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Walden University

College of Social and Behavioral Sciences

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Melody Barnes-Meisenhelder

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Walden University
2021

Abstract

Structured Training Programs for Direct Support Professionals on Behavior Intervention Support Plans

by

Melody Barnes-Meisenhelder

MS, Capella University, 2006

MS, College of New Paltz, 1995

BA, Syracuse University of Utica College, 1992

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Clinical Psychology

Walden University

August 2021

Abstract

Direct support professionals work with developmentally disabled individuals and are responsible for implementing behavior intervention support plans (BISPs). Little is known about the efficacy of supplemental BISP training in these professionals. The purpose of this quantitative experimental study was to investigate the efficacy of BISP training to improve knowledge and applied understanding of BISPs in direct support professionals. Social validation, treatment fidelity, and change theories served as the foundations of the study. Seventy-three newly hired direct support professionals were randomized into an experimental group with a 2-day workshop training or a standard training group. BISP knowledge was assessed before and after the workshop in the experimental group and before and after a two-week period of work for the standard training group. A series of t-tests revealed no statistical differences between groups on the pretest measures. The experimental group demonstrated significant improvement in their knowledge of BISPs, whereas the standard training group did not significantly change their knowledge of BISPs over time. The experimental group also had significantly larger change scores in the tests, demonstrating a significant increase in knowledge compared to the standard training group. Similar designs could be used with other training programs to make training more cost-effective and targeted at important skills. Effective support plan training can lead to positive social change through improved client treatment, leading to enhanced welling for patients and their families, as well as positive outcomes for direct care workers and their institutions.

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Dedication

This academic achievement was made possible through personal dedication, effort, commitment, and great support from family and friends. The challenges that have taken place in the years committed to the completion of my work have been strenuous, accelerating, but successful. First and foremost, to my husband Rick, who is and continues to be my "Rock" and has provided me strength, to be my sounding board, and my greatest supporter in all areas of my life. Through interactions in both, my personal, education, and career environments I have been tested and I have been provided with encouragement and strength in what I do. I also want to thank God and his love and support for guiding me to this completion of my goal in life to better not only myself, but to provide and support others.

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Chapter 1: Introduction to the Study

The focus of this study was to assess the effectiveness of a structured training program for direct support professionals (DSPs) who work with developmentally disabled individuals (DDIs). DDIs often manifests challenging behaviors that can include self-injury, pica, property destruction, verbal aggressiveness, physical aggression, or assault (Emerson & Einfeld, 2011). Treatment for DDIs who display these behaviors relies on the use of a functional behavior assessment (FBA) to develop a behavior intervention support plan (BISP), designed to reduce the frequency of such behaviors (McVilly et al., 2012). The aim of a BISP is to assist DSPs in reducing the frequency and intensity of challenging behaviors, enhance existing skills, teach new skills, and promote a better quality of life for DDIs (Horner et al., 2000). The DSPs have training in how to perform all these functions; therefore, it is vital that DSPs can read, understand, and accurately implement the BISPs.

For DDIs who receive services in the community and in residential placements, inadequate or insufficient DSP training can be a barrier to effective treatment (Luiselli et al., 2008). For example, a lack of consistency and ineffective implementation of BISPs by the DSP staff may result in a failure to reduce or eliminate challenging behaviors and/or an inability to encourage appropriate replacement behaviors (O'Neill & Stephenson, 2011). As such, the effectiveness of DSPs as caregivers depends on their knowledge and their ability to consistently and effectively apply BISPs.

The goal of this research study was to examine training practices for DSPs at a nonprofit agency that provides services to DDIs and the related outcomes. The aim was

to gain an understanding o the particular aspects of the DSP training that foster effective implementation of BISPs, and which aspects need improvement. The research on training DSPs who work with DDI populations is limited, outdated, and varied. In a study conducted in Ireland, Dowey et. al. (2007) investigated a one-day workshop and its effectiveness on the DSPs' ability to identify and describe client behavior. The authors found that after training, the DSPs demonstrated a positive shift in the models that they used to explain challenging behaviors (Dowey et al., 2007). Accordingly, additional studies on the implementation of DSP training to determine the most effective components may add value to the treatment approaches of DDIs and to the available research literature

According to the U.S. Department of Labor, Bureau of Labor Statistics (2006), the employment for personal care and service occupations is projected to grow 41% from 2016 to 2026. This is a much faster rate of job growth than all other occupations, resulting in about 1.2 million new jobs with personal care aides, and accounting for six out of 10 of the total new jobs (U.S. Department of Labor, Bureau of Labor Statistics, 2018). It is important to investigate the effectiveness of training in this population given the growth of this job sector and the importance of the work these individuals do.

Background

Training for DSPs typically consists of both preservice and on-the-job instruction (Reid, 2004). In New York State, there is currently no specific DSP preservice training requirements or curriculum on interpretation and implementation of BISPs (J. Szempruch, personal communication, April 10, 2016; J. Salerno & M. Small, personal

communication, April 13, 2019). In this study, I build on existing research by investigating the effects of a training program designed to enhance DSP knowledge and understanding of BISPs. There is a shortage of published research in this area. The significance of this study lies in its attempt to address a key problem in this field: how to evaluate staff training for DSPs that helps the participants gain knowledge and understanding of BISPs that may, in turn, translate into better BISP implementation, a reduction in challenging behaviors in DDIs, and improved quality of life for DDIs. Research on this topic is sparse, and most of the published research refers to the training of staff who have received little training, if any, in the past (Larson & Hewitt, 2012).

There has been a dearth of research on the topic of DSP training, and most of the published literature on this topic is over a decade old. According to Hewitt (2001), important areas of focus for research on DSP populations include recruitment, retention, and training. Hewitt documented that poor training and high turnover rates affected 45% to 70% of DSP staff, and although no published literature since that time has updated these statistics, scholars widely acknowledge this problem in the field. Higher turnover rates affect the training of staff because there are fewer senior staff with experience to administer this training. The role of DSPs has changed over time, and the difficulty of short-staffing in programs causes hardships in properly training staff to perform their duties. Cox et al. 2014, stated that service delivery within the community programs depended on DSPs to be knowledgable and have skills for the position, but due to limited training, there is a continued need for the development of staff training strategies.

In this study, I assessed the effectiveness of a structured training program for DSPs who work with DDIs. Tierney et al., (2007) conducted a similar study to this research, with a different focus of training. The authors implemented a two-day training course with 48 DSPs in Ireland who worked with people with intellectual disabilities presenting challenging behaviors. The researchers conducted training in the areas of understanding and responding to challenging behavior, utilizing theoretical presentation, group work, role play, practical skills, and teaching. Tierney et al. used group discussion, case studies, and group exercises to help learning; they also conducted a review of levels of behaviors and the importance of appropriate attitudes and responses for de-escalation. The researchers reported an increase in direct care staff knowledge after training, including an understanding of challenging behaviors, staff efficacy, and confidence. The researchers assessed neither the staffs' competencies and performances, nor the implementation of behavior plans during the training. The researchers also did not use an experimental design with a control group to assess the effectivness of the training. I built on this previous research with training focused on BISP knowledge using training on term definitions and procedures, and on the applied understanding of BISPs using sample FBA and BISPs. I used a standard training control group to control for the effect of time, and I used an assessment developed for this study to evaluate the trainees' knowledge and applied understanding before and after the training (compared to a two-week job experience in the standard training group).

Problem Statement

The problem investigated in this study is the efficacy of supplemental training for DSPs who apply BISPs to deliver care to DDIs. The gap in this study is the limited knowledge regarding the efficacy of supplemental training for DSPs who apply BISPs in delivering care to DDIs. The information previously published on this topic is significantly outdated given developments in behavior management strategies in the past 15 years. This study evaluates the Matrix workshop for DSPs and its effectiveness in providing additional training. I evaluated these questions through the use pretest/posttest comparisons of both knowledge about BISPs and the applied understanding of FBA and BISPs. There is limited research regarding training for DSPs who work with adult DDI populations (Hewitt, 2001). This study investigated the effectiveness of a training protocol to assist support staff in understanding and using BISPs. This investigation included a comparison of this training protocol and standard training in an agency that provides services for disabled populations. The current training available for DSPs at the site selected for this study is based on foundational knowledge, and currently there is no standardized formal training on how to interpret and implement BISPs. Behavior specialists employed at the agency, who write the FBA and BISPs, conduct the training and review the plans accordingly when in the work sites.

DDIs may manifest challenging behaviors that are addressed through the development of a BISP. There is no standardized training protocol for DSPs in the upstate New York agencies that were the focus of the study, and training programs need to address necessary content in a cost-efficient manner. In addition, there were no

benchmarking curriculums to assess DSP training. Through this study, I examined the effectiveness of a two-day training program to determine if the additional training increased trainee knowledge about FBAs and BISPs. The training, as well as the assessment, consisted of knowledge about BISPs, including how they are developed and the terms that are used in them, and the ability to read FBAs and BISPs as well as translating the plans into action. Given the sparse literature on the topic and the importance of the role of DSPs in the treatment of DDIs, there is a need for further research to examine the effect of additional training on the knowledge and behavior of DSPs in the treatment of the vulnerable populations they treat.

Purpose of the Study

This quantitative experimental study was to investigate the efficacy of BISP training in improving both knowledge and applied understanding of BISPs in a sample of DSPs. The sample consisted of newly hired DSPs who volunteered to participate. Both the standard training group and experimental group samples underwent orientation training that the agency employed them provided, which lasted two weeks. I randomly assigned DSPs to either an experimental and standard training groups. Training was the independent variable, with two levels: experimental training and standard training (i.e., the control group). Knowledge of BISPs was the dependent variable, and I assessed this using a pretest and a posttest of BISP knowledge and understanding.

The experimental group completed their standard training, took the pretest, underwent the workshop training, and took the posttest. The standard training group completed their standard training, took the pretest, and worked in the sites with DDI

population for two weeks before taking the posttest. Workshop training topics included detailed information about the psychiatric and developmental underpinnings of behavioral issues. The standard training group participated in the two-day workshop if choosing after completing the posttest.

Research Question

Research Question: Did a BISP training program significantly improve knowledge of BISPs in a group of direct care providers for developmentally disabled individuals compared to a standard training group?

H_a: The BISP training will significantly improve knowledge of those plans compared to a standard training group, as assessed by a pretest and posttest of BISP knowledge.

H_0: There will be no significant differences in knowledge between the BISP training group and a standard training group, as assessed by a pretest and posttest of BISPs knowledge.

Theoretical Framework for the Study

The theoretical frameworks for the research included concepts of social validation and treatment fidelity acceptability as described in the works of Wolf (1978) and Carter (2007), as well as change theory (Walker & Matarese, 2011). I embed these frameworks into the training program by focusing on the importance on addressing treatment fidelity, social validity, and having DSPs accept change.

Social validity is the degree to which an individual finds an intervention acceptable (Luiselli, et. al., 2011). According to Wolf (1978), social validation occurs at three levels: significance of the goals, social appropriateness of the procedures, and social importance of the effects. Social validity assessment is often used within residential settings for populations diagnosed with developmental disabilities. The social significance of the goals, social appropriateness of the procedures of the treatment, and the participants, caregivers and others should be considered for treatment procedures to be acceptable (Wolf, 1978). The treatment needs to be considered socially valid for the provider to apply treatment consistently, so training designed to help understand and apply the BISPs should ideally improve treatment fidelity. The training program itself also needed to have social validity, meaning that the workshop needed to make sense to the DSPs and be applicable for their jobs. To determine if this training program was socially valid, I assessed the social validity of the training in the standard training group after they completed the additional training. This allowed for the participants to evaluate the quality of the training they received on the job versus in the workshop. The social validity assessment was not being used in the hypothesis testing; however, it examined descriptively to help develop future training programs.

The theoretical frameworks for this research was embedded in the training program to address treatment fidelity, these were described as the social importance of DSPs in conjunction with how the intended treatment was delivered (Carter, 2007). These areas of behavioral intervention within treatment programs and BISPs assist intellectually disabled people with challenges. Regardless of existing results on the effectiveness of

these plans and the empirical data, the person treated and the staff who worked with that individual ultimately determined the appropriate approach for addressing challenging behaviors. Alternately, the staff or the person being treated may determine to manipulate or not use the approach (Wolf, 1978).

This study aligned with Wolf's (1978) explanation for social validity and the collection of objective data. Kazdin (1980) defined *treatment acceptability* as social validity research focused on the appropriateness of treatment procedures. The term treatment acceptability refers to social validity and the judgments of the people or persons who will potentially be receiving the treatments (Kazdin, 1980). The theoretical framework used for this research predicted that this training program, which is designed to have social validity by using explanations and examples would be relevant to the work of a DSP and impact the DSPs' knowledge and applied understanding of FBA and BISPs.

The theory of change is the process by which the staff develops an understanding of how the work they do is associated with outcome goals (Walker & Matarese, 2011). The theory of change is best described as a model for determining how and why a desired change is expected to happen in a specific context (Walker & Matarese, 2011). This theory focuses on adding missing pieces of material between program or change initiatives and the goals to be achieved (Theory of Change, 2019). A researcher should identify desired long-term goals and work backwards from these long-term goals to identify all the conditions or outcomes that are required for the goals to occur (Theory of Change, 2019).

Using these theoretical structures, I developed the Matrix training protocol with long-term goals based on treatment delivery priorities. The theoretical guidance in development of the training made the treatment program acceptable for DSPs, with improving both their knowledge and applied understanding of behavior plans. The Matrix workshop used training materials and various techniques and approaches (group activities, homework, role modeling, visual aids, and sample FBA and BISPs to emphasize the social validity of the training.

Nature of the Study

In the study, I used an experimental pretest-posttest design. An experimental design involves the manipulation of an independent variable and random assignment to experimental and control groups and assessment of the dependent variable (Field, 2013). An experimental design allowed the assessment for a potential causal relation between the independent variable and the dependent variable (Field, 2013). The goal of the research was to determine the impact of a training program on DSPs' knowledge and understanding of BISPs for DDIs, this was the appropriate methodology and design.

BISP training was the manipulated independent variable, with two levels: experimental training and standard training (control). Time was the within-subjects factor, with two levels: pretest and posttest. For the experimental group, the pretests and posttests took place before and after the two-day Matrix workshop, while the standard training group received both the pre and posttests before completing the two-day Matrix workshop with two weeks between tests. The dependent variable was the BISP knowledge and understanding of FBA and BISPs. The population sampled were DSPs in

the orientation phase of training and were employed by an agency located in New York State that serves DDIs.

Operational Definitions of Terms

Applied understanding: applied understanding is the mental process for comprehension or personal interpretation, characterized by understanding based on knowledge and familiarly with a particular thing (The American Heritage Dictionary, 2002).

Behavior Intervention Support Plan (BISP): is a treatment behavior intervention support plan developed to provide strategies and approaches to reduce the frequency and intensity of challenging behaviors (Horner et al., 2000)

Challenging behaviors (CB): challenging behaviors are harmful or contrary to the person's growth and progress that can be observed and measured. Some examples include, but are not limited to, self-injurious behaviors, verbal and physical aggression, assaultive behaviors, sexually inappropriate behavior, elopement, and property destruction (Killu, 2008).

Direct support professional (DSP): these refer to employees who work for an agency that provides services to DDIs. The DSPs work directly with individuals in residential and day habilitation settings, as well as within the community where activities occur. The requirements for the position include a high school diploma or a GED, a motor vehicle license, pre- and post-hire drug testing, background checks, and the ability to lift 50 pounds (Upstate Cerebral Palsy Association, 2014).

Functional behavior assessment (FBA): A BISP is developed based on the results of an FBA. The FBA includes a definition of the challenging behavior(s), the hypothesized function for the behavior(s) or why these occur, and the intervention strategies to address the behaviors (New York State Department of Education, 2011).

Knowledge: information that is relevant, actionable, and partially based on experience (Leonard & Sensiper, 1998).

Master's level clinicians or behavior specialists: clinicians who meet the New York State Office for People with Developmental Disabilities' (OPWDD, 2016) criteria for writing FBAs and BISPs for DDI populations who have a master's degree in a specific area (e.g., clinical psychology, special education, and social work). These clinicians are responsible for following the OPWDD regulations for what is required in FBAs and BISPs for DDIs (OPWDD, 2016).

Social validity: refers to DSPs acceptability of, and satisfaction with, intervention procedures, usually assessed by soliciting opinions from the people who receive and implement these procedures (Luiselli et al., 2011).

Treatment fidelity: refers to the degree that the strategies actually used in treatment are consistent with those described in the BISP. The consistency with which DSPs implement BISPs, as written, is a crucial factor in the success of the BISP and in treatment outcomes (Bellg et al., 2004).

Assumptions

The major assumption of this study was that the participants answer the pretreatment and posttreatment measures honestly, truthfully, and to the best of their ability. The participants' confidentiality was strictly maintained so that they had no reason to answer dishonestly. Other assumptions included: (a) the training was implemented as described in the provided training manual; (b) that the individuals involved in the training could learn the training material; and (c) that they paid attention. This was assumed because the training material was related to the clinicians' work, and because there was ample time for participants to ask questions. A final assumption was that the study instruments were valid and assessed knowledge about BISPs effectively. The pretest and posttest assessments were developed specifically for this study. Professionals with knowledge in the field reviewed these assessments to ensure face validity of the instruments.

Scope and Limitations

This study was limited in its scope because of its focus specifically on BISP interpretation and implementation. The training that was implemented was short in duration. There are other aspects of training for DSPs that may be topics for future research, such as ethical treatment of clients and communication; however, BISPs include these aspects of a DSP's job, and thus I chose BISPs as the focus for this study. Longer training modules may also yield different results. Training time is valuable and short training programs are more likely to be implemented consistently. Therefore, I limited this research to focus on a limited area of treatment (BISP implementation) with a short

and focused training program. In addition, the population that I sampled for this research were DSPs, who worked for a specific program in a limited geographic location (upstate New York). Findings were only generalized to this location, but this research may inspire future studies with broader generalizability.

The standard training group were not denied employment while waiting to participate; therefore, the differences between the two groups did not include the training that was provided to the experimental group and not the standard training group, but also the job experience that is gained by the standard training group and not the experimental group. It was a possibility that the standard training group had gained knowledge about BISPs and their interpretation in their on-the-job training and experience, might have influenced the findings. Thus, it is a study limitation that the standard training group was not a waitlist, but rather, the equivalent of a "treatment as usual" group.

This study did not have a long-term, follow-up component; therefore, there will be no opportunity to gain knowledge regarding maintenance following the initial assessment period. The findings were limited to the population of DSPs regarding their specific job responsibilities, required training, and geographic location. Conclusions about the specific effects of the content of the treatment was limited.

I have not tested the measures developed for this research for reliability or validity beyond a facilitated evaluation by professionals in the field. These professionals included the licensed chief psychologist for the agency, a licensed neuropsychologist that was a consultant for the agency, and a licensed chief psychologist for a state agency. All have extensive knowledge regarding the interpretation and administration of BISPs. No

such measures for BISPs exist; therefore, the measures used had to be developed for the purposes of this study. The limitation was mitigated by careful independent review of the measures, but the lack of reliability and validity data may have influenced the conclusions that were drawn from the findings.

Significance

Through this study, I built on existing research by investigating the effect of a training program designed to enhance DSPs' knowledge and understanding of BISPs. The significance of this study lies in the attempt to address key problems in this field: how to foster staff training and development among DSPs regarding knowledge, understanding, and intepretation of BISPs. This may translate into to better BISP implementation, a reduction in challenging behaviors in DDIs, and an improved quality of life for DDIs. This study may have had a direct effect on practice because the aim was to improve the way treatment is delivered and implemented by DSPs within the DDI population. The clients, their families, the DSPs, the institutions for which they work, and society in general benefited from the research. Clients and their families' benefit from improved treatment and consistent staff; the staff benefit from increased satisfaction and productivity in their work; the institutions benefit from decreased staff turnover; and, society benefits from the increased functioning and well-being of DDIs and their caretakers.

This research added to the existing literature, as well as it can be used to enhance and improve the OPWDD regulated programs for training DSPs on BISPs. These findings will contribute to positive social change. The services provided to DDIs by state

and national agencies depend on the development and effective implementation of BISPs, and the outcomes of the study had a major influence on policies regarding staff recruitment, training, and development.

Callahan et al. (2012) focused on social change in the task force report, *Expanding Our Understanding of Social Change.* The authors addressed the subject of advocacy and explained how individuals and groups have their own voices that can be used to negotiate for services and to ensure that there are opportunities provided for DDIs. Education is an aspect of advocacy that brings awareness and understanding along with confidence and self-reliance to those targeted. This study focused on training, which can be viewed as advocacy and development to implement needed instruction to serve this population better.

Summary

Although previous research on training has been useful in developing better treatment programs for DDIs (Tierney et al., 2007), there continues to be a gap in the literature regarding controlled studies of educational programs for DSPs. There is little research on this subject. According to Bradshaw and Goldbart (2013), skilled supports depend on DSP knowledge and understanding. Regardless of the services provided, DSPs are essential for working with intellectually disabled populations. The way that DSPs deliver interventions determines treatment quality (Bradshaw & Goldbart, 2013). A need exists for the development of training curriculums for DSPs, with a focus on enhancing their understanding of BISPs and improving skills.

Chapter 2: Review of Literature

The problem under investigation in this study was limited knowledge regarding the efficacy of supplemental training for DSPs who applied BISPs in delivering care to DDIs. The purpose was to investigate the effectiveness of a training protocol to assist support staff in understanding and using BISPs in an agency that provides services for disabled populations. This chapter includes a review of the research literature on training practices for direct support staff who implement BISPs to treat DDIs. Through this literature review, I discuss the published research literature concerning the theoretical basis of the study, FBAs and BISPs, ethical implications, and training program studies.

I review and discuss the theoretical basis of Wolf (1978) and Carter (2007), in the context of the importance of treatment fidelity and validity. This chapter details the research on training programs and provides information regarding the length and outcome of training, the results of training (with a focus on effective treatment plan implementation), and effectiveness of the training in assisting staff to treat individuals with challenging behaviors. I include an overview of the published research in this area and the evidence of training effectiveness, including a review of the treatment of challenging behaviors and how training affects direct care support staff workforce. This review details pertinent ethical issues concerning workforce training programs and practices in the treatment of challenging behaviors. This chapter concludes with a summary of the literature as related to direct support staff training programs and overall relevance to persons with intellectual disabilities.

Search Strategies

I conducted a search of the seminal literature, as well as articles published between 2013 and 2017 using university library search services and databases, including: EBSCO Host, ERIC, Academic Search Premier, PsycINFO, CINAHL, SAGE database, and MEDLINE. The list of search terms were: *direct support staff, training programs, developmentally disabled populations, FBAs and BISPs, effective training programs, residential and day program settings for DDI populations, behavior modification, challenging behaviors, challenging aggressive behaviors, challenging behaviors, professionals providing services, ethics, ethics in training, treatment protocols,* and *monitoring assessment measures for analyzing effectiveness of training, BISPs,* and *satisfaction*. I reviewed sources for other potential research articles of relevance as well. The search required expansion to include articles over 10 years old, as the majority of research on this topic was dated. Few articles had been published on this topic in the past 5 years, and much of the data was outdated. This research was included in the review as it was the only research that was available.

Theoretical Foundation

According to Schafer (2004), educators need to be aware of and use active learning as an approach to instruction. Active learning describes an approach in which all people are asked to engage in the learning process. In contrast, passive learning is a more traditional learning approach in an environment where the learner is a passive recipient of information. Training relies on the inclusion of relevant information, the use of a

reasonable amount of information, and an overall need for this information to be understood (Schafer, 2004). Researchers have found that active learning approaches increase knowledge and understanding of the material (Schafer, 2004). In addition, interactive training occurs when the presenter talks to (verses talked at) the audience: it is an effective and simple concept, but difficult to put into practice. The presenter should limit the use of movies and lectures, as they are considered passive learning (Schafer, 2004).

Using several methods for each training session may be the most effective way to train and assist employees on how to learn and retain information. The advantages to using interactive training include engaging the trainees, making them more receptive to the new information, and providing fun and enjoyable training. This approach includes existing employees, who provide their knowledge and experience to the new employees. This approach to training also provides a milieu in which staff provide feedback to instructors on the training areas to improve or revise (Business and Legal Resources, 2016).

Howery et al. (2013) identified the need for what they referred to as a pyramid of intervention approaches for student populations. The pyramid of intervention approaches model is built from the following four critical elements: (a) a belief in social justice and the value of every individual; (b) a commitment to an inclusive education; (c) an understanding of the power of teams; and (d) a need for flexible funding and expenses to be applied to training of DSPs. Identifying possible adaptions for this model to be for integration integrated into staff training curriculums may provide a supportive approach

for DSPs. Such an approach should be devised to increases active learner participation and provide an established leadership commitment for inclusive change in agency training and curricula (Howery et al., 2013).

Active learning approaches included calling on recipients throughout the training, integrating and providing increased interactive activities, presenting shorter presentations for the information, and having fewer distractions to increase staff attention during the training (Schafer, 2004). Establishing themes and similarities between concepts in the training program with a review period for the information contributes to successful training sessions. Success in training is defined as meeting the competencies and expectations for direct care professionals, which include meeting agency minimum requirements, completing training, and having continuous competency reviews when working with individuals with developmental disabilities (Direct Support Professional Policy, 2011; Schafer, 2004).

Wraparound Approach

The wraparound approach is not a theory, but rather, a concept that enhances the theory of change (Burchard, et. al., 2002). Wraparound approaches emerged in the 1980s, characterized by a collaborative team-based planning and a process geared toward individualized services for clients and families (Fixon et al., 2005). The wraparound approach centers on the concept that individuals with behavioral and developmental disabilities can develop and live a quality life if they and their families are afforded services and support tailored specifically to them (Burchard et al., 2002).

Wraparound approaches have become the central basis for developing and organizing behavioral management training (Burchard et al., 2002). Behavioral management training consists of three categories. The first category is *desired behaviors*, observed in the treatment population of interest with the goal of increasing those behaviors. DSPs learn approaches that will increase the frequency of the desired behaviors. The second and third categories focus on the management of *undesired behaviors*. More specifically, the second category is undesired behaviors that are not wanted but can be tolerated. Behaviors that fall under this category are those that are not dangerous, destructive, or harmful to oneself or others. The DSP aims to decrease the frequency of these behaviors, or if possible, eliminate them completely. The third category is undesired behaviors that are not wanted and cannot be tolerated. Individuals exhibiting such behaviors may be dangerous to themselves as well as others. It is most important to address the management of this type of behavior (Burchard et al., 2002).

Several areas and practices should be considered when developing behavioral management training (Schafer, 2004). Among these considerations is the length of the training. The training should be long enough to be thorough, but not so long that the trainees will lose focus or interest. Another factor to consider is whether the concepts are strategically organized. Strategically organized concepts allow for smooth delivery of the material and present an organic flow that builds on and strengthens approaches throughout the training. The last factor to consider is the use of real-life information in providing opportunities for learners to retain knowledge. Researchers have found that real life information resonates more with trainees than fictional scenarios (Schafer, 2004).

Walker and Matarese (2011) asserted that since the 1990s, the focus of training has been on a wraparound approach and implementation when providing services. In the late 1990s to the 2000s, the wraparound approach to services included four wraparound phases: (a) engagement and team preparation; (b) initial plan development; (c) plan implementation; and (d) transition (Walker & Matarese, 2011). The wraparound approach evolved from a commitment to doing whatever was needed for successful behavior management, to a causal effect that assesses outcomes and establishes longer-term goals (Walker & Matarese, 2011).

Bruns et al. (2008) and Walker et al. (2004) reviewed the research on the wraparound approach and concluded that although this model had been associated with positive outcomes in the research literature, it was complex. Organized training content and engaging professional development activities and activities that support and assist staff with organization are components necessary for success. As such, this approach was the basis for developing the training module to support staff and implement BISPs in an agency that provides services for the disabled populations (Walker & Matarese, 2011). For this study, I used the wraparound approach strategies within the framework of change theory.

Change Theory

The theory of change is the process by which the staff develops an understanding of how the work they do is associated with outcome goals (Walker & Matarese, 2011). The theory of change is best described as a model for how and why a desired change is expected to happen in a specific context (Walker & Matarese, 2011). The model allows

the researcher to add missing pieces of material between programs or change initiatives to achieve the goals (Theory of Change, 2019). The researcher should identify desired long-term goals and then work backward to identify all the conditions or outcomes required for the goals to occur (Center for Theory of Change, 2019).

The theory of change begins with an assumption that the team conducts work that is consistent with the goals. This includes having effective values-driven teamwork that is grounded in a strength's perspective, driven by underlying needs, determined by families, and supported by an effective team process. Activities are expected to be grouped and identified clearly in each phase (Walker & Matarese, 2011). These principles are consistent with effective teamwork implemented by a cohesive team with a shared commitment to the identified goals, which leads to treatment quality and fidelity.

Change theory includes staff training, coaching, and evaluation to describe the ways skillful practice can promote desired outcomes (Walker & Matarese, 2011). The theory of change explains the essential skills that staff need to effectuate change. This theory is helpful in a workforce development initiative because it ensures that practitioners are consciously aware of how their work simultaneously promotes the principles of the wraparound approach and is individualized and unique.

According to Walker and Matarese (2011), identifying key elements, practice components, and skill sets is essential to the theory of change. This identification ensures that each skill set is connected in a straightforward way using a key element to one or more of the process outcomes. Change theory predicts increased knowledge regarding support and services for behavioral management if used in conjunction with the

wraparound approach (Walker & Matarese, 2011). This theory assisted me in investigating the level of understanding the support staff gained with training focused on using BISPs in an agency that provides services for disabled populations. The theory of change in conjunction with the wraparound approach helped guide the training itself. According to the theory, the use of its principles resulted in a significant change in knowledge that directly applies to the use of BISPs.

The University of Maryland Innovations Institute (Innovations) used the change theory and the wraparound approach as the basis for its approach to support staff development (Walker & Matarese, 2011). Innovations gathered a group of nationally renowned expert researchers to define skill sets and organize these into a conceptual network to provide novice practitioners with an understanding of the wraparound theory and the principles and core activities consistent with the theory. This study provided an example of applying theory to a workforce development model (Walker & Matarese, 2011).

Fixsen et al. (2005) studied various core components of wraparound services, which the researchers described as essential for practice and program success. These core components included staff training, coaching, and evaluation. Also, Fixsen et al. emphasized the need for a focus on implementation and successful integration of training.

Intellectually Disabled Populations

The purpose of this study was to investigate the effectiveness of the Matrix workshop training program for DSPs who provide services for developmentally disabled populations. Rosa's Law (2010) replaced the term *mental retardation* with *intellectual*

disability. In *The Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association [APA], 2013), its authors referred to factors occurring during the developmental period that met criteria for intellectual disability, including cognitive and adaptive functioning deficits in social, conceptual, and practical domains. To be considered intellectually disabled, all three of the following criteria must be met with a clinical assessment and individualized standard intelligence testing must be completed:

1. Intellectual functioning category deficits include reasoning, problem-solving, planning, abstract thinking, judgment, academic learning, and learning from experience.
2. Adaptive functioning deficits include failure to meet developmental and social standards for personal independence and social responsibility. Without supports, the deficits limit functions in one or more areas of activities in life including communication, social participation, and independent living across various environments—such as work, school, and home.
3. The onset of intellectual and adaptive deficits occurs in the developmental period (APA, 2013, p. 33).

The four intensity levels of intellectual disability are mild, moderate, severe, and profound. All four levels were assigned based on functioning, which determines the level of supports required. Intelligent quotient (IQ) scores were used to assign the level of intellectual disability, but low-end IQs tended to be less valid than higher IQs (APA, 2013). Intellectual disabilities occur in all races and cultures, with males diagnosed more than females. The causes of these disabilities include genetic, perinatal, and postnatal

factors (APA, 2013). To meet criteria for the OPWDD services, regardless of need, the person or population must meet the DSM-5 criteria for functioning deficits and have a behavioral problem (OPWDD, 2016). The individual must have an IQ consistent with mild intellectual disabilities (ranging from 50 to 70), moderate intellectual disabilities (ranging from 35 to 49), severe intellectual disabilities (ranging from 20 to 34), or profound intellectual disabilities (less than 20) (APA, 2013)

More than half of the DSPs hired to work with developmentally disabled clients will leave in the first year of employment (Hewitt, 2001). Difficulties arise with DSPs attendance at training sessions because of the clinical needs and short staffing in the programs (Hewitt, 2001). The roles that DSPs must fill have changed over time, and their responsibilities are more intense. As such, a need exists to improve the support that DSPs provide to disabled populations, which can be addressed by structured training programs. The theory of change and the wraparound approach can be used to provide such an efficient and effective program to meet this need.

Direct Support Professionals

New York State's job description for DSPs includes providing a wide variety of person-centered supports and services and a focus on person-centered choices for the intellectually disabled person (OPWDD, 2016). The support that DSPs provide include advocacy, encouragement, guidance, and teaching while assisting DDI people in developing personal skills and habits (OPWDD, 2016). Also, direct care pertains to providing for the personal needs and abilities of patients, while simultaneously ensuring their health and safety. The DSPs should assist and inspire the people they serve in

numerous ways. For example, DSPs should focus on assisting and inspiring those they serve vocationally and socially. Assistance and inspiration regarding nutritional needs and personal skills would help those served meet the highest level of independence in the least restrictive environment. Staff guide their clients according to their individual plans to assist in making choices. As a result, DSPs encourage problem-solving and coping skills to assist in development. DSPs are also responsible for documenting unusual incidents and physical or behavioral symptoms. These DSPs also assist in controlling and restraining those who exhibit challenging behaviors (OPWDD, 2016).

Functional Behavior Assessments and Behavior Intervention Plans

An FBA is a multistage procedure for assessing and treating challenging behaviors. A BISP is developed at the third stage of this process. BISPs consist of strategies that may be used in various environments by DSPs to treat challenging behaviors. Behavioral supports are vital when working with populations that display complex and challenging behaviors. Best practice in treatment includes having well-structured approaches and strategies to manage client needs (McVilly et al., 2012). It is important to use measurable objectives to monitor change in the quality of supports for intellectually disabled persons who exhibit challenging behaviors. To achieve this, the process of developing and implementing FBAs and BISPs must include a range of support and strategies to enhance existing skills while optimizing quality of life (Chaplin et al., 2014).

Treatment failure is often caused by a lack of consistent and accurate implementation of BISPs (Melville et al., 2016; Noell et al., 2014). It is important to

review and assess the practicality of BISPs (i.e., whether or not they can be carried out by the DSPs) and to make sure that the DSPs were trained to consistently implement treatment interventions as written, which has been a barrier to collecting consistent and accurate data (Melville et al., 2016; Noell et al., 2014). Inconsistent BISP implementation compromises treatment for those receiving services. Evidence has shown that lower rates of treatment integrity result in poor treatment outcomes (Reinke et al., 2014; Solomon et al., 2012).

Research studies on behavior plan credibility and accuracy and DSP implementation of BISPs are outdated (Singh, et. al., 2009). Research with a focus on treatment fidelity and validity in training programs continues to be limited in populations of developmentally disabled persons, and the research is dated when addressing training of direct support staff. Current research is needed to investigate training efficacy in DSPs, especially using strategies inspired by the theory of change and the wraparound approach. If training can be done effectively and efficiently, the findings of this study may be used to influence future training programs.

Social Validity of BISPs

Wolf (1978) asserted that the concept of the social validity of treatment was determined by the social importance of that treatment, such as the use of procedures that are acceptable in society and an outcome that is both relevant and pertinent. Treatment methods need to be socially appropriate, and the effects need to have clinical significance for social validity. Reimer et al. (1987) conducted a literature review and concluded that

five primary factors affect treatment acceptability: problem severity, treatment approach, the time needed to implement the treatment itself, possible side effects from the treatment, and the overall cost for implementation.

Understanding social validity in the context of behavioral interventions is pertinent to the present study. Recognizing the factors that deem a treatment as socially acceptable is necessary to discuss how DSPs can gain a better understanding in the treatment of DDIs. Additionally, McKee (1984) stated that the relationship between knowledge of behavioral treatments and acceptance of treatments by providers explains how DSPs may benefit from structured training programs. Elliott (1988) examined research on social validity in a review of 20 empirical studies of behavioral interventions in school children. The author found that the teachers' acceptance of treatment was related to the severity of the problem, the type of behavioral problem addressed, the time invested in the treatment, and the teachers' experience and understanding of behavioral principles (Elliott, 1988). According to McKee (1984), teachers who have more knowledge of behavioral treatments are more likely to have a higher acceptance rating.

Treatment Fidelity in BISPs

Treatment fidelity refers to how the strategies used in treatment align with those described in the BISP (Bellg et al., 2004). The consistency with which DSPs implement BISPs, as written, is a crucial factor in the success of the BISP and treatment (Bellg et al., 2004). When DSPs implement BISPs inaccurately and inconsistently, inconsistent treatment outcomes will result (Bellg et al., 2004). Additional variables influencing

treatment fidelity include environmental influences, time, and the staff implementing the interventions (Mandell et al., 2013; Miller & Rollnick, 2014).

Improvement in treatment fidelity can be described as the increase in the consistent implementation of BISPs. Overall, increased consistency contributes to increased treatment efficacy (Mandell et al., 2013; Miller & Rollnick, 2014). The literature regarding treatment fidelity in intellectually disabled populations lacks consistent and accurate information on BISPs. Researchers have not sufficiently examined the implementation, effectiveness, and maintenance of BISPs. A lack of research on standardized focused trainings also exists; this information may improve consistent implementation of BISPS. As a result, training is insufficient and varies depending on the person delivering the training material (Mandell et al., 2013; Miller & Rollnick, 2014). There is also a dearth of literature pertaining to DSP acceptance or perceptions of the viability of the treatment. Treatment fidelity is significant for the development and implementation of BISPs and is a factor in the overall success or failure of treatment (Mandell et al., 2013; Miller & Rollnick, 2014).

Training Program Studies

Numerous researchers have conducted studies on training direct support staff with the goal of increasing staff knowledge in behavioral strategies and in populations that participate in challenging behaviors (Donat et al., 1991; Tierney et al., 2007). For example, Donat et al. (1991) described the development of a training program for DSPs working in a public psychiatric hospital aimed at helping them treat their clients rather than control them. The authors found a lack of the consistent implementation of

behavioral management programs and conducted a two-day training program to address the problem. Training included 234 DSPs, 119 psychiatric aides, 48 mental health workers, 36 registered nurses, and 32 practical nurses. The researchers used the Behavioral Methods Inventory (BMI) and role-play situations to assess staff learning after training. They reported a statistically significant increase in knowledge after training compared with an untrained sample (Donat et al., 1991). However, behavioral management skills have changed considerably in the past 20 years since this study (Donat et al., 1991). Although Donat et al. asserted structured training programs were advantageous in developing staff knowledge, the authors had limited data to reach that conclusion given how little research had been conducted on the topic. Donat et al. concluded future researchers should use experimental research designs to establish a cause and effect relation between training and the pre- and post-measures. Through this study, I sought to fill the gap by using a randomized controlled trial of a BISP training program for DSPs.

Tierney et al. (2007) described a two-day training course conducted for staff working with patients with challenging behaviors. The Challenging Behavior Attributions Questionnaire (CBAQ; Hastings, 1997), the Emotional Reactions to Challenging Behavior Scale (Mitchell & Hastings, 1998), and another emotional reaction scale were used as dependent variables. A total of 48 DSPs with various job titles and years of experience (e.g., nurses, DSPs, house parents, or chefs) completed the study. The researchers did not utilize a control group. At the three-month follow-up, the researchers

reported a significant increase in staff efficacy in dealing with challenging behaviors, as measured by the CBAQ. None of the other measures demonstrated statistically significant change; however, the authors noted trends in reduced negative emotional response after training. Tierney et al. concluded the need for "post-training and follow-up measurement" (p. 62) to assess if changes are maintained after training.

Way et al. (2002) referred to a study conducted in 1997, when the New York State Office of Mental Health (OMH) initiated a mandatory two-day training program for DSP mental health staff, which included 10,000 individuals. A key concept of the curriculum involved the design of a module led by former clients of OMH inpatient services. Each ward or unit trained together as one group, with mandatory attendance for staff from all shifts and disciplines and any staff who had any direct contact with clients. Hospital executive staff with the ability to implement hospital-wide changes also attended. This training curriculum provided the staff the ability to receive feedback from former clients. According to Way et al. (2002), a total of 3,732 staff completed an evaluation after the two-day training program. The New York State OMH used three instruments to assess the effect of the program: a staff questionnaire, the Moos Work Environment Scale (Moos, 1994), and the Moos Ward Atmosphere Scale (Moos, 1996). The researchers indicated statistically significant increases in DSP communication, interaction, respect for the patients, and cultural competence after training. The supports used in this study included structured training programs, although the researchers reported that the two-day training program was not sufficient in improving negative emotional reactions to challenging behaviors. The study did not involve a control group.

Salpeter (2003) identified the need for a continued focus on staff development and retaining quality personnel. The various strategies to consider when reviewing staff development include: (a) being aware of reluctant learners and their need for support; (b) keeping training realistic and including projects, activities, and goals developed by each learner; (c) having administrative support; (d) having no interruptions during training; (e) establishing study groups and requiring meeting times and sessions for face-to-face learning opportunities together; (f) having mentors to support training; and, (g) listening and providing feedback (Salpeter, 2003). I built on this literature by using the conclusions of Salpeter's review to develop a structured training program and examine how DSPs benefit from it.

Appropriate training ensures that the staff who implement BISPs are knowledgeable and competent when working in challenging environments. Training assists in establishing the least restrictive environment and refraining from the use of restrictive behavioral control methods when working with individuals who have challenging behaviors (Donat et al., 1991). A gap in the literature exists regarding BISP training programs for intellectually disabled populations, which is a substantial factor in treatment failure (Melville et al., 2016; Noell et al., 2014). Through this study, I attempted to fill that gap by examining the effectiveness of structured training programs that serves disabled populations.

If DSPs are not sufficiently trained in treatment interventions, and BISPs are not implemented as written, a barrier in the collection of accurate data collection may arise

and compromise treatment. Evidence has shown that lower rates of treatment integrity result in poor treatment outcomes (Melville et al., 2016).

Reinke et al. (2014) evaluated the association between teacher implementation of classroom management practices and coaching supports provided to the teachers. Teachers participated in six training sessions across the school year. A teacher classroom management person was assigned to each participating teacher, who observed and met with the teacher each week for one hour. This coaching model was learner-centered, supportive, collaborative, and focused on building the teachers' strengths. The authors found that teachers who received more performance feedback had higher levels of implementation compared to teachers who received less feedback. In addition, a significant interaction occurred between the amount of coaching a teacher received and his or her implementation of proactive classroom management. Many social-behavioral interventions involve coaching; however, little information has been documented regarding how much coaching is provided, how coaching activities are determined for each teacher, and how long coaching continues. Reinke et al. recommended future researchers should systematically evaluate coaching within the context of evidence-based interventions, as well as use coaching in areas of training.

Previous research on strengthening the skills of DSPs and other providers have provided some evidence that training sessions help build skills that benefit the clients they serve. The overall quality of that research has been poor, however, with little use of control groups and few measures of learning. This study seeks to fill gaps in the literature by implementing a training program for DSPs using a true experimental design

incorporating a standard training control as well as pre and posttests to assess for changes in understanding and application of BISPs.

Summary and Transition

Training for DSPs has been challenging. A gap in the literature exists regarding the training of DSPs, even though states require standard competencies as a minimum requirement of training, despite the lack of any formal standardized training programs. Instructors have a responsibility to recognize, identify, and develop training programs that will sustain employees to ensure the quality of their services and to develop a career path to advance and retain those services. Through this study, an instructor(s) was trained by me to conduct the training along with an assistant to determine the effectiveness of a program designed to help them implement BISPs.

In 2006, the U.S. Department of Health and Human Services predicted the number of individuals with developmental disabilities in need of residential, in-home, and day supports to rise from 1,015,000 in 2003 to 1,400,000 in 2020 (an increase of 38%). This increase was attributed to the rise in U.S. population and life expectancy of people with developmental disabilities and aging family caregivers. Thousands of developmentally disabled populations currently reside with aging family caregivers. It is important that the individuals who care for them have effective training aimed at helping these individuals' function as independently as possible. This study incorporated a limited amount of recent literature due to the gap in standardized trainings or curriculums for DSPs in the field of human services who work with IDD populations and use FBA

and BISPs. The literature reviewed in this chapter provided a rationale for the study, which is described in Chapter 3.

Chapter 3: Research Methods

The purpose of this quantitative true experimental study was to investigate the effectiveness of FBA and BISP training in a sample of DSPs. In this chapter I will describe the research design and rationale, the research methodology, the population, and the sample recruitment strategy. I will also describe the procedures used in developing the instrument for this study. I will explain the procedures for data collection, data analysis, and threats to validity. Finally, I will review the ethical procedures I will follow throughout the study.

Research Design and Rationale

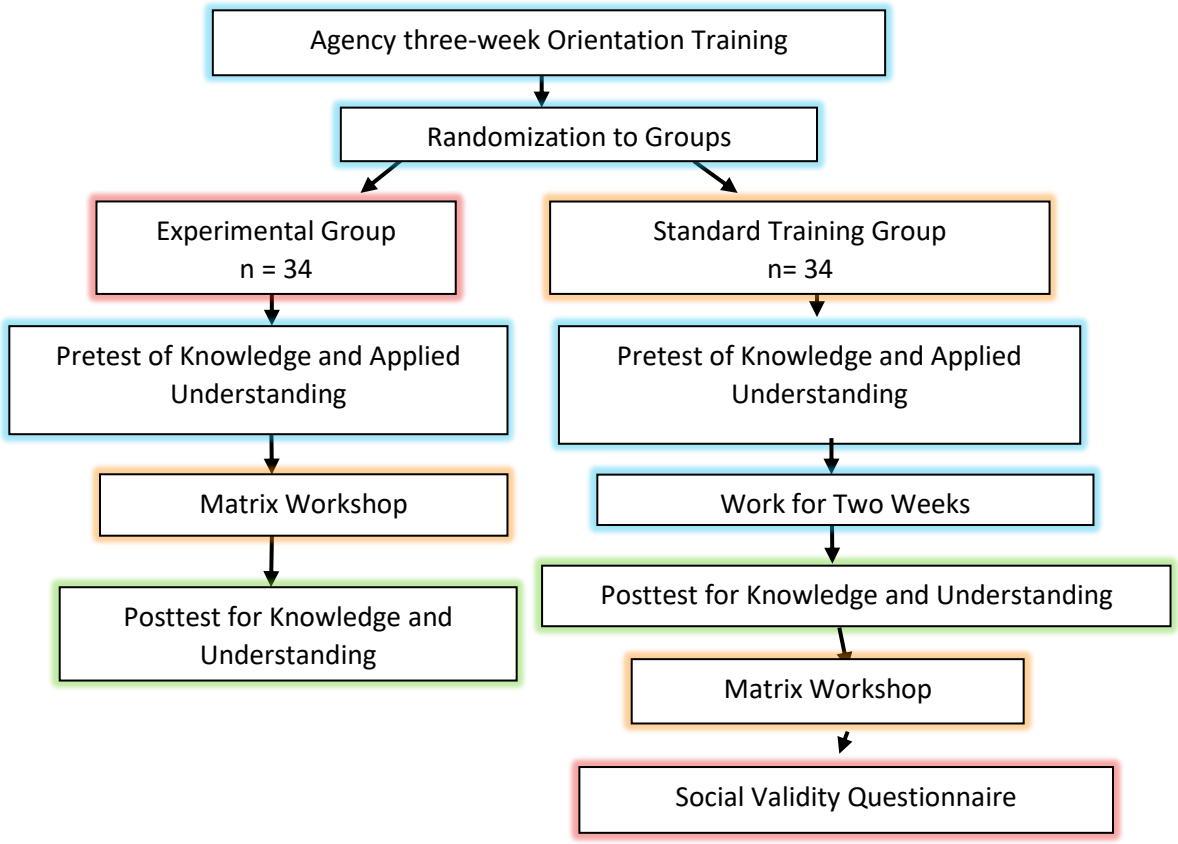
A quantitative true experimental design using a pretest and posttest to assess for change was used to address the research questions. Quantitative methodologies, in contrast to qualitative or mixed method methodologies, involve the testing of research hypotheses through statistical data analysis of numeric variables. According to Creswell (2014), experimental designs test for a cause/effect relation between a treatment or intervention and an outcome. The design also controls for other factors that may influence the outcome through the use of random assignment to experimental and control groups. The research question focused on a potential cause/effect relation between the training program and a change in knowledge and applied understanding of behavioral plans, making the experimental design the appropriate way to address the questions.

Random assignment to the experimental training and standard training groups assisted in control for extraneous variables; I investigated if the training program was responsible for any change in scores compared with the standard treatment. There was one factor that could not be controlled for, because the standard training group had two weeks of on-the-job training that the experimental training group did not have. This was unavoidable, as the participants needed to pursue their employment. The gathered data allowed me to draw conclusions about the effectiveness of the training program by comparing changes from the pretest and posttest, which assessed the dependent variables between the two groups.

The experimental group participants began the two-day Matrix workshop after their standard training and pretests were completed. The standard treatment group also completed the pretest after the standard training proceeded to start their work duties and complete the posttest two weeks later.

Figure 1

Study Flowchart



After completing that posttest, the standard training participants had the opportunity to participate in the workshop (see Figure 1). I manipulated the training (the independent variable) with two levels: training (experimental) and standard training (control). The dependent variable of interest was the BISP knowledge.

Methodology

Population

This study was conducted at a nonprofit agency located in New York State that employs more than 3,000 employees in varied positions, the majority of who are Direct

Support Professionals (DSPs). Approximately 1,500 staff are currently employed as DSPs in the agency. I recruited from new hires. The agency culture and philosophy is to provide services for people with intellectual developmental disabilities and mental health diagnoses. The agency has established residences, day habilitation programs, intermediate care facilities, school campus, and independent vocational programs, within five counties of New York State. The agency was willing to have this study conducted and may use the information collected to further improve or develop policies for training opportunities (see Appendix A for site permission letter).

Sampling and Sampling Procedures

The potential participants were newly hired DSPs who are assigned to work with DDIs in residential programs, day habilitation programs, and schools. The agency has ongoing efforts to recruit and hire DSPs. Every week a group of newly hired DSPs started in the agency's general orientation. As newly hired employees they go through the recruitment department to complete required new hire paperwork for the agency, the recruiter specialist provided a recruitment flyer (see Appendix B) to each DSP. The recruitment flyer provided information about the study as well as how to contact me for more information through email or phone. To participate in this study, participants had to be at least 18 years of age. Individuals of any sex, educational level, or ethnic background were welcomed to participate; however, they had to be able to read and write in English to take the pretest and posttest questionnaires.

I used G*Power, a power and sample size calculator developed by Faul et al. (2014), to determine an appropriate sample size. However, to determine an appropriate

sample size a priori, several parameters had to be specified, including the expected effect size, desired statistical power, and researcher-imposed alpha level. Cohen (1988) stated that when there is no indication of a specific effect size in the literature, a medium effect size can be assumed. Cohen also recommended the use of a .80 power level and an alpha of .05, as it balances the risk of Type I and II errors (i.e., the risks of concluding a false positive or false negative, respectively). Sample size requirements were based on the most stringent analysis, such that the minimum expected sample meets the needs of the analysis with the largest sample size requirement. In this study, the most stringent analysis is the independent samples *t* test. Assuming the medium effect size based on Cohen's suggestion, an independent sample *t* test with a medium effect size, an alpha of .05, and a power of .80 would require 68 participants (Faul et al., 2014), with approximately 34 in each group.

Population/Participants

The agency has ongoing efforts to recruit and hire DSPs. Every week a group of newly hired DSPs started the agency general orientation. As newly hired employees they go through the recruitment department to complete required new hire paperwork for the agency, the recruiter specialist provided a recruitment flyer (see Appendix B) to each DSP hired and informed them to contact me for more information about the study. Potential participants also could have contacted me through email or phone. Each potential participant was provided an Informed Consent Form to participate in the research study.

I used a random number generator to assign Direct Support Professionals to two different groups: the experimental group and standard training group. Immediately following the required two-week agency orientation, the experimental group were trained specifically on Functional Behavior Assessments (FBAs) and Behavioral Intervention Support Plans (BISPs) during the two-day Matrix Workshop. The standard training group was scheduled for the Matrix Workshop approximately two weeks after they completed the agency orientation. A flowchart to illustrate the progression of the experimental group and standard training groups appears in Figure 1 above.

Matrix Workshop Intervention

The two-day Matrix Workshop (the independent variable) was focused on developing the DSPs' in-depth knowledge and understanding of the clinical components and information for FBAs and BISPs. The workshop iincluded lectures and training on the psychiatric and developmental underpinnings of behavioral issues, group activities and role-playing with DSP participation, and homework assignments. The training occurred in a room located at the main campus of the agency (see Appendix G for the training syllabus). I was not the instructor, but I trained the instructor(s) to implement the Matrix Workshop syllabus.

Measures

Demographic Questionnaire

A nine-item Demographic Questionnaire was administered at the beginning of the study to assess if there were any significant differences among the two groups for variables such as age, gender, education, previous work experience, and/or relationship,

to people with developmental disabilities. The Demographic Questionnaire appears in Appendix C.

Test of Knowledge of Clinical Components of FBAs and BISPs

The Test of Clinical Components of the FBA and BISP pretest and posttest measured included five multiple choice and five scenarios with multiple choice answers to assess the DSPs' knowledge and applied understanding of FBAs and BISPs (See Appendices D and E). This dependent variable was calculated as the number of correct responses out of the five multiple choice and five scenarios with multiple choice answers. The pretest and posttest questionnaire items were the same but rearranged in placement from pretest to posttest to control for practice effects. The experimental group took the pretest after completing the standard orientation and before the Matrix workshop and took the posttest after completing the workshop. The standard training group took the pretest after completing the standard orientation and took the posttest two weeks later, before attending the workshop.

Assessment of Social Validity

To assess social validity of the training, the standard training group was administered a 10-item Likert-type scale (see Appendix F). This assessment asked about the perceived usefulness of the training after the attendees have worked had both two weeks of on the job training and the workshop experience. The analysis of the questionnaire was to be descriptive and allow me to determine if attendees found the workshop helpful regardless of the test performance.

Experimental Design and Procedures

A between-groups pretest-posttest design was used to determine the effectiveness of the Matrix Workshop. The design was carried out in three phases.

Phase 1

All the participants consented to participate in this study completed the 2-week agency orientation, the demographic questionnaire and the test for Knowledge of Clinical Components of FBAs and BISPs pretest. After completing the agency orientation and pretest the DSPs were randomly divided into two groups, experimental or standard training.

Phase 2

The DSPs in the experimental group began the two-day Matrix Workshop the following day after the completion of the agency orientation. The next day after completion of the agency orientation the DSPs in the standard training group went to their worksite assignments in either residences or in day programs and worked for two weeks. Both groups were administered the test for Knowledge of Clinical Components of FBAs and BISPs pretest.

Phase 3

After two weeks at the worksites and having completed the test of Knowledge of Clinical Components of FBAs and BISPs posttest, the standard training group began the Matrix Workshop. After completing the Matrix Workshop, the standard training group was given the Social Validity Questionnaire.

Research Question:

Research Question: Will attending the two-day Matrix Workshop training immediately following agency orientation significantly improve DSPs' knowledge of clinical components of FBAs and BISPs compared to a standard training group that did not have the additional training before going into their worksites?

H_a: Will there significant differences between an experimental group and standard training group after a full agency orientation training as assessed by a pre- and a posttest Test of Knowledge of Clinical Components for FBAs and BISPs.

H_0: Were there no significant differences between an experimental group and a standard training group on a pre- and posttest Test of Knowledge of Clinical Components of the FBA and BISP.

Data Analysis Plan

The Pretest/Posttest for Knowledge of Clinical Components of FBAs and BISPs (Appendix G) were administered to both the experimental and standard training groups to determine any group differences prior to the beginning of the study. The standard training group was administered the posttest for Knowledge of Clinical Components of FBAs and BISPs when arriving to participate in the Matrix Workshop after working two weeks in the assigned work sites. The Social Validity Questionnaire (Appendix F) was administered to the standard training group after ending the Matrix Workshop to assess for input regarding the usefulness of the workshop.

Level 1. To examine if there are any statistically significant differences between the two groups prior to introduction of the training, Chi Square or *t*-test analyses was

conducted to examine the demographic variables and any differences between the two groups. The variables of gender, education level, and previous experience working with similar clients was compared with Chi Square analyses, and age was examined with an independent samples *t*-test.

An independent-samples *t*-test was also conducted to examine if there are statistically significant differences between the two groups' mean pretest scores on the Test of Knowledge of Clinical Components of FBAs and BISPs prior to the start of the intervention.

Additional independent-samples *t*-test were conducted in an exploratory manner to compare the scores by demographic variables depending on the findings. For example, if 68% of the participants have had previous experience with working with the population and implementing similar types of plans, then I conducted an additional independent-samples *t*-test and compared the pretest scores for the participants who had previous experience vs. those who had not had experience.

Level 2. *T*-tests were conducted to examine the differences within each group. I performed a paired-samples *t*-test to examine differences in pretest and posttest assessment scores in both groups. This determined if each group demonstrated a significant difference from pretest to posttest. Difference scores were also calculated for each group (posttest score – pretest score) and compared between groups via an independent samples *t*-test to determine if one group experienced more change than the other.

Level 3. The Social Validity questionnaire was administered to the standard treatment group to examine the post intervention knowledge of the group after having the Matrix Workshop and working in the sites. The Social Validity Questionnaire consisted of ten Likert scale questions, with each item rated on a 1 to 5 scale and answers ranging from strongly disagree to strongly agree. This questionnaire was examined with descriptive analyses in order to determine if the standard treatment group participants found the workshop useful and informative.

Issues of Trustworthiness

The goal of all researchers is to produce findings that are accurate and valid. Researchers consider quantitative analysis "valid, reliable, creditable, and rigorous" (Anderson, 2010, p. 22). Reliability and validity are important aspects of data collection and the questionnaire design.

Threats to Validity

There were no established instruments to assess the dependent variables, therefore, they needed to be developed for this study. An expert panel reviewed these questionnaires and assisted in obtaining face validity of the instruments developed. Face validity refers to the ability of the questionnaire items to measure the constructs that the researcher seeks to measure. Given that I developed the measures for this study, it is unknown if the measures have adequate content or construct validity. Reliability of the measures is also unknown, and the same questions were used on the pretest and posttest (with the order changed) to ensure that the findings would be comparable. A review of experts also addressed treatment integrity, to the extent to which the training program

addresses the constructs measured by the assessment instruments and determined that the content of the training is focused on those constructs. However, there have been no preliminary studies examining the extent to which the assessment measures and the training align.

In review of any threats to external validity, I selected the setting of this study and its participants for convenience. However, the same region in New York includes other nonprofit and state agencies that are available if additional sites were needed. To control for threats to external validity, I would not generalize beyond the agencies used, as training programs can differ between agencies.

Ethical Procedures

As the U.S. Health and Human Services Administration (2009) has stipulated, I submitted all methods and procedures of this study to the IRB at Walden University for approval before proceeding with data collection. I was responsible for obtaining approval prior to commencing the participant recruitment. Human participants in research must be treated with respect and fairness. It was my responsibility to make sure that the participants were informed of their rights. They were not required to participate as a function of their employment, their identities and answers to the questions would be held confidential; they could have elected to drop out of the study at any time without consequences to their employment status, and they were not subject to nonessential or unjustified distress. The overall ethical risk of this investigation was low. Ethical issues in this study included gaining consent, avoiding coercion, ensuring confidentiality, and

minimizing psychological distress. A letter of cooperation was provided from the executive CEO of the agency for this study to be conducted.

Each participant signed an informed consent form to indicate their understanding of, and voluntary participation in, the study. All participants were also informed in person that consent is a process and that they were able to choose to withdraw their consent at any time. If at any time a participant in the training expressed any psychological distress related to the training, I would immediately withdraw that participant from the study and refer her or him to a local treatment provider as well as inform the Walden IRB.

I ensured the confidentiality of participants by using a numerical code for each individual that was used on all of the forms they completed, instead of any identifying information. I was the only one with access to the key that connects the codes to identifying information. The key was destroyed after all of the data was collected. The agency received de-identified summaries of the data from this study and have no way to connect information to the participants. The agency can use this data for policy training improvements or programs. I only provided the agency with aggregate demographic data. All data, informed consent, and any additional documents related to this study are kept in my locked office file cabinet, and only I have the key. All the electronic files are password protected. I will store and protect this information for the required seven years, after which I will destroy it by shredding or deletion.

The position I have at this nonprofit agency is Associate Vice President of Education & Talent Training Department. My role is to provide direction and support to the training team for the agency. I have not influenced this study or the results. I did not

provide any monies, salaries, or incentives to any person in the sample, although as employees for the agency they were compensated at their regular hourly salary as they participated in the training program. My position is a leadership role and I supervise the trainers in the department. I had no direct supervision of DSPs who worked in the residencies, day habilitation programs, or schools. The participants choose to enroll in the study, or not to enroll, and it was used in any way against them in their employment. Participation in the study did not benefit the employees beyond the experience that the training itself provided. Participants were informed of this verbally and in writing to ensure that they understood that the study was completely voluntary. The participants were also informed that they could cease participation at any time, even if they had already started the training, and that this would not be used against them in any way. Given that the participants were required time away from providing direct care to participate in the training, their supervisors did know that they were participating in the study, and this could not be avoided. The supervisors were instructed about the voluntary nature of the study and that the employee decisions to participate would not be a part of their written file, nor should that decision be used in any determinations regarding employment status or work hours.

Summary

The purpose of this chapter was to describe the research methodology of this study. I conducted a quantitative true experimental study using a sample of DSPs to determine whether their knowledge and applied understanding and implementation of BISPs improved after a training intervention compared to a standard training group. All

participants, regardless of their training, took a pretest and posttest via a researcher-developed instrument. The experimental group did undergo a two-day training program between the pretest and posttest. Standard training participants were offered the same training after a two-week wait period. I did use ANOVAs to test the hypotheses and determine if the training impacted applied knowledge and understanding of BISPs.

Chapter 4: Results

Introduction

The purpose of this quantitative experimental study was to investigate the efficacy of BISP training in improving knowledge and applied understanding of BISPs in a sample of DSPs. In this chapter, I will present information on the process of data collection as well as the statistical findings. Level one of the analysis incorporated chi-square tests and independent sample *t*-tests. Level two of the analysis consisted of paired *t*-tests and independent sample *t*-tests. Level three of the analysis utilized descriptive statistics. The research question for the study was:

Research Question: Does attending the 2-day Matrix Workshop training immediately following agency orientation significantly improve DSPs' knowledge of clinical components of FBAs and BISPs compared to a standard training group that did not have the additional training before going into their worksites?

H_a: There will be significant differences between an experimental group and standard training group after a full agency orientation training as assessed by a pre- and a posttest Test of Knowledge of Clinical Components for FBAs and BISPs.

H_0: There will be no significant differences between an experimental group and a standard training group on a pre- and posttest Test of Knowledge of Clinical Components of the FBA and BISP.

Data Collection

This study data was collected at a nonprofit agency located in New York State that employs more than 3,000 employees in various positions. The majority these

employees are DSPs. Potential participants were newly hired DSPs who were assigned to work with DDIs in residential programs, day habilitation programs, and schools. To participate in this study, participants were required to be at least 18 years of age. Individuals of any sex, educational level, or ethnic background were welcome to participate; however, they were required to be able to read and write in English to take the pretest and posttest questionnaires. I used a random number generator to assign DSPs to either the experimental group or the standard training group. Following the required 2-week agency orientation, the experimental group attended training on FBAs and BISPs in the two-day Matrix Workshop. The standard training group completed the agency orientation and was scheduled to attend the workshop two weeks later in groups that varied in size. The same materials, information, and approaches were used for smaller groups (with 1 or 2 participants), but the training was reduced from two days to one day, as significantly less group processing time was needed.

Recruitment began on July 7, 2020 and continued until November 12, 2020. A total of 93 participants signed up for the matrix, but 20 DSPs did not complete the study. Fifteen of those who did not complete the research were from the experimental group and five were from the control group. Reasons for dropping out included termination of employment (3), unexpected family issues (2), illness (1), transportation issues (2), needing to leave for college (1), and having performance issues within the site (1), while eight individuals gave no reason for dropping out. The table below provides the data for the Non-Responders that dropped out of the study and there were no significant

differences between the DSPs that had participated verses the twenty DSPs that dropped out.

Table 1

Comparison between Responders and Nonresponders

Variable	Responders (n = 73)		Non-responders (n = 21)			t	p
Mean Age (SD)	27.84 (10.02)		27.53 (12.53)			0.06	.949
	n	%	*n*	%	*Total n*	X^2	
Gender						0.20	.654
Female	52	71.2	16	76.2	68		
Male	21	28.8	5	23.8	26		
Highest educational degree						2.25	.523
HS/GED	46	63.0	15	71.4	61		
AS	9	12.3	3	14.3	12		
BS	13	17.8	1	4.8	14		
CP/TS	5	6.8	2	9.5	7		
I am related to someone with a developmental disability						0.00	.983
Yes	28	38.4	8	38.1	36		
No	45	61.6	13	61.9	58		
I personally know or have interacted with someone with a developmental disability						0.14	.705
Yes	60	82.2	18	85.7	78		
No	13	17.8	3	14.3	16		
I have previously been employed with people with developmentally disabilities						0.00	.979
Yes	35	47.9	10	47.6	45		
No	38	52.1	11	52.4	49		
I have had previous training to work with people with a developmental disability and/or behavioral disorder						1.32	.250

Yes	28	38.4	11	52.4	39		
No	45	61.6	10	47.6	55		
I have had previous experience working in a residential treatment setting						1.25	.264
Yes	25	34.2	10	47.6	35		
No	48	65.8	11	52.4	59		
I have had previous training in reading and implementing behavioral intervention plans and/or education plans						1.83	.176
Yes	20	27.4	9	42.9	29		
No	53	72.6	12	57.1	65		

Note. Due to rounding errors, percentages may not equal 100%.

A series of chi-square tests of independence and a *t*-test were conducted to assess for demographic differences in responders and non-responders. Neither the chi-square tests or *t*-test were statistically significant, indicating that there were not significant differences in the demographic distribution between the groups. Table 1 presents the findings of the chi-square tests.

Seventy-three participants completed the Matrix workshop, with thirty-five in the experimental group and thirty-eight in the control group. Although all of the control group participants were offered the opportunity to participate in the workshop after completing the posttest in knowledge, only eight of them completed the Matrix Workshop after being in the sites for 2 weeks. All of these individuals completed the social validity questionnaires after training. Most of the other participants scheduled themselves to work and were unable to attend, while others had no interest in additional training after going into the sites. I compiled the survey responses into Excel and imported the data into the IBM SPSS 27.0 software for analysis.

Descriptive Statistics

The group demographics and background information (nominal-level variables) are included in Table 2. A series of chi-square tests of independence were conducted between study group and the nominal-level variables, and an independent groups *t*-test was performed on age. None of the tests were statistically significant, indicating that there were no group differences on any of these variables.

An independent sample *t*-test was conducted to examine for differences between sex distribution and again there were no significant differences.

Table 2

Demographic and Nominal-Level Variables

Variable	**Experimental (*n* = 35)**	**Control (*n* = 38)**		
			t	*p*
Mean Age (SD)	26.94 (10.63)	28.66 (9.49)	-0.73	.469

	n	%	*n*	%	*Total n*	X^2	*p*
Gender						0.00	.972
Female	25	71.4	27	71.1	52		
Male	10	28.6	11	28.9	21		
Highest educational degree						4.70	.196
HS/GED	24	68.6	22	57.9	46		
AS	6	17.1	3	7.9	9		
BS	4	11.4	9	23.7	13		
CP/TS	1	2.9	4	10.5	5		
I am related to someone with a developmental disability						2.72	.099
Yes	10	28.6	18	47.4	28		
No	25	71.4	20	52.6	45		
I personally know or have interacted with someone with a developmental disability						0.22	.639
Yes	28	80.0	32	84.2	60		

No	7	20.0	6	15.8	13		
I have previously been employed with people with developmentally disabilities						1.70	.192
Yes	14	40.0	21	55.3	35		
No	21	60.0	17	44.7	38		
I have had previous training to work with people with a developmental disability and/or behavioral disorder						0.47	.492
Yes	12	34.3	16	42.1	28		
No	23	65.7	22	57.9	45		
I have had previous experience working in a residential treatment setting						2.17	.140
Yes	9	25.7	16	42.1	25		
No	26	74.3	22	57.9	48		
I have had previous training in reading and implementing behavioral intervention plans and/or education plans						0.70	.404
Yes	8	22.9	12	31.6	20		
No	27	77.1	26	68.4	53		

Note. Due to rounding errors, percentages may not equal 100%.

The group characteristics appeared to align with the population of newly hired DSPs. The agency that recruited this sample hired 417 DSPs from January 6, 2020 to December 16, 2020. The age of all of these employees ranged from eighteen to fifty-eight years old. The average DSP hired within this time tended to be women in their twenties with high school degrees, which was reflected in the sample that agreed to participate in this study.

Results

Prior to analysis, the assumptions of a *t*-test were verified. The first assumption is that the variables are measured on an interval or ratio scale. The variables of interest, knowledge scores, are interval measurements; therefore, the assumption was met. The second assumption is that there is an adequate sample size for the analysis. An a priori power analysis was conducted in G*Power and determined that a minimum of 68 participants would be sufficient for the data collection. The data exceeded the minimum sample size with a total of 73 participants.

Next, the assumption of normal distribution of the data was examined. A series of Kolmogorov-Smirnov tests were used to examine the pretest and posttest knowledge scores. Both of the tests were statistically significant ($p < .001$), indicating that the assumption of normality was not supported for pretest and posttest knowledge scores. Logarithmic transformations were attempted on the knowledge scores and the Kolmogorov-Smirnov tests were still statistically significant ($p < .001$). Kline (2010) indicates that data tend to approximate toward normality if the skewness and kurtosis values fall between $\pm$ 2.00. The skewness values were -0.13 and -0.39 for knowledge pretest and posttest scores, respectively. The kurtosis values were -0.50 and -0.42 for knowledge pretest and posttest scores, respectively. In addition, the histograms for the data only demonstrated slight deviations from normality (see Figures 2 and 3). Howell (2013) indicates that data exceeding 50 cases tends to approximate toward normality through the central limit theorem. Therefore, after the initial transformation of the data, the statistical analyses were conducted as initially proposed.

Figure 2. Histograms of knowledge pretest scores.

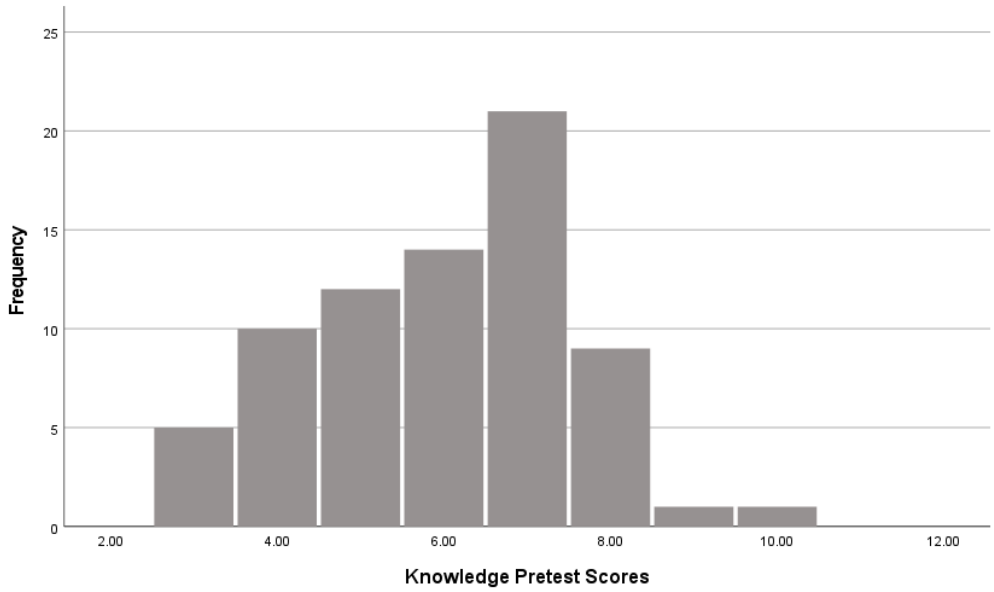
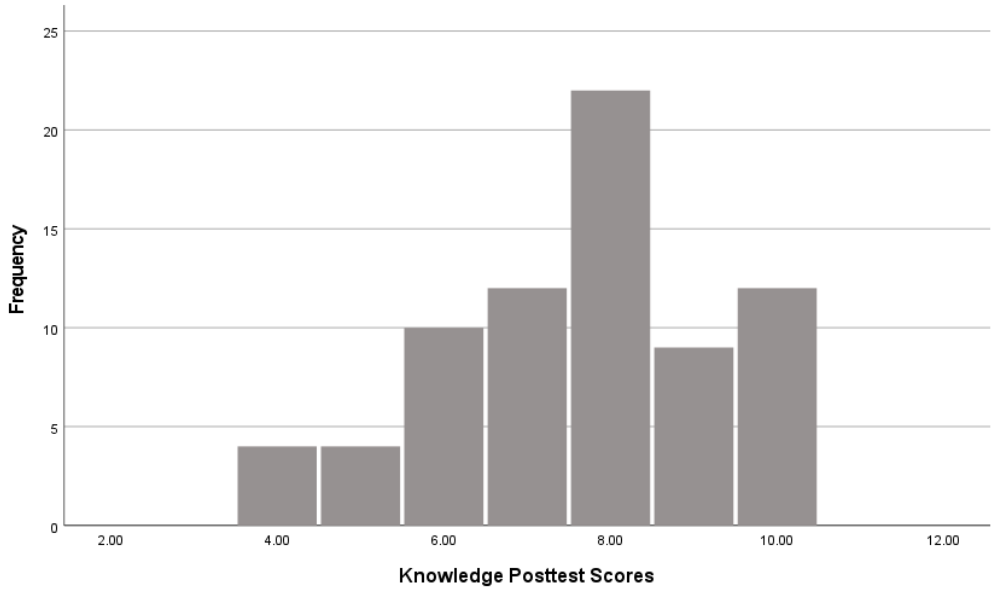


Figure 3. Histograms of knowledge posttest scores.



Level 1 Analysis

An independent sample *t*-test was conducted to examine for differences in pretest knowledge of clinical components between the treatment and control group. The groups were not significantly different ($t[71] = -0.97$, $p = .336$). Table 3 presents the data. A series of independent sample *t*-tests were conducted to examine for differences in pretest knowledge of clinical components by the nominal-level and demographic variables. None of the tests were statistically significant (*p* values ranged from .079 to .919).

Table 3

Independent Sample t-test for Pretest Knowledge Scores by Experimental and Control Groups

Variable	Experimental		Control			
	M	*SD*	*M*	*SD*	*t*(71)	*p*
Pretest knowledge score	5.80	1.59	6.16	1.57	-0.97	.336

Level 2 Analysis

Two paired sample *t*-tests were conducted to examine for differences in pretest and posttest knowledge for both groups. The findings of the paired sample *t*-test for the experimental group were statistically significant ($t[34] = -11.25$, $p < .001$), indicating that there was a significant change in knowledge scores following the training for this group. The findings of the paired sample *t*-test for the control group were also statistically significant ($t[37] = -2.38$, $p = .023$), indicating that there was a significant change in knowledge scores following the training for this group as well. Knowledge scores for the experimental group increased after training by a mean of 2.77 units. Knowledge scores

for the control group increased after training by a mean of 0.61 units. The findings of the paired sample *t*-tests are presented in Table 4.

Table 4

Paired Sample t test for Pretest and Posttest Knowledge by Group

Variable	Pretest Knowledge		Posttest Knowledge			
	M	*SD*	*M*	*SD*	*t*	*p*
Experimental Group	5.80	1.59	8.57	1.33	-11.25	< .001
Control Group	6.16	1.57	6.76	1.46	-2.38	.023

An independent sample *t*-test was conducted to examine for a difference in change scores between the experimental and control groups. A change score was calculated for each participant by subtracting the pretest score from the posttest score. The *t*-test was statistically significant ($t[71] = 6.10$, $p < .001$), indicating that there was a significant difference in knowledge change scores between the experimental and control groups. Table 5 presents the findings of the independent sample *t*-test.

Table 5

Independent Sample t-test for Knowledge Change Scores by Experimental and Control Groups

Variable	Experimental		Control			
	M	*SD*	*M*	*SD*	*t*(71)	*p*
Knowledge change (posttest-pretest)	2.77	1.46	0.61	1.57	6.10	<.001

Level 3 Analysis

Descriptive statistics were used to explore the trends of the social validity questionnaire. There were eight completed questionnaires completed and collected. This

was significantly fewer than anticipated due to staff not participating in the Matrix after they were in the sites for two weeks. Regarding the positively phrased items, a majority of the eight participants indicated that they found the workshop beneficial. Regarding the negatively phrased items, most participants indicated little to no difficulty understanding BISP components. Although this was a small return of questionnaires, it did support the workshop as beneficial training. It would have been more impactful if all participants in the study had contributed this information. The responses to the individual items on the social validity questionnaire are presented in Table 6.

Table 6

Responses to Social Validity Questionnaire Items

Social Validity Questionnaire	*n*	%
1. After taking this workshop, I do understand people's challenging behaviors better.		
Strongly disagree	1	12.5
Disagree	0	0.0
Neutral	0	0.0
Agree	3	37.5
Strongly agree	4	50.0
2. After taking this workshop, I still have difficulty understanding what an Integrity Check is, and why it is completed.		
Strongly disagree	4	50.0
Disagree	2	25.0
Neutral	0	0.0
Agree	1	12.5
Strongly agree	1	12.5
3. After taking this workshop, I still have difficulties understanding the importance of the PICA documentation.		
Strongly disagree	5	62.5
Disagree	3	37.5
Neutral	0	0.0

Agree	0	0.0
Strongly agree	0	0.0
4. I believe this workshop provided me an understanding of what the Behavior Specialist role is.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neutral	0	0.0
Agree	4	50.0
Strongly agree	4	50.0
5. I believe this workshop provided me an understanding of what and why there is an FBA for the BISP.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neutral	0	0.0
Agree	3	37.5
Strongly agree	5	62.5
6. I believe after this workshop I still have difficulties understanding what warning signs are and how they are related to challenging behaviors.		
Strongly disagree	2	25.0
Disagree	6	75.0
Neutral	0	0.0
Agree	0	0.0
Strongly agree	0	0.0
7. I believe I learned from this workshop what restrictive things are in a BISP.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neutral	0	0.0
Agree	4	50.0
Strongly agree	4	50.0
8. I believe after the workshop, that DSPs coming into this agency should participate in this training before going into the worksites.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neutral	1	12.5
Agree	3	37.5
Strongly agree	4	50.0
9. I believe after this workshop; I will understand my job better.		
Strongly disagree	0	0.0
Disagree	0	0.0

Neutral	0	0.0
Agree	3	37.5
Strongly agree	5	62.5
10. I wish I would have completed this workshop before going into the worksites.		
Strongly disagree	0	0.0
Disagree	1	12.5
Neutral	0	0.0
Agree	5	62.5
Strongly agree	2	25.0

Note. Due to rounding errors, percentages may not equal 100%.

Summary

The purpose of this quantitative experimental study was to investigate the efficacy of BISP training in improving both knowledge and applied understanding of BISPs in a sample of DSPs. In this chapter the data collection and the statistical findings were discussed. Seventy-five participants completed the study. There were no demographic or background differences between the groups. Level one of the analysis consisted of using of an independent sample *t*-tests to examine pretest score by group, and there was no statistical difference between the groups. Level two of the analysis focused on comparisons of pretest to posttest scores and revealed a significant difference in the experimental group but not the control group. Change scores were calculated, and there was a significant difference between the groups, with the experimental group demonstrating a larger increase in knowledge than the control group. Level three of the statistical analysis utilized descriptive statistics to examine the Social Validity questionnaire. Overall, the participants reported that they found the training to be beneficial. In the next chapter, the findings of the data analysis will be explored in

connection with the literature. Limitations of the research will be discussed, and recommendations for future research will also be provided.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this quantitative experimental study was to investigate the efficacy of BISP training in improving both knowledge and applied understanding of BISPs in a sample of DSPs. The sample consisted of newly hired DSPs who volunteered to participate. Individuals were randomly assigned to a standard training group or an experimental group and underwent training at a New York human services agency where they were employed. Previous to this research, there was limited knowledge regarding the efficacy of supplemental training for DSPs who apply BISPs in delivering care to DDIs.

DDIs may manifest challenging behaviors, and these are addressed through the development of a BISP. There is no standardized training protocol for DSPs in upstate New York agencies to help DSPs read and understand BISPs, and training programs need to address necessary content in a cost-efficient manner. The significance of this study lies in addressing a key problem in the field: how to evaluate staff training for DSPs, which may, in turn, translate into better BISP implementation, a reduction in challenging behaviors in DDIs, and improved quality of life for DDIs. Research on this topic was sparse, and most of the research refers to the fact that staff receive little training, if any, in this area (Larson & Hewitt, 2012).

Level one of the analysis involved using an independent sample *t*-tests to examine pretest score by group, and there was no statistical difference between the groups, indicating that the two groups were starting off with equivalent levels of knowledge in BISP implementation. Level two of the analysis included comparisons of pretest to posttest scores and revealed a significant difference in the experimental group but not the

standard training group, indicating that the experimental group significantly changed their level of knowledge in BISP implementation while the standard training group did not. Change scores were calculated, revealing a significant difference between the groups, with the experimental group showing a larger increase in knowledge than the standard training group. Level three of the statistical analysis involved descriptive statistics to examine responses to the Social Validity questionnaire. Overall, the participants reported they found the training to be beneficial, although there was a low rate of participation in completing these questionnaires.

Interpretation of Findings

These findings regarding the effectiveness and subjective appraisals of the workshop aligns with previous research on the effectiveness of active learning approaches (Schafer, 2004). The Matrix workshop largely involved active learning approaches including calling on recipients throughout the training to require their attention, integrating many interactive activities into the training, using short presentations for the dissemination of information, and having few distractions during the training (Schafer, 2004). Highlighting themes and similarities between concepts in the training program and the review period may also have contributed to successful training sessions. The Matrix workshop was clearly effective in teaching the participants how to interpret FBA and BISPs in comparison to standard training alone, and the participants who completed the evaluations also seemed to be engaged in and appreciative of the training.

The findings revealed that the test scores of the experimental group (on average) significantly increased in comparison to the standard training group, all of whom had two weeks of on-the-job training that the experimental group did not benefit from. The significant difference in change scores reflect a greater gain in understanding FBAs and BISPs in the experimental group compared to the standard training group, which is critical in enhancing the quality of services being provided to clients. The differences between the pre and post-tests revealed that relatively little learning regarding BISP understanding took place within the first two weeks on the job in the standard training group compared to the classroom training in the experimental group. The time invested in the additional training appeared to be worthwhile, as the ability to provide services as prescribed by the agency is dependent on staff's ability to understand and implement BISPs, therefore minimizing the potential of treatment failure. Assessment of the practical application of those skills, however, was beyond the scope of this study.

Dropout from the study may have influenced the results/outcome of the study. Individuals in the standard training group were more likely to drop out before completing the posttest in comparison to the experimental group. The findings may be biased because it is possible that only select individuals in the standard training group participated in the posttest in comparison to two staff that did opt out from the experimental group; however, there were no significant demographic differences between those who dropped out and those who did not. There were extenuating circumstances given staff shortages and COVID that may have unfortunately impacted staff’s ability to return to training after starting work in person, and many of the individuals who may have returned for

additional training in the standard training group were simply unable to get the time to do so. I followed up to collect posttest data from several of these individuals, but they did not have the time for the Matrix training and therefore could not complete the Social Validity questionnaire. Future studies may find it beneficial to provide incentives to staff to complete training.

There is a lack of research on standardized focused trainings; continued research on such training may result in improvement in the consistent implementation of BISPS. Current training is insufficient and varies depending on the person delivering the training material (Mandell et al., 2013; Miller & Rollnick, 2014). A similar study focused on training was conducted by Donat et al. (1991), who developed a training program for DSPs working in a public psychiatric hospital that was aimed at helping them treat their clients rather than control them. The authors found a lack of the consistent implementation of behavioral management programs and conducted a two-day training program to address the problem. There was a statistically significant increase in knowledge after training compared with an untrained sample; however, the authors had limited data and concluded that future researchers should use experimental research designs to establish a cause-and-effect relation between training and the pre- and post-measures (Donat et al., 1991).

Way et al. (2002) initiated a mandatory two-day training program for 10,000 DSP mental health staff in 1997 through a New York State Office of Mental Health (OMH) facility. A key concept of the curriculum involved the design of a module led by former clients of OMH inpatient services. The researchers noted a statistically significant

increase in DSP communication, interaction, respect for the patients, and cultural competence after training. The supports used in this study included structured training programs, although the authors reported that the two-day training program did not sufficiently improve negative emotional reactions to challenging behaviors. Way et al. did not use an experimental design, and so could not conclude that there was a cause/effect relation between the training and the changes in staff behavior.

In contrast to the research discussed above, the participants in the current study were randomized to an experimental or standard training group. Similar to the findings of Donat et al. (1991) and Way et al. (2002), there was a statically significant gain in staff knowledge after the training programs. Donat et al. and Way et al., however, assessed staff behavior in their clinical settings after training, which was not a focus of this research. Understanding how training impacts interactions with clients would have been a beneficial addition to the current study, and future research may be able to incorporate both a randomized controlled experimental approach and a work sample assessment.

The theoretical frameworks for this study included concepts of social validation and treatment fidelity acceptability as described in the works of Wolf (1978) and Carter (2007), as well as change theory (Walker & Matarese, 2011). These frameworks were embedded within the matrix workshop training program by focusing on the importance of addressing treatment fidelity, social validity, and having DSPs accept change. The Matrix workshop training was developed with long-term goals based on treatment delivery priorities. The theory of change is the process by which the staff develops an understanding of how the work they do is associated with outcome goals (Walker &

Matarese, 2011). The theoretical guidance when developing the treatment training program was effective for DSPs in improving both their knowledge and applied understanding of behavior plans.

The training program itself needed to have social validity, meaning the workshop needed to make sense to the DSPs and be applicable for their job responsibilities. To determine if this training program was socially valid, an assessment for the social validity of the training was provided for the standard training group after they completed the additional training. The social validity assessment was not used in the hypothesis testing; however, it examined descriptively to help develop future training programs. The response rate in completing this measure was unfortunately low but supported the use of the training and thus supported the theoretical frameworks as well. The eight participants that completed this measure reported that they found the training useful and informative; however, this was of course a small percentage of the individuals who participated in the training and has limited generalizability.

Kazdin (1980) defined *treatment acceptability* as social validity research focused on the appropriateness of treatment procedures. In looking at the theory of change it is the process by which the staff develop an understanding of how the work they do is associated with outcome goals (Walker & Matarese, 2011). The Matrix training workshop's long-term goals were based on treatment delivery priorities. The theoretical guidance in development of the training made the treatment program acceptable for DSPs, with improving both their knowledge and applied understanding of behavior plans. Overall, the training was found to be both effective and useful and the outcome supported

the theories that were used to guide the research. The findings that training participants effectively learned the material in comparison with the standard training controls indicates that the staff were engaged in the learning process.

Limitations

This study was limited in its scope because its focus was specifically on FBA and BISP interpretation and implementation, the training was relatively short in duration, and there were no work sample assessments to determine if and how the learned skills were applied. There is a requirement for staff to understand what components are involved in the development of the FBA and BISPs. The Matrix Workshop was designed to help staff develop that understanding including how to identify in the plans what the client's behavioral triggers are, understand clinical terms used within the plans, and be alert to potential precursors for problematic behaviors by incorporating active learning strategies in the training. Knowledge of FBA and BISP development and implementation are only part of what DSPs need to perform their responsibilities; however, the scope of this research was solely on those skills.

Another limitation of the study, as discussed above, was the relatively large dropout rate (about 20%) of staff members who were randomized to the standard training group and who did not return to participate in the Matrix training after they started working at the sites. This resulted in smaller training groups for the standard training group than those in the experimental group, which influenced the rate of the training for some of the participants. Training content was the same for all of the participants, but the training experience was not the same. Those participants who were in small groups likely

did not benefit from group discussions of the material to the same extent that those in large groups did. I did not collect posttest data on the standard training group, so this did not impact the hypothesis testing. It likely did impact the social validity ratings, however, as training was qualitatively different when carried out in small groups compared to larger ones.

Along with the large number of dropouts in the standard training group, there were also relatively few completed social validity questionnaires. The questionnaires were administered to the staff that had worked in the sites for two weeks and returned, and only eight were completed. This is because some of the standard training participants completed their post waitlist questionnaires but were unable to go on to participate in the Matrix workshop training itself. This was a limitation because only a select group of individuals: those who completed the standard training and two weeks of on-the-job training, and then were able access an additional two days for supplemental training, completed the questionnaires. They may have valued the training more than others would have given the apparent difficulty other members of the standard training group had in getting time off from working with clients to participate in the Matrix workshop. Thus, the social validity questionnaires may have been biased to reflect the opinions of those that may have attached more importance to the training than other participants.

Trustworthiness, or the rigor of a study, refers to the degree of confidence in data, interpretation, and methods used to ensure the quality of a study (Polit & Beck, 2014). Confidence in the data was enhanced by using randomization to the groups (equivalent groups). The participants were reassured that the tests they completed were used for this

research study only and would not be included in any official work-related records, which hopefully allowed participants to be honest in their assessments. Another way I focused on enhancing confidence in the data was by employing other people to collect the data, thus reducing the impact of potential researcher bias.

Generalization is the maintenance of knowledge and skills acquired during training (Baldwin & Ford, 1988; Salas & Cannon-Bowers, 2001). Adaptive expertise is the capability to modify knowledge, skill, and other characteristics acquired during training to effectively meet novel, difficult, and complex situations (Schmidt & Bjork, 1992). All participants were recruited through the same methods, through the same agency, and all had the same foundational orientation. This limits generalizability while enhancing internal consistency. The findings are limited to the agency from which the participants are recruited; however, this agency has over three thousand employees and even though generalization is limited, it is limited to this larger agency.

Reliability estimates: (a) the stability of measures administered at different times to the same individuals or using the same standard (test–retest reliability), or (b) the equivalence of sets of items from the same test (internal consistency) or of different observers scoring a behavior or event using the same instrument (interrater reliability). Validity is often defined as the extent to which an instrument measures what it purports to measure. Validity requires that an instrument is reliable, but an instrument can be reliable without being valid (Kimberlin and Winterstein, 2008).

The instruments used in this research were developed for this study; therefore, there is only limited information regarding the reliability and validity of the measures.

This limitation was mitigated but not eliminated by careful independent review of the measures. Future research may focus on establishing the reliability and validity of such assessments.

Research studies on behavior plan credibility and accuracy and DSP implementation of BISPs are outdated (Singh, et. al., 2009). Research with a focus on treatment fidelity and validity in any training programs continues to be limited in populations of developmentally disabled persons, and the research is dated when addressing training of direct support staff. Observational assessments of pre/post professional conduct may also be beneficial and lend validity to the outcome measures. This study was limited in that the measure used was developed specifically for this research without pilot testing it for reliability or validity. I also did not incorporate observational measures, which would have been useful to identify if the knowledge gained in training generalized to the daily hands-on work of the DSPs.

In addition, this study did not have a long-term follow-up component; therefore, there will be no opportunity to gain knowledge regarding maintenance following the initial assessment period or examine the relation of training to retention of DSPs at the agency. The findings were limited to the population of DSPs in regard to their job responsibilities, required training, and geographic location. Conclusions about the specific effects of the content of the treatment was limited.

Recommendations for Further Research

The findings of this study offer avenues for further research. Future studies should include larger sample sizes, ideally with a variety of agencies in multiple locations to

increase the generalizability of the results. The curriculum and instruments were developed for the current study and it would be beneficial to test the instruments for continued validity and reliability before they are used in future research. Adding practical work sample testing to assess the application of skills would also be a useful addition to determine the efficacy of training.

Other aspects of DSP training such as the ethical treatment of clients and communication should be the topics for future research. Longer training modules including more topics may be demonstrated to be effective in enhancing the skills of DSPs. However, it must be noted that training time is valuable and short training programs are more likely to be implemented consistently: research is also needed to identify the most important information to provide in similar training programs.

McClellan and Penderson-Bayus (2013) identified the need for what they referred to as a pyramid of intervention approaches for student populations. The pyramid of intervention approaches model consists of four critical elements: (a) a belief in social justice and the value of every individual; (b) a commitment to an inclusive education; (c) an understanding of the power of teams; and (d) a need for flexible funding and expenses to be applied to training of DSPs. Identifying possible adaptions of this model for integration into staff training curricula may provide a supportive approach for DSPs. Such an approach should be devised to increase active learner participation and provide an established leadership commitment for inclusive change in agency training and curricula (Howery et al., 2013). Having well-organized training with a curriculum that is

required to be followed by all trainers appears to be effective for staff to first understand and then participate with an excitement and desire to learn and apply what is trained.

Overall, there is still limited knowledge on the efficacy of supplemental training for DSPs who apply FBA and BISPs in delivering care to DDI populations. The cost, time requirements, and resources for training represent challenges in the human service field. There is a continued need for research on the development of training curricula for DSPs with a focus on enhancing their understanding of BISPs and improving their skills. According to Umar (2013), there is a positive relationship that exists between training and employees' retention and employees' decision to stay for a longer period of time can be influenced by training practice. Employees who value the development of skills for their career growth may be more willing to work for an organization that constantly equips them with well-run knowledge through training and development practice. There may be an indirect relationship between provision of training and retention; commitment could act as a bridge. Future research may examine this relationship with long term follow up assessment of DSPs who have received specialty training.

This study can be beneficial and influence positive change within the agency itself by presenting the results to the administration and professionals to promote change and develop training curriculum and programs for ensuring updated information and skills needed for this job. Future research should continue to use an experimental design in order to demonstrate a cause/effect relation between training and outcome, but the nature of the training as well as the assessment measures used may help determine which types

of training are related to the outcomes that are the most cost-effective, as well as those that lead to the best quality of care and DSP job satisfaction.

Implications for Social Change

Studies on agency training for DSPs working with IDD populations is limited. The current study was limited in its scope with a focus specifically on FBA and BISP interpretation and implementation. Additional implications of the Matrix workshop include considering areas and practices to include in training, which also aligns with previous research on the effectiveness of identifying targeted areas for concern (Schafer, 2004). Among these considerations is the length of training: it should be long enough to be thorough but not so long that the trainees will lose focus or interest. Another consideration is whether the concepts included in the training are strategically organized. Incorporating strategically organized concepts allows for smooth delivery of the material and an organic flow that builds on approaches covered throughout the training. A final consideration is the use of real-life simulations to help learners retain knowledge. Researchers have found that real-life scenarios and simulations resonate more with trainees than fictional scenarios, leading to enhanced knowledge retention (Schafer, 2004).

The findings of this study, when applied in a work setting, may lead to improved training and staff development that can be used to enhance and improve Office People with Developmental Disabilities (OPWDD) regulated programs in training DSPs on FBA and BISPs. Information on how to foster staff training and development among DSPs regarding knowledge, understanding, and intepretation of FBA and BISPs may translate

into to better implementation, a reduction in challenging behaviors in DDIs, and an improved quality of life for DDI population. The study may have a direct effect on practice because its focus was to improve the way treatment is delivered and implemented by DSPs within the DDI population.

Improving training and treatment can benefit clients, their families, the DSPs, the institutions for which they work, and society in general. The clients and their families' benefit by having improved treatment consistently performed by staff. The staff may also benefit from increased satisfaction and productivity in their work as a result of more effective and efficient treatment. The institutions that employ DSP workers may also benefit if socially valid training leads to increased worker satisfaction and decreased staff turnover. In turn, society may benefit from the findings of this and similar research if training leads to increased functioning and wellbeing of DDIs and their caretakers. This study focused on training, which can be viewed as advocacy and development to implement needed instruction to serve this population better.

Conclusion

The results of this study may be used to begin the process of communicating and demonstrating the importance of developing and researching training curriculums and programs. FBA and BISPs are widely adopted as the primary approach to reduce the frequency and intensity of challenging behaviors for DDIs, and it is important to assess the degree to which training assists DSPs to do their job well. Failure to understand and implement a BISP impedes client progress in the reduction and elimination of challenging behaviors.

As evident in the study, a formal training program training DSPs to implement FBA and BISPs is effective in increasing knowledge on that topic. The ability of DSPs to understand and implement FBAs and BISP influences the quality of life for DDIs. This study revealed that staff without formal training (the standard training group) evidenced no significant change in their knowledge of BISPs after two weeks of on-the-job training in contrast to DSPs who participated in the Matrix workshop immediately after concluding their formal training. These findings should be followed with additional research, as there are implications that may be impactful barriers to DDIs and their treatment/rehabilitation.

This research builds on existing research and its significance lies in the attempt to address a key problem in this field: how to foster staff training and development among DSPs regarding knowledge, understanding, and intepretation of FBA and BISPs. This research may translate into improved FBA and BISP implementation, a reduction in challenging behaviors in DDIs, and an improved quality of life for the DDI population. In addition, this study may have a direct effect on practice regarding improvement in the way treatment is delivered and implemented by DSPs within the DDI population. Clients, their families, the DSPs, the institutions for which they work, and society in general may benefit from this research. The staff who are entrusted to provide services to the DDI population are members of an important profession and are entrusted to provide an appropriate quality of life that all DDIs deserve and should expect.

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Appendix A: Site Permission Letter

Melody Meisenhelder

7839 Old Floyd Road, 315-371-5101, melody.meisenhelder@waldenu.edu
10/22/2018
Gino DeCondo
1020 Mary Street
Utica, NY 13501

Dear Gino DeCondo:
This serves as a formal letter of cooperation for approval to conduct a Doctoral Level Dissertation Study that has been submitted for approvals from the Dissertation Chair, Dissertation Methodology Member, and Walden University IRB. This process requires a cooperation letter from the agency CEO to conduct this study.

The name of the study is: *Structured Training Programs for Direct Support Professionals on Behavior Intervention Support Plans*. It is a study that encompasses a two-day workshop focused on the training using various teaching modalities for staff to understand the Functional Behavior Assessments and Behavior Intervention Support Plans. This additional two-day workshop will enable additional quality training for DSP's that will reinforce and provide consistency in understanding and implementation of BISP's. The cost to the agency would be at the cost DSP time, myself, and an assistant.

The focus of the study is an assessment of the effectiveness of a structured training program for direct support professionals (DSP's) working with developmentally disabled individuals (DDI's). The goal is to build on existing literature as well as foster staff training and development for DSP's to gain an understanding of behavior intervention support plans (BISP's). An increased understanding will lead to better BSIP implementation, reduction in challenging behaviors, and improved quality of life. Participants will be randomly assigned to a two-day training or a standard training group. The outcome will be assessed pre- and posttreatment with a multiple choice skills questionnaire and a test of applied knowledge in which participants will be asked questions about a sample BISP. The findings may be used to enhance training for DSP's, which may also result in improved retention of DSP's as employees and improved care for clients. have attached the proposal for your review. I will be glad to meet and discuss further. I can also send the PowerPoint and additional training materials if needed.

Sincerely,

Appendix B: Recruitment Flyer

Walden University PhD Student Dissertation Study

This study is being conducted as a part of Melody Meisenhelder' s dissertation to see if additional training enhances knowledge and understanding of behavioral intervention plans.

If you choose to participate, you will be randomly (by chance) placed into a training or waitlist group. Both groups will be asked to fill in questionnaires about their knowledge of behavior plans.

The training group will receive a two-day training program immediately after completing their required agency training, and then repeat the questionnaires. The standard training group will be asked to repeat the questionnaires after 2 weeks of working before they participate in training.

Both groups will be paid their regular salaries while they are in training. The results will not be used on any work evaluations, and although the agency will have access to the results, they will not know how you answered the questionnaires.

If you are interested in participating, call or email Melody Meisenhelder.

Research Study to Investigate if Additional Voluntary Training Orientation Helps in Understanding Behavioral Intervention Plans

Completely Voluntary, you are Not Required to Participate

_____

Appendix C: Demographic Questionnaire

Sex

- Male
- Female
- Other (please specify) _____

Age: _____

Highest Educational Degree Obtained

- Secondary School (High School) or GED
- Certificate Program or Technical School
- Associate Degree
- Bachelor's Degree
- Post Graduate Degree

Experience

I am related to someone with a developmental disability

YES_____ NO_____

I personally know or have interacted with someone with a developmental disability

YES_____ NO _____

I have previously been employed with people with developmentally disabilities

YES_____ NO _____

Training

I have had previous training to work with people with a developmental disability and/or behavioral disorder

YES_____ NO _____

If YES, please describe: -

_____

I have had previous experience working in a residential treatment setting

YES_____ NO _____

If YES, please describe: -

_____

I have had previous training in reading and implementing behavioral intervention plans and/or education plans

YES_____ NO _____

If YES, please describe: -

_____

Appendix D: Pretest for Knowledge and Applied Understanding of FBA/BISP

Date: _____ Answer Key

1. In general, which of the following is identified as warning sign(s) in a BISP.

    A. Pacing
    B. Being quiet
    C. Talking fast
    D. Both A and B

2. In regard to the case of Jane Doe (your sample BISP): people with developmental disabilities that have a dual diagnosis for mental illness are evaluated and monitored by a psychiatrist. Jane was observed by the psychiatrist to be quiet and non-responsive, and the staff reported that Jane continues to have difficult days where she is hitting her head and moaning, etc. What next steps will the staff and Behavior Specialist complete for follow up for Jane's next appt.?

    A. Continued documentation for Jane's challenging behaviors and revisit the psychiatrist in one month
    B. Continued monitoring by the behavior specialist and revisit the psychiatrist in one month
    C. Schedule the revisit to her psychiatrist in three months
    D. None of the above

3. In general, which of the following is identified as proactive coping skill(s) in a BISP.

    A. Communicating a problem
    B. Punching the wall and apologizing for the damage caused
    C. Requesting the person focus, and calling for assistance
    D. Both A and C, but not B

4. In regard to the case of Jane Doe (your sample BISP): people that have developmental disabilities attend a day program, where services are provided. At Jane's day program she was observed by the staff and it was documented in the medical/behavioral book that Jane hit her head twice on the wall, causing a red mark. What possible thing(s) did Jane do before she hit her head?

    A. Hum to herself
    B. Leave the area
    C. Loudly Vocalize

D. Pace back and forth

5. In regard to the case of Jane Doe (your sample BISP): people that have BISPs are often prescribed medications. Jane is prescribed psychotropic medications and a regulation states that a fading plan be developed for the BISP to ensure the medications are provided for a specific diagnosis, that they are reviewed, there is a range from lowest dose to highest dose, and that the medications are reduced to prevent long term use. Jane fading plan was reviewed last month, when is it required to be reviewed again per regulations?

   A. Next year
   B. Next month
   C. Now
   D. In six months

6. What document(s) are used in reviewing records for developing the FBA.

   A. Life Plans and Individualized Education Plans
   B. Previous Behavior Plans and Psychological Evaluations
   C. Medical Records and Family Reports
   D. All of the above documents may be used in developing the FBA

7. Which of the following are replacement skill(s) in a BISP?

   A. A teaching mechanism
   B. Moving an object around
   C. Use of a way to calm
   D. Both B and C but not A

8. What could be the first consideration for a person engaging in a warning sign in a BISP

   A. Anticipation of an event, transition, and crowds.
   B. A toothache, headache, or stomachache.
   C. Preferred staff are on vacation, a holiday, and boredom.
   D. All of the above

9. In the case of Jane Doe (your sample BISP): people with disabilities are not to have restrictions unless they can be justified. A restriction is considered something that slows reflexes and decreases learning capacity. Which of the following would be a restriction?

   A. Adaptive eating utensil(s)
   B. A tinted window in a bedroom

C. A gait belt for walking
D. Psychotropic medication(s)

10. In the case of Jane Doe (your sample BISP): a replacement behavior is a skill(s) that attempts to teach the person what they can do instead of engaging in challenging behavior(s). BISP are required to list specific replacement behavior(s). Jane engages in challenging behaviors to escape unpleasant situations and sensory input. What would be considered a replacement behavior for Jane?

A. Use of a calm voice
B. Interrupting Jane and providing a light touch
C. The use of hand-held sensory items
D. Giving Jane a book or puzzle

Appendix E: Posttest for Knowledge and Applied Understanding of FBA/BISP

Date: _____ Answer Key

1. In the case of Jane Doe (your sample BISP): a replacement behavior is a skill(s) that attempts to teach the person what they can do instead of engaging in challenging behavior(s). BISP are required to list specific replacement behavior(s). Jane engages in challenging behaviors to escape unpleasant situations and sensory input. What would be considered a replacement behavior for Jane?

    A. Use of a calm voice
    B. Interrupting Jane and providing a light touch
    C. The use of hand-held sensory items
    D. Giving Jane a book or puzzle

2. In the case of Jane Doe (your sample BISP): people with disabilities are not to have restrictions unless they can be justified. A restriction is considered something that slows reflexes and decreases learning capacity. Which of the following would be a restriction?

    A. Adaptive eating utensil(s)
    B. A tinted window in a bedroom
    C. A gait belt for walking
    D. Psychotropic medication(s)

3. What could be the first consideration for a person engaging in a warning sign in a BISP

    A. Anticipation of an event, transition, and crowds.
    B. A toothache, headache, or stomachache.
    C. Preferred staff are on vacation, a holiday, and boredom.
    D. All of the above

4. Which of the following are replacement skill(s) in a BISP?

    A. A teaching mechanism
    B. Moving an object around
    C. Use of a way to calm
    D. Both B and C but not A

5. What document(s) are used in reviewing records for developing the FBA.

A. Life Plans and Individualized Education Plans
B. Previous Behavior Plans and Psychological Evaluations
C. Medical Records and Family Reports
D. All of the above documents may be used in developing the FBA

6. In regard to the case of Jane Doe (your sample BISP): people that have BISPs are often prescribed medications. Jane is prescribed psychotropic medications and a regulation states that a fading plan be developed for the BISP to ensure the medications are provided for a specific diagnosis, that they are reviewed, there is a range from lowest dose to highest dose, and that the medications are reduced to prevent long term use. Jane fading plan was reviewed last month, when is it required to be reviewed again per regulations?

   A. Next year
   B. Next month
   C. Now
   D. In six months

7. In regard to the case of Jane Doe (your sample BISP): people that have developmental disabilities attend a day program, where services are provided. At Jane's day program she was observed by the staff and it was documented in the medical/behavioral book that Jane hit her head twice on the wall, causing a red mark. What possible thing(s) did Jane do before she hit her head?

   A. Hum to herself
   B. Leave the area
   C. Loudly Vocalize
   D. Pace back and forth

8. In general, which of the following is identified as proactive coping skill(s) in a BISP.

   A. Communicating a problem
   B. Punching the wall and apologizing for the damage caused
   C. Requesting the person focus, and calling for assistance
   D. Both A and C, but not B

9. In regard to the case of Jane Doe (your sample BISP): people with developmental disabilities that have a dual diagnosis for mental illness are evaluated and monitored by a psychiatrist. Jane was observed by the psychiatrist to be quiet and non-responsive, and the staff reported that Jane continues to have difficult days where she is hitting her head

and moaning, etc. What next steps will the staff and Behavior Specialist complete for follow up for Jane's next appt.?

A. Continued documentation for Jane's challenging behaviors and revisit the psychiatrist in one month
B. Continued monitoring by the behavior specialist and revisit the psychiatrist in one month
C. Schedule the revisit to her psychiatrist in three months
D. None of the above

10. In general, which of the following is identified as warning sign(s) in a BISP.

A. Pacing
B. Being quiet
C. Talking fast
D. Both A and B

Appendix F: Social Validity Post Intervention Assessment (Standard Training Group with Reverse Scoring)

On a scale from 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4 =Agree, and 5 =Strongly Agree, please circle the number the following questions.

1. After taking this workshop, I do understand people's challenging behaviors better.

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

2. After taking this workshop, I still have difficulty understanding what an Integrity Check is, and why it is completed. *

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

3. After taking this workshop, I still have difficulties understanding the importance of the PICA documentation. *

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

4. I believe this workshop provided me an understanding of what the Behavior Specialist role is.

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

5. I believe this workshop provided me an understanding of what and why there is an FBA for the BISP.

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

6. I believe after this workshop I still have difficulties understanding what warning signs are and how they are related to challenging behaviors. *

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

7. I believe I learned from this workshop what restrictive things are in a BISP.

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

8. I believe after the workshop, that DSPs coming into this agency should participate in this training before going into the worksites.

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

9. I believe after this workshop; I will understand my job better.

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

10. I wish I would have completed this workshop before going into the worksites.

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

Appendix G: Syllabus/Curriculum for Matrix Workshop

Day 1: 8:00 – 12:00 pm 12:30 – 4:00 pm

Introductions

Present Goals for the Training and Overall Description for the Two days

- Define the Role of the Clinician in the agency and in the Development of the Functional Behavior Assessment and Behavior Intervention Support Plan
- Overview and Discuss Functional Behavior assessments (FBA)
  - Functional Behavior Assessment (FBA) Process (Select & Define Challenging Behaviors, Measuring and Recording Behavior, Conduct Structured Observations, Conduct Functional Interviews of Challenging Behaviors, Formulate a Hypothesis)
    - FBA process and conducting to gather information should lead to all information to develop the BISP.
    - FBA reveals the pattern of where, with whom, and under what circumstances the behavior occurs.
    - FBA justifies any restrictive techniques to be used.
    - FBA pattern leads to the hypotheses of the function of behavior.
  - Behavior Intervention Support Plan (BISP) Process (Antecedent Strategies, Consequential Strategies, Goal to increase positive behaviors and decrease negative ones,
    - BISP to have accurate interventions, be readable, and doable.
    - When a BISP is not effective: (when punishment strategies are promoted, violates regulations, staff rejection or not following the plan).
    - Review and Use FBA/BISP for Alice in Wonderland

** **Group Questions/Answers: Linking FBA to BISP**

- Antecedent Interventions
- Replacement Behaviors
- Reinforcement Strategies
- Supervision Levels
- Restrictive Devices

**** Group Activity: Provide Three Examples for Restrictive Devices and Justification for the need in a BISP. Have each group work together and find and develop the justification for the restrictive component(s). Each group will report out the restrictive component and what and how it is justified.**

Day 2: 8:00 – 4:00 Lunch from 12:00 – 12:30

- Review material from Day 1.

- Discuss the day's agenda and areas to be covered
- Goals for the Day are:
    - Review and use FBA/BISP for Peter Pan
    - Understanding the role of consequences
    - Challenging Behaviors and Warning Signs
- Description of Challenging Behaviors (what are these, why do they occur, what reinforces them, intensity, duration, frequency, what techniques de-escalate behaviors, etc.)
    - Modeling of Escalation of behavior (Setting Events, Warning Signs, Crisis Phase, and Recovery Phase).
    - Interventions used within each phase

Behavioral Escalation and Phases

- **Setting Events Phase**
    - Internal Events
        - Medical
        - Environmental
        - Skill Deficits
    - External Events
        - Environments where challenging behaviors occur most often (Physical environments, peers, staff, etc.).

- **Warning Signs Phase**
    - Provide varied examples to look for: crying, pacing, threats, agitation, quietness, perseveration, etc.
    - Interventions Warning Sign Phase
    - Goal: in preventing behavior and discuss what NOT to do
    - Effectiveness: identifying warning signs and roles and ways to prevent escalating the behavior

- **Behaviors and what NOT to Do**
    - Types of Responses:
        - Instigating
        - Environmental

- **Behaviors and What to Do**:
    - Facilitative Resolution (Active Listening, Use of Communication, Coping Strategies, Removal/Leave the Trigger, Ask for Assistance, Use of replacement Behaviors, Redirection, Proximity Control, Humor, Stimulus Change).

**** Group Activity: (20 minutes) provide short essay scenario examples of challenging behaviors within particular setting events. Have groups (2) people review the particular example scenario handed to them, review and answer the following proactive interventions, what can be modified and what can be added for proactive approaches?**

- Review with Class the FBA/BISP and all areas within the plans.