Volunteer-Child Interaction Training: Exploring the Effects of a Modified Child-Directed Interaction with Volunteers

by

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Abstract

Community service and the involvement of volunteers are prevalent in a variety of contexts. Community service programs requiring interactions with youth typically do not emphasize particular therapeutic skills related to positive interactions between volunteers and children. Though studies indicate some effectiveness of the interactions and development of relationships between volunteers and the children they serve (i.e., DeWit, Lipman, Manzano-Munguia, Bisanz, Graham, Offord, et al., 2006; DuBois & Silverthorn, 2005), no study, as of yet, has incorporated components of play therapy into volunteer training. The present study provides a preliminary step into effectiveness research for a modified Child-Directed Interaction (CDI) component of Parent-Child Interaction Therapy (PCIT) as provided to community service volunteers. The goal of the project was to develop more positive interactions between undergraduate volunteers and the youth they serve. Results from this present study provide preliminary information for the effectiveness and transportability of the CDI component of PCIT, particularly as it relates to the teaching and in-vivo coaching formats implemented in the community. Results provide mixed support for the Volunteer-Child Interaction Training program (VCIT) implemented in this study. With regard to the long-term in-vivo training, although some support was found through the multiple-baseline design, most of the participants did not demonstrate consistent increases in the use of PRiDE (Praise, Reflect, Describe, Enthusiasm) skills or consistent decreases in the use of negative verbalizations during the training and maintenance periods of observation. There was also limited

support for a positive relationship between participant motivation and verbal behavior during coded observations. Participants from both groups (Individual VCIT versus Group VCIT) were equally satisfied with the training provided. Notably, those participants who volunteered on their own initiative reported more interest in volunteering relative to undergraduates who were volunteering at the community agency as part of a course requirement. Although many findings did not support the initial hypotheses, this study provided a first step in the development of a teaching and training program that could be used to provide information to volunteers (service learning and otherwise) about skills to develop a more positive relationship with youth. This study also provided evidence to suggest that, on a short-term basis, it was feasible to teach volunteers the basic concepts of play therapy as used in PCIT as participants did demonstrate change in PCIT knowledge immediately following the training.

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Introduction

Volunteerism

Volunteers have been recognized as an important resource in the United States and worldwide (Grossman & Furano, 2002). Every year, more than ninety million Americans donate over 20 billion hours of their time to provide some kind of service, from serving on nonprofit boards to delivering meals to the elderly, to building houses, to working with children in different settings (Grossman & Furano, 2002). Although the concepts of "volunteer" and "volunteering" have a number of meanings (e.g., Cnaan & Amrofell, 1994; Cnaan, Hand, & Wadsworth, 1996), this study will use the President's Task Force on Private Sector Initiatives (1982) definition of volunteering, suggesting:

> Volunteering is the voluntary giving of time and talents to deliver services or perform tasks with no direct financial compensation expected. Volunteering includes the participation of citizens in the direct delivery of service to others; citizen action groups; advocacy for causes, groups, or individuals; participation in the governance of both private and public agencies; self-help and mutual aid endeavors; and a broad range of informal helping activities (p. 4).

In recent times, the American education system has focused on service learning, which involves students committing their time and talents as volunteers within the local community providing assistance to others in exchange for class credit (Ferrari, Dobis, Kardaras, Michna, Wagner, Sierawsi, et al., 1999). Service learning has become a requirement for public and private schools as well as colleges around America (Ferrari et al., 1999). Educators consider the effects of community volunteerism as a way to promote

civic responsibility and moral growth in students. Community service programs can be thought of as a primary prevention tool and a means of empowering volunteers (Ferrari et al., 1999).

The concept of adult volunteers working with children is embedded in the idea that caring adults can provide children and adolescents with benefits above and beyond what parent-child relationships may provide (Zeldin, Larson, Camino, & O'Connor, 2005). Zeldin and colleagues (2005) stated that there are three purposes for youth-adult relationships: to enhance relationships (builds autonomy, child feels respected and acknowledged), to encourage positive development (acquires knowledge, empowers youth), and to build community. These purposes are accomplished by building trust, providing understanding, and creating relationship reciprocity (Zeldin et al., 2005). More specifically, Rhodes (2002) suggests that development occurs through one's social experiences, and that relationships with adults help form a child's internal working model of the world. For example, a study by DeWit, Lipman, Manzano-Munguia, Bisanz, Graham, Offord, et al. (2006) investigated the effectiveness of the Big Brothers/Big Sisters program through the use of randomized controlled trials. DeWit et al. (2006) randomly assigned participants to an experimental group or a control waitlist group, both of which were administered pre- and post-intervention measures to evaluate program effect. Post-intervention findings indicated that children involved in the Big Brother/Big Sister program and interacting with volunteer mentors reported decreased emotional problems, decreased social anxiety for negative peer evaluations, decreased social anxiety and distress, and increased social skills involving self-control as compared to those children in the waitlist condition (DeWit et al., 2006).

Volunteering helps not only the recipients of the services, but the volunteers themselves, as they gain experiences they may have never encountered prior to volunteering. For example, middle class volunteers working with a school in a lower socioeconomic area learned about the experiences of teachers and children at these schools (Grossman & Furano, 2002). Volunteering can be considered to have positive psychological and physical influences on both the volunteers and the recipients. For example, voluntary association membership among adults contributes to decreased psychological distress and buffers the negative consequences of stressors (Rietschlin, 1998); it increases life satisfaction and decreases depression (Van Willigen, 1998); and it is associated with better physical health and lower mortality (House, Landis, & Umberson, 1988; Young & Gasgow, 1998). More specifically, Hunter and Linn (1981) found that older adult volunteers had significantly higher life satisfaction, a stronger will to live, greater feelings of self-respect, and fewer symptoms of depression and anxiety compared to non-volunteers. Ferrari & Geller (1994) also indicated that volunteering may increase a volunteer's personal perceptions of self-efficacy and empowerment.

Theories for Volunteering

While studies of helping have long been mainstays of psychological inquiry, the existing literature speaks largely to varieties of helping that somewhat differ from volunteerism. Specifically, the literature has focused on helping in contexts where a potential helper is faced with an unexpected need for help, calling for an immediate decision to act and an opportunity to provide only one relatively brief act of help (Bar-Tal, 1984; Piliavin & Charng, 1990). While this is a type of volunteering called spontaneous helping (Clary, Snyder, Ridge, Copeland, Stukas, Haugen et al., 1998),

another type of helping, planned helping, is a different kind of helping. As a form of planned helping, volunteering is marked by several key characteristics such as the helper seeking out the opportunity to help, arriving at this decision after a period of deliberation, providing assistance over time, and the helper's decisions about beginning to help and about continuing to help (Clary & Snyder, 1999).

Clary and his colleagues (1998) have used the functional analysis approach to answer questions such as why people volunteer and what sustains voluntary helping. This approach is concerned with the personal and social functions being served by an individual's thoughts, feelings, and actions (Snyder, 1993). In psychology, themes of functionalism have a long and distinguished tradition and are reflected in diverse perspectives that emphasize the adaptive and purposeful strivings of individuals toward personal and social goals (Cantor, 1994; Snyder, 1993). A central principle of functionalism is that people can, and do, perform the same actions in the service of different psychological functions. Arguably, the most familiar examples of the functional theory in personality and social psychology are the classic accounts of attitudes and persuasion articulated by Smith, Bruner, and White (1956) and by Katz (1960). These theorists proposed that the same attitudes could serve different functions for different people and that attempts to change attitudes would succeed to the extent that they assessed the functions served by those attitudes. More recently, however, there has been a broadening of scope for the functionalist approach. Clary et al. (1998) suggest that the key themes of functional analyses that have contributed to the understanding of phenomena and processes in the realms of attitudes and persuasion, social cognition, social relationships, and personality also hold the promise for unraveling the complex

motivational foundation of volunteer activity. The core proposition of a functional analysis of volunteerism is that acts of volunteerism that seem to be quite similar on the surface may reflect markedly different underlying motivational processes (Clary et al., 1998). In addition, the functions served by volunteerism may vary and greatly influence the critical events associated with the initiation and maintenance of voluntary helping behavior. Taken together, one would predict that volunteers from a particular agency would report different reasons or motivation for engaging in the same volunteer behavior.

Clary et al. (1998) suggest there are six main functions served by involvement in volunteer service centers. Opportunities afforded to volunteers to express values related to altruistic and humanitarian concerns for others, and the opportunity for volunteerism to allow for new learning experiences and the chance to exercise knowledge, skills, and abilities that might otherwise go unpracticed are two functions that may influence volunteer motivation. Functions such as having the opportunity to be with one's friends or to engage in an activity viewed favorably by important others as well as the possibility for career-related benefits that may be obtained from participation in volunteer work also need to be taken into consideration as functions served by volunteering. Clary et al. (1998) also suggest that motivations to volunteer may also serve as a protective factor to reduce guilt over being more fortunate than others and to address one's own personal problems, such as loneliness. Finally, Clary et al. (1998) argue that people may volunteer for reasons of personal development or to obtain satisfactions related to personal growth and self-esteem, thus enhancing one's growth and development, involving the strivings of the ego.

One study focusing on the motivations of volunteers found that volunteers in different contexts indicated that value, esteem, and understanding served as the most important motivations to volunteer (e.g., Allison, Okun, & Dutridge, 2002). College student volunteers who, as a part of the service learning initiative of American colleges, engaged in volunteer activities indicated that their motivations to volunteer included altruistic and humanitarian concerns for others and the ability to obtain new learning experiences and exercise knowledge and skills that may otherwise go unpracticed (Ferrari et al., 1999).

Similar to Clary et al.'s (1998) functionalist approach, Wilson and Musick (1997) suggest "an integrated theory of formal and informal volunteer work that is based on several premises: (1) Volunteerism as a productive activity; (2) Volunteerism involves collective action, to some degree; (3) The volunteer-recipient relationship is an ethical one" (p. 695-696). As a productive activity, volunteer work is seen just like any other type of work irrespective of availability of pay. Considering volunteer work as a collective action, Wilson and Musick (1997) argue that volunteering is done for the collective good of a group, whether for a community at large, or a specialized organization. However, they suggest that a volunteer's behavior may be influenced by a social component, indicating that many volunteers perform volunteer work which may be influenced both by what others are thinking and doing and the thoughts and actions of the individual considering volunteer work (Wilson & Musick, 1997). Thus, performing an act of volunteerism may be rewarding because it is socially reinforcing for an individual to do so. Ethical considerations regarding volunteering seem to be regulated by moral incentives such as performing because one feels helping others is important or they feel

that they can help a cause that may be meaningful to them (Wilson & Musick, 1997). The volunteer-recipient relationship can be considered one based on the behavioral approach, in that the volunteer's behavior is being performed because of some reinforcing force (i.e., social, cultural) that is influencing the behavior of volunteering.

Volunteer Training

There has been less consensus regarding needs for training and ongoing supervision of volunteers, in general, and mentors more specifically (Rhodes, 1994) and accordingly, programs have varied considerably in these areas. Nevertheless, there is general agreement that some type of orientation should be provided and that volunteers should have ongoing support available to them (Freedman, 1993; Hamilton & Hamilton, 1992). DuBois and Silverthorn (2005) argue that greater consideration should be given to instituting policies and programs that cultivate mentoring relationships between youth and those adults who already are salient figures in different parts of their lives. Volunteers in various community-based settings are exposed to training based on the goals for that specific program (DuBois, Holloway, Valentine, & Cooper, 2002). Grossman & Furano (2002) assert that programs can teach needed skills (which can be both costly and time-consuming), screen for those who already have the requisite skills (limiting the pool of volunteers), or do a mix of both. If the mixed strategy is chosen, however, programs need to be explicit about what skills or attitudes applicants need to bring with them. For example, mentoring programs have reported difficulty in teaching volunteers, who want to improve a child's behavior, how to spend sufficient time building the relationship first (Grossman & Furano, 2002). Therefore, a program focusing on training volunteers to interact with and develop a relationship with youth may be

necessary – especially for those community service programs involving the interactions of volunteers with youth. One of the goals of the present study was to implement a volunteer training program that was based on a well-researched, behavioral parent training program, Parent-Child Interaction Therapy.

Parent-Child Interaction Therapy

Parent-Child Interaction Therapy (PCIT), developed by Sheila Eyberg, is an empirically supported treatment for children with disruptive behavior disorders, including conduct disorder and oppositional defiant disorder (Eyberg, 1988; Eyberg, Nelson, & Boggs, 2008). PCIT is modeled after Constance Hanf's two-stage approach to therapy for children demonstrating disruptive behaviors (1969). Hanf's model was based on operant learning and involved teaching parents to shape their children's behavior through positive attention and ignoring, in the first stage, and teaching discipline skills in the second stage. Using Hanf's model, other researchers (e.g., Eyberg, 1988; Forehand & McMahon, 1981) began to develop such two-stage models of parent-training.

Certain core defining features of PCIT, present in both phases of treatment, are believed to account for the changes that occur in the interactions between parents and children (Harwood & Eyberg, 2006). In the Child-Directed Interaction (CDI) component, parents are taught to use specific types of positive attention that, for most children, function as positive reinforcement. Parents are also taught to avoid particular types of statements such as commands, questions, and criticisms, which can be intrusive and often provide attention to negative child behaviors. Coaching parents directly is the application used by the therapist to shape parents' new relationship skills. At the same time, the parents' new skills serve to teach their child new skills (i.e., social interaction skills and

cooperation) through the same mechanism of operant conditioning (Harwood & Eyberg, 2006). A coaching session includes a moment-by-moment functional analysis in which behaviors of both the parent and the child are shaped toward healthier interpersonal interactions that characterize a positive parent-child relationship and collaborative social functioning. Although some evidence suggests that the CDI component of PCIT may not be essential for decreasing the noncompliance of conduct-disordered youth (Eisenstadt, Eyberg, McNeil, Newcomb, & Funderburk, 1993), the purpose of the CDI is to strengthen the parent-child relationship (Eyberg, 1988). CDI is designed to create what Kockanska (1997) has termed a mutually responsive orientation, characterized by a cooperative and affectively positive, reciprocal interaction. A study by Kochanska, Forman, Askan, & Dunbar (2005) found that a mutually responsive orientation enhances child enjoyment of the mother-child interaction and increases "willing compliance" among normal preschoolers. In a study investigating the compliance of "easy" and "difficult" children as rated by parents and teachers, Parpal and Maccoby (1985) found that "difficult" children also showed high rates of compliance after responsive play situations but not after free play or non-interactive situations. With respect to the CDI component, Floyd and Eyberg (2003) also found significant improvements in parent-report attachment security Q-sort scores following CDI, suggesting that CDI may help to change parent-child relationships through improved dyadic attachment.

A modified version of PCIT, using both PCIT components, has been implemented in the school setting with teachers and children (Herschell, Calzada, Eyberg, & McNeil, 2002). Bahl (1998) has proposed a model for applying PCIT to the classroom, called Teacher-Child Interaction Training (TCIT). Similar to the two phases of PCIT, this model

focuses on enhancing the teacher-child relationship during the first stage and improving child compliance during a later stage. The structure of TCIT is also similar to that of PCIT in its focus on working with the teacher and children together, providing direct coaching, overlearning behavioral skills, and emphasizing the use of a positive approach to working with teachers (Bahl, 1998). Similarly, Budd, Gershenson, Lyon, Farahmand, Behling, Thaxter, et al. (2007) investigated the effectiveness of group TCIT within an urban daycare context. Like Bahl (1998), Budd et al. (2007) employed both components of PCIT, with some modifications, to the parent-directed interaction (PDI) portion of the treatment. Findings of the Budd et al. (2007) study suggest that the mean levels of teacher positive behaviors increased with training.

As the literature suggests above, while not essentially necessary in reducing noncompliance in behaviorally disruptive children, the positive attention focus of the CDI component, including the mutually responsive orientation, is important in developing greater compliance in children and improvement in attachment. Within the domain of child development research, a great deal of attention has been given to the effects of praise on children's behavior. As with many terms, praise has a multitude of definitions. For the purpose of this study, praise will refer to "positive evaluations made by a person of another's products, performances, or attributes, where the evaluator presumes the validity of the standards on which the evaluation is based" (p.98, Kanouse, Gumpert & Canavan-Gumpert, 1981). This definition has been selected because of its comprehensiveness and because it resonates well with a commonsense conception of praise. This definition also complements the definition of praise as used in PCIT, which describes praise in two ways: labeled and unlabeled. Labeled praise is specific praise and

is considered to be more effective because it lets the child know exactly what a person likes about the child's behavior (e.g., "You're playing so nicely," "I like it when you sit quietly.") Unlabeled praise is nonspecific (e.g., "Great job." "I like that."). According to Eyberg, Nelson, Duke, & Boggs, (2005) praise compliments the child's behavior, increases the behavior that it follows, increases a child's self-esteem, and adds warmth to the interaction.

Praise is used frequently as a method of positive reinforcement, as the social acceptance implicated with praise is believed to be reinforcing, thus causing specific behaviors to increase. With respect to praise, one prominent view is that praise routinely enhances intrinsic motivation of children and adults alike (e.g., Anderson, Manoogian, & Reznick, 1976; Cameron & Pierce, 1994). The frequency of praise tends to be positively correlated with self-perceptions of ability among elementary school children (Blumenfeld, Pintrich, Meece, & Wessels, 1982), which in turn can enhance feelings of pride and expectations for success in the future (Weiner, 1992). Praise has also been shown to increase children's desire to engage in the praised task (e.g., Anderson et al., 1976). Meta-analytic studies reviewing the effects of rewards on motivation have shown that praise tends to increase intrinsic motivation across a variety of dependent measures (Cameron & Pierce, 1994; Deci, Koestner, & Ryan, 1999). Finally, as has been discussed above, praise has been found to be influential in the behavior modification literature, where programs are developed to involve the systematic and contingent use of praise over time for the purpose of reducing classroom behavior problems and encouraging students to learn. Such work has demonstrated that praise can be a successful technique for influencing a variety of classroom behaviors, from abiding by classroom rules and

engaging in positive peer relations to paying attention to teacher instructions and developing academic skills.

There are many theoretical mechanisms that may account for these positive effects of praise. One such potential mediating variable is self-efficacy, or personal beliefs about one's capabilities to achieve particular outcomes (Bandura, 1997). Although self-efficacy is strongest when it arises from one's own accomplishments, verbal persuasion can be used to convince others that they do in fact have the ability to succeed, which should enhance self-perceptions of efficacy (Bandura, 1997). According to the cognitive evaluation theory, which focuses on competence and autonomy as basic psychological needs, most statements of praise serve to enhance children's perceptions of competence, which in turn positively impact intrinsic motivation (Deci & Ryan, 1985; Ryan & Deci, 2000).

Praise also may be effective simply because it produces a positive mood (Delin & Baumeister, 1994) or because it makes people feel good about themselves (Blumenfeld et al., 1982). In addition, because of the positive interpersonal dynamic that typically accompanies praise, children may continue to exhibit praised behavior to sustain the attention and approval of the evaluator, a more extrinsic type of motivation.

Although a great deal of research has focused on praise, some research (e.g., Parpal & Maccoby, 1985; Wahler & Bellamy, 1997) has looked at types of attention other than praise that may affect child compliance. For example, Parpal and Maccoby (1985) found that responsive play, in which mothers used descriptions, imitations, and praise, leads to child compliance significantly more often than when mothers did not use these techniques. According to Wahler and Bellamy (1997), responsive parenting

produced synchrony and reciprocity. Thus, children reciprocated the skills that they learned from their parents. From this, one may argue that not only praise, but also other forms of attention may influence child behavior, and especially child compliance. Different aspects of attention, such as enthusiasm, may be the key to increasing appropriate behavior. For example, a study by Burts, McKinney, and Burts (1985) found that when teachers frequently used enthusiasm with typical children, the children were "more attentive, interested, and responsive" (p.19). Teachers who did not use enthusiasm as frequently had children who were seen as inattentive and unresponsive. Thus, enthusiasm may be associated with compliance and increasing general positive behavior for normative children in a group setting.

Volunteer-recipient relationship/Mentor-mentee relationship

While volunteerism covers a wide range of activities, mentoring on a volunteer basis should also be considered when discussing volunteerism (Rhodes, 2002). Studies have shown benefits related to adult-child mentoring relationships, including positive mentee outcomes in education/work, problem behavior, psychological well-being, and physical health (DuBois & Silverthorn, 2005). Available theory and research suggest the potential importance of several characteristics of mentoring relationships. These characteristics include the volunteer mentor's role in the youth's life, frequency of contact between mentor and youth, emotional closeness in the relationship, and relationship duration (Rhodes, 2002). The frequency of contact between mentors and youth represents a potentially important influence on the extent to which theoretically relevant processes of change have the opportunity to occur in relationships, including role modeling, meaningful dialogue and conversation, and skill development (Rhodes, 2002).

In accordance with this view, greater amounts of time spent together has been found to be associated with higher reported levels of emotional and instrumental support in mentoring relationships (Herrera, Sipe, & McClanahan, 2000) as well as an increased likelihood of the youth nominating the mentor as a significant adult in his or her life (DuBois et al., 2002). The degree to which feelings of closeness exist between the mentor and youth has been widely regarded as an important component of mentoring relationships (Greenberger, Chen, & Beam, 1998; Rhodes, 2002). Within a model proposed by Rhodes (2002), the development of an emotional bond characterized by mutuality and empathy is a necessary condition for mentors to possess so as to have a positive influence on youth. Several studies have found support for an association between relationship closeness and positive youth outcomes (Chen, Greenberger, Faruggia, Bush, & Dong, 2003; Parra, DuBois, Neville, Pugh-Lilly, & Povinelli, 2002). As such, it was hypothesized that the volunteers in this study would demonstrate an increased knowledge of child directed skills and that they would use these skills during behavior observations with child mentees.

Rationale for Present Study

Attachment theory suggests that sensitive and responsive parenting helps the young child to develop a stable attachment to his or her parent based on a belief that the parent will respond to the child's needs (Bell & Eyberg, 2002). A stable attachment relationship is important in promoting optimal social, emotional, and behavioral development in children (Earls, 1980). Therefore, CDI aims to improve parent-child and teacher-child interactions to facilitate a secure attachment. While the CDI component of PCIT has been implemented with parents, and to a lesser extent, with teachers during

TCIT, no research thus far has implemented the CDI component with community service volunteers. Though studies indicate some effectiveness of the interactions and development of relationships between volunteers, such as mentors with youth, no study as of yet has implemented components of the CDI segment of PCIT with volunteers interacting with youth. The primary aim of the present study was to develop a method to train community service volunteers to increase positive interactions and to develop positive relationships with the youth served by community-based agencies. The present study provides preliminary data for a modified child-directed interaction component of PCIT.

Hypotheses

The present study addressed the question of whether a modified CDI teaching session could be taught to volunteers working with children at a community agency. Based on previous research focusing on the CDI portion of PCIT and previous research evaluating the motivation of volunteers, the following hypotheses were proposed for the purposes of knowledge evaluation as well as a detailed analysis of skill acquisition, and volunteer satisfaction for training:

Knowledge Evaluation

1. Volunteers who received the CDI didactic material in a group setting (including participants in both the Individual and Group VCIT components) would demonstrate improvements in their knowledge of CDI from pre-training to post-training to follow-up.

Multiple Baseline Analysis of Skill Acquisition

2. Volunteers who received the individual coaching (Individual VCIT) would engage in more prosocial and fewer negative behaviors.
    a. Specifically, frequencies of participant prosocial behaviors, as measured by a DPICS “do” composite score (i.e., total sum of labeled praises, reflections, and descriptions) would be higher during training and maintenance than at baseline.
    b. Frequencies of negative composite scores for volunteers exposed to training, as measured by a Dyadic Parent-Child Interaction Coding System (DPICS; Eyberg, Nelson, Duke, & Boggs, 2005) “don’t” composite score (i.e., total sum of questions, criticisms, and those commands-not relevant to equine assisted activities), would be lower during training and maintenance than at baseline.

Volunteer and Child Satisfaction

3. Participants would report a high level of satisfaction with the VCIT program and volunteer reports of satisfaction would differ based on condition as measured by the Training Attitude Inventory (TAI), a modified version of the Therapy Attitude Inventory (TAI; Eyberg, 1993; Eyberg & Johnson, 1974).
    a. Specifically, volunteers who received Individual VCIT would report higher satisfaction scores relative to volunteers who only received Group VCIT.
4. Child reports of interactions with volunteers on the Volunteer Evaluation Inventory (VEI) would indicate that children working with volunteers in the

Individual VCIT condition would report higher VEI scores than children working with volunteers who received Group VCIT.

The purpose, overall, for the program evaluation was to determine not only the amount of knowledge participants acquired through the teaching and training sessions, but also to determine participant and child satisfaction with the program along with the reliability of the newly developed as well as modified measures used in this study.

Method

Participants

To be included in the study, participants had to be registered with the program director as volunteers at Storybook Farm and had to indicate their interested in participating in the teaching component of the study, and, more specifically, the in-vivo training component of the study. Participants for the study were volunteers at Storybook Farm, an organization providing horse riding experiences and arts and crafts activities to a mixed clinical sample of children ranging in age between 3 and 15 years old. The volunteers included both males and females, most of whom were volunteering as part of a service learning component for a college-level class.

Two groups of participants were included in this investigation. One group of participants received training in a large group setting (the Group VCIT condition). As will be discussed in more detail below, participants in the Group VCIT condition were involved in a teaching component where they received information about the CDI skills. This group included participants ranging in age from 14 to 50 years of age, with an average age of 21.52 (*SD* = 5.62). Additionally, 20 participants (60%) indicated their current major as being one which may involve some interaction with children (e.g., psychology, early childhood education). See Table 1 in Appendix A for additional demographic information.

The Individual VCIT condition received the same teaching component as the Group VCIT condition as well as in-vivo coaching of the implementation of these skills

throughout the semester-long program. This sample consisted of 5 females (all Caucasian) between the ages of 18 and 22 with an average age of 20 (*SD* = 1.58). Three of the five participants indicated their current majors as being one which may involve some interaction with children. See Table 2 in Appendix A for additional demographic information.

All volunteers were assigned by the Storybook Farms Director to one of three jobs: a talker, a support person, or a horse leader. *Talkers* were given the task of walking alongside the child as he/she rode the horse. They were the primary individuals who interacted with—and talked to—the child. Volunteers who were assigned as *support people* were given the job of walking alongside the child as he/she rode on the horse so as to provide physical support for children who required additional assistance while riding; therefore, those children not requiring additional support did not have a support person present. *Horse leaders* lead the horse around the rink as children engaged in various horse-related activities (e.g., getting the horse to walk and trot, identifying types of horses, and picking up toy versions of those horses). Thus, any given child had either two or three volunteers interacting with him or her at a time, depending on their individual circumstance (e.g., medical condition, age). For the purposes of this study, only five volunteers who were assigned to be talkers were selected to receive Individual VCIT.

This study also included archival data of children's reports of their interactions with the volunteers with whom they interacted throughout the semester. These data were gathered by Storybook Farm so as to obtain information regarding the interactions and relationships between the children and their volunteers. Children were selected by the Storybook Farm program director to participate in the semester-long program and

included 21children between the ages of 3 and 15. The inclusion of this data, in the present study, allowed for the presence of another measure for program satisfaction, thus allowing for more variability in analyzing satisfaction of the program (e.g., client child reports in addition to the aforementioned participant reports).

Materials and Procedures

Several measures were used in this study including CDI knowledge evaluation measures, behavioral observations of volunteer-child dyads, self-report measures from volunteers, child reports of their alliance with volunteers, and a demographics questionnaire.

Knowledge Evaluation Measures

Baseline CDI Quiz and Post-Teaching CDI Quiz. This quiz was developed to assess the knowledge of volunteer participants prior to and following exposure to the initial CDI training session. The assessment consisted of 10 multiple-choice questions evaluating various aspects of the CDI skills, including questions regarding the PRiDE (Praise, Reflect, Describe, Enthusiasm) skills as well as negative verbalizations. This measure yields a total score of 10, with higher scores reflecting a higher number of items correct. In the current study, the Baseline CDI Quiz demonstrated an internal consistency score of .62, and the Post-Teaching CDI Quiz demonstrated an internal consistency score of .75.

CDI Quiz 2. This quiz was developed to assess participant knowledge of descriptions, reflections, as well as labeled and unlabeled praises through the use of an open-ended evaluation where volunteers were asked to write statements using one of the aforementioned verbalizations based on a scenario provided to them. This measure yields

a total score of 10, with higher scores reflecting a higher number of items correct. Internal consistency for CDI Quiz 2 yielded a score of -.12. Further analysis was done in an attempt to determine if significant changes in internal consistency resulted. During this evaluation, it was found that 5 specific measure items (items #1, # 5, # 7, # 9, and # 10) demonstrated poor item-total correlations and while the removal of these items resulted in higher internal consistency, this reliability value was still not adequate for further evaluation (see Table 3 in Appendix A). Therefore, the lower estimates found with regard to internal consistency are concerning and subsequently led to questioning whether this measure should be used in the study's further analyses. As will be discussed below, acceptable reliability coefficient estimates for internal consistency should range from alphas of .60 to as high as .90 (e.g., George & Mallery, 2003; Taub, 1994). Since the internal consistency estimate found for CDI Quiz 2 in the above analysis fell below the acceptable reliability standard, it was therefore decided to exclude CDI Quiz 2 in the remaining analyses conducted on program evaluation for this study.

CDI Homework. This activity was given to the participants so as to evaluate their ability to identify statements provided to them as a behavior description, reflection, labeled praise, or unlabeled praise through the use of fill-in-the-blank questions. This measure yields a total score of 14, with higher scores reflecting a higher number of items correct. Internal consistency for the homework was found to be .99.

CDI Quiz 3. This quiz was developed to evaluate participant knowledge of the general CDI skills and positive verbalizations through the use of multiple-choice and fill-in-the blank questions asking participants to identify whether a statement presented to them, on the paper, was a behavioral description, reflection, labeled praise, or unlabeled

praise. This measure yields a total score out of 10, with higher scores reflecting a higher number of items correct. Internal consistency for this quiz was found to be .89.

Behavioral Observations

Dyadic Parent-Child Interaction Coding System (DPICS; Eyberg, Nelson, Duke, & Boggs, 2005). Participants in the Individual VCIT condition completed live DPICS III observations at pre- and post-training assessments. The DPICS is a behavioral coding system designed for use in both research and clinical settings. The DPICS categories serve as markers of parent-child relationship quality expressed through overt verbal and physical behaviors during social interactions that vary in the degree of control required by the parent. Researchers have adapted the DPICS to record adult-child interactions occurring in the home and classroom as well as the clinic setting (Eyberg et al., 2005). The Abridged Version of the DPICS (the version of DPICS used clinically) was implemented in this study. Coding sheets included the following 9 categories: negative talk, direct command, indirect command, labeled praise, unlabeled praise, question, reflective statement, behavioral description, and neutral talk.

Investigations of the DPICS have demonstrated evidence for the reliability and validity of the coding system with 3- to 7-year-old children, both clinic referred for ODD and non-referred children, as well as standardization data for the same sample (Bessmer, 1998). Bessmer (1998) assessed reliability using percent agreement, intraclass correlations, and Cohen's kappa. Overall, the DPICS categories were shown to have acceptable reliability estimates (average r = .91 for parent categories and r = .92 for child categories). The DPICS also demonstrated convergent validity with measures of child behavior problems, parental locus of control, and parenting stress for mothers and fathers

(Eyberg et al., 2005). Significant differences in code frequencies between dyads that included a behavior-disordered child and those that did not include a behavior-disordered child provide evidence for the discriminative validity of the DPICS (Bessmer, 1998).

With respect to the reliability of the DPICS using live coding, Bessmer (as cited in Eyberg, Bessmer, Newcomb, Edwards, & Robinson, 1994) reported that Pearson product-moment correlations, percent agreement, and Cohen's kappa were all computed for all parent behavioral categories, with Pearson product-moment correlations ranging from .25 to .99, percent agreement ranging from 25% to 87%, and kappa ranging from .17 to .82. Thus, these data show that most of the parent categories that occurred with sufficient frequency demonstrated variability with regard to live DPICS coding, ranging from poor to adequate inter-rater reliability when coded live. Although there is some indication of adequate inter-rater reliability, there is concern regarding the lower end of the inter-rater reliability range. As such, this current study also assessed inter-rater reliability (using Pearson product-moment correlations and percent agreement analyses) and conducted weekly training sessions to discuss coding issues to help protect from observer drift in this present study given the wide range of kappa reported when coding live.

DPICS Coding. For this study, the DPICS observations were performed live, with the volunteer-child dyad being observed by reliable coders during volunteer-child interactions. All interactions were coded while the children engaged in equine-assisted activities (i.e., the child is on horseback and the volunteer walks alongside giving instructions). The verbalizations of the Individual VCIT participant and her respective support persons were coded for a 5-minute period.

Before engaging in live coding, all observers successfully completed training procedures for the DPICS in accordance with the recommendations provided by the *Manual for the Dyadic Parent-Child Interaction Coding System (3rd Edition;* Eyberg et al., 2005*).* Standard training consists of a minimum of 30 hours of didactic training in the DPICS, which includes reading the coding manual, studying and successfully completing paper and pencil training exercises and quizzes, and coding transcripts of actual parent-child interactions. After completing the workbook exercises, observers code video-recordings with a transcript, are given feedback from a trained coder, and finally code criterion video-recordings to evaluate their level of mastery. The coders are considered successfully trained when they achieve a minimum of 80% agreement with correct coding of a criterion video through percent agreement (assessed through code by code agreement). In addition, training sessions are held on a weekly basis by a faculty member and graduate student with expertise in the DPICS, during which observers discuss coding issues and practice coding categories that they consider difficult. Weekly training sessions occurred throughout the duration of the study to prevent observer drift. All coders for this study successfully completed the training described above. In addition, inter-rater reliability was assessed, through percent agreement and Pearson correlation, of the coded live observations conducted by four coders assigned to code both the talker's and the support people's verbalizations for each session. An ad-hoc decision was made to code the verbalizations of the support people to determine the frequency and type of verbalizations they made during the same 5-minute coding period as those participants in the Individual VCIT condition and the potential influence these verbalizations may have had on the verbalizations of the five participants in the Individual VCIT condition. The

DPICS observations yielded frequency data for 9 behavioral categories. Composite categories were calculated for the "do" skills (i.e., praise, reflections, descriptions) and the "don't" skills (i.e., commands, criticisms, and questions). Thus, two composite categories of positive and negative behaviors were used in the analyses. Inter-rater reliability for the DPICS codes will be presented in the results section.

Volunteer Self-Report Measures

Volunteer Functions Inventory (VFI; Clary, Snyder, & Ridge, 1992). The VFI, a 30-item self-report questionnaire, measures the motivation of individuals to engage in volunteer activities. This questionnaire uses a seven-point Likert scale ranging from *not at all an important/accurate motivator* (1) *to a very important/accurate motivator* (7) to indicate the importance of each item for that individual. The reliability of the VFI scales has been assessed using both internal consistency estimates and test-retest correlations. Across diverse samples, the internal consistency has been good, with values of coefficient alphas above 0.80 (Clary et al., 1992). Allison et al. (2002) report coefficient alphas for the VFI scales to be adequate, ranging from 0.75 to 0.87. Thirty-day test-retest correlations for scale scores have been reported to range between 0.64 and 0.78, indicating satisfactory test-retest reliability. For the current sample, internal consistencies for the VFI scales were strong: VFI Career ($\alpha = .79$), VFI Social ($\alpha = .87$), VFI Values ($\alpha = .79$), VFI Understand ($\alpha = .88$), VFI Enhance ($\alpha = .85$), and VFI Protect ($\alpha = .78$).

The construct validity of the VFI has been examined using factor analysis. In exploratory factor analyses of college students and middle-aged volunteers, Clary et al. (1998) identified six interpretable factors that corresponded to the six motives proposed

by Clary et al. (1992). Confirmatory factor analyses of the VFI data indicated that the best fitting model was the six factor model (Clary et al., 1998). Okun, Barr, and Herzog (1998) tested three models of volunteer motivation using VFI data collected on two samples of older volunteers. They found that the six factor model provided a much better fit to the data than either a single factor or a two-factor model. Overall, factor analyses of the VFI provide support for the construct validity of the VFI.

The criterion validity of the VFI has been examined by testing the prediction derived from the functional approach that volunteer interest is highest when there is a match between the motive that is most salient for a volunteer and the theme emphasized in a persuasive appeal for volunteers. Consistent with this prediction, Clary et al. (1998) demonstrated that participants reported that thematic appeal to volunteer was a function of the degree to which they were motivated by the theme presented. In the current study, the Total scale score for the VFI was used in the analyses. Higher scores on the scale reflect higher motivation for the volunteers.

Training Attitude Inventory 1 and 2. These inventories were developed for this study to measure volunteer satisfaction with the Individual VCIT and Group VCIT protocols. Both the TAI-1 and the TAI-2 appeared to be face valid, but because they were created for this study, there were no data suggesting the reliability of these two instruments prior to conducting this study. The TAI-1, a 9-item measure, and the TAI-2, a10-item measure, were designed to assess volunteer self-report for the impact of training on volunteers' skills and child behavior on a 5-point Likert-type scale ranging from 1 (*dissatisfaction with training*) to 5 (*maximum satisfaction with training*). While most questions on both measures are the same, they differ with regard to some questions that

were better suited to be asked only either pre-teaching or post-teaching, but not at both time periods. Two versions of this measure were created as a means of assessing participant satisfaction with training immediately following the two training sessions at the beginning of the semester based on the information they had recently received as well as after a longer period of time when participants were able to implement some of the strategies and suggestions provided to them with the client children. Therefore, the TAI-1 was administered immediately following the two teaching sessions at the beginning of the session and the TAI-2 at the end of the semester. For the TAI-2, one item on the TAI-1 was removed (Item 9): If you are a returning volunteer, please answer this item: This training would have been a beneficial component during the prior training I received at Storybook Farm: (1 – *Disagree Very Much* to 5 - *Agree Very Much*). The two items on the TAI-2 that were not on the TAI -1 include: (Item 9). The handouts that were provided to me on the Child-Directed Interactions: (1 – *Hindered much more than helped* to 5 – *Helped very much*); and (Item 10) I used the handouts that were provided to me: (1 – *Never* to 5 - *All the time*).

Both inventories are based on the Therapy Attitude Inventory (TAI; Eyberg, 1993; Eyberg & Johnson, 1974), a 10-item self-report measure of parental satisfaction with treatment (Brestan, Jacobs, Rayfield, & Eyberg, 1999). The TAI was developed specifically for use with behavioral parent training programs such as PCIT. Caregivers rate items on a 5-point Likert scale ranging from 1 (*dissatisfaction with treatment or worsening of problems*) to 5 (*maximum satisfaction with treatment or improvement of problems*). The TAI measures satisfaction with both the process and outcome of treatment and has good evidence for reliability and validity. The TAI has demonstrated

high internal consistency (α = .88) and has demonstrated sensitivity to treatment, with higher scores post-treatment than pre-treatment. The modified TAI used in this study measure yields a total score with higher scores reflecting higher training satisfaction. In the current study, the TAI-1 total score demonstrated an internal consistency score of .70 and the TAI-2 total scale demonstrated an internal consistency score of .88.

Child Report of Alliance with Volunteers

Volunteer Evaluation Inventory. This questionnaire was developed for use at Storybook Farm. Two versions of this questionnaire were developed, a younger version (The VEI-young), for children 7 years and younger, and an older version (The VEI-old), for children older than 7 years of age. The 12-item questionnaire was designed to obtain child report of their interaction and relationship with volunteers on a 7-point Likert-type rating scale ranging from 1 (*Does Not Correspond at All*) to 7 (*Corresponds Exactly*). A smiley face 7-point Likert-type rating scale was used to assist children who had difficulty rating their volunteers with the numeric scale. This questionnaire obtained child perceptions of volunteer behaviors. Specifically, volunteer demonstration of general attention, praise, descriptions, reflections, and enthusiasm was measured by the VEI. In addition, child reports of volunteer-child alliance are also investigated through this questionnaire. These measures yielded a total score with higher scores reflecting higher child satisfaction with their volunteer relationship. In the current study, the VEI-young demonstrated an internal consistency score of .85 and the VEI-old demonstrated an internal consistency of .80.

Demographics

Demographics Questionnaire. This questionnaire is designed to gather information related to volunteer age, gender, and race. In addition, the demographics questionnaire asks questions regarding college enrollment, college courses taken related to children, prior experiences working with children, and reason for volunteering at Storybook Farm.

Procedure: Project Development and General Design

After obtaining IRB approval for the project, participants were recruited from Storybook Farm. Participation in the research portion of the project was not required for the standard training program. That is, 38 volunteers received the standard Storybook Farm training, all of whom agreed to participate in this study.

All 38 participants were asked to complete pre-teaching questionnaires and they completed two group teaching sessions during which they received a modified version of the CDI training, modeled after the PCIT protocol (Eyberg, 1988). As will be discussed below, following each teaching session, and at the end of the semester-long program, all 38 participants were again asked to complete program evaluation measures.

Following the group teaching sessions, four of the participants were randomly selected to participate in the in-vivo, Individual VCIT training component. Due to designated days and times, as well as program design for Storybook Farm, random assignment of the volunteers was not feasible. Specifically, volunteers were scheduled to work one day a week (i.e., Tuesday, Wednesday, or Thursday). Based on the scheduling of the graduate student trainers, those participants in the Individual VCIT group were chosen from two out of the three days. Due to limited participation at Storybook Farm,

few data were obtained for one of the four participants assigned to the Individual VCIT condition. A fifth participant was selected, after five weeks of data collection had started, to obtain additional data. Given her later start (and the reduced length of time in which she participated) and that the data for this participant demonstrated a consistent change in positive and negative verbalizations, as compared to the other four participants, this participant is considered to be an anomaly. The participants in the Individual VCIT condition were fairly representative of the Group VCIT sample with regard to their major, college enrollment, year in college, and age. However, the Individual VCIT participants were not a good representation of gender or race as all five were female and Caucasian. The remaining 33 participants were assigned to the Group VCIT condition. They did not receive the in-vivo component of training (received by participants in the Individual VCIT component) but were asked to complete follow-up measures at the end of the semester-long Storybook Farm program as were the 5 participants in the Individual VCIT condition. The data for each group was analyzed separately and will be discussed in greater detail below. Thus, this quasi-experimental study consisted of two parts: a program evaluation component, which included participants from both the Group VCIT and Individual VCIT components, and a multiple-baseline experimental component, which involved only the 5 participants involved in the Individual VCIT component.

Procedure: Group Training

The pre-training component for all 38 participants was performed over three sessions comprising of one session of demographic and volunteer motivation data collection, and two teaching sessions. Specifically, during Storybook Farm's volunteer orientation session (which is considered the first session of data collection for this

project), participants filled out the demographic questionnaire and the VFI. Additionally, during this session, the Individual VCIT participants were randomly chosen. The following week, the first teaching session (second session of data collection) was conducted with all 38 participants. This teaching session included a multiple-choice pre-training quiz (Baseline CDI Quiz), the CDI lecture to introduce the skills involved with the CDI component of PCIT as modified for this study, handouts related to the CDI skills, a multiple-choice post-teaching quiz (Post-Teaching CDI quiz), and a fill-in-the-blank CDI homework sheet to assess participants' knowledge of positive verbalizations. It should be noted that the Baseline CDI Quiz was given to the 38 volunteers prior to the CDI skills training and the Post-Teaching CDI Quiz was administered during the same session following the CDI skills training. The second training session (third data collection session) consisted of a review of the CDI homework, a fill-in-the-blank quiz to evaluate participants' knowledge of interaction skills with children (CDI Quiz 2), the TAI-1 to assess participants' satisfaction with the training, and the distribution of a handout containing horse-related positive verbalizations that participants could use while interacting with child clients. Please refer to Figure 1 in Appendix N for a detailed description of the session-by-session measures utilized in this study.

Individual VCIT: Baseline DPICS Observation

A baseline DPICS behavioral observation was conducted for the four participants initially selected for the Individual VCIT condition. The participants were observed by reliable DPICS coders during a volunteer-child interaction with one of two confederates (the Program Director's daughters) in the activities provided as part of the program. The two confederate children served as the "client" for the Individual VCIT participants at

baseline because none of the children served by the agency were available for observation during the training period. Parental permission was obtained prior to the start of this study from the program director to involve her two daughters, based on their assent, as confederate children for this study.

Procedure: In-Vivo Individual Training Sessions

After completing the pre-training assessments and teaching sessions, participants in the Group VCIT condition continued with normal Storybook Farm activities, while those in the Individual VCIT condition began their intensive training phase. The training sessions followed a multiple baseline design, where each participant was presented with an in-vivo CDI training condition at different stages following the completion of another participant's training sessions. During this phase, each participant was observed, for five minutes, during a baseline component, by undergraduate coders who recorded the verbalizations of the volunteer as they interacted with their child client. Prior to the beginning of the observation, volunteers were given the directions, "Please engage in Storybook Farm's developed program skill set with the child as planned." The baseline observations ranged in number of sessions based on several factors (e.g., days and times the participant volunteered, stability of baseline data, number of data points obtained for each participant).

Each participant in the Individual VCIT condition was trained by one of two graduate students with PCIT experience. It should be noted that each session, involved a 5-minute coded observation period followed by a 15-minute coaching, which occurred both in the first and second hours of the Storybook Farm program for four of the five participants, and in the first, second, and third hour for the participant who entered this

component later. Therefore, in a day, each participant was involved in a total of 10 to 15 minutes of coding and 30 to 45 minutes of coaching. Each session involved a brief review of the material from the previous session prior to the next training session. Following the review period, each participating volunteer engaged in the 5-minute coded observation period. Prior to the beginning of the observation, volunteers were told, "Please engage in Storybook Farm's developed program skill set with the child as planned." During the in-vivo training sessions, each participant was coached for 15 minutes on the use of the CDI skills. During each training session, the trainers focused on shaping the appropriate use of a particular PRiDE (Praise, Reflect, Describe, and Enthusiasm) skill and decreased use and/or elimination of Negative Talk (e.g., Criticisms, Questions, and non-essential Commands). Participants were encouraged to use the skills as they were interacting with the children in the activities provided by the Storybook Farms program. Additionally, prior to engaging in the next session's in-vivo coaching with the volunteer, the graduate student trainers reviewed observational data for each of the volunteers so as to tailor training accordingly.

Procedure: Post-training

The volunteers in both the Individual VCIT and the Group VCIT conditions were given the TAI-2 to complete. All 38 participants were also given a follow-up quiz, CDI Quiz 3, to assess their knowledge of the CDI skills they were introduced to during the first training session at the beginning of the semester. The volunteers in the Individual VCIT group also completed a second live DPICS observation during an interaction with the confederate child. Thus, the pre- and post- observation was conducted with the same

confederate child. Please refer to Appendix N for a detailed description of the session-by-session measures utilized in this study.

Procedure: Archival Data

Archival data were obtained from the Storybook Farm program for the VEI. Specifically, as part of the program protocol, children participating in the Storybook Farm program were asked to complete the VEI-Older Version or VEI-Younger Version, based on their age and/or cognitive level, at the end of the semester-long program. No identifying child information was available as questionnaires were identified by volunteer participant number.

Data Analyses

Given that several measures used in this present study were either newly developed or modified versions of existing questionnaires, their reliability was assessed. Reliability of measures had to meet a certain standard. In creating or modifying measures, Meltzoff (1998) notes that it is important to investigate the reliability of these measures. The examination such of psychometric properties allows for the determination of the accuracy and the extent to which a measure can be utilized in current and subsequent research studies (Wilkinson & APA Task Force on Statistical Inference, 1999). According to Kazdin (2003), reliability refers to the consistency of the measure being evaluated. Reliability can look into consistency of measures over time, between different parts of the same measure, and across raters. With regard to the measures in this study, internal consistency was used so as to evaluate the consistency and/or homogeneity among the items that make up each of the measures. Therefore, when considering internal consistency for unidimensional measures, an adequate to excellent

internal consistency for the overall measure is expected, as items of a unitary construct is being analyzed (Kazdin, 2003). While the values of reliability coefficients range from 0 to 1, there seems to be a range between which these coefficients are considered to be adequate. While some (e.g., George and Mallery, 2003) suggest that a reliability coefficient of .70 is acceptable, others such as Taub (1994) suggest a higher acceptable coefficient of .80. However, it seems that, generally, adequate to excellent reliability coefficients range between .60 and .90 (George & Mallery, 2003).

Preliminary analyses were conducted to determine descriptive statistics on the knowledge evaluation measures. In addition, Missing Values Analyses were conducted to fill missing data points. Percent agreement and Pearson correlation analyses were conducted to determine inter-rater reliability on the live DPICS observations performed. Pearson correlation and Point Biserial correlations were also performed to determine what relationships existed, if any, between demographic variables and treatment outcomes. Paired samples t-tests were conducted to examine differences between pre- and post-training as well as follow-up functioning for all participants as well as those volunteers receiving Group VCIT and those receiving Individual VCIT. Specifically, paired samples t-tests and Wilcoxon Signed Ranks tests were conducted to determine participant percent scores on the multiple-choice items on the Baseline CDI Quiz and Post-Teaching CDI Quiz as well as Baseline CDI Quiz and CDI Quiz 3 to determine the amount of CDI skill knowledge participants maintained from prior to teaching to immediately after and from before CDI teaching to the end of the semester. Paired samples t-tests and Wilcoxon Signed Ranks tests were also conducted to determine participant percent scores on the multiple-choice items on the Post-Teaching CDI Quiz

and CDI Quiz 3 for the participants to determine the amount of CDI skill knowledge participants maintained from the beginning of the semester to the end (Hypothesis 1). The investigation of treatment effects on volunteer behavior as measured by the positive and negative DPICS verbal categories was also conducted through a detailed analysis of the behavioral observations conducted through the multiple baseline design (Hypothesis 2). Independent samples t-test and Mann-Whitney U test analyses were conducted to determine volunteer attitudes towards training at post-treatment and follow-up (Hypothesis 3). Descriptive statistics analyses were performed to ascertain child reports of their relationship with their volunteers both in the Group and Individual VCIT conditions (Hypothesis 4). A Bonferroni correction was conducted to account for the large number of individual tests being conducted, which may result in Type I error.

Results

Preliminary Analyses

Prior to conducting the primary study analyses, preliminary analyses were conducted. Descriptive statistics were conducted on Baseline CDI Quiz, Post-teaching CDI Quiz, CDI Quiz 3, and CDI Homework. See Table 4 in Appendix A for descriptive statistics.

Preliminary analyses were also conducted to ensure a representative dataset and to gain a better understanding of the data. For all analyses, missing data were managed by casewise deletion, such that for a given analysis, if a participant was missing three or more data points included in that analysis, he or she was eliminated prior to conducting the analysis; however, if the participant was missing less than three data points on the questionnaire(s), the Missing Values Analysis (MVA) was conducted to fill in the missing data points using SPSS. The data for which MVA were conducted can be categorized as missing completely at random, as the missing data were not obtained as a result of participant absence or missing items on the back of the questionnaire, of which they were not aware; therefore, expectation maximization MVA was conducted. It should be noted that the participants were removed only from relevant analyses for which their data was missing, but included in those analyses for which data was available.

Missing participant data were found for the following questionnaires and evaluation measures: Baseline CDI Quiz, Post-teaching CDI Quiz, CDI Homework, CDI Quiz 3, TAI -1, and TAI-2. Specifically, one participant (2.6%) was removed from Baseline CDI Quiz and Post-teaching CDI Quiz due to the participant's absence. Data for

four participants (10.5%) were deleted from the CDI Homework data, and 6 participants (15.8%) were removed from CDI Quiz 3 data due to absence. With regard to TAI-1, three participants (7.8%) were deleted due to their absence. Data for six participants (15.8%) were removed on the TAI-2 due to absence and two participants (5.3%) were removed as a result of having missing data for three or more items. No other data was found to be missing.

Percent Agreement and Pearson Correlation Reliability Analyses. Percent agreement was calculated for 30% of the DPCIS-III Abridged Version observations. The overall percent agreement (Agreement/(Agreement + Disagreement)) was conducted for those interactions randomly selected. The interactions were coded for the three hours that training sessions were conducted at Storybook Farm, on different days, for participants engaging in the Individual VCIT condition. The average percent agreement values for participant-child observations were: 76% at Hour 1, 73% at Hour 2, and 88% at Hour 3. The overall average percent agreement value for participant-child observations based on observation hour was found to be 79%. With regard to each participant, the overall percent agreement for each participant was found to be: 68% (Participant D), 69% (Participant C), 83% (participant A), and 90% (Participant E). The overall average percent agreement value for participant-child observations for all of the Individual VCIT condition participants was found to be 78%. With respect to the Pearson correlation reliability analysis, the Pearson correlations value for participant-child observations are shown in Table 5 in Appendix A. Additionally, separate Pearson correlations for positive and negative verbalization composites are shown in Tables 6 and 7, respectively, in Appendix A. Similar to percent agreement results, Pearson correlation reliabilities

indicate results that are not significant for particular observations for Participants C and D.

Correlational Data

A preliminary analysis was conducted to determine what relationships existed, if any, between demographic variables and treatment outcomes. Bivariate Pearson product-moment and Point Biserial correlations were calculated in order to detect such relationships and to understand how all the variables were related to one another for all participants. The following variables were included in the analysis: participant age, gender, race, college enrollment, number of years in college, previous child work experience, and college course service learning requirement. Bonferroni corrections were used to control for family-wise errors. With respect to Group VCIT, a significant correlation was noted for service learning and VFI Protect subscale, such that higher scores on the VFI Protect subscale were related to those participants reporting not volunteering for service learning credit while lower scores were related to those participants volunteering as part of a service learning course requirement, $r = .547$, $n = 33$, $p = .001$. It should be noted that correlational analyses could not be conducted for the Individual VCIT group due to the small sample size and the constancy of the variables being used in these analyses.

Hypothesis 1

The hypothesis that participants who received the CDI didactic material in a group setting (Group VCIT and Individual VCIT participants combined) would demonstrate improvements in their knowledge of CDI from pre- to post-training and at follow-up was assessed using paired samples t-tests. Specifically, paired samples t-tests

were conducted to determine participant percent scores on the multiple-choice items on the Baseline CDI Quiz and Post-Teaching CDI Quiz as well as Baseline CDI Quiz and CDI Quiz 3 to determine the amount of CDI skill knowledge participants maintained from prior to teaching to immediately after and from before CDI teaching to the end of the semester for participants in the Individual VCIT condition. The results of the paired samples t-tests revealed significant differences across time between the various combinations of quizzes. Specifically, when considering all participants (Group VCIT and Individual VCIT combined) a significant difference was noted between Baseline CDI Quiz (M = 63.51, SD = 18.44) and Post-Teaching CDI Quiz (M = 89.189, SD = 8.94), $t(36) = -8.19$, $p < .01$. A significant difference was not found between Baseline CDI Quiz and CDI Quiz 3. Paired samples t-tests were also performed to investigate participant percent scores on the various quizzes for those participants only in the Group VCIT condition. Similar to the findings discussed above, a significant difference was found between Baseline CDI Quiz (M = 60.94, SD = 17.29) and Post-Teaching CDI Quiz (M = 88.13, SD = 8.96), $t(31) = -8.07$, $p <.01$. A significant difference was not found between Baseline CDI Quiz and CDI Quiz 3 in the Group VCIT condition.

Given the small sample size in the Individual VCIT condition, a Wilcoxon Signed Ranks test was also conducted to determine the amount of CDI skill knowledge these participants maintained at different time periods. For the Individual VCIT condition, significant differences were not seen between the Baseline CDI Quiz and Post-teaching CDI Quiz test nor were significant differences found between the Baseline CDI Quiz and CDI Quiz 3.

Paired samples t-tests and Wilcoxon Signed Ranks tests were also conducted to determine participant percent scores on the multiple-choice items on the Post-Teaching CDI Quiz (administered immediately following CDI Teaching Session 1) and CDI Quiz 3 (administered 11 weeks following the Post-Teaching CDI Quiz) for all participants to determine the amount of CDI skill knowledge participants maintained from the beginning of the semester to the end of the semester. These two quizzes were chosen to be analyzed given that they assessed participants' recall of CDI information taught to them immediately following exposure and after a delay. With regard to all participants, a significant difference was noted between Post-Teaching CDI Quiz (M = 89.35, SD = 8.92) and CDI Quiz 3 (M = 67.74, SD = 18.39), $t(30) = 6.06$, $p < .01$. A significant difference was also found between Post-Teaching CDI Quiz) M = 88.08, SD = 8.95) and CDI Quiz 3 (M = 66.92, SD = 19.55), $t(25) = 5.08$, $p < .01$ for the Group VCIT condition. However, significant differences were not found between the Post-Teaching CDI Quiz and CDI Quiz 3 for the Individual VCIT condition. It should be noted that the time between tests was not controlled for and is, therefore, considered to be a limitation. Family-wise error was controlled for by Bonferroni tests.

Hypothesis 2

The hypothesis that the Individual VCIT volunteers (i.e., those participants receiving CDI teaching and in-vivo coaching) would engage in more prosocial and fewer negative behaviors during interactions with the confederate and client children following the baseline component of a multiple baseline design was examined.

The effects of the CDI component in-vivo training for the participants were examined in separate multiple-baseline designs. The results of the Positive and Negative

Verbalization Composites for Participants A through E are presented in Appendix B in Figures 1 and 2 respectively. Inspection of Figures 1 and 2 indicate the in-vivo training on positive verbalizations did not lead to a demonstration of consistent improvement in Participant A's PRiDE skills. While Participant A was able to demonstrate some improvement in her verbalizations following two of the training sessions and during some maintenance sessions, she was unable to maintain these increased numbers of positive verbalizations throughout training and maintenance. With respect to the negative verbalizations composite, while the training resulted in a reduction of negative verbalizations during both training and maintenance compared to baseline, the decreased negative verbalizations were not consistent. Therefore, no clear effects of the training can be determined for Participant A.

Limited data were collected for Participant B as a result of the large amount of absences she had throughout the semester. By the tenth session, the Storybook Farm Program Director indicated that she was not certain if Participant B would continue volunteering through the semester, therefore, data collection on this participant was discontinued. The minimal data that were collected for this participant is representative of baseline data, which indicates Participant B's absence of the use of the PRiDE skills and consistent use of negative verbalizations at baseline.

The results for Participant C indicate the training on positive verbalizations did not lead to a demonstration of consistent improvement in the participant's PRiDE skills. While she was able to demonstrate some improvement in her verbalizations following one training session, she was unable to maintain these increased numbers of positive verbalizations throughout training and maintenance. Although the training session was

implemented following an increase in the positive verbalizations, it should be noted that the increase was by one verbalization, not by a large amount of verbalizations. Also, due to the concern of cancellations due to weather and other unforeseen circumstances, the decision was made to continue with the training component although stable data were not indicated. However, observational data did not indicate consistent use of the PRiDE skills by Participant C. With respect to the negative verbalizations composite, no effects could be determined as a result of the training due to the participant demonstrating low negative verbalizations during baseline, training, and maintenance, with some increases in negative verbalizations during baseline and training. However, for the most part, this participant demonstrated fairly consistent negative verbalizations throughout. Therefore, no clear effects of the training can be determined for Participant C. It should also be noted that for each day, this participant's (with the exception of one day) positive verbalizations and unlabeled praises decreased from Session Hour 1 training to Session Hour 2 training.

The results for Participant D indicate the in-vivo training on positive verbalizations did not lead to a demonstration of consistent improvement in her PRiDE skills. Participant D did not demonstrate stable improvement in her verbalizations following the training sessions or during the maintenance phase. Although the negative verbalizations composite did not decrease significantly, a variable reduction of negative verbalizations was seen during the training and maintenance phases as compared to baseline. Pearson correlations performed to determine inter-rater reliability noted that, for Participant D's negative verbalizations, two out of the four correlations performed resulted in nonsignificant results. Such results may have influenced the multiple baseline

results obtained, as the coders may not have reliably coded these verbalizations. Therefore, no clear effects of the training can be ascertained for Participant D.

Participant E was added to the multiple baseline design after the tenth session in place of Participant B. While initial baseline data were not gathered on this participant, baseline data were gathered from the tenth session. While the data gathered for this participant did not follow the steps of the other participants, data was still gathered for this participant, with consideration of this participant and her data as an anomaly.

The results for Participant E indicate the in-vivo training on positive verbalizations led to a demonstration of consistent improvement in her PRiDE skills following the training sessions and at maintenance. The participant was able to maintain these increased numbers of positive verbalizations throughout training and maintenance. With respect to the negative verbalizations composite, the training resulted in a reduction of negative verbalizations during both training and maintenance compared to baseline. Therefore, effects of the training can be determined for Participant E. The participant's behavior did change during and following training. Therefore, it seems that this participant was able to demonstrate increased use of PRiDE skills and decreased use of negative verbalizations.

In considering the effects of the multiple baseline design, the effects of training across participants have been discussed above. Additionally, the effects of training on positive and negative verbalizations should also be considered. Overall, even with the training provided to the participants, generally speaking, the consistent increase in, and maintenance of, increased positive verbalizations were not seen, with the exception of Participant E. Additionally the short-term training provided to the participants did not

seem to be as effective as anticipated in decreasing the number of negative verbalizations and maintaining this decrease for most participants, excluding Participant E. Thus, it seems that the training technique used in this study was not very effective with a majority of the participants. Given the less effective results, it is interesting to note that for those participants who were unable to maintain the desired results, inter-rater reliability was also found to be lower, whereas, inter-rater reliability was found to be the highest for the one participant who was able to demonstrated the hypothesized results, suggesting that coding of verbalizations may occur at a higher level for those participants who effectively use the training techniques provided to them.

Hypothesis 3

The hypothesis that volunteer reports of their satisfaction with training would differ based on condition as measured by the Training Attitude Inventory 1 (TAI-1) and Training Attitude Inventory 2 (TAI-2) was examined. Specifically, the hypothesis that those volunteers in the Individual VCIT condition would report higher scores on the TAI relative to volunteers in the Group VCIT condition following training, but no differences between groups would be found prior to training was assessed.

Independent samples t-test analyses and Mann-Whitney U tests were conducted to determine what differences, if any, existed between volunteers receiving the Individual VCIT and Group VCIT with respect to reports of volunteer satisfaction immediately following the group training at the beginning of the semester (TAI-1) and at the end of the semester (TAI-2). Results of the analyses indicated that participants who received Group VCIT were as satisfied as participants in the Individual VCIT condition on the

TAI-1. Similarly, those in the Group VCIT condition and those in the Individual VCIT condition again reported no significant differences in satisfaction on the TAI-2.

Hypothesis 4

The hypothesis that child reports of interactions with volunteers (in both the Individual and Group VCIT conditions) would differ as measured by the Volunteer Evaluation Inventory (VEI) Old Child Version and Young Child Version was assessed. Specifically, the hypothesis that children working with volunteers in the Individual VCIT condition would report higher satisfaction with their volunteers than would children working with volunteers in the Group VCIT condition was examined. Mean scores on the VEI-Old and VEI-Young were calculated and compared to determine child reports of their perceptions of interactions with their volunteers. Due to a limited number of questionnaires that could be used as a result of the inability for some of the child clients to respond to the questionnaire, only descriptive statistics are presented. Please refer to Appendix A Table 8 for the average VEI-Old and the average VEI-Young Version scores.

Discussion

The present study attempted to address the question of whether volunteers who received a modified version of the Child-Directed Interaction component of PCIT could demonstrate increased knowledge and application of the CDI skills in their interactions with youth at a community agency. Volunteers, a majority of whom were college students, were engaged in a teaching (Group VCIT) or teaching and training (Individual VCIT) CDI program at Storybook Farm, designed to enhance volunteer-child relationships. Volunteers were categorized in two groups, a group who received information pertaining to CDI and the implementation of CDI in a group format (Group VCIT), and a group who received the same group teaching component with an additional in-vivo component involving training on the application of CDI skills (Individual VCIT). As part of the program evaluation, all participants were given assessment measures to determine their knowledge of CDI skills. Additionally, volunteers in the Individual VCIT group were observed interacting with confederate children at pre- and post-training observations. They were also observed with client children from Storybook Farm during the training sessions. To provide data related to program evaluation, volunteers in both groups were asked to report on their perceptions of the training and their motivation for volunteering. Results from the present study provide preliminary data for the effectiveness and transportability of the CDI component of PCIT, particularly as it relates to the group (teaching) and individual (multiple baseline in-vivo coaching) formats implemented in this community-based setting.

An outcome of this study was the development and exploration of the psychometric properties of CDI quizzes with a small group of volunteers. Only one other quiz on PCIT content is available to measure participant knowledge for a CDI didactic (Lee, 2009). Although the current study had small sample sizes to measure reliability, adequate to good reliability was found for all but one measure (CDI Quiz 2). Results from the paired samples t-test and Wilcoxon Signed Ranks test indicated that when considering all 38 participants as well as those participants in the Group VCIT condition, a significant difference was found between the Baseline CDI Quiz and Post-Teaching CDI Quiz as well as between Post-Teaching CDI Quiz and CDI Quiz 3. With regard to the Individual VCIT condition, no significant results were found. The results of the analyses considering Post-Teaching CDI Quiz and CDI Quiz 3, for all participants as well as those in the Group VCIT condition, are not surprising given that the quiz was administered at the end of the semester and was not accompanied by any booster training session. As would be expected, participants demonstrated the lowest mean score for the Baseline CDI Quiz, which was administered prior to the first training session. Although adequate to good reliability was found for most of the measures used in the current study, future research is suggested using the same CDI quizzes to assess the internal consistency of this quiz with a larger sample size. While reliability was found to be poor for the CDI Quiz 2, it may have been due to the open-ended quality of this specific quiz, which may have resulted in response variability that did not meet PRiDE skills criteria as well as the small sample size for this quiz. It is recommended that further psychometric investigations be performed with a larger sample size for CDI Quiz 2 as it seems that the

open-ended feature of this quiz is distinct and could potentially be a beneficial way to investigate appropriate use of PRiDE skills by volunteers.

Though the outcome measures of this study indicate that this investigation was not as successful as predicted, participants were able to demonstrate some knowledge for the CDI skills immediately following the teaching session. The lowest mean scores following training occurred at the end of the semester. These results may suggest a possible priming effect of the pre-test quiz for CDI information and increased learning on the post-test. These results are consistent with teaching research which suggests that evaluating students' knowledge about material prior to lecturing signals attention to important lecture material (Nevid & Mahon, 2009). Results of the paired samples t-tests and Wilcoxon Signed Ranks test indicated no difference in performance on Baseline CDI Quiz and CDI Quiz 3. It should be noted that the time between tests was not controlled for in this study, therefore suggesting that these results may not be an accurate estimate of the retention and recall of CDI information. Given that no additional training was given to the Group VCIT participants throughout the semester-long service learning volunteer service, future research may want to focus on providing teaching sessions throughout the research study so as to ensure that learning of these skills continue for this particular condition. Additionally, teaching sessions throughout may allow for increased retention in these skills for longer-term application of these skills, which these volunteers could implement when working with other children and/or when interacting with their own children, in the future. However, based on the results of the Wilcoxon Signed Ranks test, it seems that participants in the Individual VCIT group should have demonstrated a better performance on CDI Quiz 3 given they had weekly reminders of these skills. Based on

the results from the multiple baseline design, it seems that several of the participants had difficulty incorporating the CDI skills they were being taught which may have affected their overall performance on CDI Quiz 3 as they did not seem to demonstrate learning of the skills even with additional training sessions. Additionally, it may be that some of the volunteers who received the in-vivo coaching earlier in the semester may have forgotten the skills at the time CDI Quiz 3 was given, again influencing their performance. Finally, as indicated above, the participants were aware that the measures being given to them for the purpose of this study did not influence their service-learning grade, which again may have decreased the amount of motivation the participants had to complete the quiz.

As discussed in the introduction, training and ongoing supervision of volunteer and mentoring programs has been fairly variable (Rhodes, 1994). Additionally, it seems that a consensus exists that more general training should be available to volunteers, interacting with children, in the setting they are volunteering (Freedman, 1993; Hamilton & Hamilton, 1992). As Grossman and Furano (2002) stated, it is to the volunteers' advantage to learn about basic youth development, communications, trust-building, and handling common challenges that may be involved with the volunteering. While it may initially seem that building a relationship between an adult volunteer and a child does not necessitate any training, some research suggests that that developing a relationship between a child and an unknown adult may be more difficult than originally believed (Morrow & Styles, 1995; Styles & Morrow, 1992). Therefore, although specific trainings for various volunteer programs exist, there is room for further study related to volunteer training, especially in the area of developing and maintaining a positive relationship between youth and their volunteers. A brief training program such as the one

implemented in this study may be an introductory means of providing a more generalized training to volunteers working with children and can be implemented in conjunction with program-specific training. Future studies can investigate how and what to teach and train these volunteers so as to maximize beneficial and effective change in individuals as a means to change, for the better, youth volunteer program outcomes and help volunteers establish better relationships with the youth.

The results of the current study provide mixed support for a short-term community-based volunteer teaching program focused on developing positive interactions between volunteers and their child clients. Specifically, results from this multiple baseline design indicate limited support for the use of the in-vivo training program with participants who were volunteering as part of a service learning component of a college course. All but one participant seemed to demonstrate variable outcomes during the training and maintenance components of observation. With regard to positive verbalizations, Participants A, C, and D were unable to maintain increased numbers of positive verbalizations throughout training and maintenance, instead, their verbalizations were observed to fluctuate or remain generally stable. With regard to Participant C's decrease in positive verbalizations from the first to second daily session, these results may suggest participant fatigue with the coaching and/or program activities for this particular participant, as the participant may have become tired of interacting with children as the day progressed.

With regard to the negative verbalizations, again, for Participants A, C, and D, a consistent downward trend towards a decrease in these statements was not observed due to inconsistencies in their verbalizations in addition to an overall low number of negative

verbalizations. Similarly, Participant B's baseline observations reflected inconsistencies in her positive and negative verbalizations; however, not much more can be said about her baseline data. Participant E was the only volunteer observed to maintain an increased amount of positive verbalizations and a decreased amount of negative verbalizations throughout training and maintenance periods. Therefore, while it seemed more difficult for the other participants, Participant E was able to engage in the increased use of PRiDE skills, work towards decreasing her negative verbalizations, and maintain neutral conversation with both the confederate children and child clients with whom she interacted. As discussed above, Participant E's results differed from that of the other participants in the Individual VCIT condition. It should be noted that this participant also reported high levels of motivation in several areas of the VFI scale (e.g., VFI Values, VFI Understand, VFI Enhance, and VFI Protect). Additionally, this participant was noted to be majoring in a subject requiring several social and behavioral science courses, which may have allowed for greater exposure to the skills that were being taught to her. Of note, since Participant E began receiving in-vivo coaching later than the other participants, she received three sessions of coaching per day (e.g., coaching at Hours 1, 2, and 3) as compared to the other participants who received only two coaching sessions (e.g., coaching at Hours 1 and 2). This more intense coaching may have been beneficial, as Participant E may have been able to associate and build upon the skills learned during the previous hour's session, therefore allowing her to acquire and apply the CDI skills for a longer period of time and with decreased breaks between coaching sessions. Specifically, it may have been to the advantage of Participant E to receive training on a more consistent basis than the other participants who received training over the course of two

to three days based on the multiple baseline design. Additionally, as the results above indicated, behavioral observation coding for Participant E were found to be more reliable than were those for the other participants, which provides further support for Participant E's results of a maintained increase in positive verbalizations. Anecdotally speaking, this participant was also observed to ask more questions of the graduate trainers during the in-vivo training so as to ensure she was implementing the skills taught to her correctly, than was observed by the other participants.

Although Participant E's results can be considered an anomaly, it should be noted that additional factors may have influenced overall participant performance. Specifically, the Individual VCIT participants were not alone in walking with the client child. Instead, there were others involved in the horse-riding activity with the child (e.g., horse walker and support person). Thus, the verbalizations of the support persons working in conjunction with these volunteers may have influenced the type and amount of verbal expression in which they engaged. For example, it may be that the support person made a statement that the Individual VCIT participant was going to say, thus hindering the participant from making that statement. These individuals may have also influenced Individual VCIT participant verbalizations in that they may have felt timid applying learned CDI skills in front of these other volunteers. There may also have been a diffusion of responsibility with regard to volunteer-child verbal interactions as there were additional volunteers working with each child. Another potential influence on the verbalizations of these participants may have been the instruction of the Storybook Farm instructor who was talking as the participants were interacting with the children, again limiting the amount of verbalizations that could be made by the participants. While the

verbalizations of these five participants could have been influenced by the increased verbalizations of the support persons and instructors, resulting in an overall decrease in their verbal behavior, inspection of the coded data for support volunteers reveal that they also exhibited a low frequency of verbal behavior. Additionally, for some of the participants, it could be that the use of the confederate children (who were observed to be quite verbal themselves) may have also played a role in their verbalizations, for the most part, decreasing their verbalizations given that they did not have much time to say anything because of the frequent verbalizations of the confederate children. Volunteers were often assigned to work with new client children (based on the absence of their typically assigned child) and this rotation may have influenced the amount of verbalizations made by each of the participants. Indeed, some participants anecdotally reported that they were less likely to verbalize with those children with whom they felt they did not have adequate rapport established.

In considering the inconsistencies in volunteers' negative and positive verbalizations, other factors are important to consider. For example, participants were working alongside other volunteers (i.e., support persons) and session instructors who may have been engaging in the use of verbalizations in general, and negative verbalizations more specifically, possibly influencing the verbalizations of the participants. Additionally, given that the session instructors were observed to be talking and instructing the children on various activities, it may have been difficult for the participants to make positive verbalizations, but easier to implement negative verbalizations to correct child behaviors on the horses. However, it should be noted that some of these negative verbalizations may have been warranted given the nature of the

activities children engage in at Storybook Farm. Specifically, with regard to the commands and critical statements, it may be necessary, and appropriate, for participants to give commands related to the equine-assisted activities and given the safety issues of being on a horse. Future research could look into using equine-appropriate verbalizations that would be coded as commands with the traditional DPICS coding scheme (e.g., "hold onto the reins," "sit on the saddle"). Participants may also have been influenced by the number of coders walking alongside them while they interacted with the children, which may have compromised their ability to use their PRiDE skills. The use of confederate children and/or interacting with client children with whom participants did not have consistent interactions may have been influential, as the relationship that had been established with their regular client children was not done so with the substituted children. Specifically, with respect to confederate children, they were observed to be fairly talkative children, who would continuously verbalize with the participants, asking them questions, or talking about their interests, which may have distracted the participants from implementing the PRiDE skills. With respect to interacting with client children with whom the participants had little to no previous, interaction experience may have negatively influenced the participants' ability to use their positive verbalization skills, given that they did not have an established relationship with the child. Additionally, given that many of the children with whom the participants interacted had a developmental disability, which may have influenced the frequency of their verbalizations, it may have been more difficult for the participants to reflect what the child said, as these statements may have been few and far between. As Grossman and Furano (2002) state, forming a relationship between a child and an adult is fairly difficult

and can be frustrating. This can be true not only from the standpoint of the child receiving the services, but also for the volunteer who is attempting to establish a relationship with the youth. A study by Morrow and Styles (1995) found that volunteer mentors who received good orientation and training, including information about the youth with whom they were matched and expectations about the nature and content of mentoring activities were more likely to form satisfying developmental relationships whereby they could hold expectations of their relationship with the youth and better determine the youth's needs. Additionally, research has shown that trust between two strangers is necessary in developing a bond between both the volunteers and those with whom they work (Sipe, 1996; Network Training and Research Group, 1996). Therefore, as with parents, it is important not only for the child to have a stable figure in their lives, but also for volunteers to maintain consistent interactions with the child so as to ensure the development of a positive relationship.

The in-vivo training component may be more effective in the future if more time for coaching could be incorporated into the design. Additionally, the live training component could be more effective in the future if more time for training could be provided focusing more on volunteers meeting mastery criteria for the PRiDE skills (mastery criteria in PCIT includes fewer than 3 questions, commands, and criticisms and at least 10 Labeled Praises, 10 Behavior Descriptions and 10 Reflections in five minutes of observation); however, accomplishing this in the context of a time-limited service-learning program such as the one used in this study may pose some difficulty, as there may not be sufficient time in which the volunteers can achieve mastery.

As stated above, teaching participants in the Individual VCIT condition positive verbalizations may have been difficult not only due to time limitations, but also because training sessions may have been provided too close together (e.g., one 15-minute session per hour), limiting their ability to practice each skill before moving to the next skill. In addition, unlike the implementation of CDI with parents, who are encouraged to practice these CDI skills, taught in session, with their children for five minutes daily, (Brinkmeyer & Eyberg, 2003; Boggs & Eyberg, 2008), participants in this study were not able to practice their skills with children beyond their volunteer time at Storybook Farm. The results of the decreased negative verbalizations were less than ideal, particularly as it related to reducing questions, commands, and negative statements. However, literature has suggested that, clinically speaking, reducing the amount of questions is a difficult feat for parents too, even after they have been through the PCIT didactic (Hembree-Kigin & McNeil, 1995). Although the results of the observations were less than ideal, there seems to be consistency with those parents who receive PCIT treatment for child behavioral difficulties. In this sense, the consistency seen between the findings by Hembree-Kigin & McNeil (1995) and the present study can be considered to be encouraging in the sense that those parents who seek out this therapy are most familiar with their child and his or her behaviors, are motivated to learn these skills and change, and have sufficient time to practice the skills yet they still demonstrate difficulty learning and effectively implementing the skills. It is possible that volunteers in the Individual VCIT condition would have demonstrated more of the targeted CDI skills if they were provided with a more structured environment in which to learn these techniques and more extended opportunities for coaching, than was provided through the present study. Along with

conducting behavioral observations on participants' positive and negative verbalizations, it is important to consider the inter-rater reliabilities of the coders. While inter-rater reliabilities for two participants were found to be adequate, reliabilities for two of the participants were found to be quite low. One consideration may be the level of training of the coders. Specifically, several of the coders who were chosen for this particular study underwent intensive training based on the DPICS Abridged Version, with a main focus on live coding. Other coders engaging in this study were trained on the more intensive research version of DPICS, which requires more rigorous training as compared to that for live coding. Therefore, the cohort of coders used in this study may have had different levels of experience, suggesting variability within coders, which may have influenced the inter-rater reliability data depicted in this study and contributed to the low reliabilities for two participants. Although weekly sessions were held throughout the duration of the study to prevent observer drift, it seems that while this may have been helpful, to some extent, the different training techniques the coders engaged in may have been more influential in the inter-rater reliability results obtained. Future studies should ensure that all coders engage in the same type of training so as to better control for variability within coders.

In sum, the results of the current study provide limited support for the ability to develop volunteer's use of effective play therapy skills with regard to volunteer demonstration of more prosocial and fewer negative verbalizations during their interactions with the confederate and client children following baseline observations. Unfortunately, the number of observations was lower than what was expected, especially

for the maintenance component, which makes generalizability of the findings quite difficult.

Results of independent samples t-tests and Mann-Whitney U tests investigating whether a difference existed in participant satisfaction with training based on reports on the TAI-1 and TAI-2 between the Individual VCIT and Group VCIT conditions provided no support for a difference between conditions and participants' reports of satisfaction with training following the training or training plus teaching conditions. Specifically, no differences were found between reports of training satisfaction pre- or post-training between the Group VCIT and Individual VCIT conditions on either the TAI-1 or TAI-2. These findings may suggest that the TAI is not a sensitive measure for treatment effects of the volunteer training program. Nevertheless, assessing volunteer satisfaction with the process and outcome of training is important in determining its effectiveness. As Eyberg (1993) argues, while reports from those receiving treatment may be subjective and may not correspond to the actual events that occur during training, it may be indicative of peoples' satisfaction with the training program. It is interesting to note that the results found for this study were much lower than those found for the Therapy Attitude Inventory in PCIT studies (e.g., Eyberg & Matarazzo, 1980; Brestan, Jacobs, Rayfield, Eyberg, 1999). This may be because parents are more invested in the process of learning and applying PCIT skills than are volunteers as parents interact with their children more than volunteers. Additionally, parents undergo a more intensive program, one requiring skill mastery prior to moving on, which may allow parents to experience more satisfaction with the overall PCIT program.

Analyses on the psychometric properties of the TAI resulted in internal consistency ranging in the adequate to good range for the TAI -1 and TAI -2 respectively, with the internal consistency of the TAI-2 being similar to that found by Eyberg (1993) on the Therapy Attitude Inventory. Given the small sample size used to conduct this analysis, it is suggested that further investigation be conducted using a larger sample size. However, preliminary results with this newly developed measure suggest that it may be useful for future investigations of volunteer training programs.

Results from this study suggest partial support for the hypothesis related to child satisfaction with their volunteers. Specifically, the Volunteer Evaluation Inventory (VEI) found that older and younger children interacting with volunteers in both conditions reported fairly equal satisfaction in their interactions with their volunteers. Literature suggests that the degree of closeness that is perceived by the child is an important component of mentoring relationships (Greenberger, Chen, & Beam, 1998; Rhodes, 2002). Both the older and younger children in this study seemed to appreciate the relationship they developed with their volunteer. Additionally, results of this study provide some support for the implementation and consideration of the CDI component as skills that create a mutually responsive orientation and strengthen volunteer-child relationships (Kockanska, 1997; Eyberg, 1988). However, it is interesting to note that a difference in satisfaction was not reported by those children interacting with participants in the Individual and Group VCIT conditions. One would hope that those children who received additional attention and positive verbalizations from those participants receiving in-vivo coaching in the Individual VCIT condition would report increased satisfaction interacting with their volunteers. Instead, child report on the VEI is yet another measure

to suggest that the Individual VCIT group did not perform as expected. Future works should include a true control group, one without any training, to obtain baseline data for these children. It could be that the children rated the volunteers higher than they would have if none of the volunteers had any VCIT training because they were appreciative of the opportunity to engage in the Storybook Farm program and interact with volunteers regardless of the type or level of training participants received.

Results of this study also suggest differences in the motivational aspects of volunteering based on volunteer type. Specifically, those participants in the Group VCIT condition who reported not being involved in service learning reported more interest in volunteering so as to reduce negative feelings and address personal problems or to obtain satisfactions in these areas, thus addressing these personal areas. More specifically, these participants indicated that they find volunteering helps them forget about their own problems and their negative emotions. This specific motivational reason reported on by this group of volunteers may be the result of previous volunteer experiences they have had in the community setting. Similar findings were not seen with participants volunteering as part of a service learning component of a course.

Volunteers engaging in service learning may not be motivated in the same sense as non-service learning volunteers, as they may feel forced to provide a service for an agency with whom they are not interested in working (Clary & Snyder, 1999). Service learning programs may provide beneficial experiences to college students by teaching students civic responsibility and moral growth, and, to some extent, allowing them to extend their professional skills (Bringle & Hatcher, 1996); however, it may not reflect personal or humanitarian motivation on the part of the volunteers, regardless of whether

or not they chose to volunteer at a particular agency. Therefore, it seems that although a majority of the participants in this study reported choosing to volunteer at this agency, their motivations, when considering their perceptions of the function of their volunteering are different from non-service learning volunteers.

Limitations and Future Directions

Results of the current study generated results that can be considered an encouraging beginning for the development and implementation of a volunteer-child interaction teaching program. Although this initial study provided some promising results, several methodological limitations were present in the current study with regard to differences in sample size between the two groups, measurement, data collection, and implementation of the teaching and training components presented to the volunteers. There were also some logistical constraints (e.g., pre-planned program activities, participant absences, child client absences, university-sanctioned breaks), and weather issues that prevented data collection. Additionally, conducting follow-up investigations of the participants was beyond the scope of the present study, as the program they engaged in was only a semester long, with no requirements to return for a second semester.

With regard to measurement, the measures used in this current study proved to be less reliable than was anticipated. Given that the TAI-1, TAI-2, VEI, and CDI quizzes and homework were developed specifically for the present study, no data on the reliability of these measures was provided prior to the current study being conducted. Preliminary analyses on the TAI-1 and TAI-2 indicate that more work needs to be done to develop a measure that can assess volunteer attitudes towards training and teaching in

a more reliable manner. Additionally, the analyses that were conducted on the two TAI measures may have been influenced by the small sample size of volunteers engaged in this study or the nature of the Individual VCIT intervention component. Consistent with the above statement, given the extremely small sample size of children responding to the VEI-Older Version and VEI-Younger Version analyses could not be conducted to determine reliability of these two measures. Along the same lines, preliminary analyses on the CDI quizzes and homework indicate that more works needs to be done to create a more reliable measure, with regard to internal consistency, that can address all components of the CDI skills that researchers and clinicians consider important for parents and non-parents to learn. More research needs to be conducted to develop or alter the current CDI knowledge measures.

In terms of data collection, several factors may have contributed to the difficulty in obtaining data for the multiple baseline design. With regard to the in-vivo training, neither the training, itself, nor the data collection was conducted consistently primarily due to two issues: weather and scheduling difficulties, which were both influenced by the overarching fact that this study was conducted within the confines of a semester-long period. Given that this study was conducted outdoors, and based on Storybook Farm policy, several cancellations were made throughout the semester due to inclement weather, thus reducing the number of opportunities to obtain observational baseline and maintenance data. Additionally, scheduling became an issue especially due to university-sanctioned holidays, when volunteers were not present on their observation day and when Storybook Farm had other special programs scheduled for those days when observational data collection was to occur. Participant absences in general made it difficult to obtain

data on CDI quizzes, CDI homework, and questionnaires given this study was done at a site off campus and no participant personal information was obtained.

The generalizability and stability of the findings of the current study is limited as a result of the uneven sample sizes between the Group VCIT and Individual VCIT. Future studies should consider replicating this study using an increased number of participants so as to allow for more support regarding the argument made about the current program's ability to affect change in volunteers' knowledge of play therapy skills. In terms of the Individual VCIT group, the participants in this group were not representative of the whole sample with regard to race and gender, as these five participants were Caucasian females. This can be considered a limitation of this study, as the results of this study cannot be generalized to the other races or gender. Therefore, future studies should consider the use of a more diverse sample of individuals for the Individual VCIT component. Additionally, more even sample sizes would influence the findings involving self-reports of training satisfaction a VEI and motivation for volunteering.

With respect to teaching all of the volunteers the CDI skills, the setting in which the teaching sessions took place, as well as the short time span were less than ideal to teach the volunteers these basic play therapy skills. Specifically, the planned amount of individual coaching during the teaching sessions with the toys brought for each of the volunteers to practice the play therapy skills did not occur given the amount of time provided to the instructors for each of the two training sessions at Storybook Farm (45 minutes). The amount of information that was presented to all volunteers was the same material that is presented to parents over approximately five sessions ranging in time

from 60 to 120 minutes (McNeil, Herschell, Gurwitch, & Clemens-Mowrer, 2005). Additionally, with regard to the teaching component, future studies should consider the implementation of "booster sessions" throughout the course of the training and/or teaching so as to ensure the presence of a learning curve associated with the play therapy skills introduced to them. The in-vivo coaching sessions were presented in a less than ideal manner, in that the graduate trainers were conducting up to two 15-minute sessions of CDI coaching in one day, thus limiting the amount of time the volunteer had to understand and apply the skills prior to moving on to learning and applying the next skill. Another factor to consider is that the graduate student trainers had limited experience with coaching PCIT clinically. It may be that more experienced PCIT therapists would have had a different outcome as they may have been better able to find more opportunities to train participants in the use of positive verbalizations and necessary commands as well as teaching them when to retrain themselves from using less desired negative verbalizations. Additionally, as discussed above, the setting where the training took place had many external factors which may have influenced the in-vivo teaching of the CDI skills to the volunteers including the employed session instructor who was observed to be talking during the coaching sessions, the use of confederate or substitute children in place of the children each volunteer was paired with, and the presence of support persons who were also engaging the child in conversation. Additionally, it is possible that because most of the volunteers did not have children of their own or consistent access to children in their lives, volunteers were not as engaged in the process of the current study (Harper & Silvestro, 1983). Future studies using this type of training technique should consider a setting that is not affected by time limitations or weather

issues. Additionally, future studies focusing on training volunteers on CDI skills should do so in a setting more conducive to a one-on-one training session with limited interference from other individuals so as to allow for more concentration on the training of the volunteer with the child with whom they are paired.

Given that Storybook Farm's volunteer program is only a semester long and generally provides and requests services for a semester, this study was not designed with the consideration of a longitudinal design, which can be considered both a limitation and something to consider for future studies. Specifically, a future study may consider using the same type of training and teaching program in a setting conducive to following volunteers for a longer period of time such as the YMCA, Big Brothers Big Sisters, and other similar settings so as to allow for longer term follow-up data collection.

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Appendices

Appendix A

Charts and Graphs for Demographics and Hypotheses 1 – 4

Table 1

Demographic Data for Group VCIT Participants

	N
Ethnicity	
Caucasian	29
African American	3
Hispanic	1
Gender	
Male	26
Female	7
College	
Enrolled	31
Not Enrolled	2
Year in College	
Freshman	3
Sophomore	3
Junior	16
Senior	9
Major	
Involving Child Interaction	20
Not Involving Child Interaction	13

Table 2

Demographic Data for Individual VCIT Participants

	N
Ethnicity	
Caucasian	5
African American	0
Hispanic	0
Gender	
Male	0
Female	5
College	
Enrolled	5
Not Enrolled	0
Year in College	
Freshman	1
Sophomore	2
Junior	0
Senior	2
Major	
Involving Child Interaction	3
Not Involving Child Interaction	2

Table 3

Internal Consistency and Item-Total Correlations for CDI Quiz 2

Measure	Original Structure	Removal of 5 Items	Item-Total Correlations				
			Item 1	Item 5	Item 7	Item 9	Item 10
CDI Quiz 2	α = -.121	α = .382	-.059	-.055	-.048	-.130	-.320

Note: n = 36

Table 4

Descriptive Statistics for Percent Correct for Baseline CDI Quiz, Post-Teaching CDI Quiz, CDI Homework, and CDI Quiz 3

	N	Minimum	Maximum	Mean	Standard Deviation
Baseline CDI Quiz	37	20%	100%	63.5%	18.4
Post-Teaching CDI Quiz	37	60%	100%	89.9%	8.9
CDI Homework	24	93%	100%	99.1%	2.4
CDI Quiz 3	32	40%	100%	66.9%	18.7

Table 5

Inter-rater Reliability Estimates for DPICS Codes

Observation	*df*	Pearson Correlation
Hour 1 Participant D (March 4)	8	.942**
Hour 1 Participant C (March 11)	8	.947**
Hour 1 Participant C (April 15)	8	.996**
Hour 1 Participant D (April 15)	8	.978**
Hour 1 Participant E (April 16)	8	.992**
Hour 1 Participant D (April 22)	8	.868**
Hour 2 Participant C (March 4)	8	.931**
Hour 2 Participant C (March 11)	8	.543
Hour 2 Participant A (March 12)	8	.994**
Hour 2 Participant D (April 15)	8	.965**
Hour 2 Participant A (April 16)	8	.995**
Hour 2 Participant E (April 16)	8	.996**
Hour 3 Participant E (April 23)	8	.984**

Note: Inter-rater reliability estimates of coders have been arranged by dates and hours given the multiple behavior observations conducted per day and per hour (e.g., Hour 1, Hour 2, and Hour 3). Participant codes were selected randomly, thus resulting in more than one observation for an hour on a different date.

Table 6

Inter-rater Reliability Estimates for DPICS Codes– Positive Verbalizations

Observation	*df*	Pearson Correlation
Hour 1 Participant D (March 4)	3	.999**
Hour 1 Participant C (March 11)	3	.980**
Hour 1 Participant C (April 15)	3	.998**
Hour 1 Participant D (April 15)	3	.965**
Hour 1 Participant E (April 16)	3	1.00**
Hour 1 Participant D (April 22)	3	.936*
Hour 2 Participant C (March 4)	3	.967**
Hour 2 Participant C (March 11)	3	.804
Hour 2 Participant A (March 12)	3	.999**
Hour 2 Participant D (April 15)	3	.956*
Hour 2 Participant A (April 16)	3	.999**
Hour 2 Participant E (April 16)	3	1.00**
Hour 3 Participant E (April 23)	3	.990**

Note: Inter-rater reliability estimates of coders have been arranged by dates and hours given the multiple behavior observations conducted per day and per hour (e.g., Hour 1, Hour 2, and Hour 3). Participant codes were selected randomly, thus resulting in more than one observation for an hour on a different date.

Table 7

Inter-rater Reliability Estimates for DPICS Codes-Negative Verbalizations

Observation	*df*	Pearson Correlation
Hour 1 Participant D (March 4)	3	.612
Hour 1 Participant C (March 11)	3	.898**
Hour 1 Participant C (April 15)	3	.974**
Hour 1 Participant D (April 15)	3	1.00**
Hour 1 Participant E (April 16)	3	.999**
Hour 1 Participant D (April 22)	3	.774
Hour 2 Participant C (March 4)	3	.886*
Hour 2 Participant C (March 11)	3	.502
Hour 2 Participant A (March 12)	3	.838**
Hour 2 Participant D (April 15)	3	.975**
Hour 2 Participant A (April 16)	3	.912*
Hour 2 Participant E (April 16)	3	.968**
Hour 3 Participant E (April 23)	3	1.00**

Note: Inter-rater reliability estimates of coders have been arranged by dates and hours given the multiple behavior observations conducted per day and per hour (e.g., Hour 1, Hour 2, and Hour 3). Participant codes were selected randomly, thus resulting in more than one observation for an hour on a different date.

Table 8

Average Scores for Volunteer Evaluation Inventory (VEI) Older and Younger Group

	Horse Leader	Support Person_Group VCIT	Support Person_ Individual VCIT	Support Person_ ALL	Horse Leaders and Support Persons_Group VCIT
VEI Older Group					
# of total questionnaires available	7	7	4	11	14
Mean score	79.42	77.71	83.00	79.63	78.57
VEI Younger Group					
# of total questionnaires available	3	3	4	7	6
Mean score	80.00	75.33	79.75	77.54	77.67

Appendix B

Volunteer Positive and Negative Verbalization Graphs

Figure 1. Positive Verbalizations Composite for Participants A through E during Baseline, Training, and Maintenance.

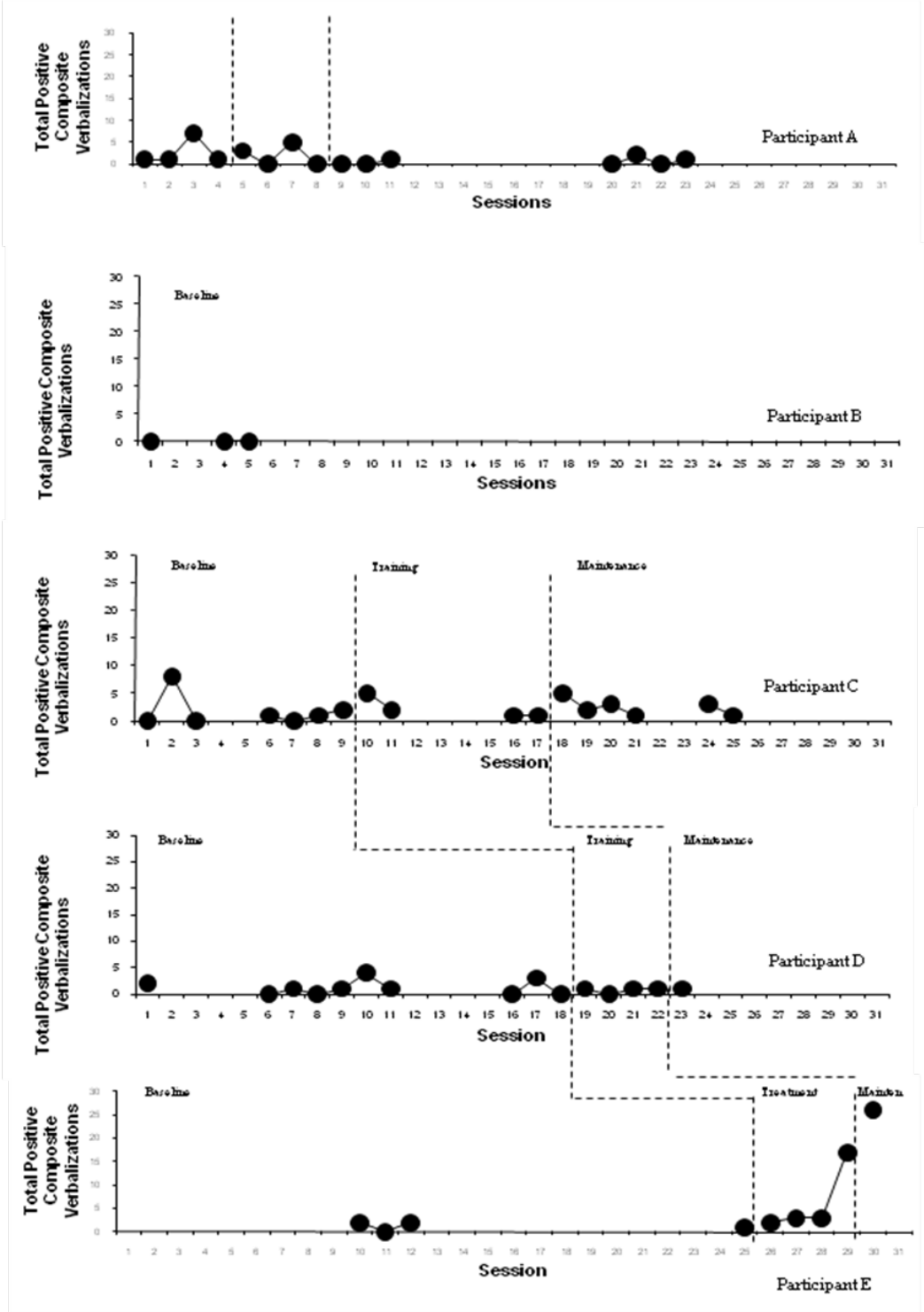
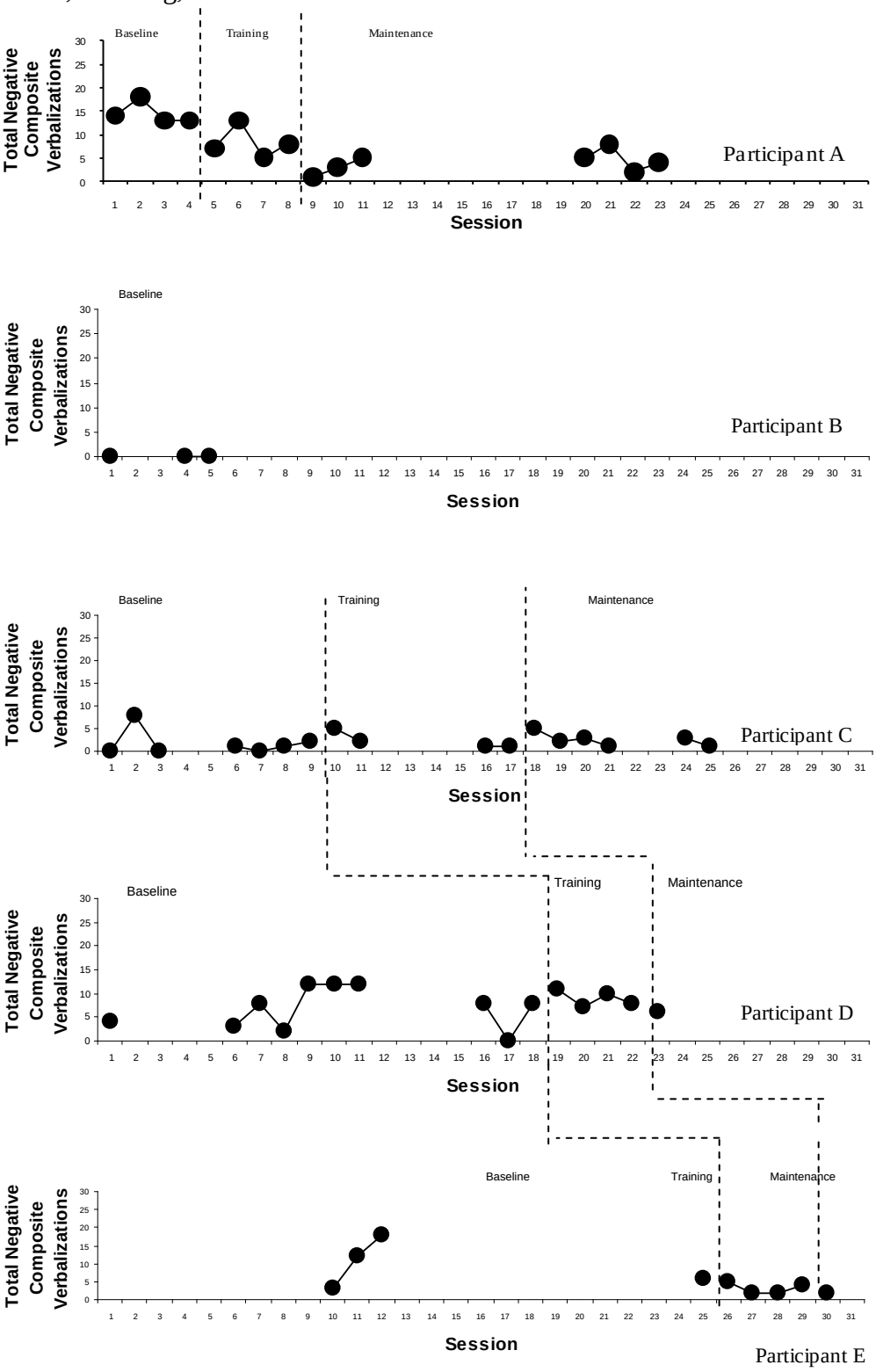


Figure 2. Negative Verbalizations Composite for Participants A through E during Baseline, Training, and Maintenance.



Appendix C

Baseline CDI Quiz, Post-Teaching CDI Quiz and Answer Key

Baseline CDI Quiz and Post-Teaching CDI Quiz

Instructions: Please read each question and circle the answer that best answers each question.

1. When interacting with children, you should describe what they are doing:
    a. True
    b. False
2. Asking children questions is:
    a. Acceptable because it provides information about what the child is doing
    b. Unacceptable because they may suggest that you are not paying attention to the child
    c. Unacceptable because the child may not provide the information you are looking to obtain
    d. Acceptable because you are showing that you are verbally interacting with the child
3. Some skills that would be suggested to use with children are:
    a. Praise, descriptions, and commands
    b. Questions, enthusiasm, and descriptions
    c. Criticisms, praise, and excitement
    d. Praise, reflect, and describe
4. What type of praise lets the child know exactly what you liked?
    a. Labeled praise
    b. Unlabeled praise
    c. Humorous praise
    d. Demonstrative praise
5. Describing what a child is doing:
    a. Does not really help the child in any way
    b. Negatively influences the child's behavior
    c. Let's the child know you approve of what he or she is doing
    d. Let's the child know that you are about to be critical of what the child is doing
6. Praise such as "Good," "Nice Job," and "Fantastic" are examples of what type of praise:
    a. Interactive praise
    b. Unlabeled praise
    c. Labeled praise
    d. Demonstrative praise
7. PCIT stands for:
    a. Personal Care Interaction Training
    b. Personal Child Incentive Training
    c. Parent Child Interaction Therapy

    d. Parent Child Incentive Therapy
8. When talking to children, the types of verbalizations you should avoid are:
    a. Questions, enthusiasm, and reflection
    b. Questions, commands, and criticisms
    c. Questions, criticisms, and descriptions
    d. Questions, descriptions, and excitement
9. The purpose of the skills taught during the when an adult is working with a child is to:
    a. Develop a child's language skills
    b. Build a child's self-esteem
    c. Both A and B
    d. Neither A nor B
10. In the acronym PRiDE, the P, R, D, and E stand for:
    a. Praise, Repeat, Demand, Excitement
    b. Praise, Reflect, Describe, Enthusiasm
    c. Perform, Repeat, Demand, Excitement
    d. Perform, Reflect, Describe, Enthusiasm

CDI Quiz 1-Answer Key

Instructions: Please read each question and circle the answer that best answers each question.

1. When interacting with children, you should describe what they are doing:
    a. True*
    b. False
2. Asking children questions is:
    a. Acceptable because it provides information about what the child is doing
    b. Unacceptable because they may suggest that you are not paying attention to the child*
    c. Unacceptable because the child may not provide the information you are looking to obtain
    d. Acceptable because you are showing that you are verbally interacting with the child
3. Some skills that would be suggested to use with children are:
    a. Praise, descriptions, and commands
    b. Questions, enthusiasm, and descriptions
    c. Criticisms, praise, and excitement
    d. Praise, reflect, and describe*
4. What type of praise lets the child know exactly what you liked?
    a. Labeled praise*
    b. Unlabeled praise
    c. Humorous praise
    d. Demonstrative praise
5. Describing what a child is doing:
    a. Does not really help the child in any way
    b. Negatively influences the child's behavior
    c. Let's the child know you approve of what he or she is doing*
    d. Let's the child know that you are about to be critical of what the child is doing
6. Praise such as "Good," "Nice Job," and "Fantastic" are examples of what type of praise:
    a. Interactive praise
    b. Unlabeled praise*
    c. Labeled praise
    d. Demonstrative praise
7. PCIT stands for:
    a. Personal Care Interaction Training
    b. Personal Child Incentive Training
    c. Parent Child Interaction Therapy*

    d. Parent Child Incentive Therapy
8. When talking to children, the types of verbalizations you should avoid are:
    a. Questions, enthusiasm, and reflection
    b. Questions, commands, and criticisms*
    c. Questions, criticisms, and descriptions
    d. Questions, descriptions, and excitement
9. The purpose of the skills taught during the when an adult is working with a child is to:
    a. Develop a child's language skills
    b. Build a child's self-esteem
    c. Both A and B*
    d. Neither A nor B
10. In the acronym PRiDE, the P, R, D, and E stand for:
    a. Praise, Repeat, Demand, Excitement
    b. Praise, Reflect, Describe, Enthusiasm*
    c. Perform, Repeat, Demand, Excitement
    d. Perform, Reflect, Describe, Enthusiasm

Appendix D

CDI Quiz 2 and Answer Key

CDI Quiz 2

This quiz is designed for you to become more familiar with descriptions, reflections, and labeled and unlabeled praises. For the following items, please follow the instructions provided for each item.

1. The child is pulling on the horse's reigns correctly. On the line below, write a statement using a labeled praise, praising the child's behavior.

_____
_____
_____

2. The child is petting the horse. On the line below, write a statement describing the child's behavior.

_____
_____
_____

3. The child gets the horse to trot and says then says "I got the horse to trot." On the line below, write a statement reflecting the child's statement.

_____
_____
_____

4. The child says "I see a doggie." On the line below, write a statement reflecting the child's statement.

_____
_____
_____

5. The child grabs Mr. Potato Head while riding on the horse. On the line below, write a statement using a labeled praise, praising the child's behavior.

_____
_____
_____

6. The child waves to her father. On the line below, write a statement describing the child's behavior.

_____
_____
_____

7. The child, while riding, says "That boy is riding a pony." On the line below, write a statement reflecting the child's statement.

_____
_____
_____

8. The child gets the horse to stop. You say "Good Job," which is an unlabeled praise. On the line below, change the unlabeled praise to reflect a labeled praise.

_____
_____
_____

9. The child places a toy horse on a barrel. On the line below, write a statement describing the child's behavior.

_____
_____
_____

10. The child says, "I liked riding on the horsie!" On the line below, write a statement reflecting the child's statement.

_____
_____
_____

CDI Quiz 2 - Answer Key

This quiz is designed for you to become more familiar with descriptions, reflections, and labeled and unlabeled praises. For the following items, please follow the instructions provided for each item.

1. The child is pulling on the horse's reigns correctly. On the line below, write a statement using a labeled praise, praising the child's behavior.

Good job pulling on the horse's reigns!

2. The child is petting the horse. On the line below, write a statement describing the child's behavior.

You are petting the horse.

3. The child gets the horse to trot and says then says "I got the horse to trot." On the line below, write a statement reflecting the child's statement.

You got the horse to trot.

4. The child says "I see a doggie." On the line below, write a statement reflecting the child's statement.

You see a dog.

5. The child grabs Mr. Potato Head while riding on the horse. On the line below, write a statement using a labeled praise, praising the child's behavior.

Nice job grabbing that Mr. Potato Head from the barrel.

6. The child waves to her father. On the line below, write a statement describing the child's behavior.

You're waving to your dad.

7. The child, while riding, says "That boy is riding a pony." On the line below, write a statement reflecting the child's statement.

That boy is riding on a pony.

8. The child gets the horse to stop. You say “Good Job,” which is an unlabeled praise. On the line below, change the unlabeled praise to reflect a labeled praise.

Good Job getting the horse to stop on your own!

9. The child places a toy horse on a barrel. On the line below, write a statement describing the child’s behavior.

You put the brown horse on top of the barrel.

10. The child says, “I like riding on the horsie!” On the line below, write a statement reflecting the child’s statement.

You like riding on the horse.

Appendix E

CDI Quiz 3 and Answer Key

CDI Quiz 3

Instructions: For the multiple choice questions, please circle the answer that best applies.

1. The acronym CDI stands for:
    a. Child Dialogued Interaction
    b. Child Directed Interaction
    c. Child Dialogued Instrumentation
    d. Child Directed Instrumentation
2. Reflecting a child's appropriate talk:
    a. Shows that you respect the child
    b. Increases and improves a child's speech and language
    c. Shows the child that you can reflect the child's verbalizations
    d. Does not really help your relationship with the child
3. Praising a child adds warmth to the interaction between a volunteer and a child:
    a. True
    b. False
4. With respect to descriptions, it is important to describe:
    a. A child's appropriate behavior
    b. A child's inappropriate behavior
    c. Both A and B
    d. Neither A nor B
5. The verbalization: Could you please pull on the reigns?" can be identified as:
    a. A question
    b. A direct command
    c. An indirect command
    d. None of the above

Instructions: For those items indicating verbalizations, read the statements of the interactions between a volunteer and a child. Please indicate whether the verbalization is a behavioral description, reflection, labeled praise, or unlabeled praise.

6. Child: "I want to see a goat."
   Volunteer: "You want to see a goat." _____

7. Volunteer: "You are sitting nicely on the horse." _____

8. Volunteer: "You are picking up the horseshoe." _____

9. Child: "I like to color pictures of horses."
   Volunteer: "You like to color horse pictures." _____

10. [Child dismounts the horse correctly]
    Volunteer: Good job! _____

CDI Quiz 3 - Answer Key

Instructions: For the multiple choice questions, please circle the answer that best applies.

1. The acronym CDI stands for:
    a. Child Dialogued Interaction
    b. Child Directed Interaction*
    c. Child Dialogued Instrumentation
    d. Child Directed Instrumentation
2. Reflecting a child's appropriate talk:
    a. Shows that you respect the child
    b. Increases and improves a child's speech and language*
    c. Shows the child that you can reflect the child's verbalizations
    d. Does not really help your relationship with the child
3. Praising a child adds warmth to the interaction between a volunteer and a child:
    a. True*
    b. False
4. With respect to descriptions, it is important to describe:
    a. A child's appropriate behavior*
    b. A child's inappropriate behavior
    c. Both A and B
    d. Neither A nor B
5. The verbalization: Could you please pull on the reigns?" can be identified as:
    a. A question
    b. A direct command
    c. An indirect command*
    d. None of the above

Instructions: For those items indicating verbalizations, read the statements of the interactions between a volunteer and a child. Please indicate whether the verbalization is a behavioral description, reflection, labeled praise, or unlabeled praise.

6. Child: "I want to see a goat."
   Volunteer: "You want to see a goat." **Reflection**

7. Volunteer: "You are sitting nicely on the horse." **Labeled Praise**

8. Volunteer: "You are picking up the horseshoe." **Behavioral Description**

9. Child: "I like to color pictures of horses."
   Volunteer: "You like to color horse pictures." **Reflection**

10. [Child dismounts the horse correctly]
    Volunteer: Good job! **Unlabeled Praise**

Appendix F

CDI Homework and Answer Key

HOMEWORK

Volunteer-Child Interaction Verbalization Transcript

Directions: Please read the following statements of an interaction between a volunteer and a child. Based on the information obtained during the training session you just received, please indicate whether the verbalization is a behavioral description, reflection, labeled praise, or unlabeled praise.

Example:
Child: "I like riding horses"
Volunteer: You like riding horses. Reflection

Volunteer: "I like how you're sitting on the horse so nicely" _____

Child: "I like to draw horses"
Volunteer: "You like to draw horses." _____

Child: "I see a cat."
Volunteer: "You see a cat." _____

Volunteer: "Good job!" _____

Volunteer: "You are petting the horse." _____

Child: "I want to learn how to ride a horse."
Volunteer: "You want to learn how to ride a horse." _____

Volunteer: "I like how you got the horse to trot." _____

Volunteer: "You are riding the horse around the rink." _____

Volunteer: "Good job getting the horse to jump!" _____

Child: "I see my mommy."
Volunteer: "You see your mommy!" _____

Volunteer: "You are getting off the horse." _____

Child: "I want a horse of my own"
Volunteer: "You want your own horse." _____

Volunteer: "You are doing such a nice job of coloring that horse! _____

Child: "Bye, bye horsie!"
Volunteer: "Bye, bye horse." _____

HOMEWORK –Answer Key

Volunteer-Child Interaction Verbalization Transcript

Directions: Please read the following statements of an interaction between a volunteer and a child. Based on the information obtained during the training session you just received, please indicate whether the verbalization is a behavioral description, reflection, labeled praise, or unlabeled praise.

Example:
Child: "I like riding horses"
Volunteer: You like riding horses. Reflection

Volunteer: "I like how you're sitting on the horse so nicely" __Labeled Praise____

Child: "I like to draw horses"
Volunteer: "You like to draw horses." ___Reflection_____

Child: "I see a cat."
Volunteer: "You see a cat." ___Reflection___

Volunteer: "Good job!" __Unlabeled Praise_____

Volunteer: "You are petting the horse." __Behavioral Description____

Child: "I want to learn how to ride a horse."
Volunteer: "You want to learn how to ride a horse." ___Reflection___

Volunteer: "I like how you got the horse to trot." __Labeled Praise____

Volunteer: "You are riding the horse around the rink." __Behavioral Description____

Volunteer: "Good job getting the horse to jump!" __Labeled Praise____

Child: "I see my mommy."
Volunteer: "You see your mommy!" ___Reflection___

Volunteer: "You are getting off the horse." __Behavioral Description____

Child: "I want a horse of my own"
Volunteer: "You want your own horse." ___Reflection___

Volunteer: "You are doing such a nice job of coloring that horse!" __Labeled Praise____

Child: "Bye, bye horsie!"
Volunteer: "Bye, bye horse." ___Reflection___

Appendix G

Child-Directed Interaction Skills Verbalization Handout

CHILD-DIRECTED INTERACTION SKILLS

VERBALIZATIONS HANDOUT

Reflections:

1) Child: "I am sitting on the horse."
   Volunteer: "You are sitting on the horse."

2) Child: "My heels are down."
   Volunteer: "Your heels are down."

3) Child: "This is a pretty horsie."
   Volunteer: "You think the horse is pretty."

4) Child: "The horse is trotting."
   Volunteer: "The horse is trotting."

5) Child: "My horse's name is Humpty Dumpty."
   Volunteer: "The horse's name is Humpty Dumpty."

Descriptions:

1) [Child riding with his or her heels down.]
   Volunteer: "You're riding with your heels down."

2) [Child picks up horseshoe from barrel.]
   Volunteer: "You're picking up the horseshoe from the barrel."

3) [Child puts Mr. Potato Head in bucket.]
   Volunteer: "You put Mr. Potato Head in the red bucket."

4) [Child pets the horse.]
   Volunteer: "You're petting the horse."

5) [Child waves to parent.]
   Volunteer: "You're waving to your parents."

Labeled Praises:

1) [Child sitting up straight on horse]
   Volunteer: "I like how you are sitting straight on the horse."

2) [Child is staying on the rail.]
   Volunteer: "Good job staying on the rail!"

3) [Child keeping his or her fingers closed on the reigns.]
   Volunteer: "You're doing such a good job of keeping your fingers closed on the reigns."

4) [Child is sitting up balanced and centered.]
Volunteer: “You’re doing a great job of sitting balanced and centered!”

5) [Child sitting on horse with eyes looking forward.]
Volunteer: “Thank you for sitting on the horse with your eyes looking forward.”

Appendix H

Volunteer Functions Inventory

The Functional Approach to Volunteers' Motivations
Gil Clary and Mark Snyder College of St. Catherine University of Minnesota

Assumptions

1. People are purposeful, planful, goal-directed -- Volunteers engage in volunteer work in order
to satisfy important personal goals.

2. Different people may do similar things for different reasons -- Volunteers performing the
same volunteer activity for the same organization may have different reasons for volunteering.

3. Any one individual may be motivated by more than one need or goal -- An individual volunteer may be attempting to satisfy two or more motives through one activity at your organization.

4. Outcomes depend on the matching of needs and goals to the opportunities afforded by the
environment – Successful volunteer recruitment, satisfaction, and retention is tied to the ability of the volunteer experience to fulfil the volunteer's important motives.

The Motivations for Volunteering

Values function the person is volunteering in order to express or act on important values, such as humanitarianism and helping the less fortunate Understanding function the volunteer is seeking to learn more about the world and/or exercise skills that are often unused. Enhancement function the individual is seeking to grow and develop psychologically through involvement in volunteering Career function the volunteer has the goal of gaining career-related experience through volunteering Social function volunteering allows the person to strengthen one's social relationships Protective function the individual uses volunteering to reduce negative feelings,
such as guilt, or to address personal problems.

VOLUNTEERISM QUESTIONNAIRE

Your organization is involved in a project related to volunteer's reasons and experiences with
volunteering. On the following pages are two sets of items that concern your experiences as a
volunteer with this organization. The first set, **Reasons for Volunteering**, presents 30 reasons
that people volunteer and asks that you indicate how important each reason is for you for your
volunteering at this organization. The second set, **Volunteering Outcomes**, presents 18

outcomes that can result from volunteering and asks that you indicate whether you have experienced each outcome. You do not need to put your name on the questionnaire.

Reasons for Volunteering

Using the 7-point scale below, please indicate how important or accurate each of the following
possible reasons for volunteering is for you in doing volunteer work at this organization. Record
your answer in the space next to each item. not at all important/ 1 2 3 4 5 6 7 extremely important/accurate for you accurate for you
Rating

__ 1. Volunteering can help me get my foot in the door at a place where I'd like to work
__ 2. My friends volunteer.
__ 3. I am concerned about those less fortunate than myself.
__ 4. People I'm close to want me to volunteer.
__ 5. Volunteering makes me feel important
__ 6. People I know share an interest in community service.
__ 7. No matter how bad I've been feeling, volunteering helps me to forget about it.
__ 8. I am genuinely concerned about the particular group I am serving.
__ 9. By volunteering, I feel less lonely.
__ 10. I can make new contacts that might help my business career.
__ 11. Doing volunteer work relieves me of some of the guilt over being more fortunate than others.
__ 12. I can learn more about the cause for which I am working.
__ 13. Volunteering increases my self-esteem.
__ 14. Volunteering allows me to gain a new perspective on things.
__ 15. Volunteering allows me to explore different career options.
__ 16. I feel compassion toward people in need.
__ 17. Others with whom I am close place a high value on community service.
__ 18. Volunteering lets me learn through direct "hands on" experience.
__ 19. I feel it is important to help others.
__ 20. Volunteering helps me work through my own personal problems.
__ 21. Volunteering will help me succeed in my chosen profession.
__ 22. I can do something for a cause that is important to me.
__ 23. Volunteering is an important activity to the people I know best.
__ 24. Volunteering is a good escape from my own troubles.
__ 25. I can learn how to deal with a variety of people.
__ 26. Volunteering makes me feel needed.
__ 27. Volunteering makes me feel better about myself.
__ 28. Volunteering experience will look good on my resume.
__ 29. Volunteering is a way to make new friends.
__ 30. I can explore my own.

Volunteer # ___

SCORING SHEET

VFI Career Item 1 10 15 21 28
Response ___ + ___ + ___ + ___ + ___ = _____
(SUM)
VFI Social Item 2 4 6 17 23
Response ___ + ___ + ___ + ___ + ___ = _____
(SUM)
VFI Values Item 3 8 16 19 22
Response ___ + ___ + ___ + ___ + ___ = _____
(SUM)
VFI Understd Item 12 14 18 25 30
Response ___ + ___ + ___ + ___ + ___ = _____
(SUM)
VFI Enhance Item 5 13 26 27 29
Response ___ + ___ + ___ + ___ + ___ = _____
(SUM)
VFI Protect Item 7 9 11 20 24
Response ___ + ___ + ___ + ___ + ___ = _____
(SUM)

Appendix I

Training Attitude Inventory - 1

Participant # _____

Training Attitude Inventory -1

(Please circle the response for each question which best expresses how you honestly feel about the training received by the department of psychology)

I. Regarding information I obtained during the training, I feel I have learned:

1) nothing 2) very little 3) a few new techniques 4) several useful techniques 5) very many useful techniques

II. Regarding techniques for teaching the children I work with new skills, I feel I have learned:

1) nothing 2) very little 3) a few new techniques 4) several useful techniques 5) very many useful techniques

III. Regarding the relationship between myself and the children I work with, I feel we get along:

1) much worse than expected 2) somewhat worse than expected 3) the same 4) somewhat better than expected 5) very much better than expected

IV. Regarding my confidence in my ability to engage in positive interactions with the children I work with, I feel:

1) much less confident 2) somewhat less confident 3) the same 4) somewhat more confident 5) much more

V. Regarding the progress the children I work with have made in their general behavior, I am:

1) very dissatisfied 2) somewhat dissatisfied 3) neutral 4) somewhat satisfied 5) very satisfied

VI. To what degree has the training program helped with other general personal or family/friend interactions not directly related to your work with the Storybook Farm client children:

1) hindered much more than helped 2) hindered slightly 3) neither helped nor hindered 4) helped somewhat 5) helped very much

VII. I feel the type of program that was used to train me to interact more positively with the children I work with was:

1) Very poor 2) poor 3) adequate 4) good 5) very good

VIII. My general feeling about the program I participate in is:

1) I disliked it Very much 2) I disliked it somewhat 3) I feel neutral 4) I liked it somewhat 5) I liked it very much

IX. If you are a returning volunteer, please answer this item: This training would have been a beneficial component during the prior training I received at Storybook Farm:

1) Disagree Very much 2) Disagree somewhat 3) I feel neutral 4) Agree somewhat 5) Agree very much

Appendix J

Training Attitude Inventory - 2

Participant # _____

Training Attitude Inventory -2

(Please circle the response for each question which best expresses how you honestly feel about the training received by the department of psychology)

I. Regarding information I obtained during the training, I feel I have learned:

1) nothing 2) very little 3) a few new techniques 4) several useful techniques 5) very many useful techniques

II. Regarding techniques for teaching the children I work with new skills, I feel I have learned:

1) nothing 2) very little 3) a few new techniques 4) several useful techniques 5) very many useful techniques

III. Regarding the relationship between myself and the children I work with, I feel we get along:

1) much worse than expected 2) somewhat worse than expected 3) the same 4) somewhat better than expected 5) very much better than expected

IV. Regarding my confidence in my ability to engage in positive interactions with the children I work with, I feel:

1) much less confident 2) somewhat less confident 3) the same 4) somewhat more confident 5) much more confident

V. Regarding the progress the children I work with has made in his/her general behavior, I am:

1) very dissatisfied 2) somewhat dissatisfied 3) neutral 4) somewhat satisfied 5) very satisfied

VI. To what degree has the training program helped with other general personal or family/friend interactions not directly related to your work with the Storybook Farm client children:

1) hindered much more than helped 2) hindered slightly 3) neither helped nor hindered 4) helped somewhat 5) helped very much

VII. I feel the type of program that was used to train me to interact more positively with the children I work with was:

1) Very poor 2) poor 3) adequate 4) good 5) very good

VIII. My general feeling about the program I participate in is:

1) I disliked it Very much 2) I disliked it somewhat 3) I feel neutral 4) I liked it somewhat 5) I liked it very much

IX. The handouts that were provided to me on the Child-Directed Interactions:

1) hindered much more than helped 2) hindered slightly 3) neither helped nor hindered 4) helped somewhat 5) helped very much

X. I used the handouts that were provided to me:

1) Never 2) Seldom 3) Occasionally 4) Often 5) All the time

Appendix K

Volunteer Evaluation Inventory – Young Version

Volunteer Evaluation Inventory

Below is a list of statements about your relationship with your volunteer. Read each item and tell us what you think for each of the items.

	Not True			Sort of True			Very True
	1	2	3	4	5	6	7

1 2 3 4 5 6 7	1. I believe my volunteer likes me
1 2 3 4 5 6 7	2. I like how my volunteer praises me/says nice things to me when we work together on riding horses and arts and crafts activities
1 2 3 4 5 6 7	3. The praises my volunteer gives me makes me feel better about what I can do both at Storybook Farm and at other places like home and school
1 2 3 4 5 6 7	4. My volunteer pays attention to what I say and repeats what I say to him/her
1 2 3 4 5 6 7	5. I like when my volunteer pays attention to me
1 2 3 4 5 6 7	6. I feel that my volunteer likes me
1 2 3 4 5 6 7	7. My volunteer and I trust one another
1 2 3 4 5 6 7	8. My volunteer seems happy when we work together
1 2 3 4 5 6 7	9. My volunteer repeats what I say to him/her, which lets me know he/she is listening to me
1 2 3 4 5 6 7	10. My volunteer is there to help me
1 2 3 4 5 6 7	11. I like working with my volunteer
1 2 3 4 5 6 7	12. Every week, I look forward to working with my volunteer

Appendix L

Volunteer Evaluation Inventory – Old Version

Volunteer Evaluation Inventory

Below is a list of statements about your relationship with your volunteer. Read each item carefully and indicate you level of agreement for each of the following items. Please write down your response on the rating scale because it makes it easier to answer the items

Does Not Correspond at All Somewhat Corresponds Corresponds Exactly

1 2 3 4 5 6 7

1 2 3 4 5 6 7 1. I believe my volunteer likes me

1 2 3 4 5 6 7 2. I like how my volunteer praises me/says nice things to me when we work together on riding horses and arts and crafts activities

1 2 3 4 5 6 7 3. The praises my volunteer gives me makes me more confident about what I can do both at Storybook Farm and at other places like home and school

1 2 3 4 5 6 7 4. My volunteer pays attention to what I say and repeats what I say to him/her

1 2 3 4 5 6 7 5. I like when my volunteer pays attention to me

1 2 3 4 5 6 7 6. I feel that my volunteer appreciates me

1 2 3 4 5 6 7 7. My volunteer and I trust one another

1 2 3 4 5 6 7 8. My volunteer shows a lot of excitement and enthusiasm when we work together

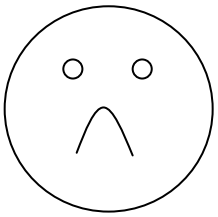
1 2 3 4 5 6 7 9. My volunteer repeats what I say to him/her, which lets me know he/she is listening to me

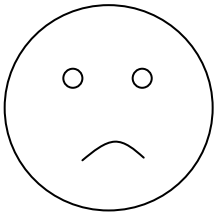
1 2 3 4 5 6 7 10. My volunteer is there to help me in the activities I need help in when I ask for assistance

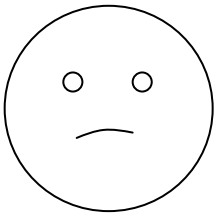
1 2 3 4 5 6 7 11. In general, I like working with my volunteer

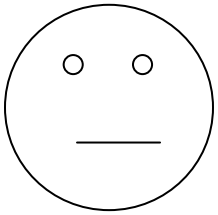
1 2 3 4 5 6 7 12. Every week, I look forward to working/interacting with my volunteer

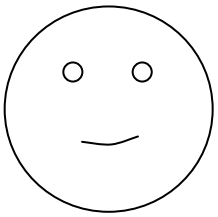
Smiley Face Likert Scale

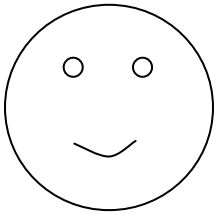
1  Not True/ Does Not Correspond At All

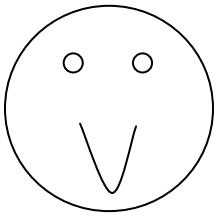
2 

3 

4  Sort of True/ Somewhat Corresponds

5 

6 

7  Very True/ Corresponds Exactly

Appendix M

Demographics Questionnaire

Demographics Questionnaire

1. Age: _____

2. Gender: _____

3. Race (Please circle the one that best applies):
    1. Caucasian
    2. African American
    3. Hispanic
    4. Asian/Pacific Islander
    5. Native American
    6. Biracial
    7. Mulitiracial
    8. Other (please explain): _____

4. Are you enrolled in college?
    1. Yes
    2. No

5. If enrolled in college, please indicate the following:
    1. Year in college: _____
    2. Current major: _____
    3. Current Grade-Point Average (GPA): _____

6. What college courses have you taken related to children and/or child development (i.e., Lifespan Development, Marriage and Family Therapy, Human Development and Family Services):
    1. _____
    2. _____
    3. _____
    4. _____
    5. _____

7. Do you have any experiences working with children prior to this experience at Storybook Farm? (Please circle the answer that best applies):
    1. Yes
    2. No

CONTINUED ON BACK

8. If you responded yes to #7, please list your experiences and how long you've had these experiences:

_____
_____
_____
_____
_____
_____
_____
_____
_____

9. If you answered YES to above, please indicate the experiences you have had working with children (please circle all responses that apply):
    1. Babysitting
    2. Working in a daycare/preschool setting
    3. Engaging in other volunteer work that involved working with children
    4. Engaging in a college course for course credit (i.e., Experiential Learning; Human Services Practicum)
    5. Other (please specify): _____

10. Are you volunteering at Storybook Farm as a service learning requirement for a course you are currently enrolled in?
    1. Yes
    2. No

11. If yes, please specify the course title and department within which this course is held:
    1. Course Title: _____
    2. Department: _____

12. If you answered YES to #9 above, please circle the answer that best applies:
    1. I chose to volunteer at Storybook Farm from a list of other potential organizations recruiting volunteers
    2. I was assigned to volunteer at Storybook Farm
    3. Other (please specify): _____
    _____
    _____

CONTINUED ON NEXT PAGE

13. Please indicate below the reason you are volunteering at Storybook Farm (please provide a detailed explanation):

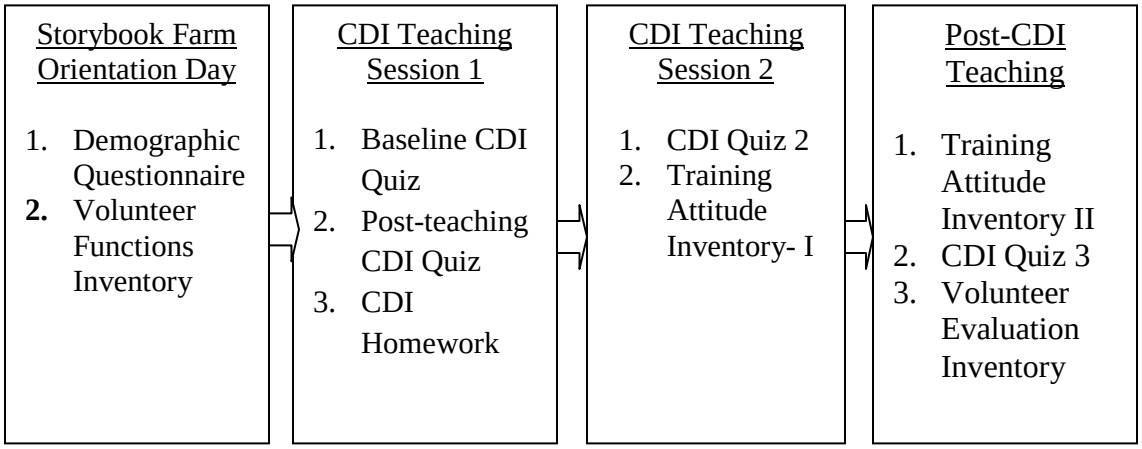
_____
_____
_____

14. There is an additional special education program in addition to the routine training that you will be provided that will include a live-coaching component. Are you interested in participating in this component? Please CIRCLE one:
    1. YES
    2. NO

Appendix N

Volunteer-Child Interaction Measures Chart and Design Outline

Figure 1. Measures Presented to Participants by Session



Volunteer-Child Interaction Design Outline

Program Evaluation:

1. **Week of January 19:** Pre-Storybook Farm (SBF) Training Day (SBF Orientation): (N ≈30)
    a. Demographic Questionnaire and VFI administered to all Storybook Farm participants.
    b. Individual VCIT group will be selected based on participant interest
2. Week of January 26: Teaching Session
    a. Large group (non-experimental group (N≈26))
        i. Pre-teaching quiz to evaluate knowledge of interaction skills with children
        ii. CDI lecture
        iii. Post-teaching quiz to evaluate knowledge of interaction skills with children
        iv. Handouts on CDI skills distributed
        v. CDI skills homework distributed to volunteers
3. **Week of February 2:** Teaching Session II
    a. Review homework
    b. Quiz to evaluate knowledge of interaction skills with children
    c. Training Attitude Inventory I given
    d. Handout on horse-related verbalizations distributed
4. Week of February 9 – April 13
    a. No interactions with the large group individuals
5. Week of April 20:
    a. Training Attitude Inventory II given
    b. Quiz to evaluate interaction skills knowledge
    c. Volunteer Evaluation Inventory (given to all kids interacting with volunteers in horse-riding)

Individual VCIT Group (Multiple-Baseline):

1. **Week of January 19:** Pre-Storybook Farm (SBF) Training Day (SBF Orientation): (N ≈30)
    a. Demographic Questionnaire and VFI administered to all Storybook Farm participants.
    b. Individual VCIT group will be selected based on participant interest
2. Week of January 26: Teaching Session
    a. Large group (Individual VCIT and Group VCIT conditions (N≈38))
        i. Pre-teaching quiz to evaluate knowledge of interaction skills with children

ii. CDI lecture
iii. Post-teaching quiz to evaluate knowledge of interaction skills with children
iv. Handouts on CDI skills distributed
v. CDI skills homework distributed to volunteers

3. **Week of February 2:** Teaching Session II
    a. Review homework
    b. Quiz to evaluate knowledge of interaction skills with children
    c. Training Attitude Inventory I given
    d. Handout on horse-related verbalizations distributed
    e. BASELINE 1 (Participants A-D) – code with confederate child
4. Week of February 9: (Program Session 1- with client child)
    a. Participants A-D → Hour 1: 4 BASELINE data collection (5 minutes) on "do" and "don't" verbalizations of talker AND data collection (5 minutes) of "physical touches" and any verbalizations by support person
    b. Participants A-D → Hour 2: 4 BASELINE data collection (5 min.) on "do" and "don't" verbalizations of talker AND data collection of "physical touches" (5 minutes - positive and negative physical touches) and any verbalizations by support person
5. Week of February 16: (Program Session 2 – with client child)
    a. Participant A → Hours 1 and 2/CDI Sessions 1 and 2: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues)
    b. Participants B-D → Hours 1 and 2: BASELINE data collection on "do" and "don't" verbalizations of talker AND data collection of "physical touches" and any verbalizations by support person
6. Week of February 24:
    a. Participant A→ Hours 1 and 2/ CDI Sessions 3 and 4: Data collection (5 minutes with coder) and live coaching/training(15 minutes with graduate trainer). (Data collection on support person as described above continues)
    b. Participant B → Hour 1: BASELINE data; Hour 2/CDI Session 1: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues)
    c. Participants C-D → Hours 1 and 2: BASELINE data collection on "do" and "don't" verbalizations of talker AND data collection of "physical touches" and any verbalizations by support person
7. Week of March 2:
    a. Participant A → Maintenance – data collection

b. Participant B→ Hours 1 and 2/CDI Sessions 2 and 3: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues)
c. Participant C-D → Hours 1 and 2: BASELINE data collection on "do" and "don't" verbalizations of talker AND data collection of "physical touches" and any verbalizations by support person

8. Week of March 9:
    a. Participant A → Maintenance – data collection
    b. Participant B → Hour 1/CDI Session 4: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues); Hour 2: Maintenance
    c. Participant C→ Hours 1 and 2/CDI Sessions 1 and 2: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues)
    d. Participant D→ Hours 1 and 2: BASELINE data collection on "do" and "don't" verbalizations of talker AND data collection of "physical touches" and any verbalizations by support person
9. Week of March 16 – SPRING BREAK
10. Week of March 23:
    a. Participant A → Maintenance – data collection
    b. Participant B → Maintenance – data collection
    c. Participant C→ Hours 1 and 2/CDI Sessions 3 and 4: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues)
    d. Participant D→ Hour 1: BASELINE data; Hour 2/ CDI Session1: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues)
11. Week of March 31:
    a. Participant A → Maintenance – data collection
    b. Participant B → Maintenance – data collection
    c. Participant C → Maintenance – data collection
    d. Participant D→ Hours 1 and 2/CDI Sessions 2 and 3: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues)
12. Week of April 6:
    a. Participant A → Maintenance – data collection
    b. Participant B → Maintenance – data collection
    c. Participant C → Maintenance – data collection

    d. Participant D→ Hour 1/CDI Session 4: Data collection (5 minutes with coder) and live coaching/training (15 minutes with graduate trainer). (Data collection on support person as described above continues); Hour 2: Maintenance

13. Week of April 13:
    a. Participants A-D → Maintenance – data collection
14. Week of April 20:
    a. Training Attitude Inventory II given
    b. Quiz to evaluate interaction skills knowledge
    c. Volunteer Evaluation Inventory (given to all kids interacting with volunteers in horse-riding)
    d. Participants A-D → Maintenance – data collection

Coders will be used with each of the sessions, with approximately 30% of the sessions having 2 coders to code for reliability purposes.
During baseline data collection and training sessions, there will be one coder coding the talker and one coder coding the support person.