prompting element was implemented with low fidelity. Overall changes in solitary student behavior on the playground across phases of the study suggested that the Buddy Bench intervention decreased solitary behavior. Results from social validity surveys indicated that participants had mixed perceptions of the Buddy Bench in improving student interaction, peer relations, and positive social behavior on the playground. Students' perceptions were overall more positive than the teacher's perceptions. Results are described in greater detail below according to each research question.

Research Question 1: Treatment Fidelity

The first research question asked, "Was the Buddy Bench implemented with fidelity during lunch recess?" To answer this question, this section describes the data collected on students use of the bench and invitations extended and accepted as well as teacher involvement in directing students to the bench.

The Buddy Bench was present during 100% of the intervention phases. The school announced the rules and a reminder to use the Buddy Bench on 80% of intervention days. Students on the 1st to 3rd grade playground extended 130 invitations to students using the bench throughout the course of all intervention phases, of which 76 (58%) were accepted and led to play activities. At any given time, there was on average 1.03 ($SD = .64$) students using the bench during intervention phases. Teacher-directed prompts to use the bench or invite someone to play accounted for only six uses of the bench during the intervention phases on the 1st to 3rd grade playground.

Students on the 4th to 6th grade playground extended 75 invitations to students using the bench throughout the course of all intervention phases, of which 47 (63%) were accepted and led to play activities. At any given time, there was on average .8 ($SD = .70$) students using the bench during intervention phases. Teacher-directed prompts to use the bench or invite someone to play accounted for only two uses of the bench during the intervention phase on the 4th to 6th grade playground.

Research Question 2: Effects on Solitary Behavior

The second research question asked, “Was the Buddy Bench intervention effective at decreasing social withdrawal on the playground during the lunch recess?” To answer this question, this section will describe the average number of solitary students on the playground across each phase of the study (see Figure 1).

Baseline. The baseline phase lasted five weeks on the 1st to 3rd grade playground and seven weeks on the 4th to 6th grade playground. The daily average during baseline was 4.84 ($SD = 0.93$) solitary students on the 1st to 3rd grade playground and 3.47 ($SD = .78$) solitary students on the 4th through 6th grade playground. Data points were variable on both playgrounds with stable trends.

Intervention. The intervention phase lasted four weeks on the 1st to 3rd grade playground and just over two weeks on the 4th to 6th grade playground. The daily average during intervention on the 1st to 3rd grade playground was 3.64 solitary students ($SD = .96$), a 24% decrease between baseline and intervention with an immediate effect seen when the bench was introduced. The corrected baseline effect size was found to be statistically significant and small ($\text{Tau-U} = -.5881, p = .00$). On the 4th to 6th grade playground, the daily average was 2.76 ($SD = .80$) during the intervention phase, a 19% decrease between baseline and intervention with

a gradual effect. The corrected baseline effect size was found to be statistically significant and small ($\text{Tau-U} = -.5083, p = .0001$). Data points on each playground during this phase were variable with stable trends.

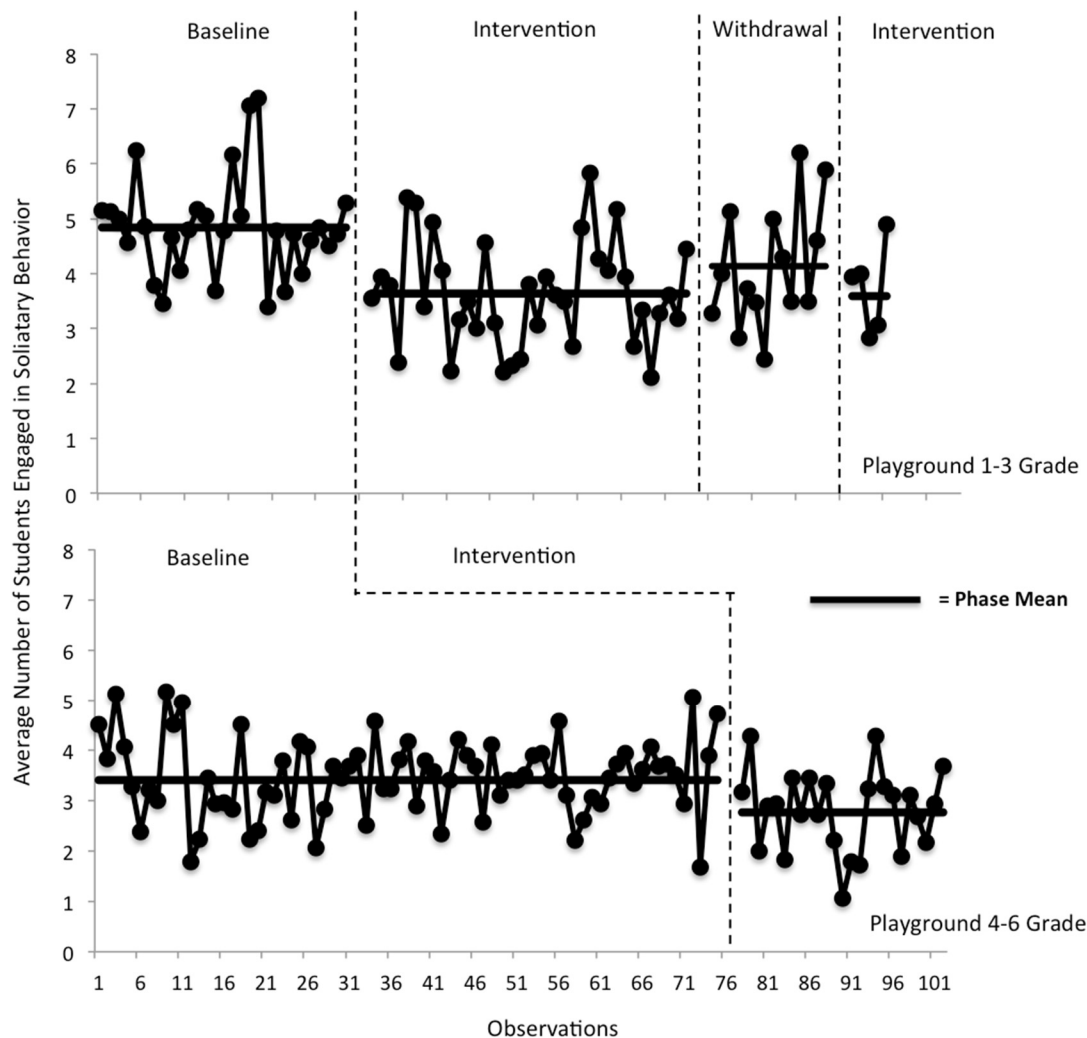


Figure 1. Multiple baseline comparison of each intervention phase across playgrounds.

Withdrawal. A withdrawal phase lasting one week was implemented on the 1st to 3rd grade playground only. Results in this phase showed that data gradually returned to near baseline levels of 4.13 solitary students ($SD = 1.11$), a 13% increase from intervention phase. The corrected baseline effect size from intervention to withdrawal was not found to be statistically

significant ($\text{Tau-U} = -.2838, p = 0.1208$). Data during the withdrawal phase displayed a moderate upward trend.

Return to intervention. After the withdrawal phase on the 1st to 3rd grade playground, the intervention was re-implemented. The daily average of students engaged in solitary behavior immediately returned to near initial intervention levels of 3.74, ($SD = .83$), a 13% decrease from withdrawal. The corrected baseline effect size from withdrawal to intervention was not found to be statistically significant ($\text{Tau-U} = -.5795, p = 0.0641$). Data displayed a variable stable trend.

Research Question 3: Social Validity

The third research question asked, “Was the Buddy Bench intervention viewed as socially valid by teachers and students?” The social validity survey was completed by 89% of student participants (347/388), and 71.45% of teacher participants (15/21). The percentage of participants agreeing with each social validity item is listed in Table 2.

Students. It appeared that students had positive perceptions on the intervention. Most student agreed that the Buddy Bench helped students at their school make more friends (73.26), and 60.88% agreed that they wanted the bench at their school next year. Only 41.94% of students however, said they like liked using the Buddy Bench at recess. Some notable responses from students included, “It’s a great idea,” “It helped kids who were hurt inside,” “I made new friends,” “If you are lonely you can sit on it, but I think it only works on the lower grades,” “People make fun of people on the bench,” “I am so sad that I am a new kid,” “It was introduced to late in the year, everyone already had cliques and loners don’t give a crap,” and “People sometimes said no to everyone.”

When analyzed between playgrounds, some global differences indicating higher approval from the 1st to 3rd grade playground were observed. On average, students on the 1st through 3rd

grade playground (173 responses) gave higher approval ratings to the intervention (4.25 out of 5), while students on the 4th through 6th grade playground (175 responses) reported lower approval ratings (2.94 out of 5). The most common positive qualitative response received from students was that the intervention “helped me make more friends” (125 responses), and “it helped other students” (66 responses). The most common negative responses were that students “misused it or didn’t follow the rules” (52 responses) and “it didn’t work in helping people make new friends” (19 responses). Some students also noted that they were never asked to play while on the bench (12 responses) and that there was sometimes teasing directed towards those using the bench (10 responses).

Teachers. It appeared that teachers were neutral on their opinion of the bench’s effectiveness. The highest agreement from teachers was with the statement that peer interaction increased as a result of the Buddy Bench (66.67%). Teachers were split on whether they wanted the bench at their school next year (53.33%). Only 13.34% of teachers surveyed agreed that the Buddy Bench helped improve student behavior on the playground. The combined approval rating of all teachers was 3.49 out of 5. The most common positive response was that the Buddy Bench was helpful in fostering friendships or provided an additional way to make friends on the playground (6 responses). The most common negative response was that students misused the bench (7 responses). Some notable positive responses included, “It gave students a clear course of action if they needed a friend,” “It gave students an opportunity to make friends in a less intimidating way,” “It seemed like a good idea, especially in the younger grades,” and “It called attention to children, that there are lonely children. They became more aware.” Some notable negative responses included, “Many students misused the bench, they played on it or made fun of people there,” “Students who never had problems finding a friend were all of the sudden

“loners” just so they could use the bench” and “Some students sat there to get attention and then would not play when asked by others to play.”

Table 2

Percentage of Participants Who Agreed on Buddy Bench Social Validity Survey Items

<i>Student Rating Items</i>	% of Students (<i>n</i> = 347)
The Buddy Bench helped students at my school make more friends.	73.26
I thought the Buddy Bench was a good idea for our playground.	68.8
If I felt lonely I would use the Buddy Bench.	63.85
I want to have the Buddy Bench at my school next year.	60.88
The Buddy Bench helped me get along better with my peers.	47.68
The Buddy Bench helped me talk to new friends.	46.81
I liked using the Buddy Bench at recess.	41.94
<i>Teacher Rating Items</i>	% of Teachers (<i>n</i> = 15)
Peer interaction increased as a result of the Buddy Bench.	66.67
Students sitting at the bench were consistently befriended and invited to play by their peers.	60.00
Students liked using the Buddy Bench.	60.00
Fewer students spent recess alone as a result of the Buddy Bench.	57.15
I want the Buddy Bench on the school playground next year.	53.33
Students made more friends as a result of the Buddy Bench.	46.66
The Buddy Bench helped students improve their playground behavior.	13.34

CHAPTER 5: DISCUSSION

This is the first study to evaluate the implementation of a Buddy Bench intervention at recess. Because reporting only results would add limited knowledge to the subject, we also implemented a social validity measure and a treatment integrity analysis to the study (Gresham & Lopez, 1996). While results suggest the intervention was somewhat effective in improving solitary student behavior, more research is needed to further support the notion of using a Buddy Bench at recess. Changes in student solitary behavior from baseline to intervention were significantly lower on each playground, and the majority of student participants had positive perceptions of the intervention. However, teachers were neutral on their perceptions of the Buddy Bench. While the treatment fidelity of students' usage of the Buddy Bench appeared adequate, the teacher prompting element of the intervention was implemented with low fidelity. The outcomes regarding each research question will be further discussed, as well as limitations, areas for future research, and implications.

Research Question 1: Treatment Fidelity

Data collected on treatment fidelity suggest that when students used the bench, they were often extended invitations to play, or in other words, it appears the Buddy Bench was somewhat effective in facilitating social interaction opportunities for students. Over the course of the intervention phases on both playgrounds, 205 invitations were observed by data collectors, of which 60.6% led to a play activity. Fidelity levels of 80% or higher are considered acceptable (Kamps et al., 2011). The Buddy Bench intervention appeared to have some measure of effectiveness even with lower fidelity of implementation. During observation periods, there was approximately one student using the bench at any given time. Furthermore, 60% of teachers agreed that students were consistently befriended while at Buddy Bench.

However, the teacher-prompting element was implemented less successfully. Overall, only eight invitations to play were attributed to teacher-prompting. Observers also noted that typically only two teachers supervised recess and were often too preoccupied with other activities (e.g., talking to groups of students, other teachers or distributing balls and play equipment) to seek out students to prompt to use the Buddy Bench. In regards to the intervention, we believe that the Buddy Bench would have been more effective had the teachers played a more prominent role in prompting students to use the bench. Teerlink et al. (2016) experienced similar problems when utilizing recess supervisors in their peer praise note intervention. They noted that helping recess supervisors be informed and involved in the intervention could help establish better buy-in. Teerlink and colleagues also suggested that involving recess supervisors to take a more active role in the intervention, by informing them of daily goals, students to look out for, and daily information on the progress of the intervention, might be effective in helping recess supervisors become part of the intervention.

Research Question 2: Effects on Solitary Behavior

The changes in student solitary behavior across phases from baseline to intervention suggested a potentially functional relationship, though there were only two demonstrations of a significant treatment effect, the change from baseline to intervention phases across both playgrounds (Kratochwill et al., 2010). There was a stable solitary behavior trend and high variability in the baseline phases, and, distinct decreases in solitary behavior during intervention phases. While the withdrawal and return to intervention phases appeared to have a similar effect, these were not determined to be statistically significant. One possible cause for is the lack of statistical significance between the withdrawal phase and the second intervention phase is that students may have utilized the Buddy Bench to make new friends during the first intervention

phases, thus negating their need for continued use of the Buddy Bench (Onwuegbuzie, 2003). While data suggests that on average about one student per playground was no longer engaged in solitary behavior when the Buddy Bench was implemented, our observers were unable to record if this was the same student each day or if different students were engaging in the solitary behavior.

Research Question 3: Social Validity

Almost, three-fourths of students agreed that the Buddy Bench helped students make friends. Over 60% of students agreed that if they felt lonely they would use the bench, that the Buddy Bench was a good idea for their school, and that they wanted the bench to be used at their school next year. However, less than 50% of students agreed that the bench helped them personally or that they enjoyed using the bench themselves. It appears that while students liked the idea of a Buddy Bench being at their school, many may have thought of it as an intervention to help “other” students and not necessarily themselves.

Teachers appeared split on their perceptions of the intervention: Approximately half agreed that they wanted the intervention on the playground next year and that students made more friends as a result of the Bench. The majority of teachers (approximately 60%) agreed that students liked the Buddy Bench, peer interactions at recess increased, fewer students spent recess alone, and students using the bench were consistently befriended and invited to play. However, only 13% of teachers agreed that the Buddy Bench helped students improve their playground behavior. It is also noteworthy to mention that on many social validity survey items, the most common response from teachers was “Not sure/Neutral.” It appears that teachers, while not against the use of Buddy Bench, were neutral. Perhaps with a longer exposure period, teachers may have decided more strongly for or against the use of a Buddy Bench intervention. Similar to

the results of Teerlink et al. (2016), student social validity ratings of the intervention were higher than teacher ratings. Students were the primary individuals involved in using the Buddy Bench, and therefore teachers may have been less invested thus affecting their social validity ratings.

Comparison with Media Reports

As mentioned earlier, no empirical studies have attempted to document the use of the Buddy Bench. However, media outlets have followed it's spread across schools in the United States. While student's perceptions of the Buddy Bench in our study were largely positive, teachers in our study were neutral. This is not reflective of what popular press has reported. Media coverage has reported almost exclusively positive perceptions of the intervention. The following are what some of the media has reported, as well as a hypothesis as to the possible disconnect between our evaluation and media reports.

Itkowitz (2016) noted that Willowgrove Elementary school in Saskatoon, Canada recently adopted the Buddy Bench and commented on the change of atmosphere change propelled by the Bench. The school's principal, Shane Armstrong said,

It really helps build a positive school climate. If kids aren't sure what to do or what their options are, they can go hang out there. ... [Then] other kids can go invite that kid to join them in whatever they are doing. (p. 1)

Mansoor (2016) reported that a school in Dallas, Texas, recently participated in the Buddy Bench program. Akiba Academy principal, Jennifer Lavine said that the Bench appeared to give students an opportunity to reach out for help when lonely. "It helps students who feel lonely find the courage to sit and identify themselves as feeling lonely" (p. 1). Akiba Academy School counselor Suzie Hacker added, that students would often come to her during recess because of fights, or other disagreements on the playground, but that since using the Buddy

Bench such cases have decreased as the year went on. “Loneliness is definitely a challenge, but it can impact self-esteem, grades, behavior in the classroom” (p. 1). John Fabro, an adviser for the middle school council in Dallas said the benches appear more effective than other bullying campaigns: “We’ve all sat in meetings before where we listen to a speaker. This is something tangible—something the kiddos can see: something fun, something cool” (p. 1).

One possible explanation for the difference in opinions found in the present study may be that media covering the Buddy Bench may only include positive comments, or only interview principals and counselors who may be more removed from the process than teachers who oversee recess on a daily basis like those surveyed in our study. There may also have been differences in the way the Buddy Bench intervention was implemented in these other school settings, compared to how it was implemented in the current study, resulting in greater success and more positive satisfaction ratings from stakeholders. Additionally, the teachers surveyed in this study were not involved in the intervention on a day-to-day basis. Teachers merely took turns periodically monitoring the playground. Because they were somewhat removed from the process, perhaps they felt more ambivalent about the intervention.

The Associated Press (2013) reported that Christian Bucks, the student who introduced the idea in his school in Pennsylvania, said that the bench helped create an atmosphere of befriending others. This was evident in our observations as 205 invitations at the bench were recorded by observers. Christian’s mother, Alyson Bucks also noted that, “It was the Roundtown faculty and staff who brought the idea to fruition” (p. 1), indicating that staff buy-in and participation may be a key element to success (Associated Press, 2013).

Behavioral Explanation of Buddy Bench Effects

In placing a Buddy Bench on a school playground, administrators and teachers hope to create a school climate in which students include and befriend others. In our observation, the Buddy Bench was successful in that it served as (a) a discriminative stimulus, which preceded rule-following behavior (e.g., inviting others to interact, join play activities), and (b) as a reinforcement by giving students a place to gather should they feel intimidated by seeking out play activities on their own (Cooper et al., 2007). Students, both those inviting and those joining in play activities, were reinforced for this behavior in several ways. They were reinforced via positive social interactions, and via rule following behavior. In our observation, antecedent events (seeing the bench, or seeing students at the bench) increased the likelihood that students would either use the bench or invite students at the bench to play, which was rewarded by social interaction, following rules, and being asked to play or making a new friend. As a result of the history of reinforcement, students learned to use the behavior of asking others to play or sitting at the bench when the discriminative stimulus of the bench was present.

Limitations and Future Directions

This study has several limitations, which must be considered in context with the results. In terms of the student population, this study took place in a unique demographic at one Title 1 Elementary school in suburban central Utah. The school had a large percentage of minorities, primarily Hispanic students. Other schools may respond differently depending on the demographic. Future studies may consider implementing the intervention with populations of different demographics or SES, and examining the effects at several schools.

In terms of research methods, the study was limited in several ways. Because the school started the intervention during the second half of the school year, we were unable to complete a

reversal and return to intervention phase on both playgrounds. Our teacher prompting element was also implemented with low fidelity and could have resulted in greater change in student solitary behavior, had it been utilized more fully. Future studies would benefit from including teachers more actively in the intervention by monitoring students' proper use of the bench. We could have also studied each student individually and identified which students had internalizing behaviors and crafted a plan for each of them respectively. We also were unable to assess the function of students' solitary behavior. For example, some students may enjoy being alone and may feel they benefit from a break from teachers and students during their recess, while others lack the ability to make friends and would rather not spend recess alone if they had the skills to make friends. Using a method similar to Coplan, Ooi, Rose-Krasnor, and Nocita (2014), who measured student solitary play preferences, could have been valuable in assessing function as well as possible interventions and outcomes for students who prefer to play alone. Future studies may also consider utilizing a more effectively implemented teacher prompting element and a more vigorous experimental design with reversals on multiple playgrounds or studying specific students with EBD in a single subject design research method.

While the results from the baseline and intervention phases are encouraging, our research design was somewhat limited in that the withdrawal and return to intervention phases on the 1st to 3rd grade playground did not display statistically significant results, though the return to intervention was very near significance ($p = .06$). As mentioned earlier there is the possibility of a therapeutic effect. This may have been due to students making friends during the intervention phase and no longer needing the Buddy Bench to find friends once the withdrawal phase began. Had we examined the intervention on more playgrounds, we may have found stronger evidence for a therapeutic effect. Multiple baseline studies are stronger with such replications.

Based on social validity results, some students in older grades may not have taken the intervention seriously. While students on the 1st to 3rd grade playground had almost exclusively positive comments toward the Buddy Bench, this was not the case for students on the 4th to 6th grade playground. There were some comments noting that some teasing behavior took place towards those that used the Buddy Bench on the older grade playground. Perhaps if the intervention had been implemented with higher fidelity or if teachers themselves had a more positive perception of the bench, students may have been influenced to take the Buddy Bench more seriously.

Conclusion

In evaluation of the Buddy Bench intervention, we draw several conclusions from the results. First, the Buddy Bench appears to be simple and cost efficient to implement, but needs staff buy-in and support to be maximally successful. The Buddy Bench does not require significant time or financial resources but, in order for the bench to be successful, several elements must be present. Administration and teachers should be positive about the bench and support a helping, friendly attitude in the school. This attitude is advantageous in helping students buy-in, participate and change recess climate to an environment where students watch for peers that may be lonely.

Second, the Buddy Bench appears to be useful as a tool in lowering solitary student behavior on the playground, but needs additional research to verify the validity of our results. While results are encouraging in providing evidence of the effectiveness of the Buddy Bench intervention, additional studies replicating our results and analyzing the intervention in a more rigorous experimental design would solidify the case for implementing this type of intervention on a larger scale.

Third, the Buddy Bench appears socially valid for students, but was not as widely accepted by teachers in the present study, as popular media would suggest. Social validity survey data revealed that teachers were neutral on their perceptions of the Buddy Bench, which contradicted the almost exclusively positive feedback reported in popular media reports of the Buddy Bench. While teachers in our study did list some aspects they liked about the intervention, they did not appear to be reflective of popular media reports. This may be because teachers in present study were less involved in the intervention. Perhaps past media reports focused on positive comments or because others teachers have had different experiences at their schools. For example, perhaps teachers in past reports had better staff buy-in, longer intervention implementation, different reactions from students, or because the intervention simply worked more successfully at their schools.

In conclusion, we encourage educators to implement interventions like the Buddy Bench on the playground. Our findings suggest that the Buddy Bench shows promise as a useful and practical intervention to help students make friends and decrease social isolation. As mentioned earlier, SWPBS programs are aimed at improving the learning environment in schools by improving student's social interactions and addressing social-emotional concerns (Young et al., 2011). The Buddy Bench intervention may fit as another tool for educators to implement in improving the school recess environment.

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APPENDIX A: Playground Map Layout



APPENDIX B:
Buddy Bench Rules

Posted in each classroom and included in daily announcement

If you are alone:

1. Sit at the Buddy Bench
2. If someone invites you to play with them, say “Yes” or “No, thank you.”

If you see someone who is alone at the Bench:

1. Join them and invite them to play, talk, or walk with you
2. If they say no, say “Okay, maybe next time,” and walk away

APPENDIX C: Data Observation Sheet

OBSERVER _____	Grade Observed _____	DATE _____	Observation start time _____	Observation end time _____		
<p>Key:</p> <p>Solitary: The number of students not engaged or engaging in play behavior alone at any time during the 20 second observation period. Solitary behavior is defined as having no students within 5 feet of them(exclusion, tossing the football, etc).</p> <p>Teacher: The number of students engaged at anytime during the 20 second observation period in one-on-one interaction with an adult. One-on-one interaction is defined as facing or speaking to an adult with no other peers within a 5-foot proximity.</p> <p>Students on bench: The number students sitting at the bench at anytime during the 20 second observation period. Students sitting or learning on the bench are defined as on the bench</p> <p>Invitations extended: The number of invitations extended to students at anytime during the 20 second observation period. Students extending an invitation to a peer at the bench would be considered an invitation</p> <p>Invitations accepted: the number invitations accepted by students at the Buddy Bench at anytime during the 20 second observation period. A student responding to an invitation in a positive manner and leaving the bench to engage in a play activity would be considered a invite acceptance.</p>						
Minutes	Time Interval	DEPENDENT VARIABLE		Treatment Fidelity		Qualitative Notes
0		# of Students Solitary	# of students talking to teacher	Students on bench	Invitations extended	Invitations accepted
	:00-:20					Notes
	:20-:40					
	:40-:60					
1		# of Students Solitary	# of students talking to teacher	Students on bench	Invitations extended	Invitations accepted
	:00-:20					Notes
	:20-:40					
	:40-:60					
2		# of Students Solitary	# of students talking to teacher	Students on bench	Invitations extended	Invitations accepted
	:00-:20					Notes
	:20-:40					
	:40-:60					
3		# of Students Solitary	# of students talking to teacher	Students on bench	Invitations extended	Invitations accepted
	:00-:20					Notes
	:20-:40					
	:40-:60					
4		# of Students Solitary	# of students talking to teacher	Students on bench	Invitations extended	Invitations accepted
	:00-:20					Notes
	:20-:40					
	:40-:60					
5		# of Students Solitary	# of students talking to teacher	Students on bench	Invitations extended	Invitations accepted
	:00-:20					Notes
	:20-:40					
	:40-:60					

APPENDIX D:
Institutional Review Board Approval

Institutional Review Board
for Human Subjects



Brigham Young University
A-285 ASB Provo, Utah 84602
(801) 422-3841 / Fax: (801) 422-0620

September 2, 2016

AJ Griffin
585 N 400 E Apt. 12
Provo, UT 84606

Re: The Effects of a Buddy Bench on the Playground Interactions of Elementary Students.

Dear AJ Griffin

This is to inform you that Brigham Young University's IRB has approved the above research study.

The approval period is from 9-2-2016 to 9-1-2017. Your study number is E16316. Please be sure to reference this number in any correspondence with the IRB.

Continued approval is conditional upon your compliance with the following requirements.

All protocol amendments and changes to approved research must be submitted to the IRB and not be implemented until approved by the IRB.

A few months before this date we will send out a continuing review form. There will only be two reminders. Please fill this form out in a timely manner to ensure that there is not a lapse in your approval.

If you have any questions, please do not hesitate to call me.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert Ridge".

Robert Ridge, PhD, Chair

APPENDIX E:
Principal Investigator Briefing Script to Teachers

Hello, my name is AJ Griffin. I am a BYU student. As part of my studies in the EDS School Psychology Program, I am interested in learning about Buddy Benches and how children make friends on the playground. With the approval of your principal, we have organized a project to place Buddy Benches on the school playgrounds as a function of helping socially isolated kids make friends and decrease overall social solitary behavior on the playground. As part of this project we would like to enlist the help of teachers in three ways.

First, we would like each classroom teacher to introduce the idea to their students and teach them the rules of the Buddy Bench. We will provide a script and everything you need to know for this briefing.

Second, we would like to ask teachers to monitor the Buddy Bench during the lunchtime recess. If while supervising the playground, you notice a child has sat at the bench alone for longer than a minute or two, encourage nearby students to befriend and invite this child to play.

Lastly, at the conclusion of the study we will ask you to fill out a brief survey, which should take less than 5 minutes to complete. This survey will ask you about your observations of the student's use of the Buddy Bench and your thoughts how effective it was at helping students to make friends and join play activities.

Your participation in all activities is entirely voluntary; you may withhold participation or skip questions that you don't want to answer. No personally identifying information is being collected. All information gathered will be kept strictly confidential and in locked files located in main office. I will only use aggregated data in my report.

Do you have any questions? Thank you for your participation. If you have any questions later on you may reach me by email at ajgriffin@byu.edu or by phone at (435) 619-3465

APPENDIX F:
Teacher Briefing Script to Students

Classroom teachers,

Please brief your students on the Buddy Benches being installed in your school using the script below. This should take no more than 5-10 minutes.

BYU is helping students feel less lonely at recess and make more friends by installing Buddy Benches on our school playground. You will notice one colorful bench placed on (each) playground. These benches are not just for hanging out or taking a break. These benches are to be used to help everyone make friends. If you ever feel lonely at recess, sit at the bench. Students, if you ever see someone at the bench, talk to them and invite them to walk and talk or to join a play activity. If you are at the bench, say yes. If someone sits by you, invite them to walk and talk or to join a play activity.

To make it simple and easier to remember, the Buddy Bench will have rules posted on them. Here are the five buddy bench rules.

1. If you are feeling lonely, sit at the Buddy Bench
2. If you see someone at the Buddy Bench, join him or her or invite him or her to walk and talk or to play with you.
3. If someone invites you to walk and talk or play with him or her, say yes.
4. If someone sits with you at the bench, invite him or her to walk and talk or to play
5. Don't sit at the bench with friends you already have, keep it open for other students wanting to make new friends

Ask students what question they might have and answer them to the best of your knowledge. Refer any questions you don't know the answer to the research team.

After this instruction, show your students to the Buddy Bench situated near the playground. Demonstrate how a student who was lonely would sit at the bench and how to accept a play invite. Also demonstrate how a student would invite those at the bench to join play activities.

APPENDIX G:
Social Validity Surveys

Playground Buddy Bench –Teacher Survey

Instructions: **Circle the number showing how much you agree or disagree with each of the following statements, thinking just about the recent Buddy Bench intervention at your school.**

1	2	3	4	5
Strongly disagree	Disagree	Neutral Not sure	Agree	Strongly agree

1. The Buddy Bench helped students improve their playground behavior.	1	2	3	4	5
2. Students liked using the Buddy Bench.	1	2	3	4	5
3. Less students spent recess alone as a result of the Buddy Bench.	1	2	3	4	5
4. Peer interaction increased as a result of the Buddy Bench.	1	2	3	4	5
5. Students made more friends as a result of the Buddy Bench.	1	2	3	4	5
6. I want the Buddy Bench on the school playground next year.	1	2	3	4	5
7. Students sitting at the Buddy Bench were consistently befriended and invited to play by their peers.	1	2	3	4	5

Please write additional comments regarding things you particularly *liked* about the Buddy Bench below:

Please write additional comments regarding things you particularly *disliked* about the Buddy Bench below:

Student Social Validity Survey (Grades 1–3)

Grade _____

Buddy Bench – Student Survey (1–3 grades)

Answer the following by circling the number that tells how you feel about the question or statement.



Example:

I am a great kid.									
I like chocolate ice cream.									

1. The Buddy Bench helped me get along better with my peers.									
2. I liked using the Buddy Bench at recess.									
3. The Buddy Bench helped me talk to new friends.									
4. I want to have the Buddy Bench at my school next year.									
5. If I felt lonely I would use the Buddy Bench									
6. I thought the Buddy Bench was a good idea for our playground.									
7. The Buddy Bench helped students at my school make more friends									

What did you *like* about the Buddy Bench?

What did you *dislike* about the Buddy Bench?

Student Social Validity Survey (Grades 4-6)

Grade _____

Buddy Bench– Student Survey (Grades 4-6)

Answer the following by circling the number that tells how you feel about the statement.

1	2	3	4	5
Strongly disagree	Disagree	Neutral Not sure	Agree	Strongly agree

Example:

I am a great kid.	1	2	3	4	5
I like chocolate ice cream.	1	2	3	4	5

1. The Buddy Bench helped me get along better with my peers.	1	2	3	4	5
2. I liked using the Buddy Bench at recess.	1	2	3	4	5
3. The Buddy Bench helped me talk to new friends.	1	2	3	4	5
4. I want to have the Buddy Bench at my school next year.	1	2	3	4	5
5. If I felt lonely I would use the Buddy Bench	1	2	3	4	5
6. I thought the Buddy Bench was a good idea for our playground.	1	2	3	4	5
7. The Buddy Bench helped students at my school make more friends	1	2	3	4	5

What do you *like* about the Buddy Bench?

What do you *dislike* about the Buddy Bench?