THE EFFECTS OF POSITIVE-INTERACTIONS STAFF TRAINING ON THE BEHAVIOR OF STAFF AND CLIENTS DURING SMALL GROUPS IN A CENTER-BASED PROGRAM OF ADULT DAY SERVICES

By

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Abstract

The current study evaluated the effects of positive-interactions training on the extent to which staff had positive interactions with their small groups of clients with severe and/or multiple intellectual and developmental disabilities. Three direct support staff and seven clients at a center-based program of adult day services participated. Staff participants received no formal training during baseline. After baseline, staff participants received positive-interactions training consisting of instructions, modeling, role-playing practice, and feedback across three teaching sessions. Experimental analysis revealed the staff training package increased the quality with which staff interacted with their clients. In addition, findings suggest the intervention may have improved the behavior of clients.
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In the United States, a variety of services and programs are provided for children with intellectual and development disabilities (IDD) to improve their intellectual, emotional, and social development (Birenbaum, 2010). The provision of services is mandated under federal legislation, such as the Individuals with Disabilities Education Act of 2004 (IDEA), which span early education programs for pre-school age children and access to a free and appropriate education up to approximately 22 years of age (Turnbull III, Stowe, & Huerta, 2007). Special education programs exist in every public school and federal laws mandate that public schools provide students with IDD special education services that are formalized under an Individualized Education Plan or 504 plan designed to identify and address the student’s specific developmental deficiencies (IDEA, 2004; Section 504, 2009; Turnbull III et al., 2007).

Children with IDD are eligible to receive special education services until they are 22 years old, after which they must transition into adult services (IDEA, 2004). Unfortunately, opportunities to receive services and laws mandating services are more limited for adults with IDD (Birenbaum, 2010; Halpern, 1999). Though the Social Security Act requires services supporting adults with IDD or related conditions to provide active treatment in their programming, it does not provide a minimum standard for active treatment (SSA, 1965). Additionally, adults often receive services for short periods of time and less money is allocated to adult services, which requires agencies to cut costs and adjust staffing ratios, resulting in higher staff-to-client ratios, overloaded staff, and lengthy waitlists for residential programs with chronic staffing shortages (Anderson, Dabelko-Schoeny, & Tarrant, 2012). Adults with severe
and/or multiple IDD depend on their families, guardians, or a state representative to locate, initiate, and maintain services in many circumstances (Birenbaum, 2010; Turnbull III et al., 2007).

Adult day services are among the few programs offered to adults with severe and/or multiple disabilities and provide home and community day habilitation in a variety of settings located across the country (Anderson, Dabelko-Schoeny, & Johnson, 2013; Anderson, Park, Monteleone, & Dabelko-Schoeny, 2014; Force & O’Malley, 1999; Towery, Parsons, & Reid, 2014; West et al., 2002). Center-based day programs are the most common type of day service used by adults with severe and/or multiple IDD (Parsons, Reid, Towery, & Darden, 2008; Reid, Parsons, & Green 2001; Towery et al., 2014). The purposes of center-based day programs are to increase physical and emotional functioning of clients with IDD (Anderson et al., 2012; Force & O’Malley, 1999; Schmitt, Sands, Weiss, Dowling, & Covinsky, 2010; Towery et al., 2014). Moreover, they are designed to provide social interaction and teaching opportunities to develop functional communication, self-care routines, independence, socialization with peers, and age-appropriate experiences in community settings (Anderson et al., 2013; Anderson et al., 2014; Dabelko & Zimmerman, 2008; Lowe, Beyer, Kilsby, & Felce, 1992; Parsons et al., 2008; Reid et al., 2001; Towery et al., 2014; van der Putten & Vlaskamp, 2010).

Over the last few decades, center-based day programs generally include work training and engaging activities such as arts and crafts, cooking classes, modified dance and aerobics, community outings, sheltered workshops, recreation, and occupational and physical therapy (Anderson et al., 2013; Anderson et al., 2014; Towery et al., 2014). These activities are intended to teach and encourage independence, socialization with peers in community settings, and age-specific experiences including educational classes, professional training, and personal care.
Experienced staff members are critical in the provision of adult day services (Fixsen, Blase, Naoom, & Wallace, 2009; Halpern, 1999), especially within center-based day programs supporting adults with severe and/or multiple IDD (Para-Cremer, 2008; Towery et al., 2014). A positive relationship between staff and their clients can promote client engagement and continued social development (Fixsen et al., 2009; Lowe et al., 1992; Schmitt et al., 2010; Stuart, 2007; van der Putten & Vlaskamp, 2011). For example, Felce and Perry (1995) found that quality of life for adults with IDD is measured using multidimensional criteria and that positive client-staff relationships are among the criteria that determine whether a client is engaged, socially-developing and experiencing a high quality of life.

Unfortunately, adult day services, including center-based day programs, often lack the resources necessary to provide staff training that is of sufficient quality to effectively teach staff best practices in client interactions (Anderson et al., 2012; Force & O’Malley, 1999; van Oorsouw, Embregts, Bosman, & Jahoda, 2009). Poor staff training procedures may result in staff who lack the knowledge and skills to work effectively in service delivery settings (Anderson et al., 2012; Green, Gardner, Canipe, & Reid, 1994; Vlaskamp, Hiemstra, & Wiersma, 2007). Lack of training and inadequate training procedures may contribute to low buy-in, staff burnout, and high turnover (Force & O’Malley, 1999).

In their meta-analysis of effective staff training, van Oorsouw et al. (2009) reported that best-practice staff training procedures should include carefully prepared training goals, a combined training format (in-service training and on-the-job coaching), and one or more training techniques such as the provision of literature, instructions, modeling, role-play, feedback,
practice, and discussion. For example, Para-Cremer (2008) investigated the effects of multifaceted staff training on engagement techniques for staff working with adults with developmental disabilities in a center-based day program and two community-based homes. Training consisted of a mini-workshop, on-the-job observation, coaching, and feedback. The 45-min mini-workshop was designed to provide staff with information on how to increase client engagement in daily activities and included an opportunity for staff to ask questions. On-the-job observations, coaching, and positive and corrective feedback lasted 20-min and immediately followed the mini-workshop. Using a multiple baseline design across staff, Para-Cremer demonstrated higher levels of client engagement after staff training.

Parsons, Rollyson, and Reid (2012) evaluated the effects of an evidence-based staff training package on staff use of most-to-least prompting and signing when working with individuals with disabilities. Training consisted of instructions, modeling, practice, feedback until mastery, and on-the-job training; an evidence-based practice also known as “behavioral skills training.” Instructions included vocal rationales and descriptions of the target behaviors followed by a written description with examples. During modeling, the trainer demonstrated how to correctly perform the target skill. Practice included the opportunity for staff to role-play the target behaviors with positive and corrective feedback from the trainer. Modeling, practice, and feedback continued until mastery of 100% was achieved. Finally, on-the-job training consisted of positive and constructive feedback based on the results of in-vivo observations of staff working with individuals with disabilities. Using a multiple baseline design across behaviors (i.e., most-to-least prompting and signing), Parsons et al. demonstrated an increase in overall average use of teaching and prompting skills by staff after training.
Staff-training research designed to improve client behavior by changing the behavior of staff has been conducted for decades (e.g., Dyer, Schwartz, & Luce, 1984; Green, Reid, Perkins, & Gardner, 1991; Parsons & Reid, 2011; Reid & Whitman, 1983; Wilson, Reid, & Green, 2006). Despite this robust literature, infrequent staff-to-client interactions and low levels of client engagement persist, which is problematic given research indicating one of the most significant aspects of adult day services are the positive relationships between staff and their clients (Dabelko & Zimmerman, 2008). Establishing a positive relationship between staff and their clients with IDD is an important first step to effecting long-term positive change (Weinberg, Parenti, & Powell, 2000). Positive staff-client relationships are also very important in meeting the treatment outcomes for individual clients and the programs providing services to them (Phillips, Phillips, Fixsen, & Wolf, 1974; Solnick, Braukmann, Bedlington, Kirgin, & Wolf, 1981; Wolf, Kirigin, Fixsen, Blase, & Braukmann, 1995). Specifically, establishing rapport allows staff to create positive changes in client behavior that would not otherwise occur. To provide adequate services and improve client behavior, staff working with adults with severe and/or multiple IDD must first improve the quality of interactions with their clients (Vlaskamp et al., 2007).

Courtemanche (2010) evaluated a reinforcement procedure designed to foster staff-client relationship development and corresponding task and communication compliance by individuals with profound IDD in a group home setting. The study measured client approach responses. Approach responses were defined as a client approaching and being within an arm’s length of the investigator. The investigator provided reinforcement whenever a client participant approached her. Increases were seen in: (a) the amount of time the client participants spent near the investigator, (b) the number of teaching interactions that occurred, and (c) improved task and
communication compliance. These findings provide fundamental insights into how to design positive staff-client relationship procedures that can be taught to staff. Courtemanche concluded that having the investigator in close proximity with the client resulted in more teaching interactions and improved client behavior.

Presently, there remains a deficiency in the research on positive-relationship development between staff and small groups of clients with severe and/or multiple IDD in center-based adult day services (Courtemanche, 2010; Green, Gardner, & Reid, 1997; Parsons et al., 2008; Reid et al., 2001; Towery et al., 2014; Weinberg et al., 2000). Prior studies have largely focused on other areas such as increasing engagement by varying the availability of high and low preferred items, training staff how to teach (e.g., new skills, replacement behaviors, least intrusive prompting), providing structured functional activities, identifying and providing preferred reinforcers or leisure activities through preference assessments with clients, and generally providing staff information on increasing levels of engagement (e.g., Green et al., 1994; Green et al., 1997; Klatt, Sherman, & Sheldon, 2000; Parsons et al., 2012; van der Putten & Vlaskamp, 2011; Wilson et al., 2006). This lack of research underscores the need for further research on positive-relationship development between staff and adult clients within adult day services.

To address this limited research, Realon, Bligen, Force, Helsel, and Goldman (2002) developed the Positive Environment Program (PEP), which trains staff to use routine rules for client interactions and positive interactions skills to improve staff-client interactions and thereby improve client engagement and behavior in a large institutional setting. In this study, handouts were distributed to staff describing 18 routine rules for client interactions and six positive interactions skills. Routine rules for client interactions included refraining from talking to other staff about client problem behavior in front of clients, avoiding physical confrontation when
possible, only making promises that could be kept, or acknowledging everyone who enters or exits the room. The positive interaction skills included establishing eye contact with clients, saying/signing positive comments to clients, interacting with everyone in the group, saying/signing a variety of comments, being responsive to clients’ attempts to communicate, and providing leisure/habilitative materials for all clients. Realon et al. (2002) reported an overall increase in staff interactions with clients and client engagement, alertness, and positive affect.

Although these results are promising, the study had several limitations that should be addressed in subsequent research. The effects of the combined number of positive interaction rules and skills (24 in total) taught to staff are unclear because all combined behaviors taught to staff were not measured. Additionally, these rules and skills were not operationally defined and were primarily framed to instruct staff on what not to do, limiting staff member’s ability to objectively use what they had learned with their clients. Finally, client behavior was not defined in the study leading to subjective measurement. For instance, clients were marked as engaged if they were present in the room at the time of the observation; however, this does not provide an accurate measure of engagement as those “engaged” clients might also be sleeping or wandering around the room.

Thus, the purpose of the current study was to address the limitations of Realon et al. (2002) by developing and adopting objective criteria for measuring client and staff behavior. The specific aim was to evaluate the effects of positive-interactions training on the extent to which staff had quality interactions with their small groups of clients with severe and/or multiple IDD. The intended effect of modifying staff interactions was to increase client engagement, alertness, and positive affect, and decrease problem behavior, which were also measured in this study.
Methods

Participants

Three female staff between 29 and 40 years of age participated in the study (see Appendix A for recruitment materials). Participants worked in a center-based adult day services program for one to four years and had a caseload of three clients with IDD. Staff 1 was a 40-year-old female and had been employed at the center-based adult day program for four years. She completed her high school education in Africa and spoke several languages; English was a fourth language, which made reading and writing English difficult. She had experience working as a teacher for young children in large communal settings in Africa prior to working with adults with IDD. Staff 2 was a 32-year-old female and had been employed at the center-based adult day program for less than a year. Her highest degree obtained was a high school diploma. She had been a stay-at-home mother for ten years with a year of experience with foster care for troubled youth prior to working with adults with IDD. Staff 3 was a 29-year-old female and had been employed at the center-based adult day program for a year. Her highest degree obtained was a high school diploma, however, she was not proficient in reading or writing. She had no prior experience working with adults with IDD.

Their collective responsibilities spanned clerical work (e.g., completing client data cards and recording medication administration), assisting clients with their daily activities (e.g., personal hygiene, leisure activities, and community outings), and addressing problem behaviors of clients (e.g., hitting, kicking, and disruption). In addition, participants completed at least 60 hours of standardized training prior to working directly with their small groups of clients. This training only briefly covered some of the target staff behaviors included in this study. Moreover,
because the standardized training was offered prior to working directly with clients, staff were not able to practice with clients during training.

Participants also included seven clients (four males, three females) between the ages of 24 and 50 years, with severe and/or multiple IDD, and actively receiving services at the center-based adult day services program for a period of at least one month. Parents or guardians provided consent on each client’s behalf (see Appendix B for recruitment materials). Client participant A was a 26-year-old female diagnosed with Down syndrome and attention deficit hyperactive disorder. Client participant B was a 26-year-old male diagnosed with cerebral palsy, neurological impairment, and mental retardation. Client participant C was a 25-year-old male diagnosed with autism spectrum disorder, bipolar disorder, and seizure disorder. Client participant D was a 50-year-old female diagnosed with mental retardation, hypothyroidism, and seizure disorder. Client participant E was a 32-year-old female diagnosed with mental retardation, autism, static encephalopathy, and seizure disorder. Client participant F was a 36-year-old male diagnosed with autism and mental retardation. Client participant G was a 24-year-old female diagnosed with autism, mental retardation, and seizure disorder. No intelligent quotient measures were available for client participants.

Setting

This study was conducted within a center-based adult day services program that provided services to adults with IDD. The center-based program operated weekdays from 8 a.m. to 5 p.m. and had nine common areas where clients could intermingle: three rooms including tables, chairs, and other materials designed for client leisure and planned activities; one room designed for occupational and physical therapy; one sensory room designed for clients to use as needed to reduce sensory input with low lighting and limited noise; a nursing center where clients can be
seen by a nurse; a kitchen; two restrooms; and an outdoor space with a paved walkway and rocking chair to which clients had free access. The daily schedule included leisure activities (e.g., board games, computer games, and movies), snack time, lunchtime, and class activities. Classes were held in one of the program rooms or in various locations throughout the community. Class activities included art, music, board games, indoor sports, dance, movies, cooking, manicures and pedicures, party planning, book club, drama, and choir. Activities away from the center included swimming and participation in community programs such as nature tours at an arboretum, choir performances, and zoo events. If a client chose not to participate in activities, he or she would sit and observe the class.

The center-based program personnel consisted of one Director of Day Services and six direct support staff who provided services to twelve clients with IDD. Each staff had a caseload of three clients. Direct support staff and clients from the organization’s residential-based program were allowed to attend classes and utilize the facilities. The ages of all staff ranged from 29 to 50 years. The ages of all clients ranged from 19 to 65 years. On-site support services included a physical therapist, two nurses, and a behavior specialist.

**Dependent Variables and Response Measurement**

Observations were unannounced and occurred between the hours of 9 a.m. and 3 p.m. on varying days of the week at the center-based adult day program. Staff participants were observed with their small groups of clients for 5-min observations by the primary investigator and research assistant. A 15-sec partial-interval recording procedure (Cooper, Heron, & Heward, 2007) was used to record the occurrence of target behaviors during 5-min observations. A timer was used to signal every 15-sec interval with a short vibration. The first vibration signaled the primary investigator to observe for 15-sec. The second vibration signaled the primary
investigator to record for the next 15-sec the target responses that occurred during the prior
interval. This continued for the entire 5-min observation. The conclusion of each 5-min
observation was signaled by a long buzzer, at which point the primary investigator rotated to the
next staff. Observations rotated among the staff participants for a minimum of two 5-min
observations on days when data were collected. Observations occurred in the three activity
rooms, the occupational and physical therapy room, the sensory room, and the kitchen.
Observations were not randomly selected by a predetermined order but began with the first staff
participant with whom the primary investigator and research assistant made contact with
(typically the first staff participant in the activity room closest to the entrance of the center-based
program) and rotated to the other staff participants. When a staff participant was absent on a day
of observations, the primary investigator and research assistant would make a note of this
absence and begin with this staff participant on the next day of observations, including
conducting an extra observation to make up for the absence. Observations were done in-vivo as
the video monitoring system used in the center had only visual capabilities and no audio at the
time of this study. Data collection was conducted using paper and pencil (see Appendix C for
examples of the data sheet).

Preliminary data was initially taken on a greater number of behaviors than what is
reported in this study. For instance, although reprimanding and requesting behaviors are shown
on the data card, we do not report on these behaviors because they did not occur during
preliminary data collection. We also do not report on tone of voice because reliability was too
difficult to obtain during preliminary data collection.

This study reports on a total of six target staff behaviors (i.e., positive-interaction
behaviors): proximity to client, smiling around clients, stating client’s name, making a positive
comment to client, stating name of activity, and prompting client engagement with activities (see Table 1 for target staff behavior definitions). We trained staff to utilize the first five of these six behaviors for clients who were appropriately engaged. We trained staff to utilize an additional behavior (prompting client to engage) for clients who were inappropriately or not engaged.

These data are summarized as the percentage of intervals in which all of the individual target staff behaviors occurred. For example, each observation had 10 intervals. During each interval, we scored whether each of the five staff behaviors occurred if the staff member’s client was engaged and if the client was not engaged, whether the additional staff behavior of prompting the client to engage occurred. We added the occurrence of each behavior and divided it by 60 (10 intervals for each of the six target behaviors) to the percentage of staff behaviors that occurred.

Four client behaviors were recorded including engagement with activities, appearing alert, positive affect such as smiling or laughing, and problem behavior. Problem behavior included, but was not limited to, hitting, kicking, screaming, biting, pinching, or screaming (see Table 2 for client behavior definitions). These data were summarized as the percentage of intervals in which each individual client behavior occurred. The percentages were then aggregated to reflect the pre- and post-average percentage of intervals for client behaviors.

**Experimental Design and Procedure**

A concurrent multiple baseline design (Baer, Wolf, & Risley, 1968) across staff participants was used to evaluate the effects of the positive-interactions training on staff behavior and the resulting effects on client behavior. The analysis consisted of two phases: (a) baseline; and (b) staff training. During baseline, behavior was concurrently assessed for Staff 1, Staff 2, and Staff 3. Training was first implemented with Staff 1. Any changes in Staff 1’s behavior
post-training were assessed to determine the changes in targeted staff behavior from baseline levels, after which training was initiated with Staff 2, using the exact same procedures and format. Any changes in Staff 2’s behavior post-training were assessed to determine the changes in targeted staff behavior from baseline levels, after which training was initiated with Staff 3, following the same procedures and format.

A concurrent quasi-experimental pre-post design was used to examine the effects of the positive-interactions staff training on clients’ behavior. The analysis consisted of two phases for each staff member’s small group of clients: (a) pre-intervention; and (b) post-intervention. During the pre-intervention phase, we scored for each of the staff member’s clients whether any of the four client behaviors occurred. We then calculated the combined average percentage of intervals in which each client behavior occurred for each client. We did the same scoring and calculation post-intervention for each client.

**Baseline.** The purpose of this phase was to establish baseline levels of the target behaviors prior to implementing the intervention for the purpose of comparing to the changes that occurred during the intervention (Baer et al., 1968). During the baseline condition, staff participants were observed in the center-based adult day program common areas with their small client groups. No training or programmed consequences were made available to staff participants by the primary investigator.

**Staff training.** The purpose of this phase was to evaluate the effects of the positive-interactions training on staff participant behavior and the resulting influences on client behavior. Staff participants were taught to use the specific set positive-interaction behaviors (proximity to client, smiling around clients, stating client’s name, making a positive comment to client, stating name of activity, and prompting client engagement with activities) when working with their
small group of clients with severe and/or multiple IDD. Each staff participant received three 45-min teaching sessions (at the center, in a room unoccupied by clients) separated by no more than two days between each session. Staff participants were taught individually throughout these sessions.

During the first teaching session, the primary investigator presented the staff participant with a handout describing how to respond to clients who were appropriately engaged (see Appendix D for handout of positive interactions and related behaviors). The primary investigator asked the staff participant to read the handout and provided an opportunity to ask any questions. The five positive-interaction behaviors included in this positive interaction were proximity to client, smiling around clients, stating client’s name, making a positive comment to client, stating name of activity.

Visual aids were introduced by first showing the notecard labeled “PROXIMITY” to the staff participant. The primary investigator then asked the staff participant, “What is this?” If the staff participant said, “proximity,” the primary investigator would provide verbal praise. If the staff participant could not read it due to language barrier or illiteracy, the primary investigator said, “proximity,” and asked the staff participant to repeat the word “proximity,” at which point the primary investigator would provide verbal praise. The primary investigator then asked the staff participant to define proximity. If the staff participant provided a correct response (e.g., being within 5 ft of the client), the primary investigator would provide verbal praise. If the staff participant provided an incorrect response (e.g., in the same room as client), the primary investigator would provide the correct response and would subsequently ask the staff participant to define proximity. If the staff participant responded correctly, the primary investigator would provide verbal praise. The primary investigator subsequently showed the staff participant the
other six notecards that pertained to the other target behaviors one at a time and repeated the same process until the staff participant correctly identified and defined the behavior written on each notecard on the first presentation.

Once proficient in identifying and defining each behavior on each notecard, the primary investigator then asked the staff participant, “What do you do when a client is appropriately engaged?” If the staff participant first identified proximity, smile, and positive tone in any order and then identified name, praise, behavior, and activity in that order the primary investigator provided verbal praise. If not, the primary investigator would identify the correct responses, remove the notecards, and ask the staff participant, “What do you do when a client is appropriately engaged?” This continued until the staff participant correctly responded that she would first come into proximity with the client, smile, and utilize a positive voice tone (in any order) and then identified the short definitions for the other target behaviors in the following order: name, praise, behavior, and activity.

The primary investigator and a research assistant then described several hypothetical client scenarios pertinent to the participant’s small group of clients and modeled the targeted positive-interaction behaviors in which the primary investigator assumed the role of the staff participant and the research assistant assumed the role of the client. The primary investigator developed the hypothetical client scenarios during preliminary and baseline observations to reflect real-life situations the staff participant experienced with her small group of client participants. The primary investigator first began by reading aloud the real-life scenario to the staff participant. For example, “Your client is in art class, sitting at the table with their feet on the ground, and is using the colored pencils to color on the picture provided by the art teacher.” After reading aloud the hypothetical scenario the primary investigator and the research assistant
acted out the scenarios by demonstrating the positive-interaction behaviors in response to a client being appropriately engaged (e.g., moving within 5 ft, smiling, stating the client’s name, stating a positive comment, and stating the activity and/or behavior in which the client was appropriately engaged). The primary investigator then asked the staff participant to identify the positive-interaction behaviors used in the hypothetical scenario. If the staff participant provided a correct response (e.g., proximity to client, smiled at client, stated client’s name, stated a positive comment, and stated the activity and/or behavior), the primary investigator would provide verbal praise. If the staff participant provided an incorrect response (e.g., smiled and stated client’s name), the primary investigator would provide the correct response and would subsequently ask the staff participant to identify the positive-interaction behaviors used in the modeling scenario. If the staff participant responded correctly, the primary investigator would provide verbal praise. This continued until the staff participant correctly identified all of the positive-interaction behaviors in response to the modeling scenarios.

The research assistant and participating staff then engaged in a role-playing exercise in which the research assistant assumed the role of the client and the staff participant assumed the staff role. The primary investigator asked the staff participant to describe her own scenarios experienced with her small group of clients to be used in the role-playing exercise. If unable to think of any scenarios, the primary investigator provided the staff participant with hypothetical scenarios (similar to the example provided above for modeling) to be used in the role-playing exercise, and asked the staff participant to come prepared to the second session with one or more of her own scenarios from her work experience. The primary investigator instructed staff participant to practice the target positive-interaction behaviors in response to the scenarios. The
primary investigator then provided feedback on the staff participant’s use of the target positive-interaction behaviors during the role-playing exercise.

The data sheet used for observation and feedback of staff behavior contains seven steps for responding to clients who are appropriately engaged and nine steps for clients who are inappropriately or not engaged (see Appendix E for staff behavior observation and feedback data card), but two of these steps were not ultimately assessed. The two extra steps for each interaction, included (1) staff first recognizing whether clients were appropriately, inappropriately, or not engaged, and (2) staff’s voice tone. Recognizing whether clients were engaged was only measured during role-playing exercises because the staff participant had the opportunity to state aloud what form of engagement the scenario represented. During the actual observation we were unable to evaluate whether the staff member recognized whether clients were engaged or not. The staff voice tone was also not assessed because we determined that this was not a behavior on which we could obtain reliable data.

At the conclusion of the first teaching session, the primary investigator presented the staff participant with a written comprehension test and instructed staff to complete it to the best of her ability. The questions consisted of novel scenarios in which the staff participant would describe how to respond to a particular scenario or asked staff to identify what is missing and describe how to respond. An example of a novel scenario presented to a staff participant included:

“Ronald is pinching himself; staff is within 5 ft, and using a negative voice tone; staff says: ‘Ronald, stop pinching yourself.’” The primary investigator then asked the staff participant, “Is this interaction appropriate or not? If ‘yes’, explain why. If ‘no’, explain why and what should be done to make it appropriate.” The written comprehension test aimed to assess understanding of
the positive-interaction behaviors and how to utilize them with a small group of clients (see Appendix F for written comprehension test).

During the second teaching session, procedures identical to the first teaching session were used with the exception of the focus being on the six positive-interaction behaviors for responding to clients who were inappropriately or not engaged (see Appendix D for handout of positive interactions and related behaviors). The six positive-interaction behaviors included in this teaching interaction were proximity to client, smiling around clients, stating client’s name, making a positive comment to client, stating name of activity, and prompting client engagement with activities.

During the third teaching session, the experimenter reviewed content from the first and second sessions and focused heavily on role-play and feedback. The role-play procedures utilized were identical to the role-play procedures described above with regard to the first session. Next, the primary investigator observed the staff participant with her clients and provided immediate feedback on her use of the targeted positive-interaction behaviors.

**Interobserver Agreement**

To assess interobserver agreement (IOA), two independent observers collected data on all dependent variables during at least 30% of observations at the center-based adult day services program. We calculated IOA using the interval-by-interval method, dividing the number of intervals with agreement on occurrence or nonoccurrence of the dependent variables by the total number of intervals, and multiplying by 100. IOA was taken on 43% of the observations in baseline and averaged 92% across all dependent variables and participants (range, 89% to 95%). IOA was taken on 33% of observations after the positive-interactions training and averaged 91%
across all dependent variables and participants (range, 85% to 96%). (See Tables 3 and 4 for IOA for staff and client participants.)

**Results**

Figure 1 displays the percentage of intervals scored for target staff behaviors (i.e., positive-interaction behaviors) for each observation session. During baseline, all participating staff had low, but variable positive-interaction behaviors ($M = 7.8\%$, range 7% to 8.2%). The mean percentage of positive interactions for Staff 1 increased from 7% during baseline to 15.9% following training. The mean percentage of positive interactions for Staff 2 increased from 8.2% during baseline to 29.6% following training. The mean percentage of positive interactions for Staff 3 increased from 8.1% during baseline to 31.5% following training.

Figures 2, 3, and 4 display client pre- and post-intervention data that show the average percentage of intervals in which client behavior occurred. During baseline, all participating clients had low, but variable levels of engagement ($M = 14.7\%$, range 4.1% to 46.3%). The percentage of intervals with engagement for Client A increased from 46.3% during baseline to 52.6% following training provided to staff. The percentage of intervals with engagement for Client B increased from 12.2% during baseline to 77.1% following training provided to staff. The percentage of intervals with engagement for Client C increased from 13.6% during baseline to 71.9% following training provided to staff. The percentage of intervals with engagement for Client D increased from 8.3% during baseline to 50% following training provided to staff. The percentage of intervals with engagement for Client E increased from 10% during baseline to 74.1% following training provided to staff. The percentage of intervals with engagement for Client F increased from 8.6% during baseline to 66.7% following training provided to staff. The
percentage of intervals with engagement for Client G increased from 4.1% during baseline to 85.7% following training provided to staff.

Increases in alertness were also seen in the post-intervention client data. During baseline, all participating clients had low, but variable levels of alertness ($M = 55.2\%$, range 22.2% to 97.5%). The percentage of intervals with alertness for Client A increased from 97.5% during baseline to 99.1% following training provided to staff. The percentage of intervals with alertness for Client B increased from 48.9% during baseline to 100% following training provided to staff. The percentage of intervals with alertness for Client C increased from 86.4% during baseline to 96.9% following training provided to staff. The percentage of intervals with alertness for Client D increased from 37.5% during baseline to 95.8% following training provided to staff. The percentage of intervals with alertness for Client E increased from 22.2% during baseline to 92.6% following training provided to staff. The percentage of intervals with alertness for Client F increased from 45.7% during baseline to 100% following training provided to staff. The percentage of intervals with alertness for Client G increased from 47.9% during baseline to 100% following training provided to staff.

Increases in positive affect were also seen in the post-intervention client data. During baseline, all but one of the participating clients had low, but variable levels of positive affect ($M = 5.6\%$, range 0% to 16.7%). The percentage of intervals with positive affect for Client A increased from 13.1% during baseline to 14.1% following training provided to staff. The percentage of intervals with positive affect for Client B increased from 0% during baseline to 25% following training provided to staff. The percentage of intervals with positive affect for Client C increased from 9.1% during baseline to 21.9% following training provided to staff. The percentage of intervals with positive affect for Client D increased from 0% during baseline to
33.3% following training provided to staff. The percentage of intervals with positive affect for Client E increased from 16.7% during baseline to 44.4% following training provided to staff. The percentage of intervals with positive affect for Client G increased from 0% during baseline to 57.1% following training provided to staff.

Decreases in problem behavior were seen in the post-intervention client data for those clients who exhibited problem behavior pre-intervention. During baseline, three participating clients had low levels of problem behavior ($M = 20.8\%$, range 4.9% to 28.8%). The percentage of intervals with problem behavior for Client B decreased from 4.9% during baseline to 0% following training provided to staff. The percentage of intervals with problem behavior for Client F decreased from 28.6% during baseline to 0% following training provided to staff. The percentage of intervals with problem behavior for Client G decreased from 28.8% during baseline to 0% following training provided to staff.

**Discussion**

The purpose of the present study was to evaluate the effects of a training intervention on the use of positive interactions by staff with their small groups of clients and determined whether increased use of these target staff behaviors resulted in increased client engagement, alertness, and positive affect, and decreased client problem behavior. This study used a multiple baseline experimental design across staff participants to evaluate the effects of positive-interactions training on the behavior of staff with their small group of clients with severe and/or multiple IDD. This study also used a quasi-experimental pre-post design to examine the effects on client behavior before and after staff participants received the training. Overall, the findings support the efficacy of training package. Moreover, an improved quality of interactions was correlated with changes in client behavior; however, these changes were not evaluated within a sound...
experimental design (i.e., pre-post data were measured). As the staff learned the positive-interaction behaviors, and practiced them with feedback from the primary investigator, their clients became more alert, active, showed positive affect (e.g., smiling or laughing), and engaged with the environment. The results of this study are important because they add to the literature on positive relationship development between staff and clients with severe and/or multiple IDD in small groups in center-based adult day services.

Overall, increases in target staff behavior(s) were seen with all three staff participants with their small groups of client participants following staff training (see Figures 1 through 4). Greater increases were seen with Staff 2 and 3 than for Staff 1, who had small increases. In addition, all client participants showed increases in engagement, alertness, and positive affect as well as decreases in problem behavior (see Figures 2 and 4).

Staff 1 informally reported that she had worked with Client A the longest and preferred spending time with Client A over her other two clients. This is a potential cause for the small increases in Staff 1’s overall behavior and Client A’s behavior from pre- to post-intervention. Additionally, the more significant increases in client behavior for Staff 1’s other two clients may suggest the intervention was successful in increasing the amount of time and quality of interactions Staff 1 had with her small groups of clients.

The results of this study contribute to the staff training literature by demonstrating that in-service instruction, modeling, role-play, and on-the-job feedback continue to be an effective method for training staff, more specifically, staff working with adults with severe and/or multiple IDD in center-based adult day services programs. Additionally, this study contributes to the adult day services literature by providing a staff training program in center-based adult day services programs, an environment in which there is limited research (Parsons et al., 2008;
This study also demonstrated the potential to train staff how to promote positive relationship development when working with small groups of clients with severe and/or multiple IDD. As mentioned earlier, prior studies have largely focused in other areas such as increasing client engagement by varying the availability of high and low preferred items, training staff how to teach clients with IDD, and providing structured functional activities (Green et al., 1997; Klatt et al., 2000; Parsons et al., 2012; van der Putten & Vlaskamp, 2011).

**Limitations and Future Research**

Although the current study has strengths and addresses a gap in the literature, there were also several limitations. For instance, the procedural integrity of the training methods used was not examined. The extent to which the independent variables were implemented as described is unknown. Additionally, the amount of time the experimenter used to deliver on-the-job feedback after the positive-interactions training was not measured for each staff participant. Because one of the goals of adult day services is to train staff utilizing a cost-effective training method, precise data about the amount of time providing on-the-job feedback would be valuable information. Future research may consider investigating the necessary and sufficient components of the training package.

Another limitation included the cost of the labor-intensive staff training. As mentioned earlier, center-based adult day programs often lack the resources necessary to provide staff training (Anderson et al., 2012; Force & O’Malley, 1999; van Oorsouw et al., 2009). Though the training was effective, it was labor intensive as it relied on face-to-face verbal and written instructions. DiGennaro Reed and Henley (2015) recommend ways to enhance the cost-effectiveness of research-supported training through the use of technology, which may have utility for the training procedures used in this study. For example, video-based training packages
may be developed to provide training information, allowing the trainer to allocate face-to-face
time primarily to focus on role-play practices with staff to provide positive and corrective
feedback opportunities. Though there is an upfront cost to developing such technology, there is
a potential for long-term savings by reducing the time trainers are face-to-face with trainees.
Future research may consider developing handouts plus video modeling of the positive
interactions training material so the trainer will only need to be present for role-play and
feedback.

Another limitation includes the recording procedures designed to measure the dependent
variables. The experimenter relied on partial-interval recording, which is an *estimate* of
behavior. Harrop and Daniels (1986) found through their examination of recording procedures
that partial-interval recording is best to estimate frequency whereas momentary time sampling is
more sensitive to duration. Thus, future research may consider utilizing a momentary time
sampling procedure to estimate the duration of positive interactions and client behavior.

In addition, we did not measure whether staff-client interactions were initiated by a staff
member or by the client. Thus, it remains unclear if staff’s initiations of interactions increased or
if staff were simply responding more often to client’s initiations. Future research may consider
measuring staff initiations versus client initiations.

Throughout the course of the study, two new staff were hired and trained after two staff
left, and caseloads of small groups of clients were changed twice. The staff turnover resulted in
a limited amount of observations with some staff participants, and the caseload changes resulted
in a limited number of observations with some client participants for a specific small group.
Despite these changes, the experimental analysis utilized through the multiple baseline design
across staff participants demonstrated systematic and reliable increases in staff behavior following staff training.

Consumer satisfaction surveys can be used as a measurement of satisfaction and add to credibility of research (Fawcett et al., 2000). Though staff and client behavior increased after staff participants received training, it remains unclear if staff participants were satisfied with the training received because consumer satisfaction surveys were not provided to staff participants. Future research may consider investigating consumer satisfaction with the positive interactions training by providing consumer satisfaction surveys to staff participants pre- and post-training to determine staff participants satisfaction.

Finally, future research may consider investigating levels of engagement for individuals with severe and/or multiple IDD to develop a reasonable standard. While engagement needs differ between individuals, the development of standardized levels of engagement for individuals with severe and/or multiple IDD would be not only be informative for the staff supporting clients but also for the continued research on the conceptualization of quality of life measures (Felce & Perry, 1995). While it is important for interactions between staff and their clients to be frequent and positive, it is unreasonable to expect staff to constantly engage their clients (Green, Reid, Passante, & Canipe, 2008). In the current study, staff behavior increased from a mean of 7.8% in baseline to 25.7% after staff training. Though 25.7% is a far from 100%, it has the possibility of being an acceptable level considering the many other responsibilities of staff. Furthermore, a determination of acceptable levels for engagement of clients with severe and/or multiple IDD and the staff working with those clients in small groups could increase the overall productivity for both staff and clients.
References


<table>
<thead>
<tr>
<th>Staff Behavior</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proximity</td>
<td>The staff was within five feet of the client for two or more seconds.</td>
</tr>
<tr>
<td>Smiled</td>
<td>There was an upward curve of at least one corner of the staffs’ mouth for two or more seconds.</td>
</tr>
<tr>
<td>Stated Client’s Name</td>
<td>The staff said the client’s name at least once during the observation interval.</td>
</tr>
<tr>
<td>Positive Comment</td>
<td>The staff made a praise statement to the client at least once during the observation interval.</td>
</tr>
<tr>
<td></td>
<td>Praise statement examples:</td>
</tr>
<tr>
<td></td>
<td>“Great job getting your lunch ready!”</td>
</tr>
<tr>
<td></td>
<td>“Excellent job greeting your friend!”</td>
</tr>
<tr>
<td></td>
<td>“What an outstanding piece of art, thank you for sharing with me!”</td>
</tr>
<tr>
<td>Stated Name of Activity</td>
<td>The staff made a statement of a specific activity a client was engaged in at least once during the observation interval.</td>
</tr>
<tr>
<td></td>
<td>Activity statement examples:</td>
</tr>
<tr>
<td></td>
<td>“You are working on an art project.”</td>
</tr>
<tr>
<td></td>
<td>“You are talking to your friend”, “You are swinging on that swing.”</td>
</tr>
<tr>
<td>Prompted Engagement</td>
<td>The staff did one of the following during the observation interval:</td>
</tr>
<tr>
<td></td>
<td>- Asked the client to use materials in an appropriate manner.</td>
</tr>
<tr>
<td></td>
<td>- Made a statement to a client about activities for the client to engage in.</td>
</tr>
<tr>
<td></td>
<td>- Asked a question to initiate conversation with his/her client.</td>
</tr>
<tr>
<td></td>
<td>- Pointed at an engagement item_modeled the use of an engagement item.</td>
</tr>
</tbody>
</table>
### Table 2

**Dependent Variables: Client Behaviors**

<table>
<thead>
<tr>
<th>Client Behavior</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaged</td>
<td>The client was interacting or communicating with a staff or a peer for two or more second, or actively participating in an appropriate behavior such as manipulating objects appropriately, appropriately participating in a presented activity for two or more seconds.</td>
</tr>
<tr>
<td>Alert</td>
<td>The client’s eyes were open and looking at or making eye contact with another person, or looking at an object in their environment for two seconds or more.</td>
</tr>
<tr>
<td>Smiling/Laughing</td>
<td>The client was smiling or laughing with, at a minimum, an upward curve on at least one corner of the client’s mouth and/or an audible happy vocalization such as a laugh or giggle for two or more seconds.</td>
</tr>
<tr>
<td>Problem Behavior</td>
<td>The client was screaming, hitting, biting, pinching, kicking, or spitting, or some other problem behavior that is specific to that client’s individual behavioral topography.</td>
</tr>
</tbody>
</table>
Table 3

*Interobserver Agreement for Staff Participants*

<table>
<thead>
<tr>
<th></th>
<th>Staff Member 1</th>
<th>Staff Member 2</th>
<th>Staff Member 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of Observations Scored</td>
<td>40.4%</td>
<td>33.2%</td>
<td>40.4%</td>
</tr>
<tr>
<td>Total Agreement</td>
<td>94.3%</td>
<td>92.4%</td>
<td>93.1%</td>
</tr>
</tbody>
</table>
Table 4

*Interobserver Agreement for Client Participants*

<table>
<thead>
<tr>
<th>Percentage of Observations Scored</th>
<th>Client A</th>
<th>Client B</th>
<th>Client C</th>
<th>Client D</th>
<th>Client E</th>
<th>Client F</th>
<th>Client G</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40.4%</td>
<td>40.4%</td>
<td>40.4%</td>
<td>33.2%</td>
<td>33.2%</td>
<td>40.4%</td>
<td>40.4%</td>
</tr>
</tbody>
</table>

| Total Agreement                  | 95.3%    | 92.4%    | 92.4%    | 92.4%    | 93.1%    | 92.4%    | 92.4%    |
Figure 1. Staff participant session-by-session combined percentage of target staff behaviors with staff's small group of clients. Staff target behaviors: proximity, smiling, stating client's name, positive comment, stating name of activity, and prompting engagement.
Figure 2. Client pre- and post-intervention data. The bars represent the combined averaged percentage of intervals where client behavior occurred for Client A, Client B, and Client C.
Figure 3. Client pre- and post-intervention data. The bars represent the combined averaged percentage of intervals where client behavior occurred for Client D and Client E.
Figure 4. Client pre- and post-intervention data. The bars represent the combined averaged percentage of intervals where client behavior occurred for Client F and Client G.
Appendix A – Recruitment Packets for Staff Members

Dear (Staff’s Name),

You have been nominated by CLO as someone who is a good candidate for participating in a research study. This particular study is designed to increase the ease of staff’s job by teaching staff relationship development skills to increase their client’s independence and engagement in both leisure activities and daily living tasks, which may produce a greater quality of life. Attached is a more thorough description of the study. Please read the summary of the study. If you are interested in participating, please sign and return a copy of the consent in the self-addressed envelope provided. There is also a copy of the consent included for you to keep. If you would like more information before you sign the consent form, please indicate this at the end of the form. We then will contact you to arrange a meeting to discuss this project.

Thank you for considering this opportunity.

Thank you for your time,

Amanda J. Scoggins
The Effects of Positive-Interactions Staff Training on the Behavior of Staff and Clients during Small Groups in a Center-Based Program of Adult Day Services

Amanda J. Scoggins, James A. Sherman, Jan B. Sheldon

What we would like to propose:

The purpose of this project is to increase the quality of staff members interactions with their small client groups and ultimately aimed to increase engagement, alertness, and positive affect (smiling/laughing) in daily activities for clients with severe and/or multiple intellectual and developmental disabilities (IDD) and evaluate if increases in these behaviors reduces problem behavior. The project is also designed to determine whether behavioral effects in individual clients behavior can also be seen when looking at small groups of people.

The positive-interactions staff training procedures used to develop this set of behaviors will involve a mini-workshop, model and role-play sessions with feedback, and in vivo observations and feedback on the positive-interaction behaviors covered in the staff training. The positive-interactions behaviors that will be taught to participating staff members will include proximity, smile, state client’s name, positive comment, state activity, and prompt engagement.

The design of the project will involve the participants maintaining his/her typical daily schedule of activities and leisure time. The primary behavioral measures for clients will be engagement, alertness, positive affect (smiling/laughing), and problem behavior. The rewards will be seen in the quality of interactions between staff members and their small client groups.

We believe that increases in appropriate engagement, alertness, and positive affect (smiling/laughing) produces a greater quality of life for individuals with severe and/or multiple IDD and may produce decreases in problem behavior. We would appreciate the opportunity to work with those individuals who currently do not regularly engage in activities and who have limited communication with those around them (e.g., staff members, peers, family, etc.) preventing access to quality of life opportunities. The proposed project will provide those individuals who participate with opportunities to access new and exciting activities through the positive relationship development between staff members and their small client groups.
The Effects of Positive-Interactions Staff Training on the Behavior of Staff and Clients during Small Groups in a Center-Based Program of Adult Day Services

STAFF MEMBER CONSENT FORM

INTRODUCTION

The Department of Applied Behavioral Science at the University of Kansas supports the practice of protecting human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You may refuse to sign this form and not participate in this study. You should be aware that even if you agree to participate, you are free to withdraw permission at any time. If you do withdraw from this study, it will not affect your relationship with this unit, the services it may provide to you, the University of Kansas, or Community Living Opportunities.

PURPOSE OF THE STUDY

This project is designed to increase the quality of staff members' interactions with their small client groups and ultimately aimed to increase engagement, alertness, and positive affect (smiling/laughing) in daily activities for clients with severe and/or multiple intellectual and developmental disabilities (IDD) and evaluate if increases in these behaviors reduces problem behavior. The project is also designed to determine whether behavioral effects in individual clients' behavior can also be seen when looking at small groups of people.

PROCEDURES

The research staff will work with Community Living Opportunities (CLO) staff to conduct this project. The researchers are Amanda Scoggins, a graduate student in the Masters program in Applied Behavioral Science at the University of Kansas and Dr. James Sherman and Dr. Jan Sheldon, professors in the Department of Applied Behavioral Science at the University of Kansas.

If you give consent to take part in the research, this is what will happen:

1. We (research staff members) will visit the adult day services (ADS) center to observe you participate in everyday activities. We will also try to find out what types of things you like and get to know you better.

2. We will give you the opportunity to engage in these activities and we will record the interactions between you and your small client groups.

3. You will participate in a positive-interactions training where you will be taught to utilize the 6 positive-interaction behaviors included by participating in a mini-workshop, modeling and role-playing sessions, and on-the-job observations with feedback. I will teach you how to recognize opportunities for interactions with your small client groups and respond to each client utilizing the positive-interaction behaviors (proximity, smile, state name, positive comment, state activity, and prompt engagement).
4. You will be observed to determine what your levels of proximity, smile, state name, positive comment, state activity, and prompt engagement are and how these level change after you participate in the positive-interactions training. Your clients in your small group will also be observed to determine what their current levels of engagement, alertness, positive affect (smiling/laughing), and problem behavior are and to determine how these levels change after you participate the positive-interactions training.

5. All sessions will take place in the ADS center at CLO. Sessions will be conducted 4 to 5 times per week during the times specified by the staff and will last up to 1 hour.

6. We anticipate that it will take between 4 and 8 months to complete this project. When the project is completed, we will give you and the treatment team at CLO a written report.

RISKS

There are no risks anticipated for participating in the study.

BENEFITS

If successful, this study may result in overall increases in your clients’ engagement, alertness, and positive affect (smiling/laughing) in your small client groups at the ADS center. Increases in these client behaviors have been said to reflect a higher quality of life for adults with severe and/or multiple IDD. Also, with the projected increases in engagement there may be a decrease in overall problem behavior. These changes in client behavior may result in overall increases in your satisfaction working with clients with severe and/or multiple IDD in small client groups while working at the ADS center. This is an experimental procedure, however, so there may not be any direct benefits to you.

PAYMENT TO PARTICIPANTS

There will be no monetary compensation for your participation in the study.

PARTICIPANT CONFIDENTIALITY

Your name will not be associated in any publication or presentation with the information collected about you or with the research findings from this study. Instead, the researcher(s) will use a study number or a pseudonym rather than your name. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission.

INSTITUTIONAL DISCLAIMER STATEMENT

In the event of injury, the Kansas Tort Claims Act provides for compensation if it can be demonstrated that the injury was caused by the negligent or wrongful act or omission of a state employee acting within the scope of his/her employment.
REFUSAL TO SIGN CONSENT AND AUTHORIZATION

You are not required to sign this Consent and Authorization form and you may refuse to do so without affecting your right to any services you are receiving or may receive from the University of Kansas or to participate in any programs or events of the University of Kansas. However, if you refuse to sign, you cannot participate in this study.

CANCELLING THIS CONSENT AND AUTHORIZATION

You may withdraw your consent to participate in this study at any time. You also have the right to cancel your permission to use and disclose further information collected about you, in writing, at any time, by sending your written request to:

Amanda Scoggin
Department of Applied Behavioral Science
4001 Dole Human Development Center
1000 Sunnyside Avenue
Lawrence, Kansas 66045

If you cancel permission to use your information, the researchers will stop collecting additional information about you. However, the research team may use and disclose information that was gathered before they received your cancellation, as described above.

QUESTIONS ABOUT PARTICIPATION

Questions about procedures should be directed to the researcher(s) listed at the end of this consent form.

PARTICIPANT CERTIFICATION:

I have read this Consent and Authorization form. I have had the opportunity to ask, and I have received answers to, any questions I had regarding the study. I understand that if I have any additional questions about my rights as a research participant, I may call (785) 864-7429, write to the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email irb@ku.edu.

I agree to take part in this study as a research participant. By my signature I affirm that I have received a copy of this Consent and Authorization form.

_________________________________________         _______________________
Type/Print Name                                           Date

_________________________________________
Signature
Researcher Contact Information:

Amanda Scoggins
Primary Researcher
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University of Kansas
Lawrence, KS 66045
408-981-7472

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Lawrence, KS 66045
785-864-4840

Jan Sheldon, Ph.D., J.D
Faculty Supervisor
Department of Applied Behavioral Science
1000 Sunnyside Ave. Rm. 4001
University of Kansas
Lawrence, KS 66045
785-864-4840
Appendix B – Recruitment Packets for Parents or Guardians

Dear (Parent or Guardian’s Name),

Your (son/daughter/ward) was nominated by CLO as someone who is a good candidate for participating in a research study. This particular study is designed to increase people’s independence and engagement in both leisure activities and daily living tasks, which may produce a greater quality of life. Attached is a more thorough description of the study. Please read the summary of the study. If you are interested in having your (son/daughter/ward) participate, please sign and return a copy of the consent in the self-addressed envelope provided. There is also a copy of the consent included for you to keep. If you would like more information before you sign the consent form, please indicate this at the end of the form. We then will contact you to arrange a meeting to discuss this project.

Thank you for considering this opportunity.

Thank you for your time,

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Amanda J. Scoggins, James A. Sherman, Jan B. Sheldon

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The positive-interactions staff training procedures used to develop this set of behaviors will involve a mini-workshop, model and role-play sessions with feedback, and in vivo observations and feedback on the positive-interaction behaviors covered in the staff training. The positive-interactions behaviors that will be taught to participating staff members will include proximity, smile, state client’s name, positive comment, state activity, and prompt engagement.

The design of the project will involve the participants maintaining his/her typical daily schedule of activities and leisure time. The primary behavioral measures for clients will be engagement, alertness, positive affect (smiling/laughing), and problem behavior. The rewards will be seen in the quality of interactions between staff members and their small client groups.

We believe that increases in appropriate engagement, alertness, and positive affect (smiling/laughing) produces a greater quality of life for individuals with severe and/or multiple IDD and may produce decreases in problem behavior. We would appreciate the opportunity to work with those individuals who currently do not regularly engage in activities and who have limited communication with those around them (e.g., staff members, peers, family, etc.) preventing access to quality of life opportunities. The proposed project will provide those individuals who participate with opportunities to access new and exciting activities through the positive relationship development between staff members and their small client groups.
The Effects of Positive-Interactions Staff Training on the Behavior of Staff and Clients during Small Groups in a Center-Based Program of Adult Day Services

PARENT/GUARDIAN CONSENT FORM

INTRODUCTION

The Department of Applied Behavioral Science at the University of Kansas supports the practice of protecting human subjects participating in research. The following information is provided for you to decide whether you wish your son/daughter/ward to participate in the present study. You may refuse to sign this form and not allow your son/daughter/ward to participate in this study. You should be aware that even if you agree to allow your son/daughter/ward to participate, you are free to withdraw permission at any time. If you do withdraw your son/daughter/ward from this study, it will not affect your relationship with this unit, the services it may provide to you, the University of Kansas, or Community Living Opportunities.

PURPOSE OF THE STUDY

This project is designed to increase the quality of staff members interactions with their small client groups and ultimately aimed to increase engagement, alertness, and positive affect (smiling/laughing) in daily activities for clients with severe and/or multiple intellectual and developmental disabilities (IDD) and evaluate if increases in these behaviors reduces problem behavior. The project is also designed to determine whether behavioral effects in individual clients behavior can also be seen when looking at small groups of people.

PROCEDURES

The research staff will work with Community Living Opportunities (CLO) staff to conduct this project. The researchers are Amanda Scoggins, a graduate student in the Masters program in Applied Behavioral Science at the University of Kansas and Dr. James Sherman and Dr. Jan Sheldon, professors in the Department of Applied Behavioral Science at the University of Kansas.

If you give consent for your son/daughter/ward to take part in the research, this is what will happen:

7. We (research staff members) will ask for the age and diagnosis of your son/daughter/ward. We understand that this information is confidential and this information will not be given to any other people in a form that reveals who the research participant is.

8. Your son’s/daughter’s/ward’s staff member at their adult day services (ADS) center will participate in a positive-interactions staff training. They will be taught to utilize the 6 positive-interaction behaviors included by participating in a mini-workshop, modeling and role-playing sessions, and on-the-job observations with feedback. The positive-interaction behaviors include proximity, smile, state name, positive comment, state activity, and prompt engagement.
9. Your son/daughter/ward will be observed to determine what their levels of engagement, alertness, positive affect (smiling/laughing), and problem behavior are and to determine how these levels change after their staff member participates the positive-interactions staff training.

10. All sessions will take place in your son/daughter/ward’s current ADS center at CLO. Sessions will be conducted 4 to 5 times per week during the times specified by the staff and will last up to 1 hour. Your presence is not required at these sessions although you are invited to observe at any time you would like to do so.

11. We anticipate that it will take between 4 and 8 months to complete this project. When the project is completed, we will give you and the treatment team at CLO a written report.

RISKS

There are no risks anticipated for participating in the study.

BENEFITS

If successful, this study may result in overall increases in your son’s/daughter’s/ward’s engagement, alertness, and positive affect (smiling/laughing) in their small client groups at their ADS center. Increases in these client behaviors have been said to reflect a higher quality of life for adults with severe and/or multiple IDD. Also, with the projected increases in engagement there may be a decrease in overall problem behavior. This is an experimental procedure, however, so there may not be any direct benefits to your son/daughter/ward.

PAYMENT TO PARTICIPANTS

There will be no monetary compensation for your son/daughter/ward’s participation in the study.

PARTICIPANT CONFIDENTIALITY

Your son/daughter/ward’s name will not be associated in any publication or presentation with the information collected about your son/daughter/ward or with the research findings from this study. Instead, the researcher(s) will use a study number or a pseudonym rather than your son/daughter/ward’s name. Your son/daughter/ward’s identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission.

INSTITUTIONAL DISCLAIMER STATEMENT

In the event of injury, the Kansas Tort Claims Act provides for compensation if it can be demonstrated that the injury was caused by the negligent or wrongful act or omission of a state employee acting within the scope of his/her employment.

REFUSAL TO SIGN CONSENT AND AUTHORIZATION
You are not required to sign this Consent and Authorization form and you may refuse to do so without affecting your right to any services you are receiving or may receive from the University of Kansas or to participate in any programs or events of the University of Kansas. However, if you refuse to sign, your son/daughter/ward cannot participate in this study.

CANCELING THIS CONSENT AND AUTHORIZATION

You may withdraw your consent to allow participation of your son/daughter/ward in this study at any time. You also have the right to cancel your permission to use and disclose further information collected about your son/daughter/ward, in writing, at any time, by sending your written request to:

Amanda J. Scoggins  
Department of Applied Behavioral Science  
4001 Dole Human Development Center  
1000 Sunnyside Avenue  
Lawrence, Kansas 66045

If you cancel permission to use your son/daughter/ward’s information, the researchers will stop collecting additional information about your son/daughter/ward. However, the research team may use and disclose information that was gathered before they received your cancellation, as described above.

QUESTIONS ABOUT PARTICIPATION

Questions about procedures should be directed to the researcher(s) listed at the end of this consent form.

PARTICIPANT CERTIFICATION:

I have read this Consent and Authorization form. I have had the opportunity to ask, and I have received answers to, any questions I had regarding the study. I understand that if I have any additional questions about my son/daughter/ward's rights as a research participant, I may call (785) 864-7429, write to the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7568, or email irb@ku.edu.

I agree to allow my son/daughter/ward to take part in this study as a research participant. By my signature I affirm that I have received a copy of this Consent and Authorization form.

_________________________________________         _____________________
Type/Print Participant's Name                             Date

_________________________________________              
Parent/Guardian Signature
Researcher Contact Information:

Amanda J. Scoggins  
Principal Investigator  
Department of Applied Behavioral Science  
4001 Dole Human Development Center  
University of Kansas  
Lawrence, KS 66045  
408-981-7472

James A. Sherman, Ph.D., BCBA-D  
Faculty Supervisor  
Department of Applied Behavioral Science  
4001 Dole Human Development Center  
University of Kansas  
Lawrence, KS 66045  
785-864-0509

Jan B. Sheldon, Ph.D., J.D.  
Faculty Supervisor  
Department of Applied Behavioral Science  
4013 Dole Human Development Center  
University of Kansas  
Lawrence, KS 66045  
785-864-4840
### Teaching Counselor Behavior

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### Client Behavior

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**Legend:**
- TAS – Talking to Another Teacher
- TR – Talking to Recorder
- OCP – On Cell Phone
- CNR – Client Not in Room
- LRLA – Left the Room/Left the Area
- OROA – Out of the Room/Out of the Area
- HO – Handed Caseload Off

**Notes:**
- NE – Not Engaged
- E – Engaged
- AD – Add or Subtract
- Al – Adjust Level
- CS – Client’s Score
- N SL – Not Likely to Succeed
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TAS – Talking to Another Teacher  TR – Talking to Recorder  OCP – On Cell Phone  CNR – Client Not in Room
LR/LA – Left the Room/Left the Area  OR/OA – Out of the Room/Out of the Area  HO – Handed Caseload Off
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TAS – Talking to Another Teacher
TR – Talking to Recorder
OCP – On Cell Phone
CNR – Client Not in Room
LR/LA – Left the Room/Left the Area
OR/OA – Out of the Room/Out of the Area
HO – Handled Caseload Off
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**TAS** – Talking to Another Teacher  **TR** – Talking to Recorder  **OCP** – On Cell Phone  **CNR** – Client Not in Room

**LR/LA** – Left the Room/Left the Area  **OR/OA** – Out of the Room/Out of the Area  **HO** – Handed Caseload Off

**DID STAFF ROTATE AMONG CLIENTS?**  Y  or  N (circle one)
**Staff Behavior:**
Circle “0” if nothing occurred; Circle “1” if the behavior occurred.

**State Name** – Staff said client’s name. Mark voice tone.

**Smile** – Staff smiled or smiled at client for 2 or more seconds.

**State Activity** – Staff stated activity client was engaged in. Mark voice tone.

**Positive Comment** – Staff stated positive comment(s) to a client with a positive voice tone.

**Proximity** – Staff is within 5-feet or less to client for 2 or more seconds.

**Prompt Engagement** – Staff prompts client to engage in an activity/with their environment if clients are not engaged, and may include a choice of something to engage in. Includes asking a question to initiate conversation or a non-verbal physical gesture or modeling. Mark voice tone.

**Reprimand** – Questioning of the client’s behavior and/or a statement to tell the client to stop doing something with the negative voice tone.

**Request** – A statement of an instruction to do something or a choice or in a question form. Mark voice tone.

**Client Behavior:**
Circle nothing if nothing occurred; Circle each behavior that occurred.

**Engagement**

**NE:** Not Engaged – A client who is not functionally manipulating their environment or an object in their environment, or functionally participating in the present activity.

**E:** Engagement – A client who is interacting or communicating with a teacher or a peer for 2 or more seconds, or actively participating in the present activity for 2 or more seconds, or functionally manipulating their environment or an object in their environment for 2 or more seconds.

**Alert**

**AD:** Asleep or Drowsy – A client’s eyes are closed, breathing is slow and regular, body posture is relaxed, and little to no motor activity is exhibited; or a client’s eyes are open but eyes are opening/closing repeatedly in a slow fashion; yawning; rubbing face with hands; head facing down.

**AI:** Alert – A client whose eyes were open and looking at/making eye contact with another person and/or object and/or their environment.

**Affect**

**CS:** Crying/Screaming – Tearing of eyes, a frown, a grimace, and an unhappy facial expression (e.g., frown, grimace, scrunched face, burrowed brows, etc.) and an audible unhappy vocalization (e.g., scream, cry, yelp, etc.).

**N:** Neutral – None of the above responses.

**SL:** Smiling or Laughing – An upward curve on at least one corner of the client’s mouth or a positive vocalization accompanied by a smile.

**Problem Behavior**
Circle “0” if nothing occurred; Circle “1” if the behavior occurred.

A client who is screaming, hitting, etc.

A client cannot be engaged if they are exhibiting maladaptive behavior (individualized for each client).
Appendix D – Handout of Positive Interactions and Related Behaviors

(1) **When you see a client appropriately engaged:**

Examples of engagement –

- Participating on-task in the current class activity.
- Functionally manipulating leisure material and/or their environment.
- Positively communicating with staff and/or peers.

**Step 1:** Recognize that the client is appropriately engaged.

**Step 2:** Move within 5-feet or closer to the client.

**Step 3:** Smile at the client genuinely.

**Step 4:** Use a positive voice tone.

**Step 5:** Say the client’s name.

**Step 6:** Make a positive comment on the client’s behavior with a descriptive statement that describes what the client is doing (using a positive voice tone).

**Step 7:** State the activity in which the client is engaged (using a positive voice tone).

Be Sure To Allocate Your Time Equally Among Your Clients

**NAME** + **PRAISE** + **BEHAVIOR** + **ACTIVITY**

Johnny you are doing an excellent job at shaking that tambourine!!

Mary fabulous eye contact with George when you said hello!

Zack amazing job communicating that you want to work on a different project!

Susan great work putting together those puzzles pieces!!
Non-Examples –

Johnny you are doing a great job!

You are doing a great job shaking the tambourine!

Good job!!

Mary you looked into George’s eyes!

Amazing job communicating what you want to do!

Excellent work!!

Susan great work today!

Keep going you are doing brilliant!

Thank you!!
(2) **When you see a client inappropriately or not engaged:**

Examples of inappropriate engagement –

- Off-task in current class activity.
- Improperly manipulating leisure material and/or their environment.
- Engaging in verbal and/or physical aggression towards themselves, peers, and/or staff.
- Not actively engaged.

**Step 1:** Recognize the client is not engaged or is inappropriately engaged.

**Step 2:** Move within 5-feet or closer to the client.

<table>
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<tr>
<th>If Not Engaged:</th>
<th>If Inappropriately Engaged:</th>
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<tr>
<td><strong>Step 3:</strong> Smile at the client genuinely.</td>
<td><strong>Step 3:</strong> Use a neutral facial expression.</td>
</tr>
<tr>
<td><strong>Step 4:</strong> Use a positive voice tone.</td>
<td><strong>Step 4:</strong> Use a neutral voice tone.</td>
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**Step 5:** Say the client’s name.

**Step 6:** State the specific activity or alternative activity and/or behavior for the client to appropriately engage in using positive language.

**Step 7:** Refrain from saying “No”, “Stop”, “Don’t”, “Quit it”, “Why are you doing that?”, “You shouldn’t be doing that”.

**Step 8:** Use the least intrusive prompt(s) required to help the client appropriately engage (e.g., verbal requests, hand-over-hand, light physical assistance).

**Step 9:** After the client engages in the specific activity and/or appropriate behavior, praise the client for appropriately engaging in the alternative appropriate activity and/or behavior using “**NAME** + **PRAISE** + **BEHAVIOR** + **ACTIVITY**” (see handout p. 1).
**Examples –**

(Brandon has eaten a snack and his entire lunch in the last hour and it is now time to participate in leisure time but he is pushing past you and running to the kitchen)

“**Brandon** the kitchen is closed until lunch but the **activity room** is open.”

(Using the least restrictive prompt, provide Brandon with a verbal or gestural prompt to the activity room)

(Repeat until Brandon appropriately engages)

(Once Brandon is appropriately engaging use “**NAME + PRAISE + BEHAVIOR + ACTIVITY**”)

(Smile and use a positive voice tone)

“**Excellent choice to use the activity room!**”

(Jennifer is sitting staring out the window and lunchtime has started)

(Smile and use a positive voice tone)

“**Jennifer** it’s lunchtime, let’s **walk to the kitchen** to get your lunch started!”

(Using the least restrictive prompt, provide Jennifer with a light physical prompt to the activity room)

(Repeat until Jennifer appropriately engages)

(Once Jennifer is appropriately engaging use “**NAME + PRAISE + BEHAVIOR + ACTIVITY**”)

(Smile and use a positive voice tone)

“**Thank you for preparing your lunch!!**”

**Non-Examples –**

“Come over here.”                                “Sit still.”

“Don’t do that!”                                  “Stop!”

“Look into my eyes!”                              “Listen to me.”
Appendix E – Data Sheet for Observations and Feedback of Staff Behavior

Date: __________ Staff Initials: _____ Session #: __________ Observer Initials: _____

Teaching Interaction: __________________________

### Responding to Client When Client is Appropriately Engaged

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<td>2. Within proximity to a client (i.e., 5-feet or less to client for 2 or more seconds)</td>
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<td>3. Smiles for 2 or more seconds</td>
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<td>4. Positive tone of voice</td>
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<td>5. States a clients name</td>
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<td>6. States a behavior specific positive comment</td>
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<td>7. States activity with behavior specific language</td>
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Notes:

### Responding to Client When Client is Inappropriately Engaged

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<td>3. Smiles for 2 or more seconds (if appropriate)</td>
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<td>4. Positive or Neutral tone of voice</td>
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<td>5. States a clients name</td>
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<td>6. Using positive language states activity or alternative activity and/or behavior to client</td>
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<td>7. Refrained from using reprimands</td>
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<td>8. Uses least restrictive prompt</td>
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<td>9. States a behavior specific positive comment for client engagement</td>
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Appendix F – Written Comprehension Test

Date: 
Staff Initials: 

Written Comprehension Test

1. If you saw a client sitting in a chair staring off into space specifically what should you do?

2. If a client is repeating the same phrase specifically what should you do?

3. What is missing from this interaction?

   (Danny is doing nothing)  
   (Staff approaches within 5-feet, smiling, and using a positive voice tone and says: 
   “Danny, here is a puzzle for you to work on.”  
   (Danny appropriately engages with the puzzle)  
   Staff says, “Great job!”

4. What is missing from this interaction?

   (Isabel is appropriately engaged in Zumba class)  
   (Standing in the doorway, with a blank face, using a positive voice tone)  
   Staff says, “Isabel work it girl!!!!”

5. Is this interaction appropriate or not? If yes, explain why. If not, explain why and what should be done to make it appropriate.

   (Ronald is pinching himself)  
   (Within 5-feet and using a negative voice tone)  
   “Ronald, stop pinching yourself.”